CORDIVARI®

CALORIFIERS
THERMAL STORAGE

EXPORT CATALOGUE

11

Cordivari boasts of a consolidated industrial tradition and is one of the most important Italian companies in the plumbing and heating sector. Founded in 1972 by Ercole Cordivari, the company specializes in the production of Calorifiers, Pressure Vessels, Solar Thermal and Heat Pumps Systems, Storage and Water Treatment Tanks, Chimney Pipes Systems and Decorative Radiators.

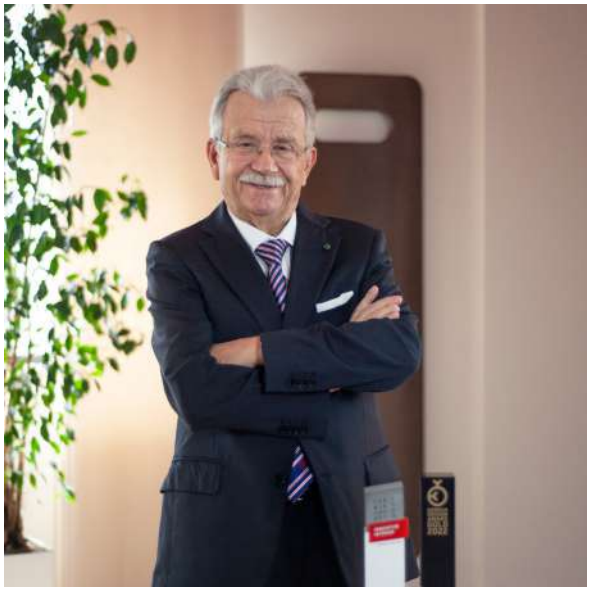
The four Cordivari manufacturing facilities cover an area of over 370,000 square meters and employ over 700 people.

To guarantee the total quality of our products, all of them are designed and Made in Italy, in the Cordivari's plants.

Thanks to development strategies oriented towards technological innovation and continuous staff training, Cordivari is equipped with modern systems and cutting-edge production processes. The technological, ergonomic and ecological choices allow to operate in full respect of people and environment, according to UNI EN ISO 14001 Environmental Management System and the UNI EN ISO Quality System 9001, which guarantees the full quality and reliability of our products.

Cordivari's highly qualified management, the continuous search for innovative solutions and a strongly customer oriented approach, brought us today to serve more than 2.000 customers in 72 countries around the world, a market leadership position and an exclusive know-how in the production of Integrated Hydrothermal Systems.

The testimony of a continuous commitment aimed at achieving Customer Satisfaction.



Cav. **Ercole Cordivari**

MANUFACTURING PHILOSOPHY FOR THE SAKE OF THE ENVIRONMENT



Cordivari was the first among the companies of the Heating and Plumbing sector to obtain the certification integrated management system according to UNI EN ISO 9001, together with the UNI EN ISO environmental management certification 14001.

This manufacturing philosophy, which today is a lifestyle for the company, means reducing emissions and energy inefficiencies, waste reduction through differentiation and recycling.

Thanks to these choices, the company can operate without harming people and environment. In compliance with the Quality & Environment management system, Cordivari exploit clean energy from renewable sources and uses only recyclable and environmentally friendly resources, from raw materials to packaging.

CARING ABOUT QUALITY, COMBINED WITH ATTENTION TO THE ENVIRONMENT, HAVE ALWAYS BEEN CONSIDERED STRATEGIC ACTIVITIES.

50 YEARS OF TECHNOLOGIES IN THE SERVICE OF WELL-BEING

Each proposed solution has always represented the synthesis of consumer needs through reliable technical choices, ergonomic design, attention for final installation and ease of use.

The continuous evolution of the product offer testifies the company's attention to the needs of the market. Likewise, the research and development of new solutions align with the evolutionary trends of a market oriented to the themes of efficiency and energy saving.

The different stages of production involve the best techniques of industrial automation, advanced robotics and craftsmanship, and each product is subjected more times during the production phases to a rigorous automated, manual, and visual control.

CONTINUOUS INNOVATION, DEVELOPMENT AND DESIGN STUDIES ARE CENTRAL BELIEFS IN THE CORDIVARI PRODUCTION PROCESS.







MADE IN ITALY SKILLS AND PRODUCTION INNOVATIONS



The company has always invested in technology and automation of all production processes.

The production facilities have been redesigned according to the guidelines of the most modern Industry 4.0 to ensure the control and reliability of each individual stage of the process.

Knowledge and experience, gained over 50 years of activities, combine with technology and artificial intelligence, to translate our work into total quality.

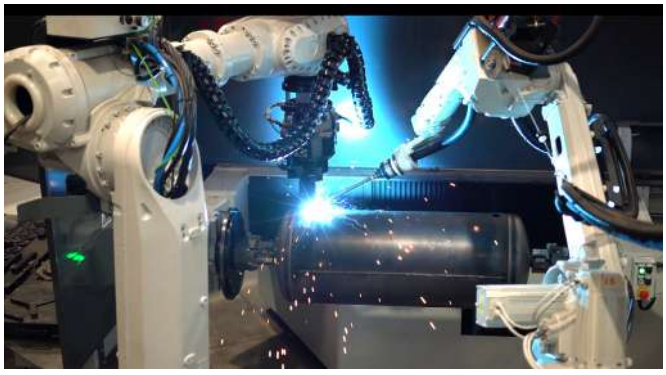
The importance of people is always at the center of production processes.

Experience, professionalism and orientation to quality, integrate with the Company's objectives and vision for environment and safety.

All Cordivari products have always been Made In Italy, made with passion and competence in our factories in Abruzzo.









CERTIFIED QUALITY

Calorifiers, thermal storages, pressurized water tanks, membrane vessels and tanks for compressed air, are all manufactured in compliance with the most important international certifications and approvals, such as P.E.D. (Pressure Equipment Directive) and Directive 2009/125 / EC (ErP -Specifications for Eco-compatible Design).

All items intended for the containment of sanitary water are certified for use with drinking water according to the most stringent Italian and international regulations (ACS -SSICA - DVGW W270 - WRAS).



SYSTEM CERTIFICATES

UNI EN ISO 9001 Quality Management System

Environmental Management System UNI EN ISO 14001

Qualità & Ambiente
UNI EN ISO 9001-14001

PRODUCT CERTIFICATES

The Centro Inox brand distinguishes the STAINLESS STEEL material, a durable, hygienic and ecological material

2014/68/UE - 2014/29/CE
Products compliant with CE and PED standards

ErP - Energy Related Products Directive 2009 / 125 / UE

IMQ CLIMA
CENTRO DI INNOVAZIONE TECNOLOGICA AGEMONT

POLITECNICO DI MILANO
Dipartimento di Energia
RELAB- Renewable Heating and Cooling LAB

CERTIFICATES OF CONFORMITY FOR DRINKING WATER

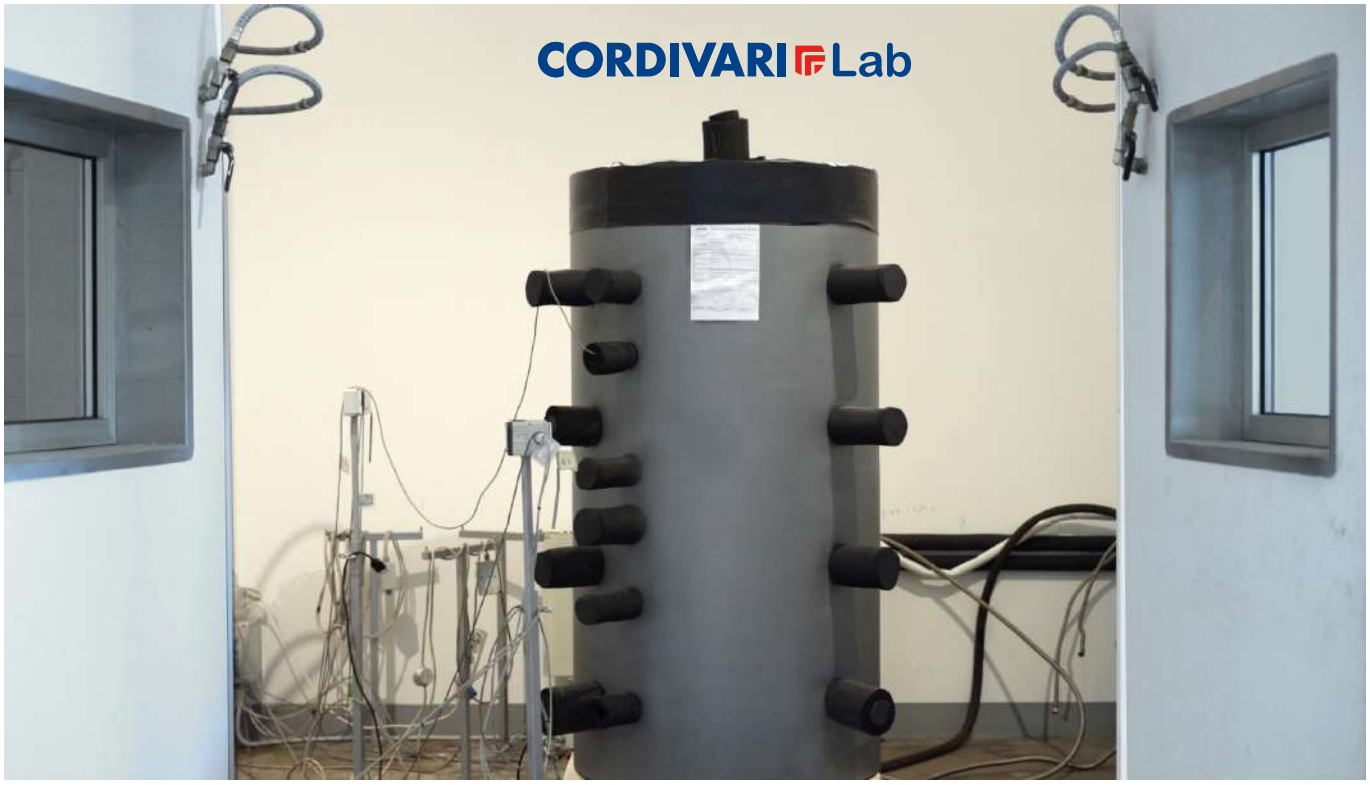
Potability certificates obtained from the prestigious SSICA laboratory in Parma

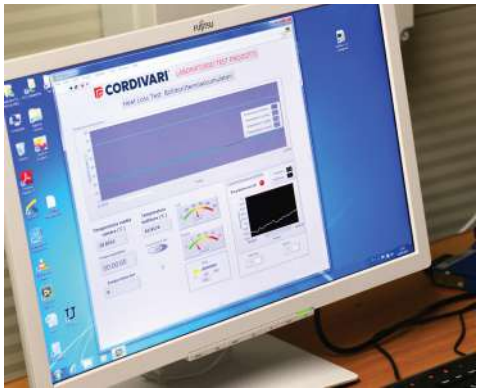
A.C.S. Certification (Attestation de Conformité Sanitaire) obtained from CARSO - Laboratoire Santé Environnement Hygiène De Lyon on the Polywarm® anticorrosive coating.

EN 16421
on the Polywarm® anticorrosive coating

on the Polywarm® anticorrosive coating

CORDIVARI LAB: RELIABILITY AND PERFORMANCE





Today, more than ever, those who choose a Cordivari product choose serenity!

With the introduction of the new ErP Ecodesign standards, we have chosen to offer you the certainty of performance and reliability.

The creation of the Cordivari LAB represents this precise choice. Since 2015, the company has equipped itself with a state-of-the-art laboratory and testing area, capable of testing any product or system, measuring and certifying its performance.



CORDIVARI Lab

TÜV Rheinland Energie und Umwelt GmbH states that test procedures and Cordivari LAB are certified conforming to European standard EN 15332, as indicated by Ecodesign ErP Directive.

TESTED ErP

ENERGY EFFICIENCY

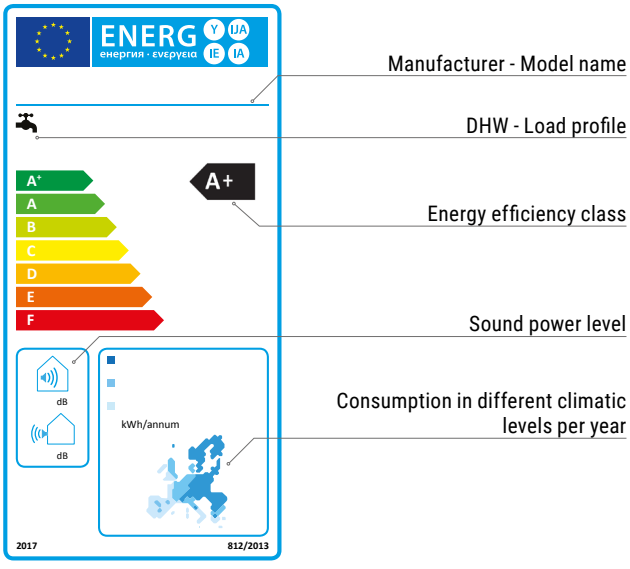
Through strict procedures and sophisticated instrumentation, Cordivari is today the only Italian manufacturer able to perform accurate tests internally, on all products, in compliance with the provisions of European regulations.

This translates into a continuous flow of research and development around performance and energy efficiency, aimed at improving the solutions proposed by the company, to guarantee reliability, savings and high performance every day.

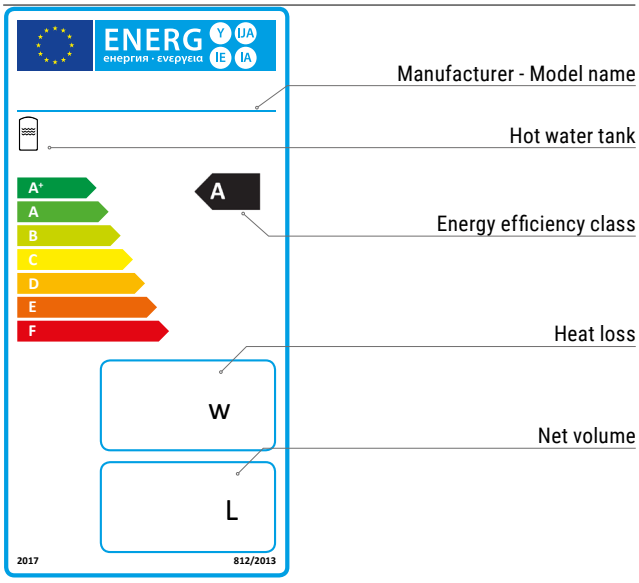
Cordivari LAB is the only qualified structure supplied to a production company, approved, and accredited by the TUV.
Choose the safety of certified quality!



EXAMPLE OF LABEL FOR WATER HEATER PUMP



EXAMPLE OF LABEL FOR TANK/MULTI-HEAT ENERGY BUFFERS



CORDIVARI

Icons

Domestic Hot Water production (D.H.W.)

Heating Water Production

Heating / Cooling

STOCK AVAILABILITY

STOCK AVAILABILITY
Grey highlighted products are available on stock and can be dispatched in 1-5 working days.

How To Choose Your Calorifier

A calorifier is an indirect water heating appliance (i.e. one that features at least one heat exchanger) which accumulates heat so to control consumption rates that may vary greatly over a period of time, while also limiting the power used by the generators.

Cordivari offers a wide and varied range of calorifiers, thermal storages and heating components, to provide the most suitable product for different installations and also to allow simultaneous use of more energy sources.

Calorifiers with traditional boilers:
These products are designed for use with conventional boilers which use water as a heating medium in a sealed or open expansion circuit. The heat exchangers are designed to handle high flow rates on the primary side to ensure that the heat transfer will be efficient while at the same time avoiding excessively low return water temperatures.

Calorifiers with biomass boilers:
The selection of a calorifier while operating in conjunction with a biomass boiler must take account of fact that excessively low return water temperatures could reduce the lifespan of the boiler. In addition, a calorifier with a larger accumulation volume than normal will be more suitable as it will act as a buffer which will be beneficial to the biomass boiler.

Calorifiers with condensing boilers:
Condensing boilers are highly efficient and ecologically friendly. To obtain the best performance, the primary circuit should work at a limited temperature, and the return water temperature being as low as possible. This will ensure that the latent heat is extracted out of the combustion.

Calorifiers with solar systems:
The heat exchange coil surface area is a critical issue when interfacing solar thermal systems with calorifiers, due to limited primary flow rates and temperatures. The calorifier must also be capable of acting as a buffer to harness the solar energy throughout daylight hours.

Calorifiers with heat pumps:
Calorifiers operating in conjunction with air-to-water or water-to-water heat pumps must have oversized heat exchange surface areas to ensure that heat exchange will take place even when there is a limited difference in temperature between the primary circuit and stored water. This will maximise the COP (coefficiency of performance) of the heat pump.

Calorifiers with steam boilers:
The use of saturated steam as a heating medium to produce domestic hot water, although little used in the housing sector, is a solution which is still employed in industrial environments where the steam is already in use for the manufacturing process. Technically speaking, steam calorifiers are characterized by relatively small heat exchangers, as on one hand the steam gives high heat exchange coefficients and on the other hand the exchangers usually operate with considerable differences in temperature between the primary and secondary circuits. The use of steam demands a more stringent safety regeime than the use of low pressure hot water systems as steam boilers, depending on their capacity and design pressures, are classified as higher risk and therefore must comply with the European Pressure Equipment Directive.

Domestic hot water production (D.H.W.)

Calorifiers operating with more than one energy source
The demand to heat a calorifier using more than one energy source, while at the same time keeping the various circuits separate, has become much more common in recent times with the advent of renewable technologies which usually need to be backed-up with conventional boilers. In these cases, calorifiers with more heat exchangers are used, ensuring that excellent thermal stratification will be achieved with minimal interference between the various heat sources.

Calorifiers operating with electrical power
Cordivari products designed for working with electricity can be connected to A/C power supply.
Combined with a renewable energy power supply system (fotovoltaic, wind energy, and so on), it allows to have an environmental friendly system.

How To Choose Your Storage Tanks

Insulated storages are used in heating with the dual function of allowing the generator to operate in a regular manner, restricting the number of stoppages, and of creating a thermal stabiliser for the heating system, thus considerably improving efficiency.

Cordivari offers a wide range of storage tanks, which include both standard versions and several combined versions to be used as the same time as storage tank and to produce domestic hot water.

Central heating systems with one or more boilers which are plumbed together and do not generate domestic hot water.

Central heating systems with one or more boilers which are plumbed together in conjunction with solar power which is connected to either one or two coil type heat exchangers. Domestic hot water is not generated in these tanks.

Heating systems with one or more sources hydraulically divided, with the exploitation of the solar power and without DHW production.
These are heating systems powered by a biomass generator or more generators that are hydraulically divided.
The preparation of the DHW is done without involving the hot water storage tank.

Combined central heating system and domestic hot water production with one or more boilers which are plumbed together.

Combined central heating system and domestic hot water production with one or more boilers which are plumbed together, with solar thermal integration

Combined central heating system and domestic hot water production with one or more sources hydraulically divides and solar thermal integratio.

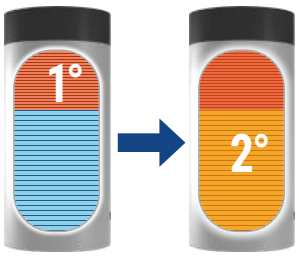
New Products

NEW BOLLY® DOUBLE CYCLE RANGE

Bolly® PDC is a range of tanks patented by Cordivari and specifically designed for optimized use with heat pumps.

These tanks can be integrated with up to 3 different energy sources and guarantee approximately +30% performance compared to tank-in-tank or traditional ones and -15% electricity consumption of the heat pump thanks to the patented stratified exchange system. This exclusive range of tanks is now extended with a further patent, specifically for medium and large sized systems. The DOUBLE CYCLE solution is designed to optimize the operation and performance of this type of systems. Heat exchange takes place in two distinct phases: CYCLE ONE, through perfect thermal stratification, heats only the upper part of the cylinder to allow for an initial and very rapid supply of DHW at a comfort temperature; CYCLE TWO which, after cycle one has been completed, heats only the lower part of the cylinder without any disturbance to the stratification in the upper part. In this way the heating of the entire cylinder is completed, achieving the best balance between thermal comfort in the building and comfort in the use of DHW, favouring savings and energy efficiency.





NEW ECO COMBI PDC HY RANGE

The new Eco Combi PDC HY are combined heat tanks with an Integrated energy buffer tank heating/cooling for heat pumps.

This new range has been designed in the name of energy efficiency and savings, both in terms of energy and system optimization. The new Eco Combi PDC HY are suitable for the rapid production of DHW in heat pump systems by exploiting a technical water storage and an exchange system with a large-surface corrugated AISI 316L stainless steel coil. In the storage tank there is an additional integrated technical tank to be used as a thermal buffer tank (hot/cold) for the heat pump. The range also includes a version with a double coil to integrate not only the heat pump, but also the solar thermal system and any other back-up generator.



NEW PUFFERMAS® PDC RANGE

The proposal of production and storage tanks for heat pumps is expanded with a new, high-performance range of solutions.

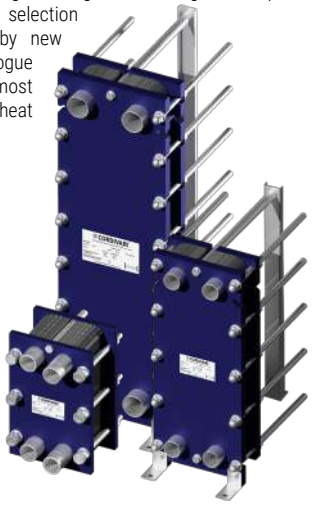
The Puffermas® 1 PDC and 3 CTS PDC are stratified technical water storage tanks for heating systems and instantaneous DHW production with high flow rates and efficiencies. These storage heaters are designed for use in mixed systems with a heat pump generator and possible integration of auxiliary heat sources, as well as supplemented by the solar thermal system with a top-loading thermal system. The new Puffermas® CTS PDC are intended for domestic hot water production in combination with the supply of the heating circuit. Thanks to the specific high-power MACS® 180HP exchange module, they allow excellent performance in DHW production at the low primary temperatures typical of heat pump heaters.



NEW PLATE EXCHANGERS RANGE

The PHC range of heat exchangers has been renewed with a re-engineering of the range and the introduction of new models capable of satisfying all domestic and civil installation needs.

The chapter on exchangers is even more detailed, full of information and of easy and immediate consultation. This new range of plate exchangers is supported by a wide range of tools available to designers and installers such as the online dimensioning tool.
The new dimensioning software on cordivari.it is a professional and highly efficient tool available, free of charge, for dimensioning exchangers according to the specific operating conditions of each system. The selection and dimensioning guide are completed by new quick-choice tables online and in the catalogue that allow you to quickly identify the most suitable solution in relation to the use of the heat exchanger.



CONFIGURE YOUR PHC PLATE EXCHANGER ONLINE



On our website you can get all information to guide you in purchasing Cordivari products.

Index

D.H.W. AND CLIMATE COMFORT

BOLLY®

BOLLYTERM® WATER HEATER

EXTRA CALORIFIERS

VASO INERZIALE - VASO STORAGE

EXTRA INOX - VASO STORAGE INOX

BOLLY® INOX - COMBI INOX

CALORIFIERS FOR HEAT PUMPS

HEATING / COOLING BUFFER TANKS

HYDRONIC

DHW INSTANTANEOUS SYSTEMS

PUFFER

BUFFER AND COMBINED TANKS

PRESSURIZED TANKS

PRESSURE VESSELS AND EXPANSION VESSELS

COMPRESSED AIR RECEIVERS

ACCESSORIES

TECHNICAL SUPPORT



12
44



58
104



120
148



200



268



284
316



330
346



384
398
410
430



BOLLY®

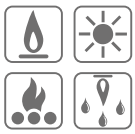


BOLLY® RANGE

DHW production





	Bolly® ST FB	Bolly® AP
Heat exchanger model	Fixed coil	Fixed coil
Number of heat exchangers		
Energy source		
Energy efficiency class	**B-C**	**A-B-C**
Insulation	- Polyurethane hard foam - Dismountable polyester fleece	Polyurethane hard foam
Available range	150 ÷ 1500	150 ÷ 500
Installation	floor standing	floor standing
Suggested Application	Traditional, solar, condensation and biomass installations	Traditional, solar, condensation and biomass installations

		
Bolly® Murale Bolly® Primo	Interka	Interka Panarea
Fixed coil	Double wall	Double wall
		
		
C	**C**	**B**
Polyurethane hard foam	Polyurethane hard foam	Polyurethane hard foam
80 ÷ 300	80 ÷ 300	150 ÷ 300
(Bolly® Murale) - vertical / horizontal wall mounted (Bolly® Primo) - vertical / horizontal wall mounted - floor standing	wall mounted (vertical/horizontal)	on carpentry of solar thermosyphon systems with natural circulation
Traditional, solar and biomass installations	Biomass and traditional installations	Solar thermosyphon system

BOLLY® **1 ST FB** - WITH ALIGNED FRONT / BACK CONNECTIONS

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER
Mild steel Polywarm® coated heat exchanger.
INSULATION
HARD: High thermal insulation with ecological polyurethane hard foam.
SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.
CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection. Models > 500 external confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.


POLYWARM® COATED DHW STORAGE


POLYWARM® COATED HEAT EXCHANGER


ALIGNED

PROMPT AVAILABILITY





BOLLY® 1 ST FB WB

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
150	3104162330041	0,6	**B**
200	3104162330042	0,8	**B**
300	3104162330043	1,2	**B**
400	3104162330044	1,5	**C**
500	3104162330045	1,8	**C**
800	3104162330046	2,7	**B**
1000	3104162330047	3,5	**B**
1500	3104162330048	3,8	**C**

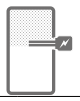


BOLLY® 1 ST FB WC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
800	3103162321162	2,7	**C**
1000	3103162321163	3,5	**C**
1500	3103162321164	3,8	**C**

ACCESSORIES

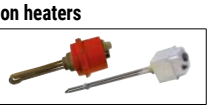
ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW	THREEPHASE 6 kW	THREEPHASE 9 kW	THREEPHASE 12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
150	30	53	40	27	20	//	//	//	//
200	56	100	75	50	38	//	//	//	//
300	89	159	119	79	60	48	//	//	//
400	137	245	184	123	92	74	//	//	//
500	152	272	204	136	102	82	68	//	//
800	279	500	375	250	187	150	125	83	62
1000	345	618	464	309	232	185	155	103	77
1500	510	914	686	457	343	274	229	152	114

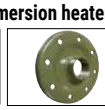
Electric immersion heaters

See Accessories section



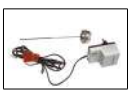
Flange plate for electric immersion heater

See Accessories section



Titanium anode

See Accessories section

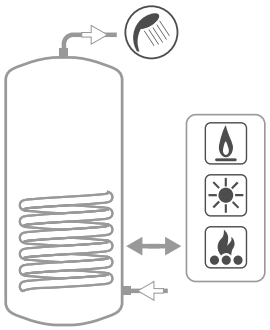


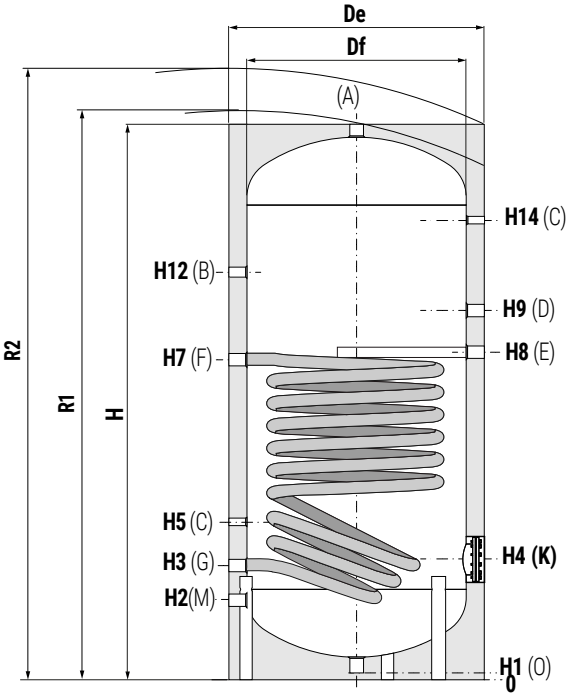
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

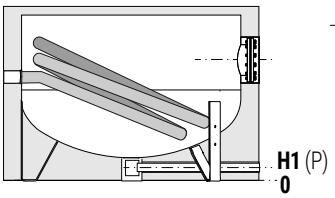
BOLLY® **1 ST FB** - WITH ALIGNED FRONT / BACK CONNECTIONS

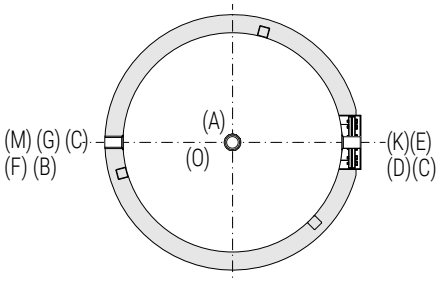
POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED HEAT EXCHANGER

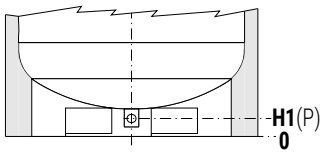
	STORAGE		HEAT EXCHANGER	
Model	Pmax	Tmax	Pmax	Tmax
150 ÷ 800	10 bar	90 °C	12 bar	110 °C
1000 ÷ 1500	8 bar			











A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F	Lower heat exchanger inlet 1"1/4 G F
G	Lower heat exchanger outlet 1"1/4 G F
K	Flange for inspection
M	Domestic cold water circuit inlet
O	Drain 1" 1/4 F For models ≤ 500
P	Drain For models > 500

Models 1500 are equipped with a practical **skirt** support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

BOLLY® 1 ST FB WB - HARD FOAM INSULATION

Model	Volume	Weight	De	H	R2	H1	H2	H3	H4	H5	H7	H8	H9	H12	H14	K	P	M	D	B	A
	[lt]	[kg]	[mm]														Connections F				
150	148	49	500	1414	1505	71	210	275	315	395	888	956	1086	1065	1185	Øi120/Øe180	-	3/4"	1"1/2	3/4"	1"1/4
200	189	55	550	1434	1540	71	220	285	325	405	811	855	985	1089	1195	Øi120/Øe180	-	3/4"	1"1/2	3/4"	1"1/4
300	291	67	650	1486	1630	71	246	311	381	431	832	871	1006	1101	1221	Øi120/Øe180	-	1"	1"1/2	1"	1"1/4
400	422	88	700	1766	1905	71	261	326	396	446	988	1033	1170	1286	1486	Øi120/Øe180	-	1"	1"1/2	1"	1"1/4
500	498	120	750	1786	1945	71	271	346	411	466	1036	1076	1211	1331	1476	Øi120/Øe180	-	1"	1"1/2	1"	1"1/4
800	789	184	900	2162	2350	101	338	428	483	548	1181	1243	1378	1598	1788	Øi170/Øe240	3/4"	1"	2"	1"	1"1/4
1000	1038	215	1000	2217	2440	89	359	439	499	559	1279	1309	1444	1584	1819	Øi170/Øe240	3/4"	1"1/4	2"	1"	1"1/2
1500	1443	389	1100	2415	2660	109	340	425	575	545	1403	1450	1585	1825	2065	Øi300/Øe380	1"	1"1/2	2"	1"	2"

BOLLY® 1 ST FB WC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	Weight	DF	DE	H	R1	R2	H1	H2	H3	H4	H5	H7	H8	H9	H12	H14	K	P	M	D	B	A
	[lt]	[kg]	[mm]																Connections F				
800	789	184	750	950	2158	2194	2365	101	493	428	483	368	1181	1243	1378	1598	1788	Øi170/Øe240	3/4"	1"	2"	1"	1"1/4
1000	1038	215	850	1050	2192	2258	2435	89	524	439	499	389	1279	1309	1444	1584	1819	Øi170/Øe240	3/4"	1"1/4	2"	1"	1"1/2
1500	1443	389	950	1150	2440	2483	2705	109	450	425	575	375	1403	1450	1585	1825	2065	Øi300/Øe380	1"	1"1/2	2"	1"	2"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

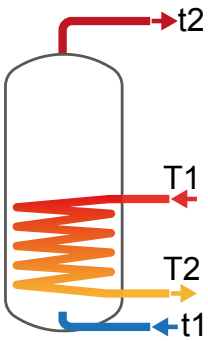
BOLLY® **1 ST FB**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

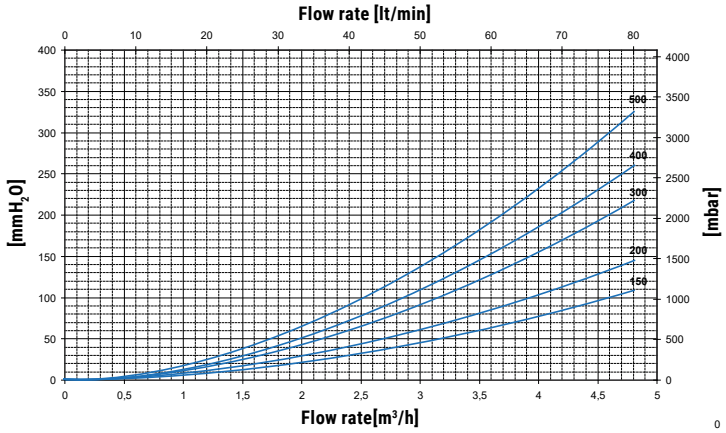
LOWER
HEAT EXCHANGER

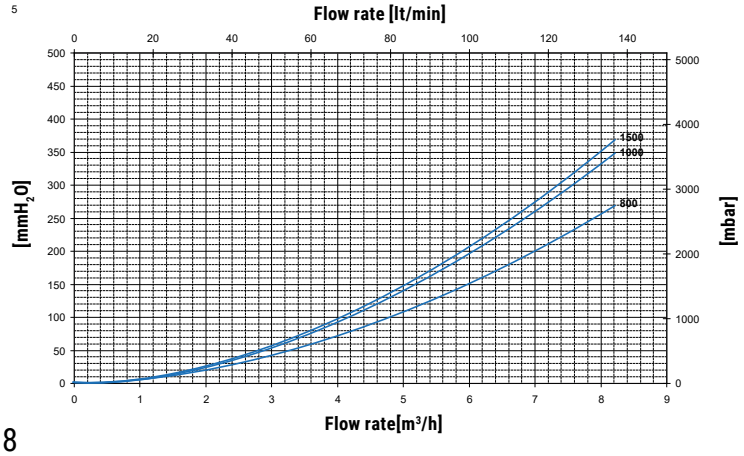


Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
150	2	99	102	71	46	6,6	10	11,7	15,2	162	246	288	371
	1	111	116	81	53	6,1	9,1	10,6	13,2	149	223	260	336
200	2,5	92	95	66	43	9	13,5	15,8	20,5	220	332	389	506
	1,25	103	107	75	49	8,3	12,3	14,4	18,5	203	303	354	456
300	3	97	101	70	45	13,5	20,2	23,6	30,6	331	498	583	756
	1,5	106	111	78	51	12,5	18,5	21,5	27,5	307	455	529	680
400	3,5	105	110	76	50	16,9	25,4	29,6	38,3	416	625	731	947
	1,75	117	122	86	57	15,4	23,2	26,9	34,5	387	571	664	853
500	3,5	111	116	81	53	20,2	30,1	35,1	45,3	496	742	867	1121
	1,75	126	131	93	61	18,7	27,3	31,7	40,6	459	674	782	1000
800	6	116	120	84	55	30,3	45,4	53	68,6	746	1120	1309	1695
	3	131	136	96	64	28,2	41,4	48,1	61,6	692	1021	1186	1521
1000	6	114	119	84	56	38,9	57,9	67,5	87	958	1429	1667	2151
	3	132	138	98	65	35,5	52,2	60,4	77	882	1288	1492	1903
1500	6	162	168	119	78	41	61	71	91,5	1009	1504	1753	2261
	3	189	197	139	92	37,7	54,9	63,4	80,7	927	1352	1564	1993

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
150	2	195	251	258	272	298	407	440	507	218,85	21,46
	1	193	247	253	266	287	388	418	479	60,62	5,95
200	2,5	253	325	335	354	392	536	581	675	441,12	43,26
	1,25	250	321	329	346	378	512	553	635	122,19	11,98
300	3	388	499	513	542	597	814	882	1021	927,45	90,95
	1,5	384	492	504	529	578	780	839	960	256,91	25,19
400	3,5	550	706	723	759	814	1101	1186	1359	1480,67	145,20
	1,75	546	697	712	744	791	1058	1133	1284	410,16	40,22
500	3,5	651	834	855	897	965	1304	1404	1607	1850,84	181,50
	1,75	645	822	840	877	935	1249	1336	1510	512,70	50,28
800	6	1026	1314	1345	1410	1499	2023	2174	2483	1538,50	150,87
	3	1017	1297	1325	1381	1455	1944	2076	2344	426,18	41,79
1000	6	1345	1720	1759	1840	1952	2625	2815	3202	1994,35	195,58
	3	1332	1696	1730	1799	1891	2512	2675	3004	552,45	54,18
1500	6	1870	2378	2419	2504	2509	3330	3530	3936	2108,31	206,75
	3	1856	2352	2388	2459	2443	3209	3378	3722	584,02	57,27

HEAT EXCHANGERS PRESSURE DROP



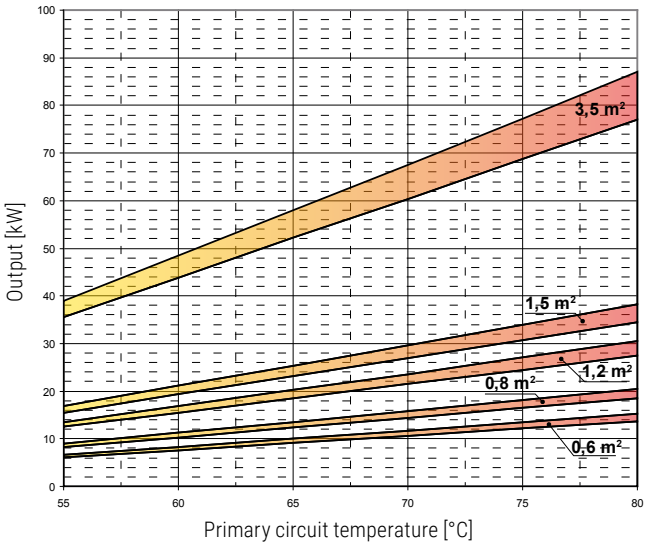


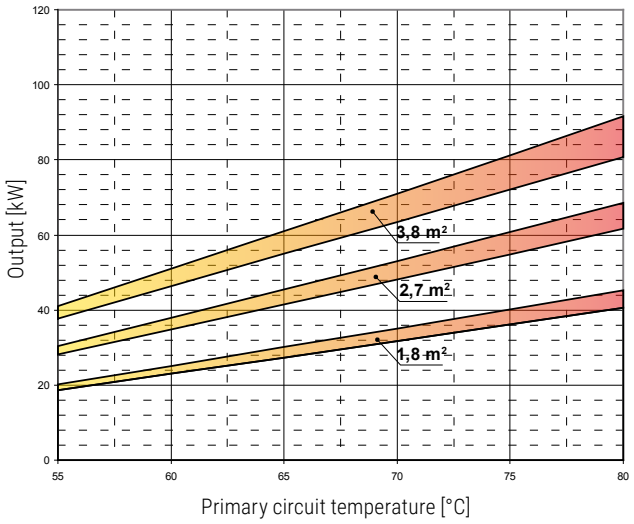
BOLLY® **1 ST FB**

HEAT EXCHANGERS TECHNICAL DATA



Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate).

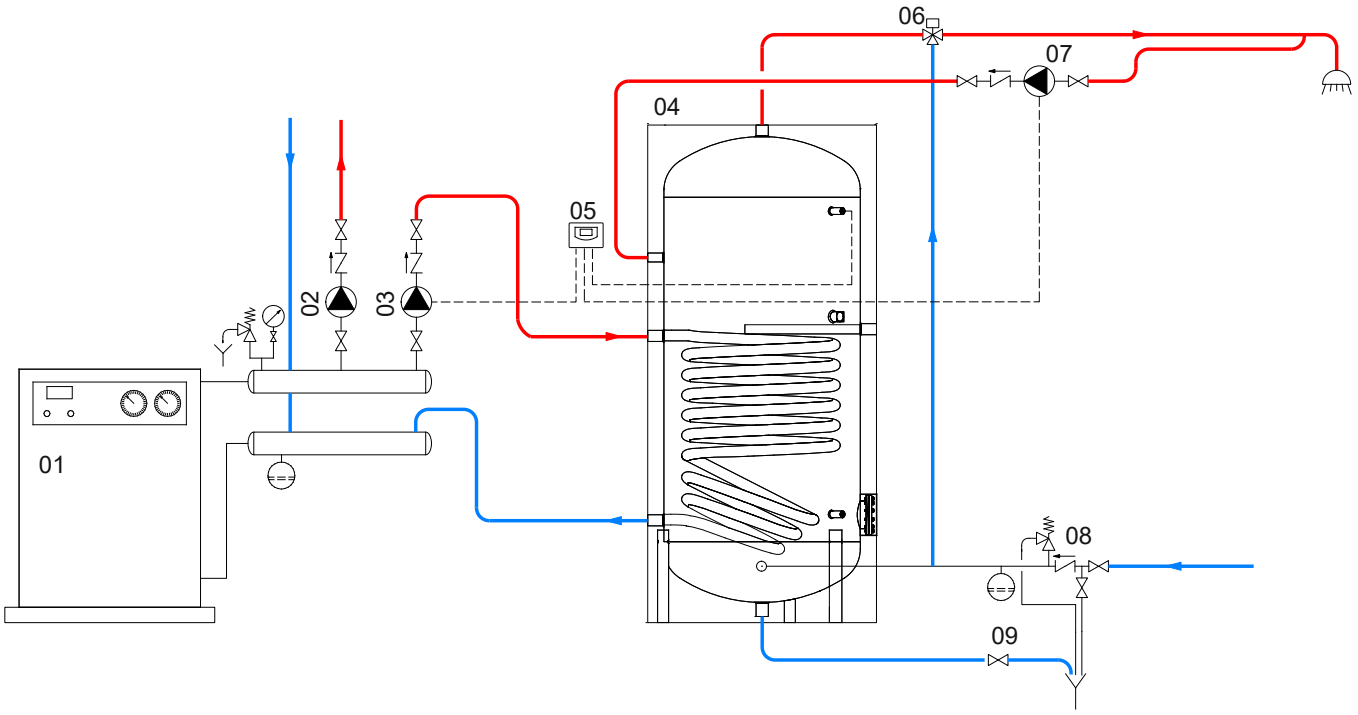




Heat exchanger	0,6 m²		0,8 m²		1,2 m²		1,5 m²		3,5 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	2,5	1,25	3	1,5	3,5	1,75	6	3

Heat exchanger	1,8 m²		2,7 m²		3,8 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	3,50	1,75	6	3	6	3

EXAMPLE OF INSTALLATION WITH **BOLLY® 1 ST FB**



01	Generator	04	BOLLY® 1 ST FB	07	D.H.W. recirculation group
02	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group
03	D.H.W. circulation group	06	Thermostatic mixing valve	09	Blowdown valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

BOLLY® 2 ST FB - WITH ALIGNED FRONT / BACK CONNECTIONS

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER
2 Mild steel Polywarm® coated heat exchangers
INSULATION
HARD: High thermal insulation with ecological polyurethane hard foam.
SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.
CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection. Models > 500 external confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

NEW



PROMPT AVAILABILITY



BOLLY® 2 ST FB WB

Model	HARD FOAM INSULATION	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
150	3134162330011	0,4	0,6	**B**
200	3134162330012	0,5	0,8	**B**
300	3134162330013	0,7	1,2	**B**
400	3134162330014	1	1,5	**C**
500	3134162330015	1	1,8	**C**
800	3134162330016	1,6	2,7	**B**
1000	3134162330017	1,8	3,5	**B**
1500	3134162330018	1,9	3,8	**C**

BOLLY® 2 ST FB WC

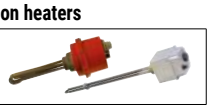
Model	DISMOUNTABLE SOFT FLEECE INSULATION	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
800	3138162320112	1,6	2,7	**C**
1000	3138162320113	1,8	3,5	**C**
1500	3138162320114	1,9	3,8	**C**

ACCESSORIES

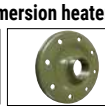
ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	2 kW	3 kW	THREEPHASE 4 kW	5 kW	6 kW	9 kW	12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
150	54	97	73	49	37	//	//	//	//
200	67	120	90	60	45	//	//	//	//
300	106	190	143	95	71	57	//	//	//
400	159	285	213	142	107	85	//	//	//
500	174	312	234	156	117	93	78	//	//
800	310	554	416	277	208	166	139	92	69
1000	390	698	524	349	262	210	175	116	87
1500	559	1002	751	501	376	301	250	167	125

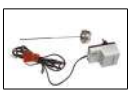
Electric immersion heaters
See Accessories section



Flange plate for electric immersion heater
See Accessories section



Titanium anode
See Accessories section

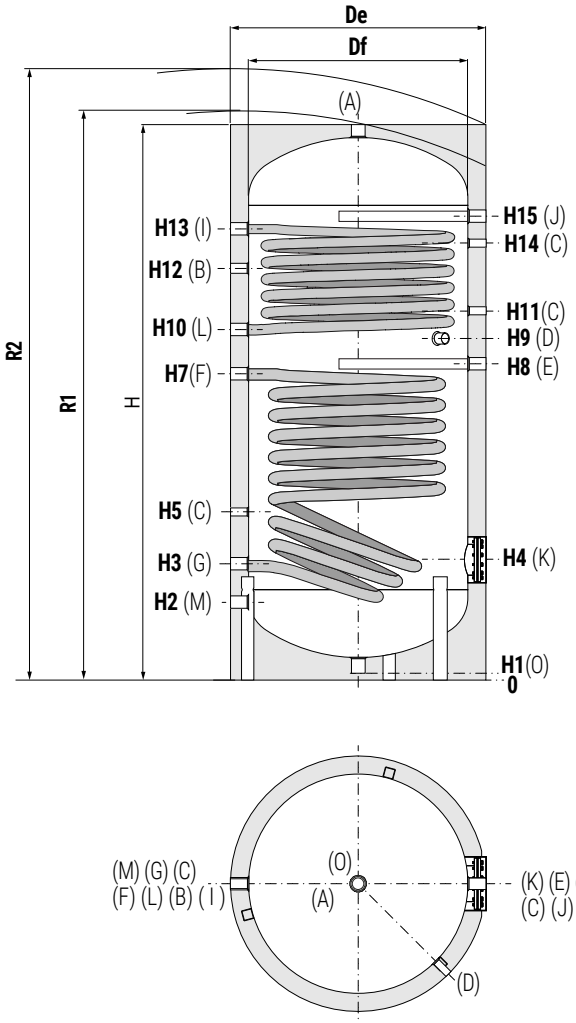


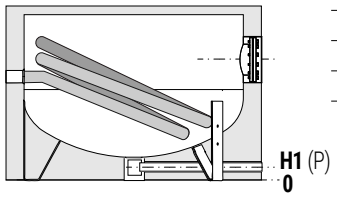
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

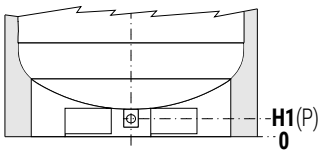
BOLLY® **2 ST FB** - WITH ALIGNED FRONT / BACK CONNECTIONS

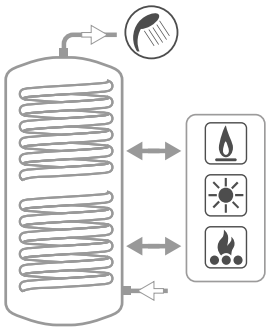
POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS

	STORAGE		HEAT EXCHANGER	
Model	Pmax	Tmax	Pmax	Tmax
150 ÷ 800	10 bar	90 °C	12 bar	110 °C
1000 ÷ 1500	8 bar			









A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F	Lower heat exchanger inlet 1"1/4 G F
G	Lower heat exchanger outlet 1"1/4 G F
I	Upper heat exchanger inlet 1"1/4 G F
J	Connection for 2nd magnesium anode 1"1/4 G F (only for models >500)
K	Flange for inspection
L	Upper heat exchanger outlet 1"1/4 G F
M	Domestic cold water circuit inlet
O	Drain 1" 1/4 F For models ≤ 500
P	Drain For models > 500

Models 1500 are equipped with a practical **skirt** support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

BOLLY® 2 ST FB WB - HARD FOAM INSULATION

Model	Vol.	Weight	DF	DE	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	H15	K	P	M	D	B	A
	[lt]	[kg]	[mm]																					Connections F				
150	148	54	-	500	1414	-	1505	71	210	275	315	395	//	765	815	885	945	975	1065	1185	1185	//	Øi120/Øe180	-	3/4"	1"1/2	3/4"	1"1/4
200	189	65	-	550	1434	-	1540	71	220	285	325	405	//	811	855	915	960	985	1089	1195	1195	//	Øi120/Øe180	-	3/4"	1"1/2	3/4"	1"1/4
300	291	83	-	650	1486	-	1630	71	246	311	381	431	//	832	871	931	981	1011	1101	1221	1221	//	Øi120/Øe180	-	1"	1"1/2	1"	1"1/4
400	422	112	-	700	1766	-	1905	71	261	326	396	446	//	988	1033	1091	1143	1166	1286	1486	1486	//	Øi120/Øe180	-	1"	1"1/2	1"	1"1/4
500	498	134	-	750	1786	-	1945	71	271	346	411	466	//	1036	1076	1144	1186	1206	1331	1476	1476	//	Øi120/Øe180	-	1"	1"1/2	1"	1"1/4
800	789	232	750	900	2163	-	2350	101	338	428	483	548	//	1181	1243	1308	1362	1378	1598	1770	1708	1818	Øi170/Øe240	3/4"	1"	2"	1"	1"1/4
1000	1038	272	850	1000	2217	-	2440	89	359	439	499	559	//	1279	1309	1364	1399	1444	1584	1819	1729	1839	Øi170/Øe240	3/4"	1"1/4	2"	1"	1"1/2
1500	1443	351	950	1100	2440	-	2685	109	340	425	575	545	//	1403	1450	1515	1550	1585	1825	2045	1965	2075	Øi300/Øe380	1"	1"1/2	2"	1"	2"

BOLLY® 2 ST FB WC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Vol.	Weight	DF	DE	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	H15	K	P	M	D	B	A
	[lt]	[kg]	[mm]																					Connections F				
800	789	232	750	950	2163	2205	2365	101	338	428	483	548	//	1181	1243	1308	1362	1378	1598	1770	1708	1818	Øi170/Øe240	3/4"	1"	2"	1"	1"1/4
1000	1038	272	850	1050	2217	2270	2455	89	359	439	499	559	//	1279	1309	1364	1399	1444	1584	1819	1729	1839	Øi170/Øe240	3/4"	1"1/4	2"	1"	1"1/2
1500	1443	351	950	1150	2440	2500	2700	109	340	425	575	545	//	1403	1450	1515	1550	1585	1825	2045	1965	2075	Øi300/Øe380	1"	1"1/2	2"	1"	2"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

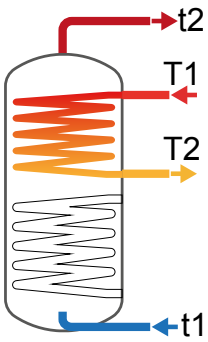
BOLLY® **2 ST FB**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

UPPER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
150	2	47	49	34	22	4,5	6,8	7,9	10,3	109	165	194	254
	1	52	64	38	24	4,1	6,2	7,2	9,4	100	151	177	231
200	2,5	46	48	33	21	5,7	8,6	10	13,1	138	210	247	322
	1,25	51	53	37	24	5,3	7,9	9,3	12	129	194	227	296
300	3	51	53	37	24	8	12,1	14,1	18,4	195	296	347	453
	1,5	57	59	41	27	7,5	11,2	13,1	16,9	183	274	321	416
400	3,5	55	57	40	26	11,4	17,2	20,2	26,2	279	423	496	646
	1,75	61	63	44	29	10,7	16	18,6	24	262	392	458	592
500	3,5	61	64	44	29	11,4	17,2	20,2	26,2	279	423	496	646
	1,75	68	70	49	32	10,7	16	18,6	24	262	392	458	592
800	6	68	71	49	32	18,3	27,6	32,3	41,9	447	677	794	1034
	3	75	78	54	36	17,2	25,6	29,8	38,5	419	628	733	949
1000	6	79	82	57	37	20,5	30,9	36,1	46,9	501	759	889	1157
	3	87	91	64	42	19,2	28,5	33,3	42,9	469	701	818	1057
1500	6	87	90	63	41	26	39	45,6	59,1	636	959	1123	1457
	3	97	102	71	46	24,2	35,8	41,6	53,6	592	879	1024	1318

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
150	2	73	96	101	111	142	201	224	272	145,90	14,31
	1	72	94	98	107	135	189	210	253	40,41	3,96
200	2,5	92	121	127	139	179	254	283	343	275,70	27,04
	1,25	90	118	124	135	172	241	267	323	76,37	7,49
300	3	141	185	194	211	265	373	413	498	541,01	53,06
	1,5	139	181	189	205	255	355	393	469	149,87	14,70
400	3,5	211	276	288	313	388	544	603	723	1028,24	100,84
	1,75	208	271	282	304	374	519	572	679	284,83	27,93
500	3,5	229	299	311	336	406	567	625	745	1028,24	100,84
	1,75	227	294	305	327	392	542	595	702	284,83	27,93
800	6	401	521	541	581	684	950	1044	1236	911,70	89,41
	3	397	513	531	567	662	911	995	1168	252,55	24,77
1000	6	508	657	678	723	825	1137	1241	1456	1025,66	100,58
	3	502	647	666	706	799	1091	1184	1376	284,12	27,86
1500	6	691	891	919	974	1094	1499	1630	1897	1310,57	128,52
	3	684	878	902	951	1059	1435	1551	1786	363,04	35,60

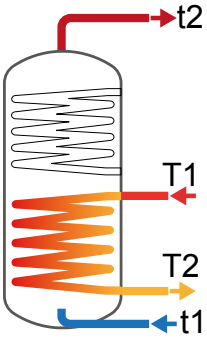
BOLLY® **2 ST FB**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

LOWER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
150	2	99	102	71	46	6,6	10	11,7	15,2	162	246	288	371
	1	111	116	81	53	6,1	9,1	10,6	13,2	149	223	260	336
200	2,5	92	95	66	43	9	13,5	15,8	20,5	220	332	389	506
	1,25	103	107	75	49	8,3	12,3	14,4	18,5	203	303	354	456
300	3	97	101	70	45	13,5	20,2	23,6	30,6	331	498	583	756
	1,5	106	111	78	51	12,5	18,5	21,5	27,5	307	455	529	680
400	3,5	105	110	76	50	16,9	25,4	29,6	38,3	416	625	731	947
	1,75	117	122	86	57	15,4	23,2	26,9	34,5	387	571	664	853
500	3,5	111	116	81	53	20,2	30,1	35,1	45,3	496	742	867	1121
	1,75	126	131	93	61	18,7	27,3	31,7	40,6	459	674	782	1000
800	6	116	120	84	55	30,3	45,4	53	68,6	746	1120	1309	1695
	3	131	136	96	64	28,2	41,4	48,1	61,6	692	1021	1186	1521
1000	6	114	119	84	56	38,9	57,9	67,5	87	958	1429	1667	2151
	3	132	138	98	65	35,5	52,2	60,4	77	882	1288	1492	1903
1500	6	162	168	119	78	41	61	71	91,5	1009	1504	1753	2261
	3	189	197	139	92	37,7	54,9	63,4	80,7	927	1352	1564	1993

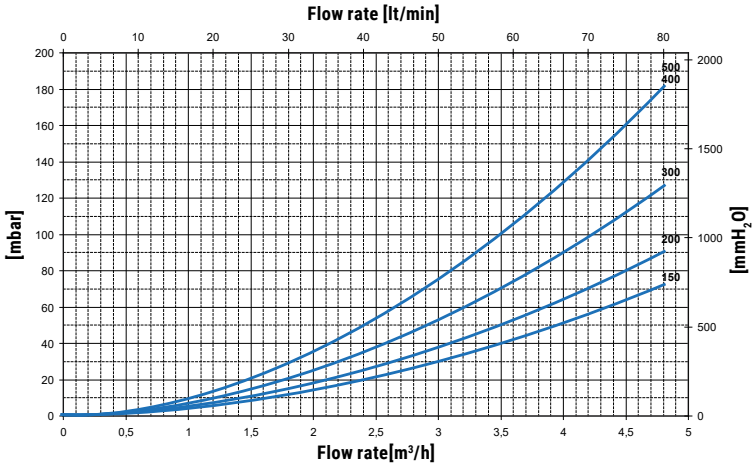
Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
150	2	195	251	258	272	298	407	440	507	218,85	21,46
	1	193	247	253	266	287	388	418	479	60,62	5,95
200	2,5	253	325	335	354	392	536	581	675	441,12	43,26
	1,25	250	321	329	346	378	512	553	635	122,19	11,98
300	3	388	499	513	542	597	814	882	1021	927,45	90,95
	1,5	384	492	504	529	578	780	839	960	256,91	25,19
400	3,5	550	706	723	759	814	1101	1186	1359	1480,67	145,20
	1,75	546	697	712	744	791	1058	1133	1284	410,16	40,22
500	3,5	651	834	855	897	965	1304	1404	1607	1850,84	181,50
	1,75	645	822	840	877	935	1249	1336	1510	512,70	50,28
800	6	1026	1314	1345	1410	1499	2023	2174	2483	1538,50	150,87
	3	1017	1297	1325	1381	1455	1944	2076	2344	426,18	41,79
1000	6	1345	1720	1759	1840	1952	2625	2815	3202	1994,35	195,58
	3	1332	1696	1730	1799	1891	2512	2675	3004	552,45	54,18
1500	6	1870	2378	2419	2504	2509	3330	3530	3936	2108,31	206,75
	3	1856	2352	2388	2459	2443	3209	3378	3722	584,02	57,27

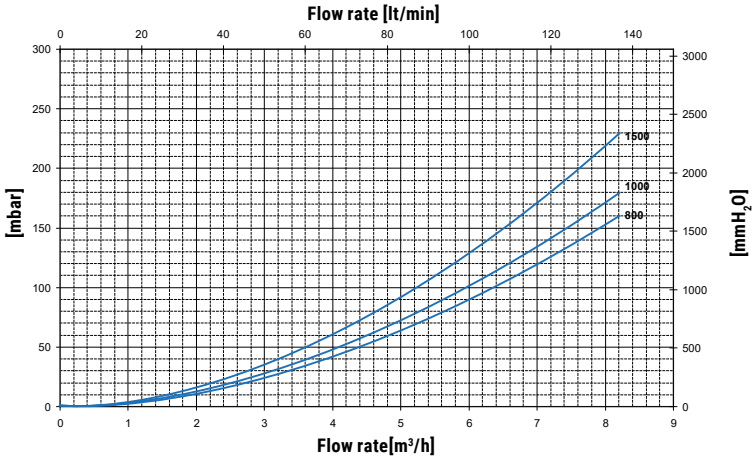
BOLLY® **2 ST FB**

UPPER HEAT EXCHANGERS PRESSURE DROP



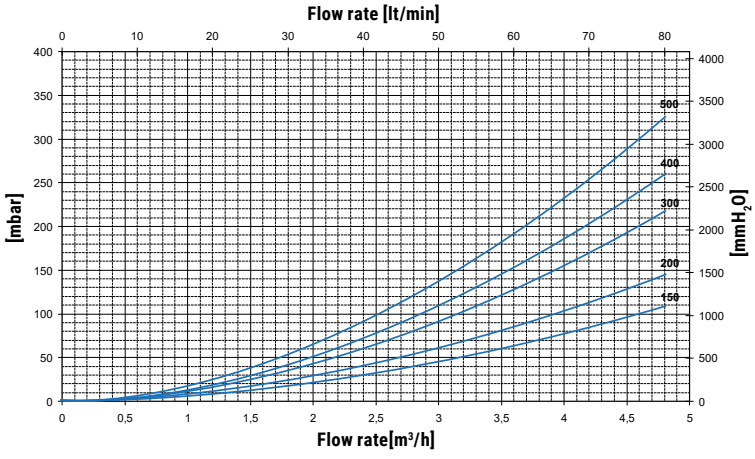
Heat exchangers surface [m²]	
150	0,4
200	0,5
300	0,7
400	1
500	1
800	1,6
1000	1,8
1500	1,9

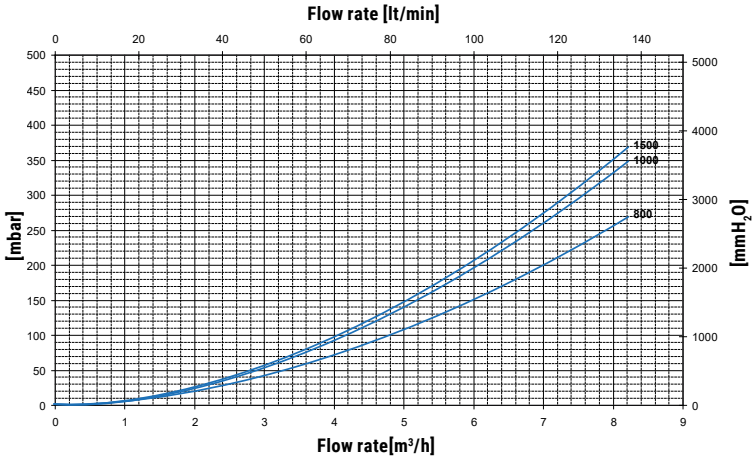




LOWER HEAT EXCHANGERS PRESSURE DROP

Heat exchangers surface [m²]	
150	0,6
200	0,8
300	1,2
400	1,5
500	1,8
800	2,7
1000	3,5
1500	3,8



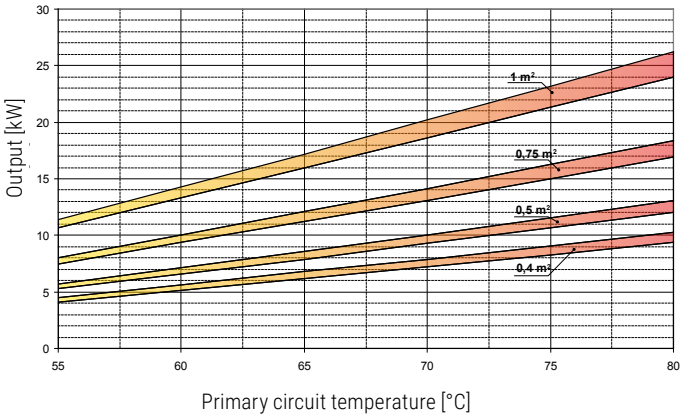


BOLLY® **2 ST FB**

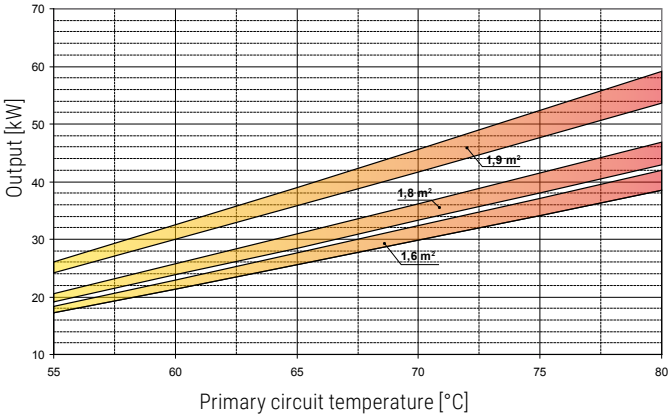
UPPER HEAT EXCHANGERS TECHNICAL DATA



Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate).
For Lower heat exchangers technical data- see BOLLY® 1 ST



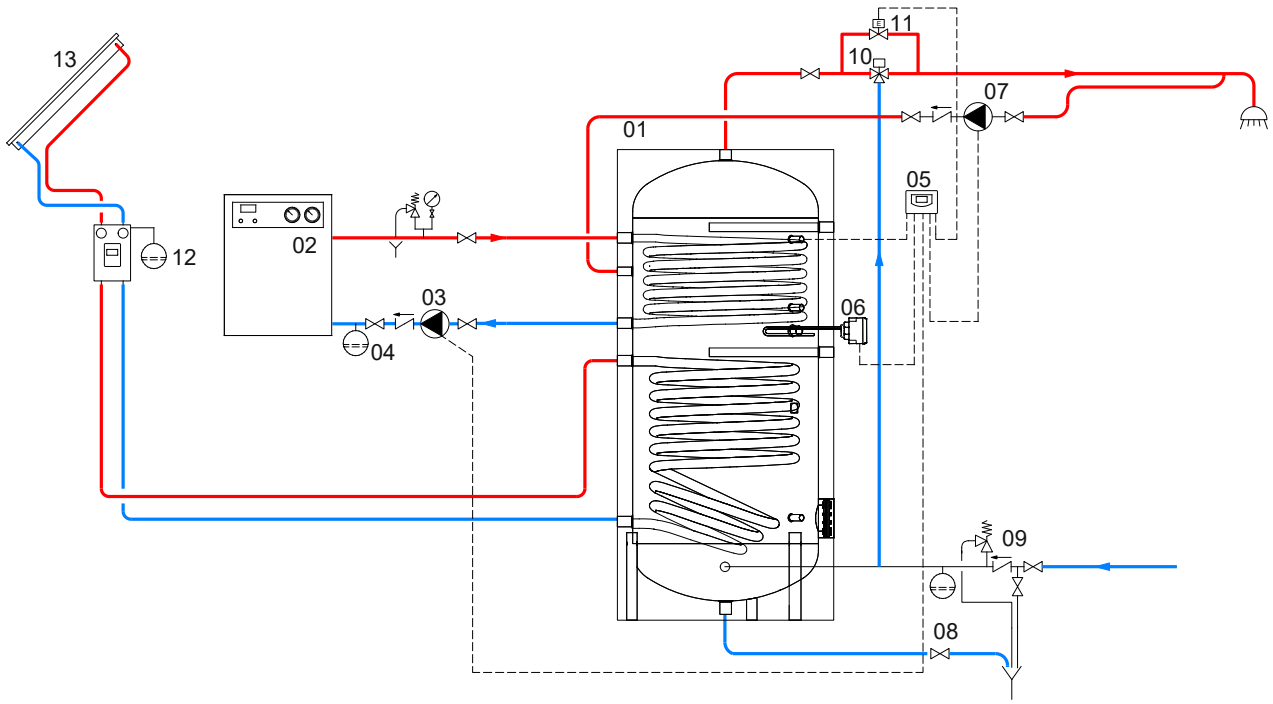
Heat exchanger	0,4 m²		0,5 m²		0,75 m²		1 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	2,5	1,25	3	1,5	3,5	1,75



Heat exchanger	1,6 m²		1,8 m²		1,9 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	6	3	6	3	6	3

FOR LOWER HEAT EXCHANGERS TECHNICAL DATA- SEE BOLLY® 1 ST

EXAMPLE OF INSTALLATION WITH **BOLLY® 2 ST FB**



1	Bolly® 2 ST FB	5	Electronic Control/thermostat	9	Hydraulic safety group	13	Solar panels
2	Generator	6	Electric immersion heater (optional)	10	Thermostatic mixing valve		
3	Circulation group	7	D.H.W. recirculation group	11	By-pass solenoid valve		
4	Expansion vessel	8	Blowdown valve	12	Solar system circulation group		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

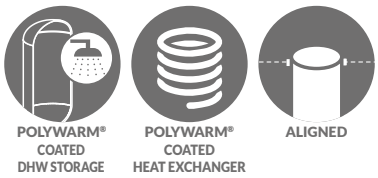
BOLLY® 1 AP - HIGH PERFORMANCES

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
N° 1 Mild steel Polywarm® coated heat exchanger.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



PROMPT AVAILABILITY



BOLLY® 1 AP WB

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
150	3104162330031	1,1	**B**
200	3104162330032	1,3	**B**
300	3104162330033	1,8	**B**
400	3104162330034	2	**C**
500	3104162330035	2,6	**C**

BOLLY® 1 AP WB CLASS A

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
200	3104162330054	1,3	**A**
300	3104162330055	1,8	**A**
500	3104162330056	2,6	**A**

ACCESSORIES

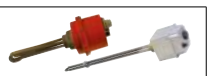
ELECTRIC IMMERSION HEATERS



Mod.	Position electric immersion heater	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW	THREEPHASE 6 kW
			5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049
			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]		
150	1	125	223	167	112	//	//	//
	2	48	86	65	43	32	//	//
200	1	159	285	214	142	//	//	//
	2	62	111	83	56	42	//	//
300	1	235	421	316	210	158	//	//
	2	73	132	99	66	49	39	//
400	1	353	632	474	316	237	//	//
	2	132	237	178	119	89	71	//
500	1	413	741	555	370	278	222	//
	2	150	269	202	135	101	81	67

Electric immersion heaters

See Accessories section



HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Titanium anode

See Accessories section

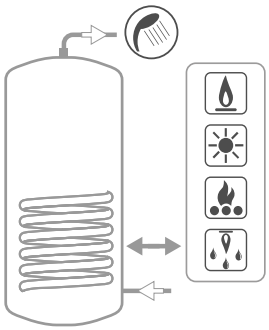


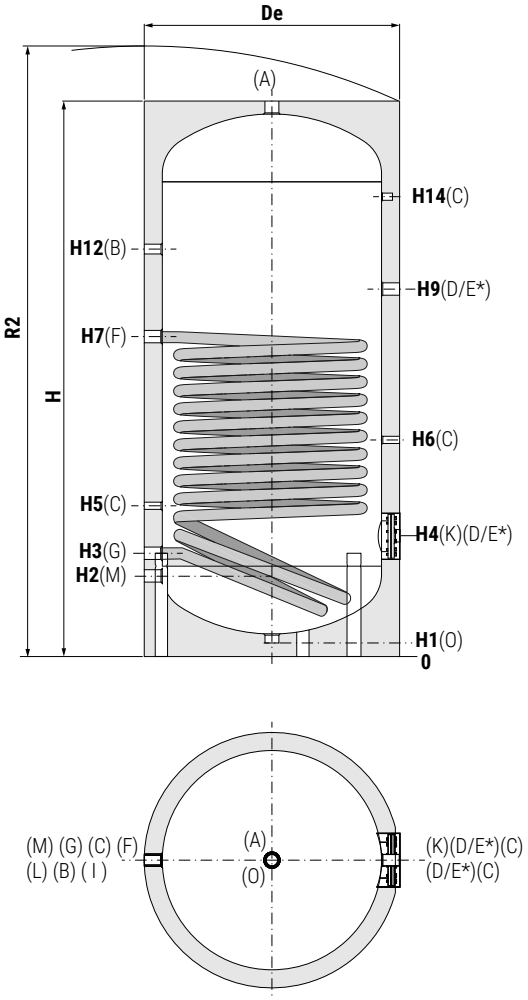
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **1 AP - HIGH PERFORMANCES**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED HEAT EXCHANGER

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	12 bar	110 °C





A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E*	Connection for magnesium anode 1"1/4 G F- Use a reduction 1"1/2-1"1/4
F	Lower heat exchanger inlet 1"1/4 G F
G	Lower heat exchanger outlet 1"1/4 G F
K	Flange for inspection
M	Domestic cold water circuit inlet
O	Drain 1" 1/4 F

BOLLY® 1 AP WB +AP WB CLASS A (HARD FOAM INSULATION)

Model	Volume	Weight	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H9
	[lt]	[Kg]	[mm]										
150	148	54	500	1416	1510	72	206	276	316	396	526	871	936
200	189	63	550	1436	1550	71	216	286	326	406	536	874	946
300	291	75	650	1486	1630	71	241	311	381	431	561	1021	1071
400	422	93	700	1766	1910	71	256	336	396	456	586	1116	1186
500	498	118	750	1786	1950	71	266	346	411	466	596	1136	1216

Model	H12	H14	K	O	M	D	B	A
				Connections F				
150	1066	1186	Øi120/Øe180	1"1/4	3/4"	1"1/2	3/4"	1"1/4
200	1116	1196	Øi120/Øe180	1"1/4	3/4"	1"1/2	3/4"	1"1/4
300	1141	1231	Øi120/Øe180	1"1/4	1"	1"1/2	1"	1"1/4
400	1386	1466	Øi120/Øe180	1"1/4	1"	1"1/2	1"	1"1/4
500	1331	1476	Øi120/Øe180	1"1/4	1"	1"1/2	1"	1"1/4

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

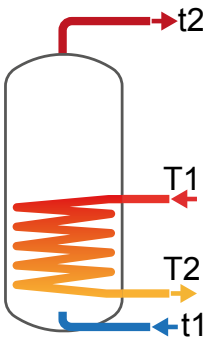
BOLLY® **1 AP**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

LOWER
HEAT EXCHANGER

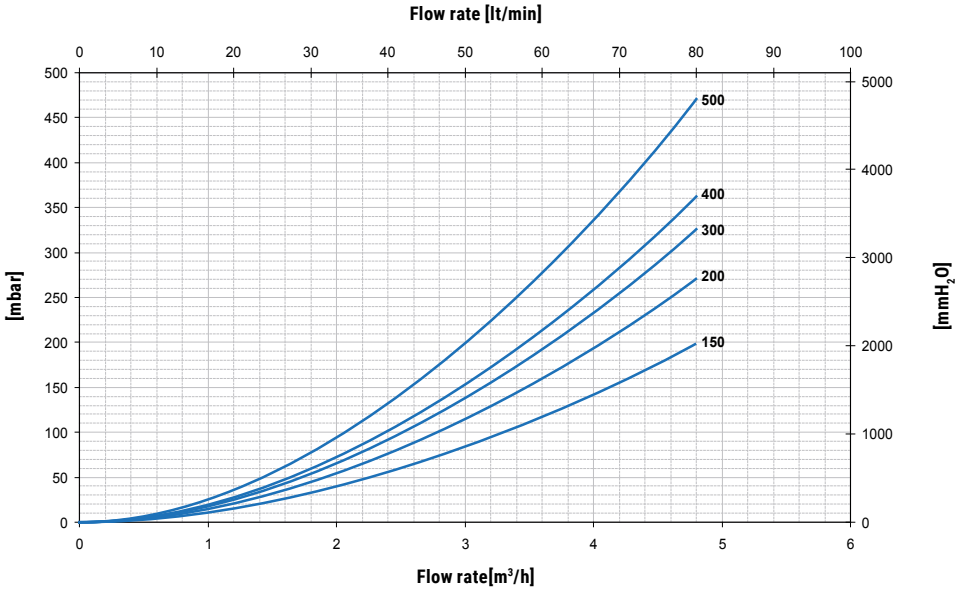


Mod.	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary from 10°C to t2 constant use of DHW production					DHW continuous production lt/h from 10°C to t2 and primary at T1				
	[m³/h]	T1/t2				T1/t2					T1/t2				
		55/50	65/60	70/60	80/60	55/45	65/45	70/45	80/45	80/60	55/45	65/45	70/45	80/45	80/60
150	2	56	58	41	27	12	18	21	27	22	294	439	512	662	378
	1	65	68	48	32	11	16	18	23	19	266	390	452	577	334
200	2,5	62	65	46	30	13	20	23	30	25	327	488	569	735	439
	1,25	72	76	54	35	12	18	20	26	23	433	433	503	644	393
300	3	65	67	48	31	20	30	35	44	38	490	731	852	1099	666
	1,5	75	79	56	37	18	27	31	39	34	449	656	759	968	596
400	3,5	80	83	58	38	22	33	39	50	43	549	820	956	1234	745
	1,75	92	96	68	45	21	30	35	44	39	506	741	858	1095	672
500	3,5	79	82	58	38	29	42	49	63	54	705	1045	1216	1563	948
	1,75	93	98	69	46	26	38	44	55	49	645	933	1076	1365	847

Mod.	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
150	2	218	285	297	322	404	563	621	741	401	39
	1	213	276	287	308	382	523	573	673	11	11
200	2,5	271	351	365	393	478	660	725	858	827	81
	1,25	288	342	354	377	562	616	672	785	229	22
300	3	414	538	558	599	725	1001	1097	1295	1391	136
	1,5	407	525	542	577	692	941	1023	1190	385	38
400	3,5	574	740	762	809	921	1259	1368	1590	2056	202
	1,75	567	726	746	785	887	1196	1289	1479	570	56
500	3,5	687	886	914	972	1133	1547	1684	1962	262	2673
	1,75	677	867	891	939	1085	1458	1572	1803	73	741

HEAT EXCHANGERS PRESSURE DROP

Heat exchangers surface [m²]	
150	1,1
200	1,3
300	1,8
400	2
500	2,6

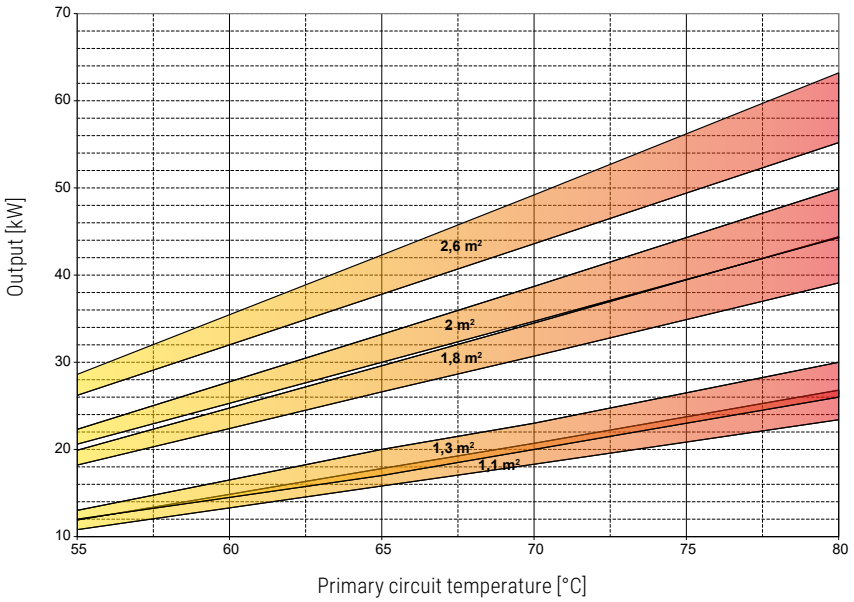


BOLLY® **1 AP**

HEAT EXCHANGERS TECHNICAL DATA

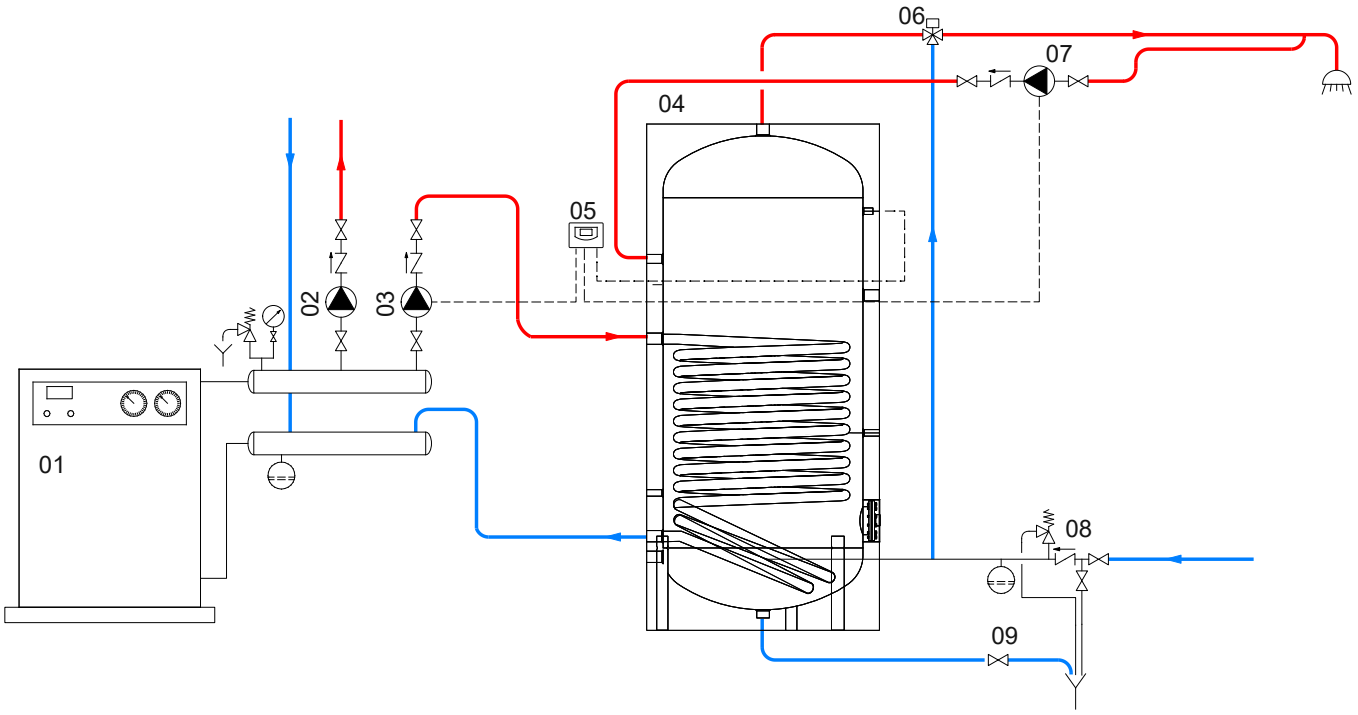


Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)



Heat exchanger	1,1 m²		1,3 m²		1,8 m²		2 m²		2,6 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	2,5	1,25	3	1,5	3,5	1,75	3,5	1,75

EXAMPLE OF INSTALLATION WITH **BOLLY® 1 AP**



01	Generator	04	Bolly® 1 AP	07	D.H.W. recirculation group
02	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group
03	D.H.W. circulation group	06	Thermostatic mixing valve	09	Blowdown valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

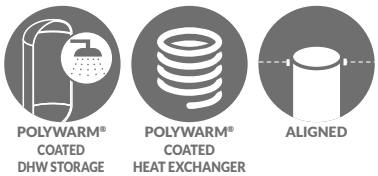
BOLLY® 2 AP - HIGH PERFORMANCES

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
N° 2 Mild steel Polywarm® coated heat exchangers.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



PROMPT AVAILABILITY

BOLLY® 2 AP WB

Model	HARD FOAM INSULATION	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
200	3134162320006	0,4	1,4	**B**
300	3134162320007	0,9	1,4	**B**
500	3134162320008	1,3	2,2	**C**

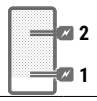


BOLLY® 2 AP WB CLASS A

Model	HARD FOAM INSULATION	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
200	3134162330024	0,4	1,4	**A**
300	3134162330025	0,9	1,4	**A**
500	3134162330026	1,3	2,2	**A**

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Position electric immersion heater	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	2 kW	3 kW	THREEPHASE 4 kW	5 kW	6 kW
			5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049
			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]		
200	1	159	285	214	142	//	//	//
	2	58	104	78	52	39	//	//
300	1	235	421	316	210	158	//	//
	2	112	201	151	100	75	60	//
500	1	413	741	555	370	278	222	//
	2	185	331	248	165	124	99	83

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Titanium anode

Art. Nr.	**Model**
5200000000008	200, 300
5200000000009	500

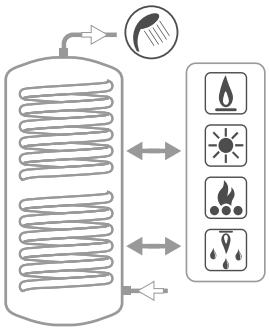


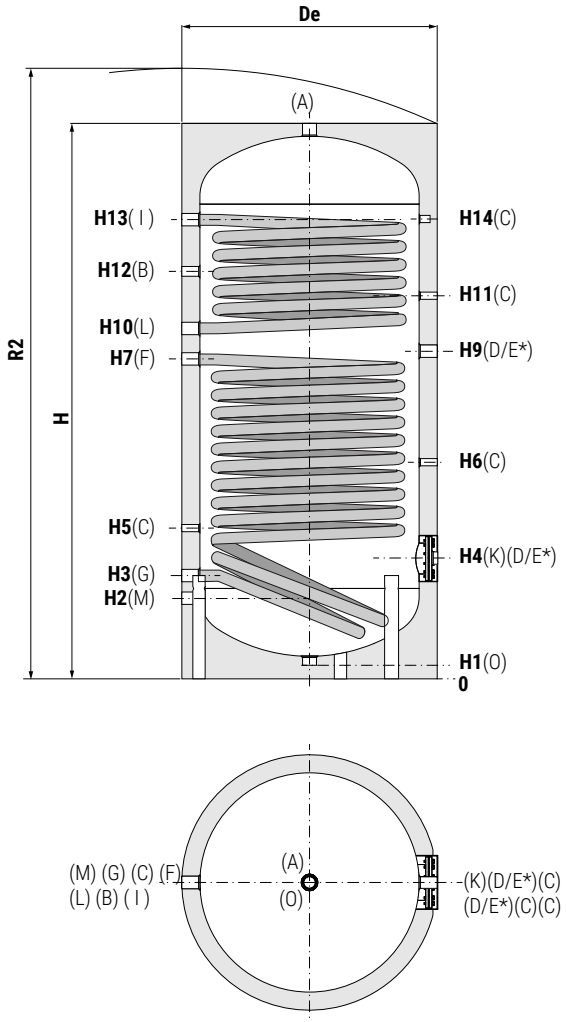
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 AP - HIGH PERFORMANCES**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	12 bar	110 °C





A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E*	Connection for magnesium anode (Use a reduction 1"1/2 –>1"1/4)
F	Lower heat exchanger inlet 1"1/4 G F
G	Lower heat exchanger outlet 1"1/4 G F
I	Upper heat exchanger inlet 1"1/4 G F
K	Flange for inspection
L	Upper heat exchanger outlet 1"1/4 G F
M	Domestic cold water circuit inlet
O	Drain 1" 1/4 F

BOLLY® 2 AP WB +AP WB CLASS A (HARD FOAM INSULATION)

Model	Volume	Weight	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9
	[lt]	[Kg]	[mm]											
200	189	65	550	1434	1540	71	215	285	325	405	535	925	//	970
300	291	83	650	1486	1630	71	241	311	381	431	561	832	//	906
500	498	134	750	1786	1950	71	266	346	411	466	586	1036	//	1111

Model	H10	H11	H12	H13	H14	K	O	M	D	B	A
	[mm]						Connections F				
200	1015	1080	1115	1205	1195	Øi120/Øe180	1"1/4	3/4"	1"1/2	3/4"	1"1/4
300	981	1021	1101	1221	1221	Øi120/Øe180	1"1/4	1"	1"1/2	1"	1"1/4
500	1186	1246	1331	1476	1476	Øi120/Øe180	1"1/4	1"	1"1/2	1"	1"1/4

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

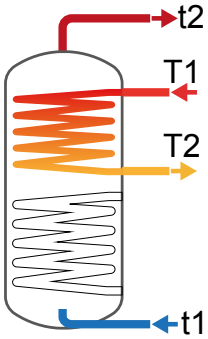
BOLLY® **2 AP**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

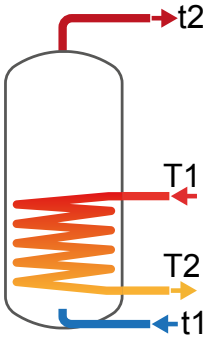
UPPER HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary from 10°C to t2 constant use of DHW production					DHW continuous production lt/h from 10°C to t2 and primary at T1				
	[m³/h]	T1/t2				T1/t2					T1/t2				
		55/50	65/60	70/60	80/60	55/45	65/45	70/45	80/45	80/60	55/45	65/45	70/45	80/45	80/60
200	2	54	56	39	25	4	7	8	10	8	107	162	190	247	145
	1	61	63	44	29	4	6	7	9	8	97	146	170	221	131
300	3	41	43	30	20	10	15	18	23	17	243	368	432	562	290
	1,5	47	48	34	22	9	14	16	20	15	223	333	389	503	267
500	3,5	49	51	35	23	14	23	26	32	24	353	532	623	809	419
	1,75	55	57	40	26	13	20	23	29	22	326	482	562	724	385

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	2	234	297	302	311	302	400	422	468	150	15
	1	232	294	298	307	294	387	406	447	50	5
300	3	373	477	488	509	527	710	761	865	830	81
	1,5	370	471	481	500	511	682	727	818	243	24
500	3,5	628	800	815	846	852	1137	1210	1359	1264	124
	1,75	623	792	805	832	830	1097	1161	1291	371	36

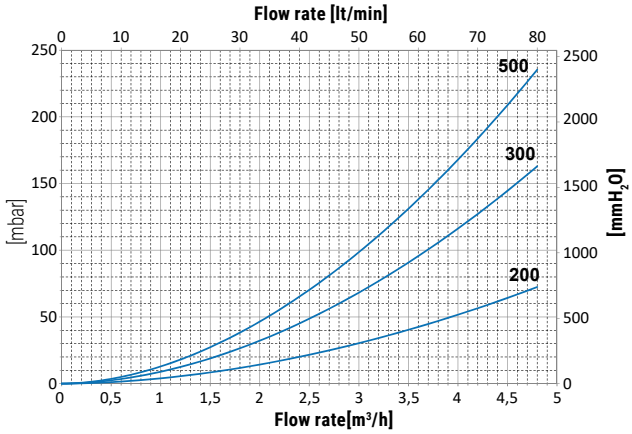
LOWER HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production					DHW continuous production lt/h within 10-45 °C and primary at T1				
	[m³/h]	T1/t2				T1/t2					T1/t2				
		55/50	65/60	70/60	80/60	55/45	65/45	70/45	80/45	80/60	55/45	65/45	70/45	80/45	80/60
200	3	54	56	40	26	16	23	27	36	29	384	576	673	871	500
	1,5	62	65	46	31	15	21	25	32	26	354	522	607	778	455
300	3	82	85	60	39	16	23	27	36	29	384	576	673	871	500
	1,5	94	98	69	45	15	21	25	32	26	354	522	607	778	455
500	3,5	100	104	73	48	22	33	39	50	41	549	820	956	1234	711
	1,75	115	120	85	56	21	30	35	44	37	506	741	858	1095	643

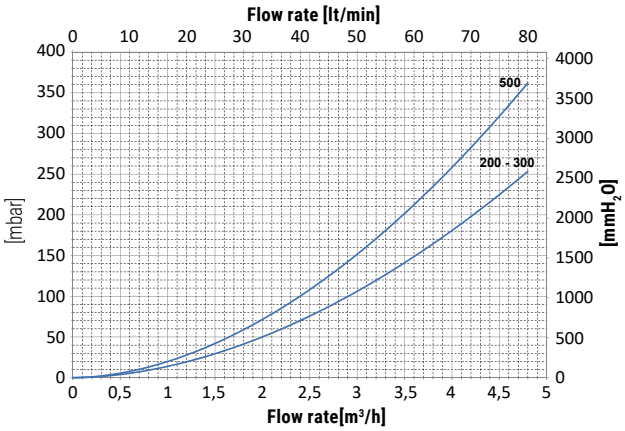
Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	3	280	366	382	415	523	731	808	967	830	81
	1,5	275	357	371	400	499	688	756	892	243	24
300	3	397	512	528	561	640	877	954	1113	830	81
	1,5	392	503	517	545	616	833	901	1038	243	24
500	3,5	661	848	871	917	1008	1367	1476	1699	1264	124
	1,75	653	835	854	894	974	1304	1398	1587	371	36

HEAT EXCHANGERS PRESSURE DROP



UPPER

Heat exchangers surface [m²]	
200	0,4
300	0,9
500	1,3



LOWER

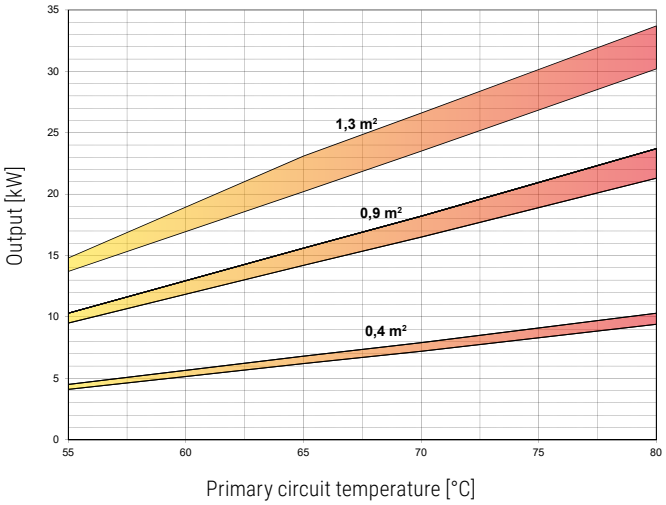
Heat exchangers surface [m²]	
200	1,4
300	1,4
500	2,2

BOLLY® **2 AP**

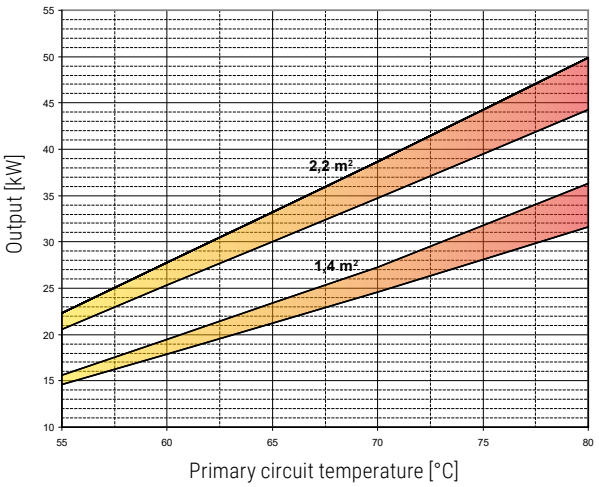
HEAT EXCHANGERS TECHNICAL DATA



Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)

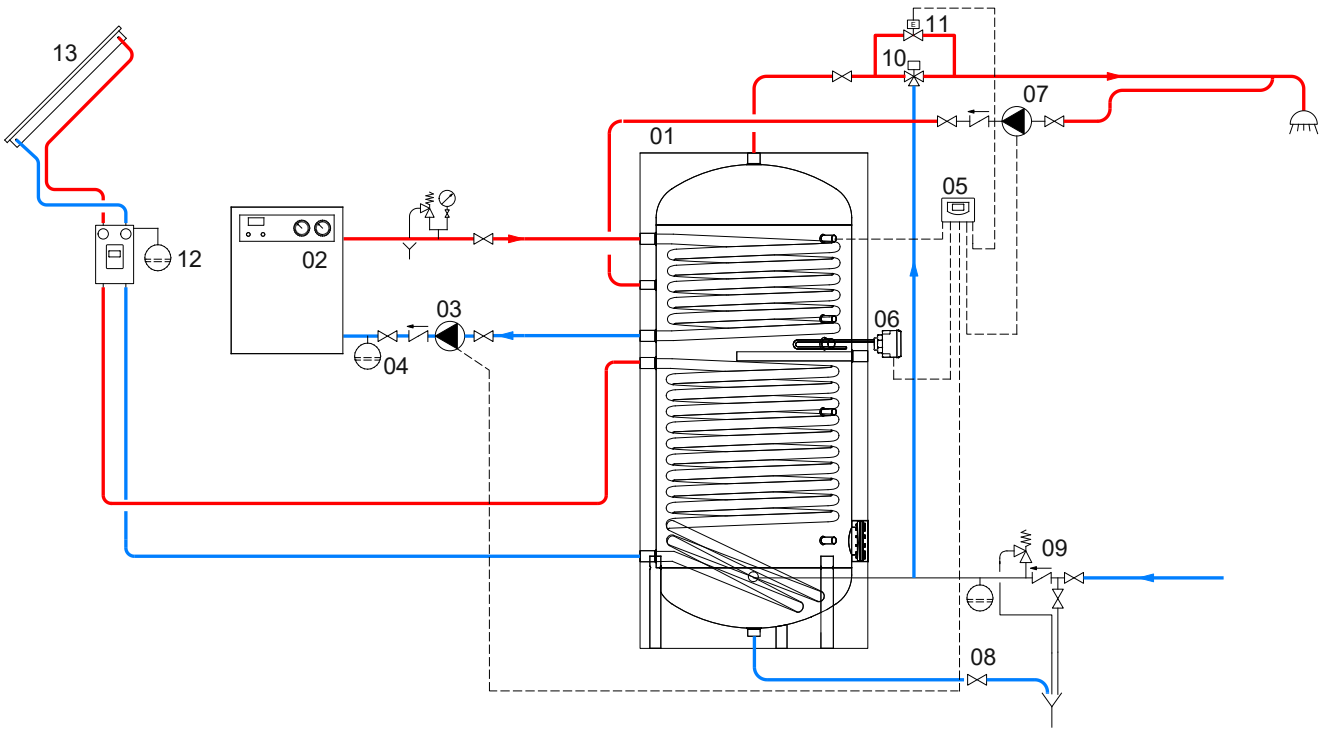


Heat exchanger	0,4 m²		0,9 m²		1,3 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	3	1,5	3,5	1,75



Heat exchanger	1,4 m²		2,2 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN
	3	1,5	3,5	1,75

EXAMPLE OF INSTALLATION WITH **BOLLY® 2 AP**



1	Bolly® 2 AP	5	Electronic Control/thermostat	9	Hydraulic safety group
2	Generator	6	Electric immersion heater (optional)	10	Thermostatic mixing valve
3	Circulation group	7	D.H.W. recirculation group	11	By-pass solenoid valve
4	Expansion vessel	8	Blowdown valve	12	Solar system circulation group

13	Solar panels

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

CORDIVARI

BOLLY® **MURALE**

HANGED POLYWARM® COATED CALORIFIER FOR D.H.W. PRODUCTION WITH 1 FIXED HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
Complete with wall brackets
HEAT EXCHANGER:
Nr.1 Mild steel Polywarm® coated heat exchanger.
INSULATION
High thermal insulation with ecological polyurethane hard foam.
Grey PVC external lining.

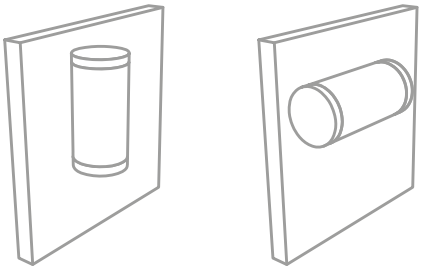
CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

POLYWARM® COATED HEAT EXCHANGER

PROMPT AVAILABILITY





Vertical or horizontal wall hanged

BOLLY® MURALE WB

Model	HARD FOAM INSULATION+PVC Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
80	3104160900031	0,44	C
100	3104160900032	0,44	C
150	3104160900033	0,63	C
200	3104160900034	0,84	C
300	3104160900035	1,22	C

Model	Output	Ignition time	Production of D.H.W.	
	[kW]	[min]	[lt/h]	[lt/10']
80	14	26	345	171
100	14	32	345	200
150	21	33	508	298
200	29	32	704	403
300	42	34	1027	599

Data have been calculated with primary water at 85 °C - DHW production from 10°C to 45°C, and storage at 60 °C

ACCESSORIES

Electric immersion heater with thermostat

Art. Nr.	Output	Connection
5240000000051	1,5 kW	1"1/2
5240000000052	2 kW	1"1/2
5240000000053	3 kW	1"1/2



Thermometer

Art. Nr.
5032240000107
5 units box



HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER	
5240000000074	1,5 kW	
5240000000075	2 kW	
5240000000076	3 kW	



Magnesium anode

ART. NR.	Model
5200000041015	80÷150
5200000041010	200÷300
2 units box	

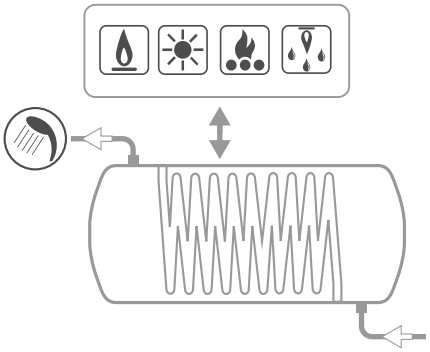


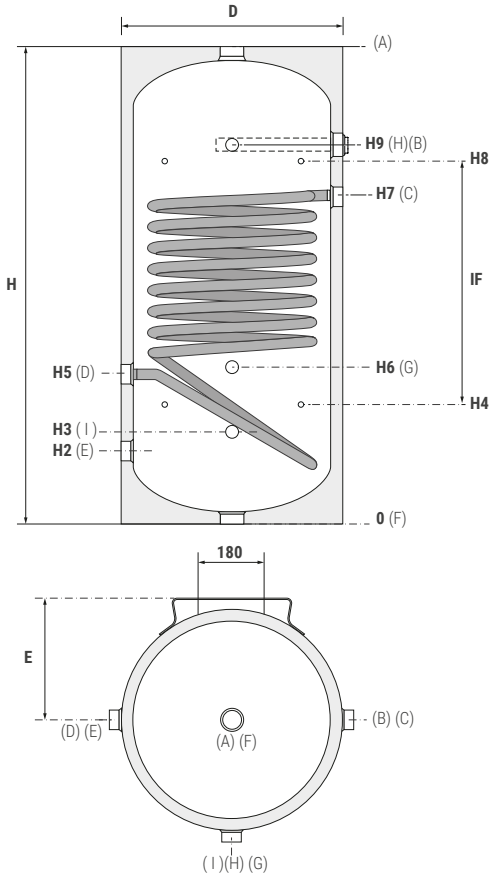
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

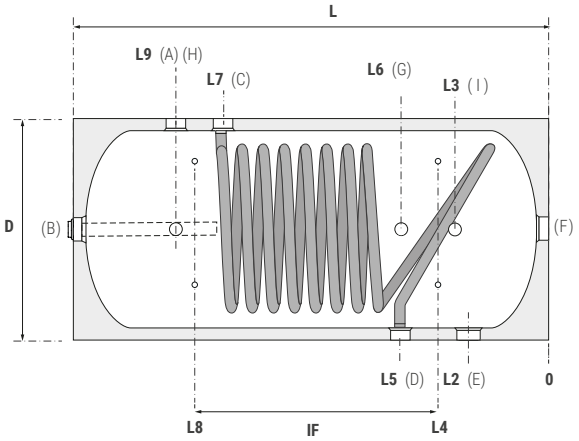
BOLLY® **MURALE**

HANGED POLYWARM® COATED CALORIFIER FOR D.H.W. PRODUCTION WITH 1 FIXED HEAT EXCHANGER

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	12 bar	110 °C







A	Domestic hot water outlet 1"1/4 G
B	Magnesium anode 1"1/4 G F
C	Primary circuit inlet 1"1/4 G F
D	Primary circuit outlet 1"1/4 G F
E	Domestic cold water circuit inlet 1"1/4 G F
F	Connection 1"1/4 G F
G	Instrumentation 1/2" G F
H	Instrumentation 1/2" G F
I	Connection for electric immersion heater 1"1/2 G F

Model	Volume	Weight	DE	H/L	H2/L2	H3/L3	H4/L4	H5/L5	H6/L6	H7/L7	H8/L8	H9/L9	IF	E
	[lt]	[Kg]	[mm]											
80	84	25	456	800	195	205	218	290	330	510	583	605	220	250
100	103	29	456	954	205	215	223	300	340	655	733	750	510	250
150	149	40	456	1330	205	215	330	300	340	1030	1000	1125	570	250
200	191	47	510	1350	215	225	318	310	350	1040	1033	1135	730	275
300	293	62	610	1400	240	250	343	335	375	1065	1058	1160	730	325

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **PRIMO**

POLYWARM® COATED CALORIFIER FOR D.H.W. PRODUCTION WITH 1 FIXED HEAT EXCHANGER FOR WALL OR FLOOR STANDING INSTALLATION



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
Mild steel Polywarm® coated heat exchanger.
INSULATION
High thermal insulation with ecological polyurethane hard foam
Grey PVC external lining.
CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection (versione verticale).
WARRANTY
2 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



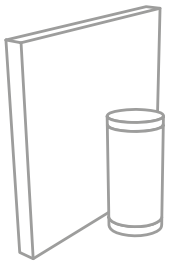


BOLLY® PRIMO WB

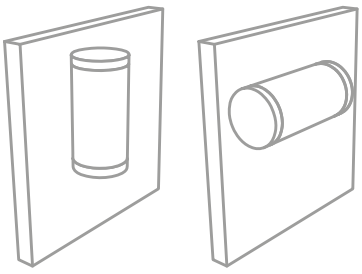
Model	HARD FOAM INSULATION		HEAT EXCHANGER SURFACE	ENERGY EFFICIENCY CLASS
	Pallet Art. Nr.	PIECES per pallet	[m²]	
100	310416090005606	6	0,44	C
150	310416090005706	6	0,63	C
200	310416090005804	4	0,84	C
300	310416090005904	4	1,22	C

Model	Output	Ignition time	Production of D.H.W.	
	[kW]	[min]	[lt/h]	[lt/10']
100	14	32	345	200
150	21	33	508	298
200	29	32	704	403
300	42	34	1027	599

Data have been calculated with primary water at 85 °C - DHW production from 10°C to 45°C, and storage at 60 °C



Standard installation floor standing



With the wall mounting kit (optional) it is possible to install the tank vertically or horizontally

ACCESSORIES

Wall fixing kit

ART. NR.	For model
5221000000069	100
5221000000070	**150**
5221000000071	**200**
5221000000072	**300**
Galvanized brackets +PVC bottom cover	



Electric immersion heater with thermostat

Art. Nr.	Output	Connection
5240000000051	1,5 kW	1"1/2
5240000000052	2 kW	1"1/2
5240000000053	3 kW	1"1/2



Thermometer

Art. Nr.
5032240000107
5 units box



Magnesium anode

ART. NR.	Model
5200000041015	100÷150
5200000041010	200÷300
2 units box	

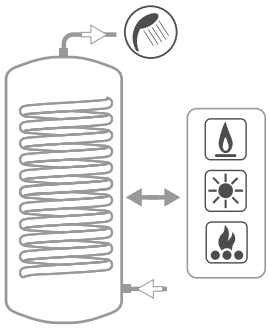


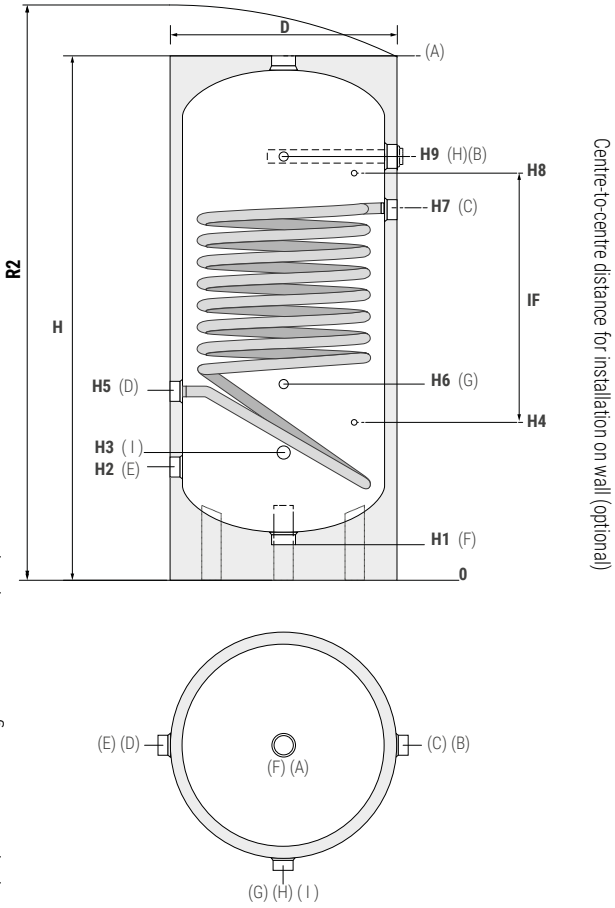
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **PRIMO**

POLYWARM® COATED CALORIFIER FOR D.H.W. PRODUCTION WITH 1 FIXED HEAT EXCHANGER FOR WALL OR FLOOR STANDING INSTALLATION

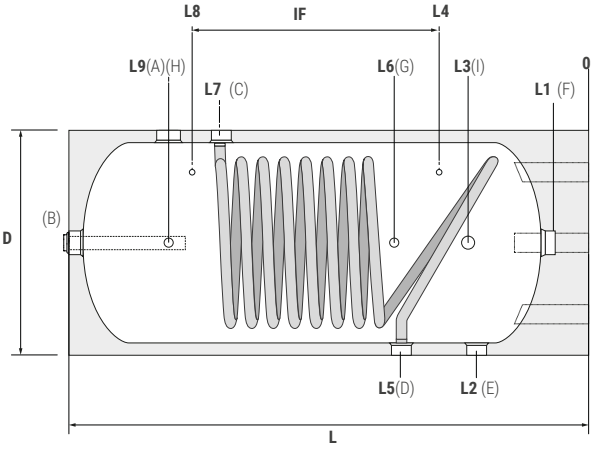
STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	12 bar	110 °C

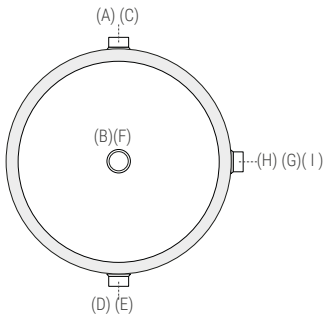




Centre-to-centre distance for installation on wall (optional)

Centre-to-centre distance for installation on wall (optional)





A	Domestic hot water outlet 1"1/4 G F
B	Magnesium anode 1"1/4 G F
C	Primary circuit inlet 1"G F
D	Primary circuit outlet 1"G F
E	Domestic cold water circuit inlet 1"1/4 G F
F	Connection 1"1/4 G F
G	Instrumentation 1/2" G F
H	Instrumentation 1/2" G F
I	Connection for electric immersion heater 1"1/2 G F

Model	Volume	Weight	DE	R1	H/L	H1/L1	H2/L2	H3/L3	H4/L4	H5/L5	H6/L6	H7/L7	H8/L8	H9/L9	IF
	[lt]	[kg]	[mm]												
100	103	29	456	1130	1025	72	276	286	294	371	411	726	804	821	510
150	149	40	456	1410	1330	72	276	286	401	371	411	1101	1071	1196	570
200	191	47	510	1450	1350	69	283	293	386	378	418	1108	1101	1203	730
300	293	62	610	1535	1400	70	310	320	413	405	445	1135	1128	1230	730

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

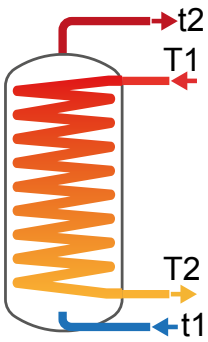
BOLLY® **MURALE -** BOLLY® **PRIMO**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

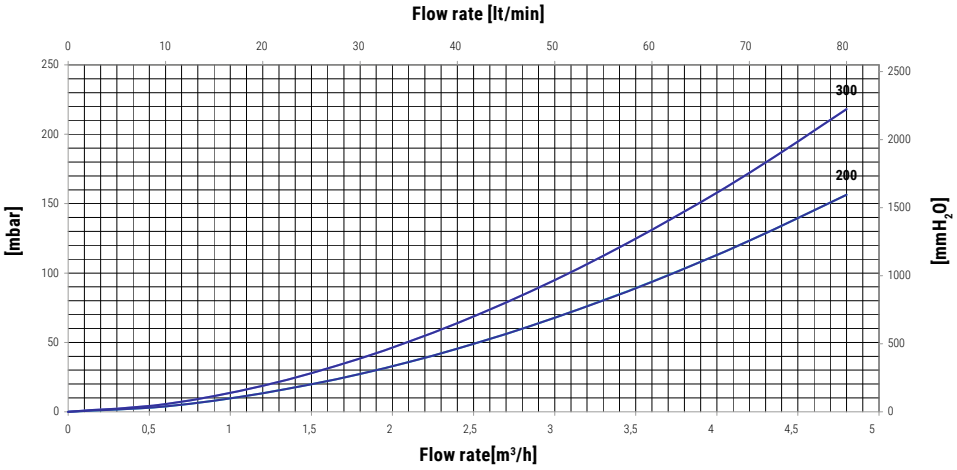
Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
80	2	80	85	55	35	4,9	7,3	8,6	11,2	114	175	207	270
	1	90	96	61	39	4,5	6,7	7,9	10,2	105	160	188	245
100	2	99	105	68	43	4,9	7,3	8,6	11,2	114	175	207	270
	1	111	119	76	48	4,5	6,7	7,9	10,2	105	160	188	245
150	2	105	111	74	47	6,5	9,7	11,3	14,7	154	234	275	358
	1	119	126	84	54	6	8,8	10,3	13,2	141	218	248	322
200	2,5	91	95	65	42	9,2	13,8	16,2	21	223	337	395	513
	1,25	102	108	73	48	8,6	12,7	14,7	19	206	308	359	464
300	3	98	102	70	46	13,1	19,6	22,9	29,6	318	479	561	727
	1,5	110	115	80	52	12,2	17,9	20,8	26,7	296	438	510	656

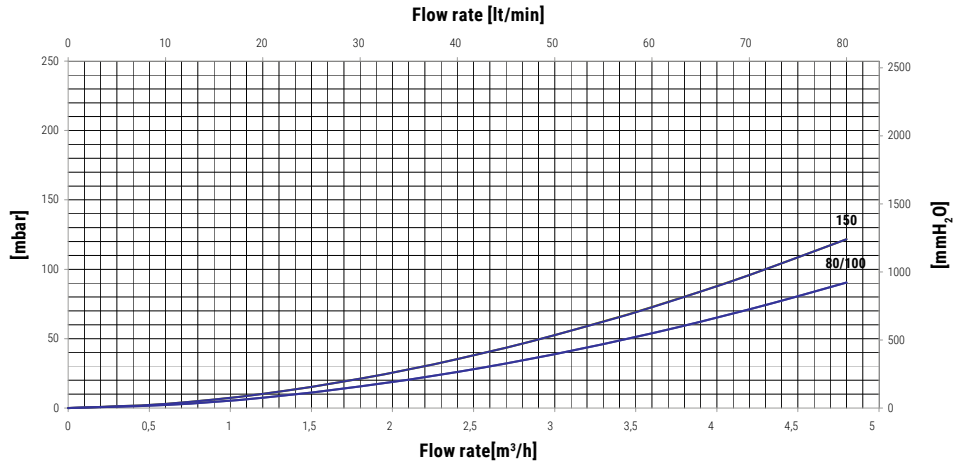


Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
80	2	110	143	149	159	183	254	280	330	175	17
	1	109	141	146	155	175	242	265	310	51	5
100	2	133	172	177	188	205	283	308	359	175	17
	1	132	170	174	184	198	271	293	339	51	5
150	2	191	246	253	267	289	394	427	494	229	22
	1	189	243	248	261	279	382	406	465	67	7
200	2,5	249	320	330	350	390	534	580	675	472	46
	1,25	246	316	324	342	376	511	551	635	139	14
300	3	379	487	501	528	580	790	856	989	908	89
	1,5	375	480	492	516	563	758	815	932	268	26

HEAT EXCHANGERS PRESSURE DROP

Heat exchangers surface [m²]	
80	0,44
100	0,44
150	0,63
200	0,84
300	1,22



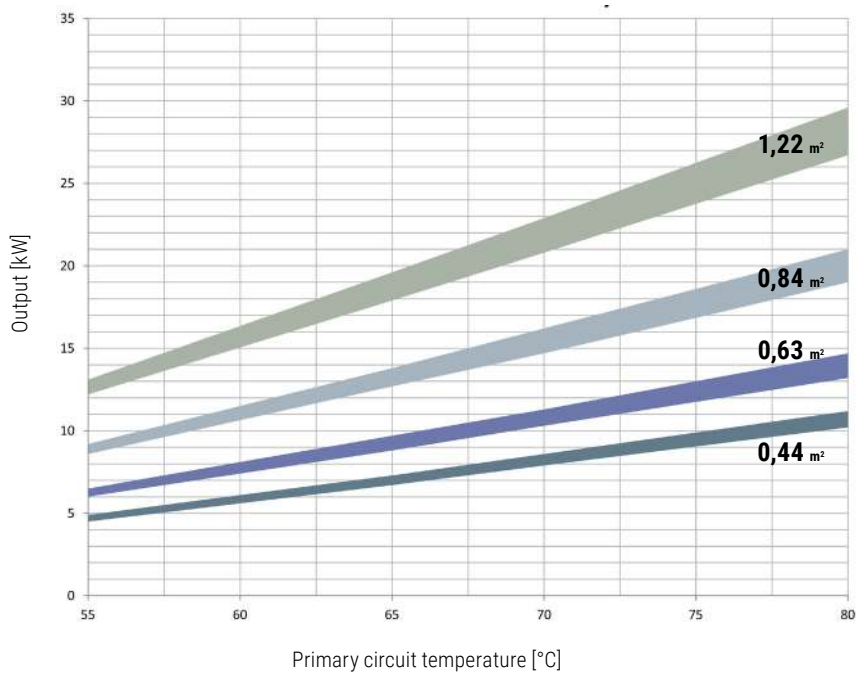


BOLLY® **MURALE -** BOLLY® **PRIMO**

HEAT EXCHANGERS TECHNICAL DATA

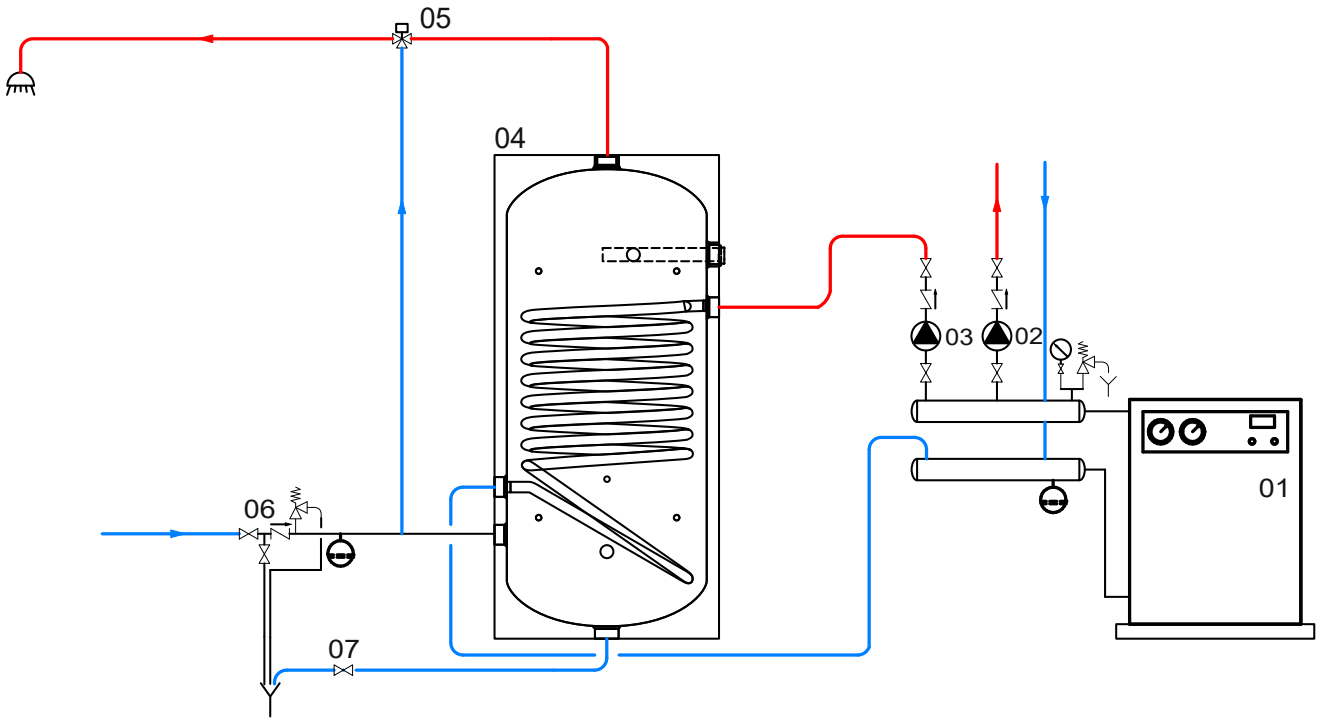


Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)



Heat exchanger [m²]	0,44		0,63		0,84		1,22	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	2	1	2,5	1,25	3	1,5

EXAMPLE OF INSTALLATION WITH **BOLLY® MURALE**



01	Generator	03	D.H.W. circulation group	05	Thermostatic mixing valve	07	Blowdown valve
02	Heating system circulation group	04	Bolly Murale	06	Hydraulic safety group		

INTERKA

POLYWARM® COATED DOUBLE WALLED CALORIFIER FOR D.H.W. PRODUCTION



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
Double wall heat exchanger.

INSULATION
High thermal insulation with ecological polyurethane hard foam.
Grey PVC external lining.
CATHODE PROTECTION
Magnesium anode.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

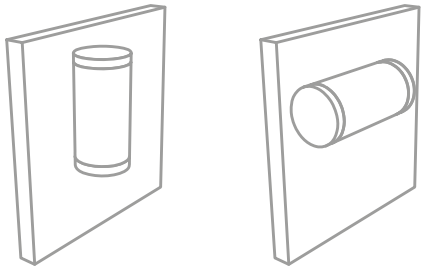
POLYWARM® COATED DHW STORAGE

PROMPT AVAILABILITY

INTERKA WB

Model	HARD FOAM INSULATION	DOUBLE WALL EXCHANGER Surface	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]	
80	3203160310001	0,36	C
100	3203160310002	0,54	C
150	3203160310003	0,82	C
200	3203160310004	1,00	C
300	3203160310015	1,40	C





Vertical or horizontal wall hanged

Model	Output	Ignition time	Production of D.H.W.		Weight
	[kW]	[min]	[lt/h]	[lt/10']	[Kg]
80	8	27	190	112	24
100	11	24	263	144	30
150	15	26	372	212	41
200	20	25	508	285	49
300	24	31	606	401	65

Data have been calculated with primary water at 80 °C - DHW production from 10°C to 45°C, and storage at 60 °C

ACCESSORIES

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.
5240000000077



Magnesium anode

ART. NR.	Model
5200000041015	80÷150
5200000041010	200÷300
2 units box	



Electric immersion heater with thermostat

Art. Nr.	Output	Connection	
5240000000042	1,5 kW	1" 1/4	



Thermometer

Art. Nr.
5032240000107
5 units box

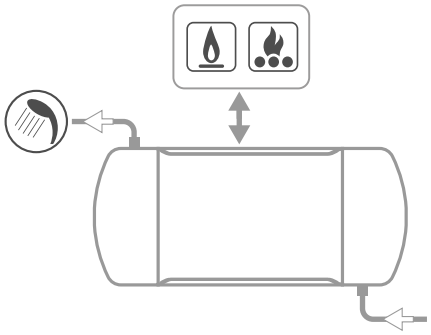


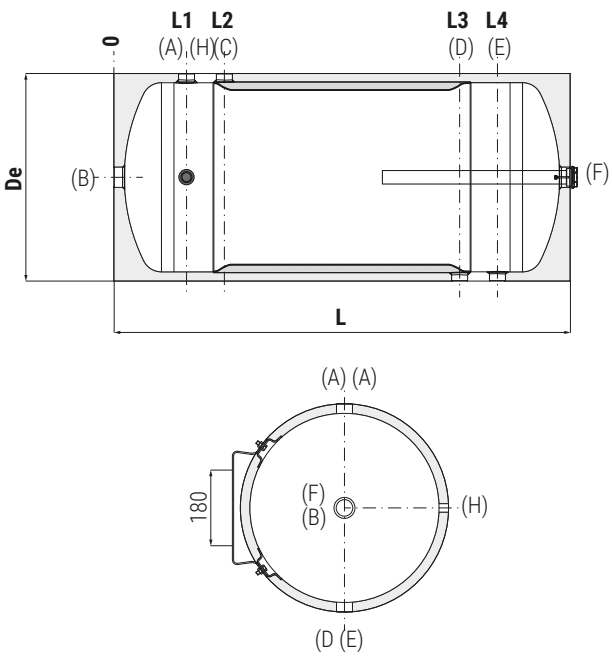
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

INTERKA

POLYWARM® COATED DOUBLE WALLED CALORIFIER FOR D.H.W. PRODUCTION

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	90 °C	1,5 bar	99 °C





A	Domestic hot water outlet 1"1/4 G
B	Connection 1"1/4 G F / Magnesium anode
C	Primary circuit inlet 1"1/4 G F
D	Primary circuit outlet 1"1/4 G F
E	Domestic cold water circuit inlet 1"1/4 G F
F	Connection 1"1/4 G F / Magnesium anode
G	Instrumentation 1/2" G F
H	Instrumentation 1/2" G F

POSSIBLE VERTICAL INSTALLATION

NOTE:
THIS INSTALLATION MAY REDUCE THE D.H.W. STORAGE AVAILABILITY.

Model	Volume	De	L	L1	L2	L3	L4	C-D
	[lt]	[mm]						Connections F
80	82	456	770	165	260	510	605	1"
100	100	456	920	165	260	660	755	1"
150	152	510	1086	173	268	818	913	1"
200	203	560	1170	190	285	885	980	1"
300	293	610	1399	230	325	1075	1170	1"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

INTERKA **PANAREA**

POLYWARM® CALORIFIER WITH DOUBLE WALL EXCHANGER SPECIFIC FOR THERMOSYPHON SOLAR THERMAL SYSTEMS



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
Double wall heat exchanger.

INSULATION
High thermal insulation with ecological polyurethane hard foam.
External coating in metal sheet protected by a particular anticorrosive treatment.
CATHODE PROTECTION
Magnesium anode.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

PROMPT AVAILABILITY



Model	INTERKA PANAREA WB HARD FOAM INSULATION Art. Nr.	DOUBLE WALL EXCHANGER Surface [m²]	DOUBLE WALL EXCHANGER Volume [lt]	ENERGY EFFICIENCY CLASS
150	3068160980166	0,80	8,0	**B**
200	3068160980167	1,20	12,0	**B**
300	3068160980168	2,05	21,0	**B**

ACCESSORIES

Electric immersion heater with cover

Art. Nr.	Output	Connection	
5240000000073	1,5 kW	1" 1/4	
SEE CORDIVARI INTEGRATED THERMAL SOLAR SYSTEMS CATALOGUE			

HEAT MANAGER

See CORDIVARI INTEGRATED THERMAL SOLAR SYSTEMS catalogue	

Magnesium anode

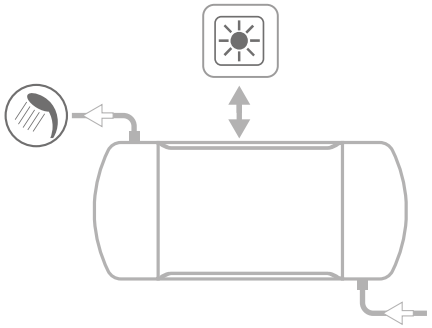
ART. NR.	Model	
5200000041008	150	
5200000041009	200,300	
2 units box		

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

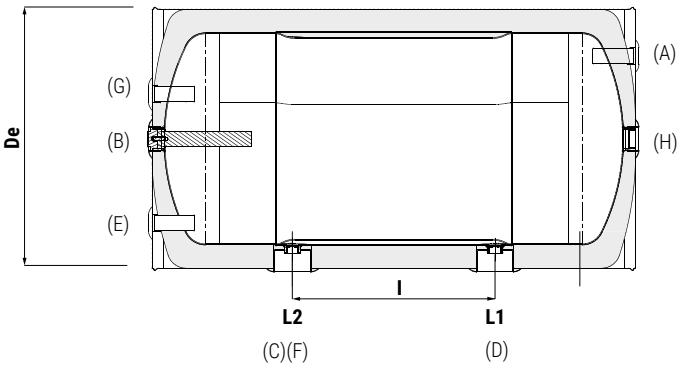
INTERKA **PANAREA**

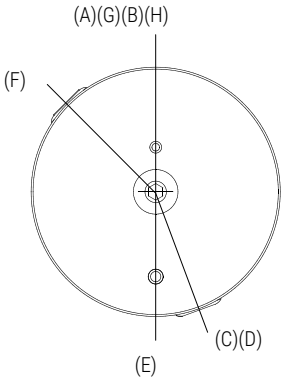
POLYWARM® CALORIFIER WITH DOUBLE WALL EXCHANGER SPECIFIC FOR THERMOSYPHON SOLAR THERMAL SYSTEMS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	90 °C	2,5 bar	99 °C

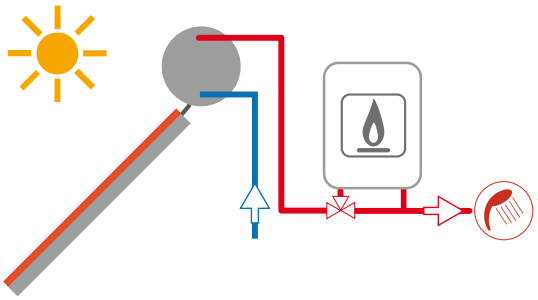


A	Domestic hot water outlet 3/4" G F
B	Connection for magnesium anode
C	Solar collector connection 3/4" G F
D	Solar collector connection 3/4" G F
E	Domestic water inlet 3/4" G F
F	Overflow volume 1/2" G F
G	Instrumentation 1/2" G F
H	Electric immersion heater 1" 1/4 G F (optional)









Model	Volume	De	L	I	L1	L2
	[lt]	[mm]				
150	143	550	1026	430	298	728
200	183	550	1286	640	323	963
300	270	550	1840	1090	375	1465

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE



BOLLYTERM® HEAT PUMP WATER HEATERS

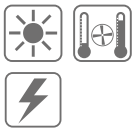


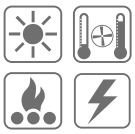
BOLLYTERM® RANGE

DHW production





	Bollyterm® HP	Bollyterm® HP 1
Heat exchanger model	Water heater with integrated heat pump	- Water heater with integrated heat pump - 1 fixed coil
Number of heat exchangers		
Energy source		
Energy efficiency class	**A+**	**A+**
Insulation	Polyurethane hard foam	Polyurethane hard foam
Available range	200 - 300	200 - 300
Installation	floor standing	floor standing
Suggested Application	Traditional installations	Traditional, solar and condensation installations

	
Bollyterm® HP 2	Bollyterm® HOME
- Water heater with integrated heat pump - 2 fixed coils	- Water heater with integrated heat pump
	
	
A+	**A+**
Polyurethane hard foam	Polyurethane hard foam+painted metallic lining
300	80 - 110
floor standing	wall hanging
Traditional, solar and condensation installations	Traditional installations

BOLLYTERM® **HP**

POLYWARM® COATED WATER HEATER WITH INTEGRATED HEAT PUMP



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT PUMP
The water inside the tank is warmed up by an integrated heat pump, equipped with external condensing coil. **A 1500 Watt electric resistance with "BOOST" option is already installed.**
Electronic central unit with graphic display allows controlling and scheduling.
INSULATION
High thermal insulation with ecological polyurethane hard foam.
Upper cover and flange cover in ABS.

CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Mild steel Polywarm® coated flange plate with electrical immersion resistance.
WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

Percorso Efficienza Innovazione
MCE - EXPOCOMFORT

POLYWARM® COATED DHW STORAGE

PROMPT AVAILABILITY



BOLLYTERM® HP

ENERGY EFFICIENCY CLASS

Model	HARD FOAM INSULATION Art. Nr.	ErP
200	3180162330102	A+
300	3180162330103	A+

Model	Net volume heated by heat pump	Room temperature output	C.O.P.	ErP Energy efficiency class (Reg EU 812/2013)	Ignition time (air temperature 20 °C - Water temperature from 15 °C to 55 °C)	Electric integration power	Maximum absorption	
							Heat pump	Total
	[lt]	[°C]			[min]	[W]	[W]	
200	176	-5/+43	2,98(*)	A+	236'	1500	805	2305
300	264		2,91(*)	A+	353'			

(*) Data obtained under the following conditions (T air 20 °C - T water from 15 °C to 55 °C)

INTEGRATED HEAT PUMP

The Bollyterm® HP produces DHW thanks to the heat energy naturally present in the air, allowing considerable energy savings.
The functioning of the heat pump is based on the exploitation of R134a ecological gas that, through its compression and expansion, ensures high performance and cost efficiency.
The energy (heat) is transferred from the air to the water through a condenser coil wrapped outside the tank, avoiding any possible contact between the fluid and the sanitary water, ensuring therefore maximum hygiene and safety.
The output is indicated by the coefficient of performance C.O.P. indicating the relation between used and obtained energy.



Heat Pump TECHNICAL DATA						
Power supply	Max water temperature	Coolant type	Refrigerant charge	Max ducts length / Max static P	Minimum diameter pressure for duct	Acoustic level
[V / Ph / Hz]	[°C]	[type]	[g]	[m / Pa]	[mm]	[dB]
220-240 / 1 / 50	60	R134a	800	8 / 60	180	59 (*)

(*) Test in compliance with European standard EN 12102 – EN ISO 3741

ACCESSORIES

Electric immersion heater

Art. Nr.	Output	Size
5221000000064	2 kW	1" 1/2
5221000000066	3 kW	75-140 mm

See Accessories section

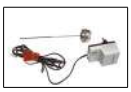
Thermometer

Art. Nr.
5032240000107
5 units box



Titanium anode

See Accessories section



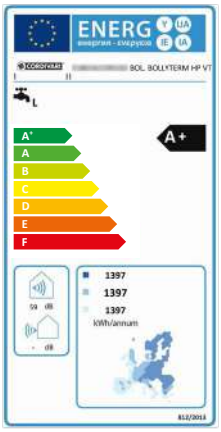
Electric immersion heater **already installed** - Art. Nr. for spare part only		
5221000000103	1,5 kW	75-140 mm

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLYTERM® **HP**

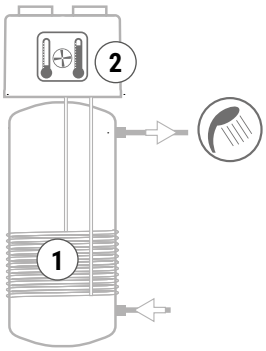
POLYWARM® COATED WATER HEATER WITH INTEGRATED HEAT PUMP

STORAGE	
Pmax	Tmax
10 bar	90 °C



IMQ CLIMA
CENTRO DI INNOVAZIONE TECNOLOGICA AGEMONT

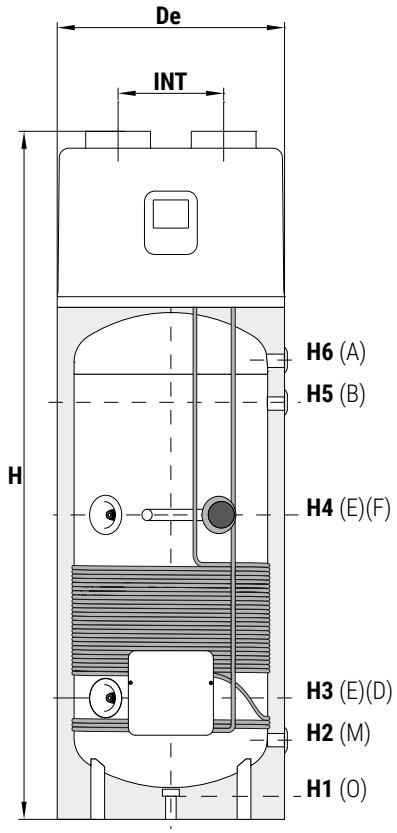
POLITECNICO DI MILANO
DIPARTIMENTO DI ENERGIA
REALAB- RENEWABLE HEATING AND COOLING LAB



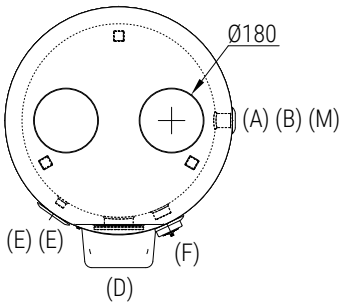
See TECHNICAL SUPPORT chapter for example of installation

1 External to the storage, condensator coil avoiding any contact between coolant - D.H.W.

2 Electronic central unit (included):
- set point hot water
- self check
- anti-legionellosis treatement
- operating programs
- "BOOST" mode



A	Domestic hot water outlet 1" F
B	Recirculation 1" F
D	Flange for inspection Ø 75 mm / Electric immersion heater
E	Connection for instrumentation 1/2" F
F	Connection for magnesium anode 1"1/4 F
M	Domestic cold water circuit inlet 1" F
O	Drain 1" 1/4 F



Model	Volume	De	INT	H	H1	H2	H3	H4	H5	H6
	[lt]	[mm]								
200	205	640	340	1585	71	240	350	800	815	925
300	293	640	340	1960	71	240	350	860	1190	1300

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLYTERM® **HP 1**

POLYWARM® COATED WATER HEATER WITH INTEGRATED HEAT PUMP AND 1 FIXED HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT PUMP
The water inside the tank is warmed up by an integrated heat pump, equipped with external condensing coil. **A 1500 Watt electric resistance with "BOOST" option is already installed.**
Electronic central unit with graphic display allows controlling and scheduling.
INTEGRATIVE HEAT EXCHANGER:
N° 1 mild steel Polywarm® coated heat exchanger.

INSULATION
High thermal insulation with ecological polyurethane hard foam.
Upper cover and flange cover in ABS.
CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Mild steel Polywarm® coated flange plate with electrical immersion resistance.
WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE
POLYWARM® COATED HEAT EXCHANGER

Percorso Efficienza Innovazione
MCE - EXPOCOMFORT

PROMPT AVAILABILITY



BOLLYTERM® HP 1

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS ErP
200	3181162330102	0,8	**A+**
300	3181162330103	1,2	**A+**

Model	Net volume heated by heat pump [lt]	Room temperature output [°C]	C.O.P.	ErP Energy efficiency class (Reg EU 812/2013)	Ignition time (air temperature 20 °C - Water temperature from 15 °C to 55 °C) [min]	Electric integration power [W]	Maximum absorption [W] Heat pump	Maximum absorption [W] Total
200	176	-5/+43	2,98(*)	A+	236'	1500	805	2305
300	264		2,91(*)	A+	353'			

(*) Data obtained under the following conditions (T air 20 °C - T water from 15 °C to 55 °C)

INTEGRATED HEAT PUMP

The Bollyterm® HP produces DHW thanks to the heat energy naturally present in the air, allowing considerable energy savings.
The functioning of the heat pump is based on the exploitation of R134a ecological gas that, through its compression and expansion, ensures high performance and cost efficiency.
The energy (heat) is transferred from the air to the water through a condenser coil wrapped outside the tank, avoiding any possible contact between the fluid and the sanitary water, ensuring therefore maximum hygiene and safety.
The output is indicated by the coefficient of performance C.O.P. indicating the relation between used and obtained energy.



Heat Pump TECHNICAL DATA						
Power supply	Max water temperature	Coolant type	Refrigerant charge	Max ducts length / Max static P	Minimum diameter pressure for duct	Acoustic level
[V / Ph / Hz]	[°C]	[type]	[g]	[m / Pa]	[mm]	[dB]
220-240 / 1 / 50	60	R134a	800	8 / 60	180	59 (*)

(*) Test in compliance with European standard EN 12102 – EN ISO 3741

ACCESSORIES

Electric immersion heater

Art. Nr.	Output	Size
5221000000064	2 kW	1" 1/2
5221000000066	3 kW	75-140 mm

See Accessories section

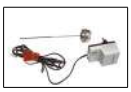
Thermometer

Art. Nr.
5032240000107
5 units box



Titanium anode

See Accessories section



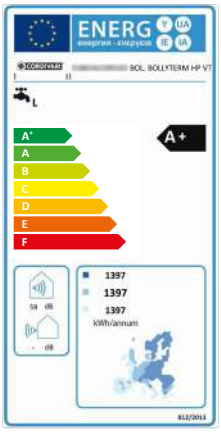
Electric immersion heater **already installed** - Art. Nr. for spare part only		
5221000000103	1,5 kW	75-140 mm

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLYTERM® **HP 1**

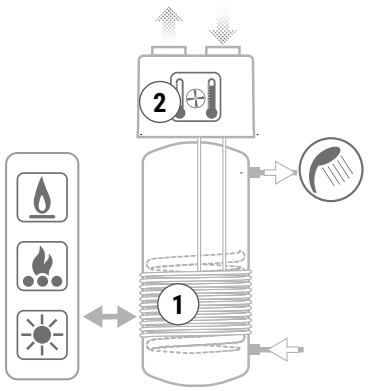
POLYWARM® COATED WATER HEATER WITH INTEGRATED HEAT PUMP AND 1 FIXED HEAT EXCHANGER

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	12 bar	110 °C



IMQ CLIMA
CENTRO DI INNOVAZIONE TECNOLOGICA AGEMONT

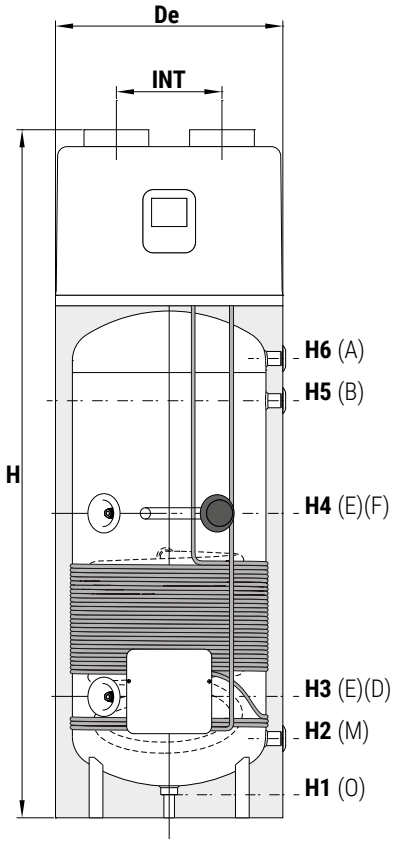
POLITECNICO DI MILANO
DIPARTIMENTO DI ENERGIA
REALAB- RENEWABLE HEATING AND COOLING LAB

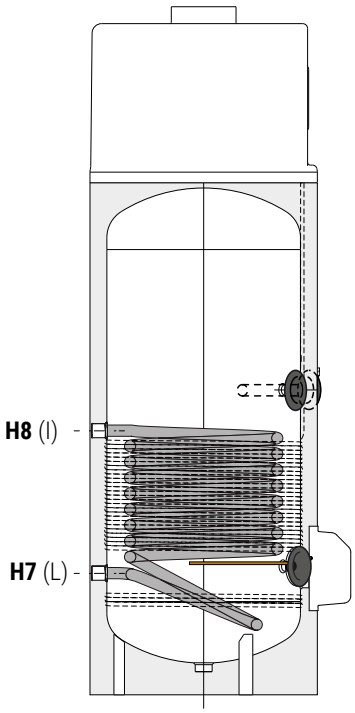


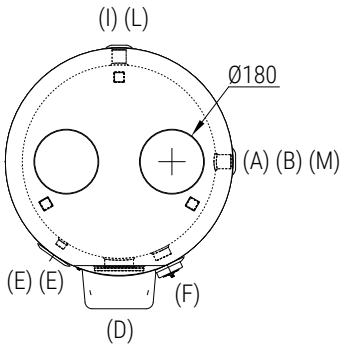
See TECHNICAL SUPPORT chapter for example of installation

1 External to the storage, condensator coil avoiding any contact between coolant - D.H.W.

2 Electronic central unit (included):
- set point hot water
- self check
- anti-legionellosis treatement
- operating programs
- "BOOST" mode







A	Domestic hot water outlet 1" F
B	Recirculation 1" F
D	Flange for inspection Ø 75 mm / Electric immersion heater
E	Connection for instrumentation 1/2" F
F	Connection for magnesium anode 1"1/4 F
I	Primary circuit inlet 1"1/4 G F
L	Primary circuit outlet 1"1/4 G F
M	Domestic cold water circuit inlet 1" F
O	Drain 1" 1/4 F

Model	Volume	De	INT	H	H1	H2	H3	H4	H5	H6	H7	H8
	[lt]	[mm]										
200	205	640	340	1585	71	240	350	800	815	925	345	765
300	293	640	340	1960	71	240	350	860	1190	1300	351	755

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLYTERM® **HP 2**

POLYWARM® COATED WATER HEATER WITH INTEGRATED HEAT PUMP AND 2 FIXED HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT PUMP
The water inside the tank is warmed up by an integrated heat pump, equipped with external condensing coil. **A 1500 Watt electric resistance with "BOOST" option is already installed.**
Electronic central unit with graphic display allows controlling and scheduling.
INTEGRATIVE HEAT EXCHANGER:
N° 2 mild steel Polywarm® coated heat exchangers.

INSULATION
High thermal insulation with ecological polyurethane hard foam.
Upper cover and flange cover in ABS.
CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Mild steel Polywarm® coated flange plate with electrical immersion resistance.
WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

POLYWARM® COATED HEAT EXCHANGER

Percorso Efficienza Innovazione
MCE - EXPOCOMFORT

PROMPT AVAILABILITY



BOLLYTERM® HP 2

Model	HARD FOAM INSULATION	HEAT EXCHANGER SURFACE		ENERGY EFFICIENCY CLASS
		Lower	Upper	
	Art. Nr.	[m²]		
300	3180162330013	1,2	0,67	**A+**

Model	Net volume heated by heat pump	Room temperature output	C.O.P.	ErP Energy efficiency class (Reg EU 812/2013)	Ignition time (air temperature 20 °C - Water temperature from 15 °C to 55 °C)	Electric integration power	Maximum absorption	
							Heat pump	Total
	[lt]	[°C]			[min]	[W]	[W]	
200	176	-5/+43	2,98(*)	A+	236'	1500	805	2305
300	264		2,91(*)	A+	353'			

(*) Data obtained under the following conditions (T air 20 °C - T water from 15 °C to 55 °C)

INTEGRATED HEAT PUMP

The Bollyterm® HP produces DHW thanks to the heat energy naturally present in the air, allowing considerable energy savings.
The functioning of the heat pump is based on the exploitation of R134a ecological gas that, through its compression and expansion, ensures high performance and cost efficiency.
The energy (heat) is transferred from the air to the water through a condenser coil wrapped outside the tank, avoiding any possible contact between the fluid and the sanitary water, ensuring therefore maximum hygiene and safety.
The output is indicated by the coefficient of performance C.O.P. indicating the relation between used and obtained energy.



Heat Pump TECHNICAL DATA						
Power supply	Max water temperature	Coolant type	Refrigerant charge	Max ducts length / Max static P	Minimum diameter pressure for duct	Acoustic level
[V / Ph / Hz]	[°C]	[type]	[g]	[m / Pa]	[mm]	[dB]
220-240 / 1 / 50	60	R134a	800	8 / 60	180	59 (*)

(*) Test in compliance with European standard EN 12102 – EN ISO 3741

ACCESSORIES

Electric immersion heater

Art. Nr.	Output	Size
5221000000064	2 kW	1" 1/2
5221000000066	3 kW	75-140 mm

See Accessories section

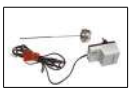
Thermometer

Art. Nr.
5032240000107
5 units box



Titanium anode

See Accessories section



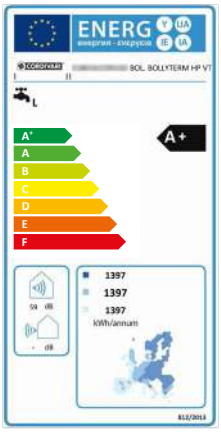
Electric immersion heater **already installed** - Art. Nr. for spare part only		
5221000000103	1,5 kW	75-140 mm

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLYTERM® **HP 2**

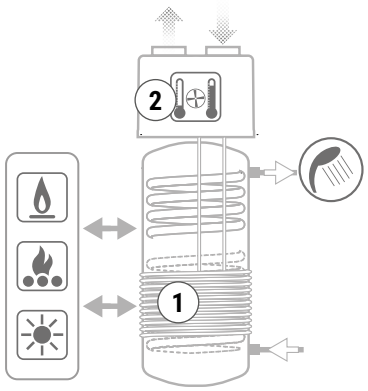
POLYWARM® COATED WATER HEATER WITH INTEGRATED HEAT PUMP AND 2 FIXED HEAT EXCHANGERS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	12 bar	110 °C

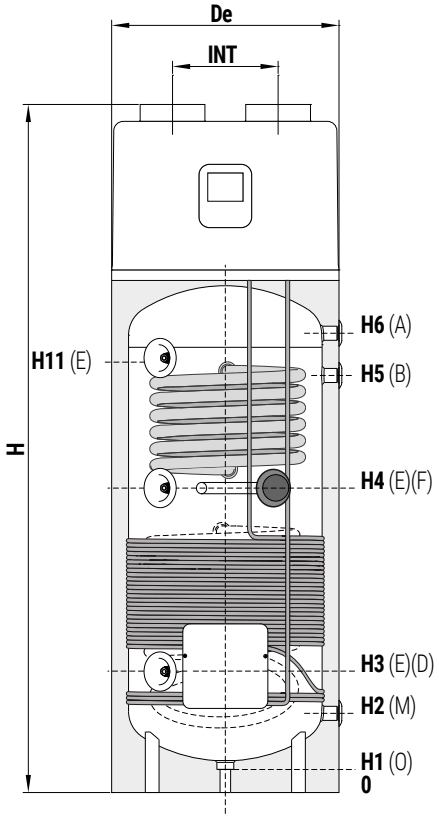


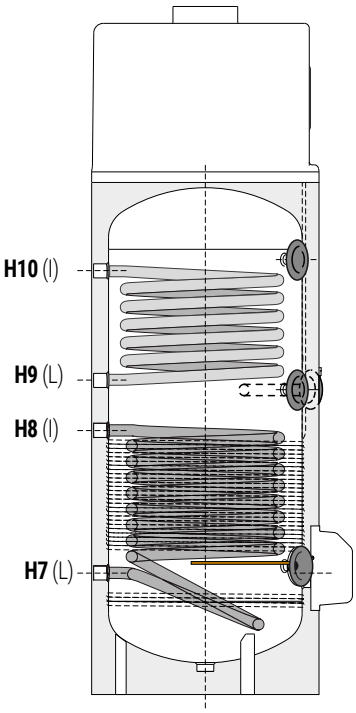
IMQ CLIMA
CENTRO DI INNOVAZIONE TECNOLOGICA AGEMONT

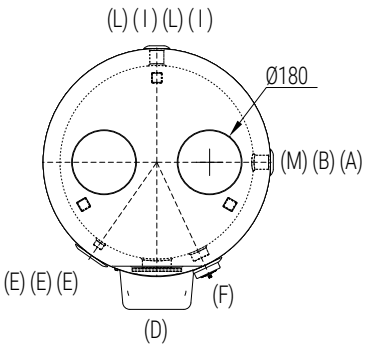
POLITECNICO DI MILANO
DIPARTIMENTO DI ENERGIA
REALAB- RENEWABLE HEATING AND COOLING LAB



See TECHNICAL SUPPORT chapter for example of installation







1 External to the storage, condensator coil avoiding any contact between coolant - D.H.W.

2 Electronic central unit (included):
- set point hot water
- self check
- anti-legionellosis treatement
- operating programs
- "BOOST" mode

A	Domestic hot water outlet 1" F
B	Recirculation 1" F
D	Flange for inspection Ø 75 mm / Electric immersion heater
E	Connection for instrumentation 1/2" F
F	Connection for magnesium anode 1"1/4 F
I	Primary circuit inlet 1"1/4 G F
L	Primary circuit outlet 1"1/4 G F
M	Domestic cold water circuit inlet 1" F
O	Drain 1" 1/4 F

Model	Volume	De	INT	H	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11
	[lt]	[mm]													
300	293	640	340	1960	71	240	350	860	1190	1300	351	755	900	1140	1210

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLYTERM® **HOME**

WALL HANGING WATER HEATER WITH INTEGRATED HEAT PUMP



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT PUMP
The water inside the tank is warmed up by an integrated heat pump, equipped with external condensing coil. **A 1500 Watt electric resistance with "BOOST" option is already installed.**
Electronic central unit with graphic display allows controlling and scheduling.
INSULATION
High thermal insulation with ecological polyurethane hard foam.
Painted metallic external cover.

DRAIN
External confluence through drain connection.
WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

PROMPT AVAILABILITY



BOLLYTERM® HOME

ENERGY EFFICIENCY CLASS

Model	HARD FOAM INSULATION Art. Nr.	ErP
80	3180162330050	A+
110	3180162330051	A+

TECHNICAL DATA						
Model	Net volume heated by heat pump	Room temperature output	C.O.P.	ErP Energy efficiency class (Reg EU 812/2013)	IGNITION TIME (heat pump)	IGNITION TIME (heat pump+electric immersion heater)
	[lt]	[°C]			[min]	[min]
80	80	-5/+43	2,83(*)	A+	255' (4h:10')(*)	104' (1 h: 44')(**)
110	102,5		2,60(*)	A+	377' (6h:17')(*)	142' (2 h: 22')(**)

(*) Data obtained under the following conditions: T air 20 °C - T water from 10 °C to 50 °C, according to EN 16147
(**) Data obtained under the following conditions: T air 20 °C - T water from 15 °C to 55 °C, according to EN 16147



TECHNICAL DATA								
Power supply	Output	Maximum absorption (heat pump+electric immersion heater)	Max water temperature [°C]		Coolant	Coolant charge	Max ducts length	Acoustic level
			heat pump	heat pump+electric immersion heater				
[V / Ph / Hz]	[W]	[W]			[type]	[g]	[mm]	[dB]
220-240 / 1 / 50	1000	430 (+1500)	60	80	R134a	500	125	55 (*)

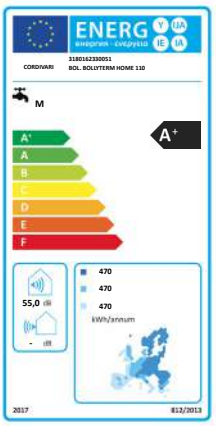
(*) Test in compliance with European standard EN 12102 – EN ISO 3741

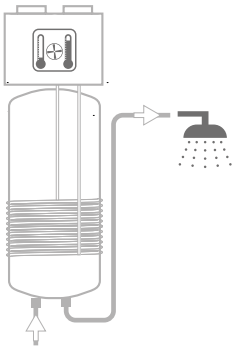
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLYTERM® **HOME**

WALL HANGING WATER HEATER WITH INTEGRATED HEAT PUMP

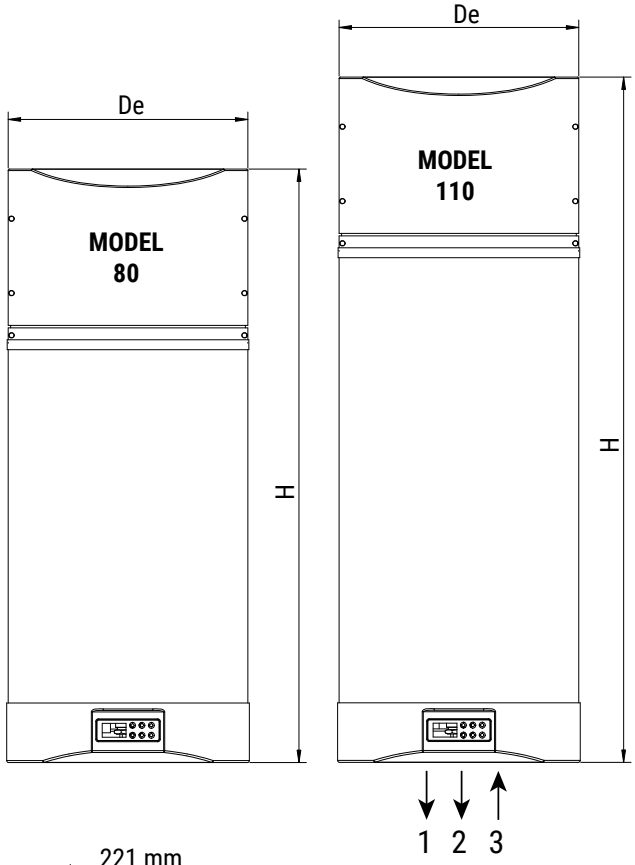
STORAGE	
Pmax	Tmax
10 bar	90 °C

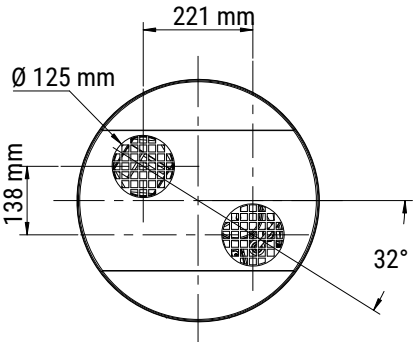




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Università Politecnica delle Marche

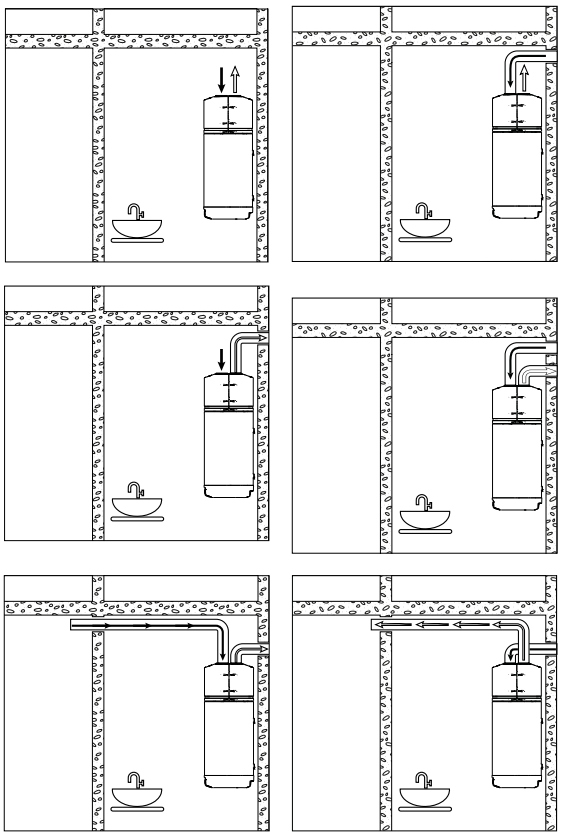
1	Domestic hot water circuit outlet 1/2" M
2	Drain/Condensate
3	Domestic cold water circuit inlet 1/2" M

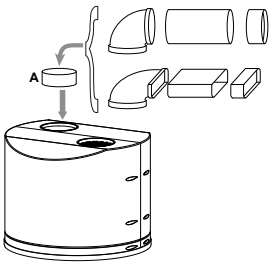




Model	Volume	De	H
	[lt]	[mm]	
80	80	483	1208
110	102,5	483	1392

Canalization examples





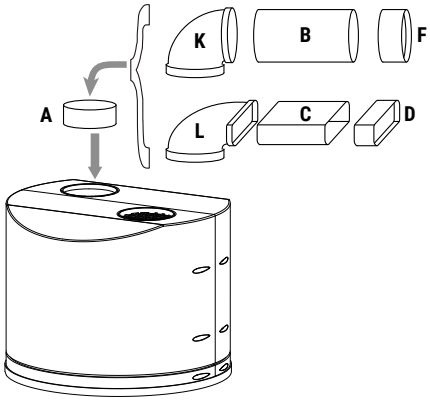
See ACCESSORIES section or next pages for complete elements range for canalization.

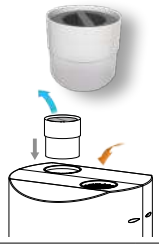
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

CORDIVARI



PLASTIC ELEMENTS FOR CANALIZATION

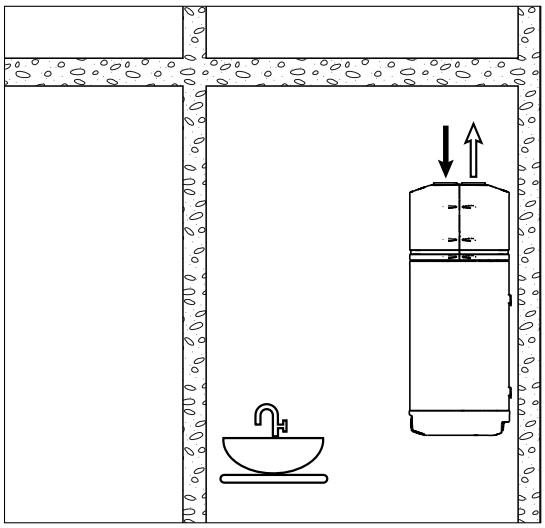


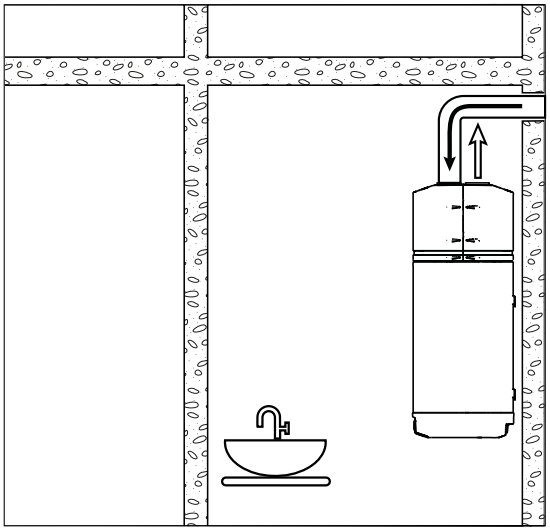
	Art. Nr.	DESCRIPTION
	A 5221000000085	Stub pipe of Ø 125 mm Length 75 mm
	B 5221000000086	Tube of Ø 125 Mm Length 1200 mm
	C 5221000000087	Rectangular tube of Ø 150x70 mm Length 1200 mm
	D 5221000000088	Rectangular plastic joint Ø 150x70 mm
	5221000000089	Horizontal joint from round pipe of Ø125 mm Rectangular Ø 150x70 mm
	F 5221000000090	Round joint Ø 125 mm
	5221000000091	Flexible tube Ø 125 mm Length 1000 mm
	5221000000092	Flexible rectangular tube Ø 150x70 mm Length 1000 mm
	5221000000093	Rectangular curve Ø 150x70 mm horizontal
	5221000000107	**NEW** **Sound pressure reduction** Ø 125 L 120 mm Acoustic silencer to reduce by 6dbA the declared values (55 dBA). Tested according to UNI EN 12102-2 and UNI EN ISO 3741 standards.

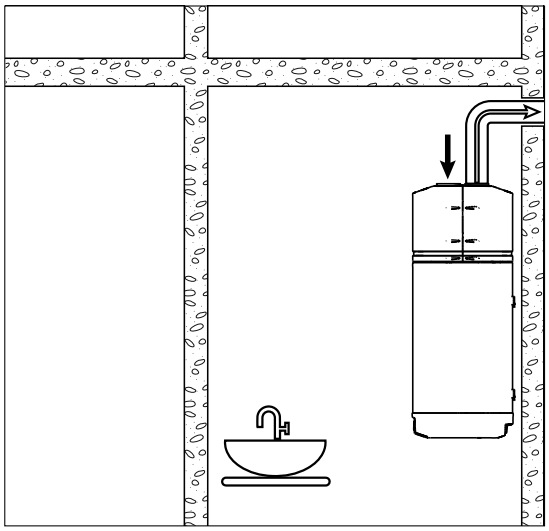
	Art. Nr.	DESCRIPTION
	5221000000094	Rectangular curve Ø 150x70 mm vertical
	K 5221000000095	Round elbow curve Ø125 mm
	L 5221000000096	Vertical curve from round Ø 125 mm to rectangular Ø 150x70 mm
	5221000000097	Pair of pipe clamps Ø 150 mm
	5221000000098	Pair of brackets for rectangular tubes Ø 150x70 mm
	5221000000099	Plastic grid with fixed fins for tubes of Ø 125 mm
	5221000000100	Roll of adhesive white tape for tubes, width 50 x length 10 mt
	5221000000101	Plastic pipe flange for tubes of Ø 125 mm

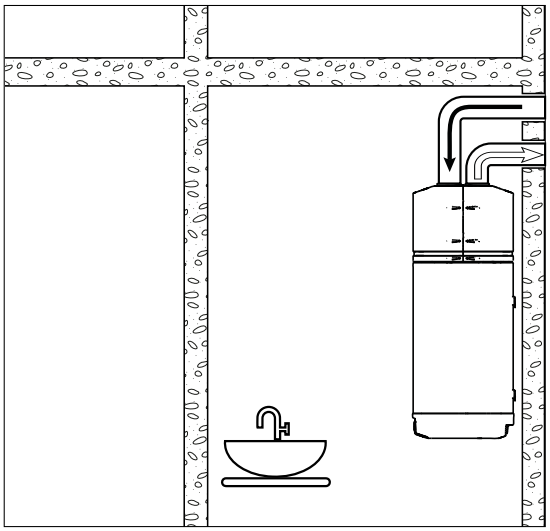


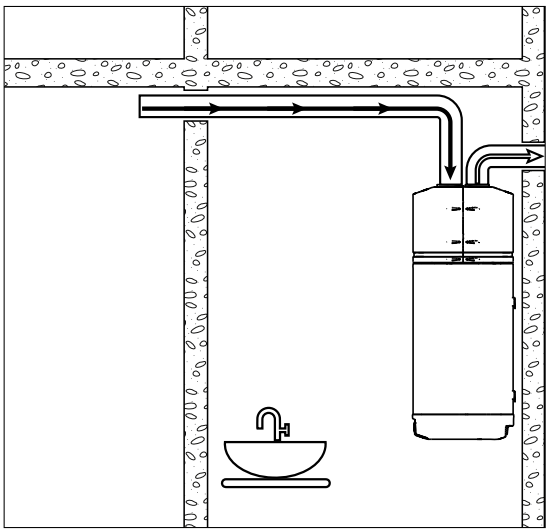
CANALIZATION EXAMPLES

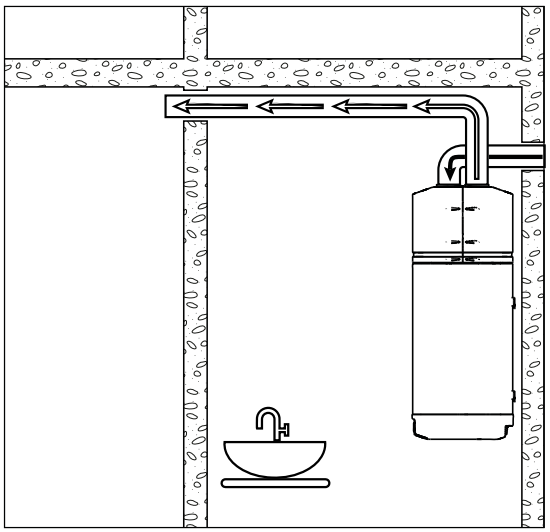






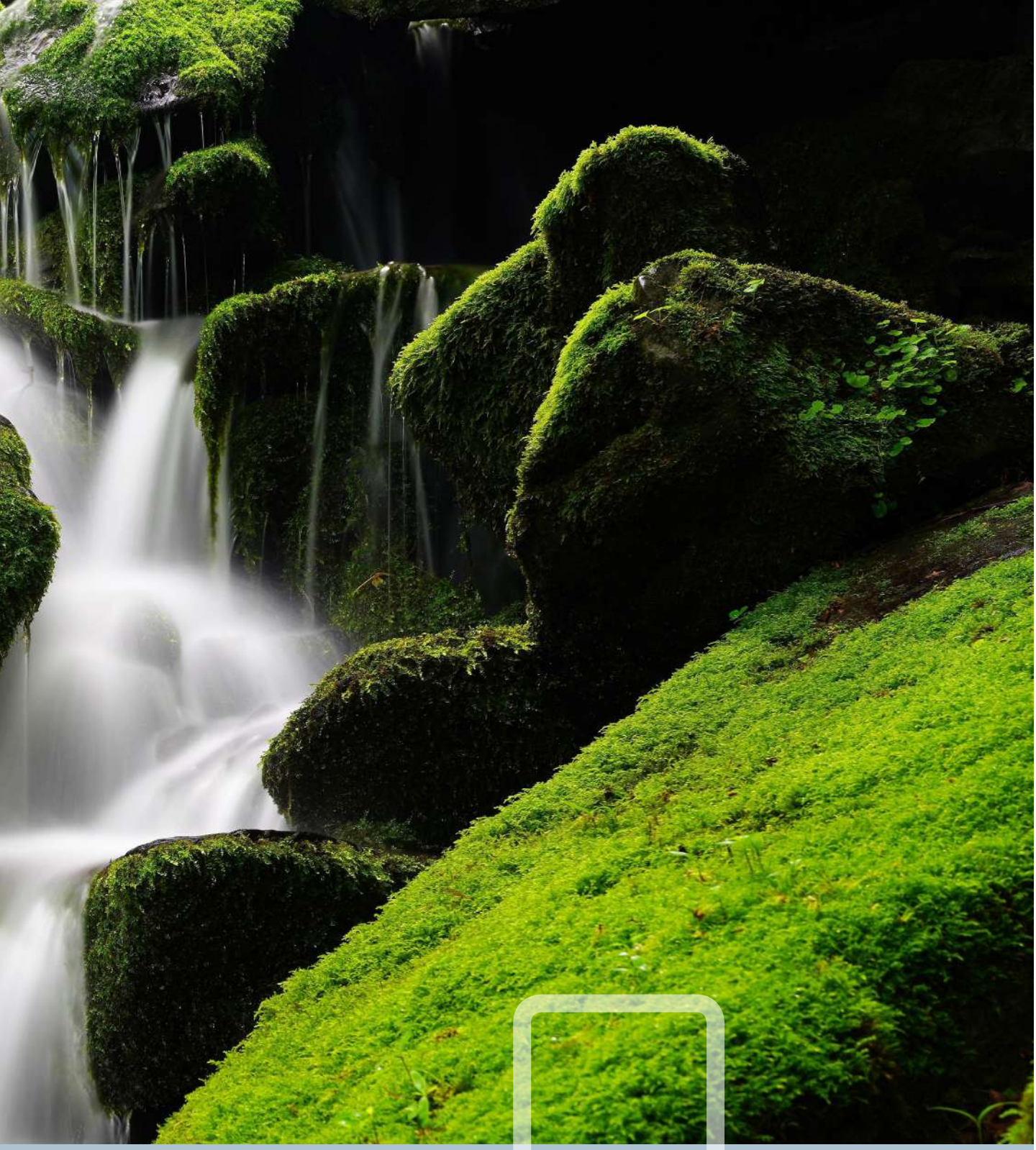








EXTRA CALORIFIERS AND D.H.W. ACCUMULATION TANKS



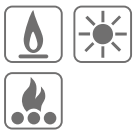
EXTRA CALORIFIERS RANGE

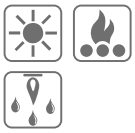
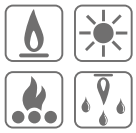
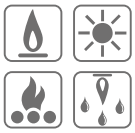
Domestic Hot Water production (D.H.W.)







	EXTRA	EXTRA Compact	EXTRA Horizontal
Heat exchanger model	**STAINLESS STEEL 316L** extractable heat exchangers		
Number of heat exchangers			
Energy source			
Energy efficiency class	**B-C**	**C**	**C**
Insulation	- Polyurethane hard foam - Dismountable polyester fleece	Dismountable polyester fleece	Dismountable polyester fleece
Available range	200 ÷ 5000	1500 ÷ 4000	200 ÷ 5000
Installation	floor standing	floor standing	floor standing
Suggested Application	Traditional and solar installations	Traditional and solar installations limited height spaces	Traditional and solar installations

			
EXTRA STEAM	EXTRA Plus	VASO Inerziale	VASO STORAGE
STAINLESS STEEL 316L extractable straight heat exchangers	Extractable finned copper heat exchangers	with inspection flange (from 1000)	with inspection flange and provision for heat exchangers
			
			
B-C	**B-C**	**B-C**	**B-C**
- Polyurethane hard foam - Dismountable polyester fleece	- Polyurethane hard foam - Dismountable polyester fleece	- Polyurethane hard foam - Dismountable polyester fleece - Class A1 fireproof mineral wool	- Polyurethane hard foam - Dismountable polyester fleece
500 ÷ 5000	200 ÷ 5000	200 ÷ 5000	200 ÷ 5000
floor standing	floor standing	floor standing	floor standing
Industrial installations/ installations with steam generators	Solar, biomass and condensation installations	Traditional, solar, biomass and condensation installations	Traditional, solar, biomass and condensation installations

EXTRA **1 WX**

POLYWARM® COATED CALORIFIER WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
Stainless steel 316L Antilegionella® heat exchanger, with tubes bent to the bottom
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

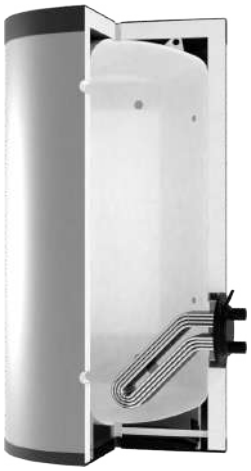
CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection. Models > 1000 external confluence through drain pipe.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

316L STAINLESS STEEL HEAT EXCHANGER

100% HEATED STORAGE

PROMPT AVAILABILITY



EXTRA 1 WXB

Model	HARD FOAM INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
200	3072162360122	0,5	**B**
300	3072162360123	0,75	**C**
500	3072162360124	1	**C**
800	3072162360125	1,5	**B**
1000	3072162360126	2	**C**
1500	3072162360127	3	**C**
2000	3072162360128	4	**B**

EXTRA 1 WXC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
500	3072162360134	1	**C**
800	3072162360135	1,5	**C**
1000	3072162360136	2	**C**
1500	3072162360137	3	**C**
2000	3072162360138	4	**C**
2500	3072162360113	5	
3000	3072162360109	6	
4000	3072162360110	8	
5000	3072162360112	10	

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE **1,5** kW	MONOPHASE **2** kW	MONOPHASE **3** kW	THREEPHASE **4** kW	THREEPHASE **5** kW	THREEPHASE **6** kW	THREEPHASE **9** kW	THREEPHASE **12** kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	49	87	65	44	33	//	//	//	//
300	76	136	102	68	51	//	//	//	//
500	127	228	171	114	85	68	57	//	//
800	178	318	239	159	120	96	80	//	//
1000	243	436	327	218	163	131	109	73	54
1500	288	516	387	258	194	155	129	86	65
2000	443	793	595	396	297	238	198	132	99
2500	577	1033	775	517	387	310	258	172	129
3000	577	1033	775	517	387	310	258	172	129
4000	797	1428	1071	714	535	428	357	238	178
5000	1040	1864	1398	932	699	559	466	311	233

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

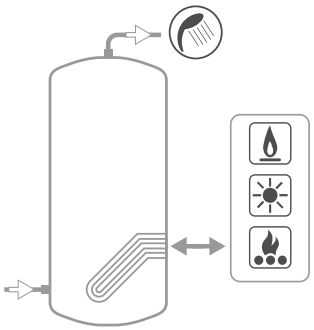


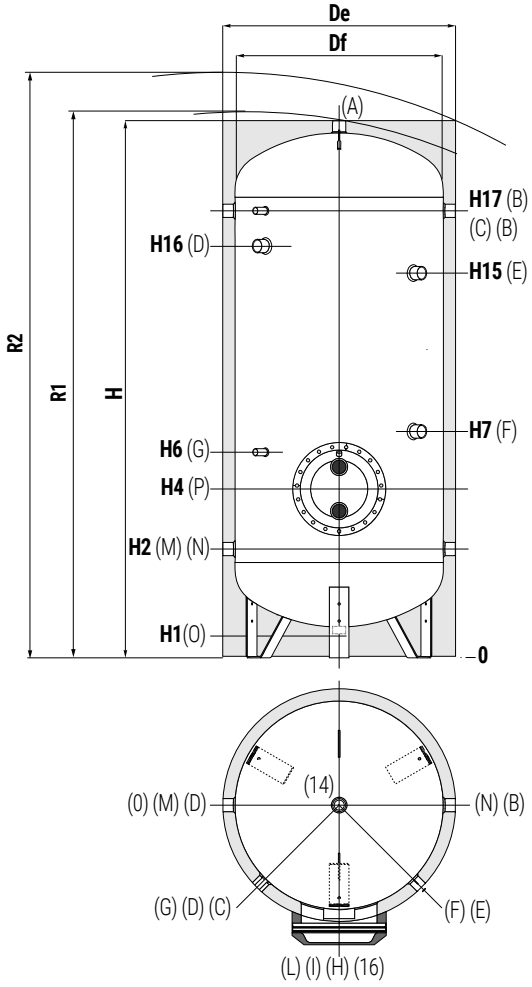
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

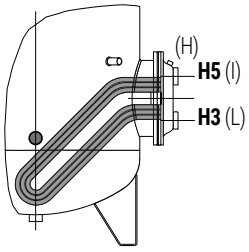
EXTRA **1 WX**

POLYWARM® COATED CALORIFIER WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER

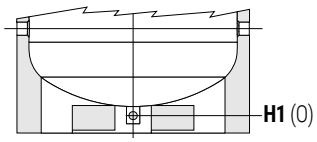
	STORAGE		HEAT EXCHANGER	
Model	Pmax	Tmax	Pmax	Tmax
200 ÷ 1000	8 bar	90 °C	12 bar	110 °C
1500 ÷ 5000	6 bar			







A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation 1/2" G F
D	Connection for for electric immersion heater1"1/2 G F. For models > 800 connection 2" G F
E	Connection for 2nd magnesium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
H	Heat exchanger drain 3/8" G F
I	Primary circuit inlet 1" G F. For models > 500 connection 2" G F
L	Primary circuit outlet 1" G F. For models > 500 connection 2" G F
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks in series
O	Drain
P	Heat exchanger flange



Models from 1500 to 5000 are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

EXTRA 1 WXB - HARD FOAM INSULATION

Model	Volume	Weight	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H15	H16	H17	P	B M-N	A	O
	[lt]	[kg]	[mm]														Connections F		
200	191	52	550	1449	1560	85	325	360	410	460	520	650	//	1075	1185	Øi220/Øe300	1"1/4	1"1/4	1"1/4
300	292	65	650	1499	1640	85	350	385	435	485	545	735	//	1100	1210	Øi220/Øe300	1"1/4	1"1/4	1"1/4
500	500	83	750	1800	1960	85	375	410	460	510	570	760	//	1329	1485	Øi220/Øe300	1"1/4	1"1/4	1"1/4
800	794	139	900	2135	2330	85	405	450	540	630	690	870	//	1610	1765	Øi300/Øe380	1"1/4	1"1/2	1"1/4
1000	1042	181	1000	2221	2450	105	458	503	593	683	743	993	//	1664	1818	Øi300/Øe380	1"1/2	2"	1"1/2
1500	1445	224	1100	2415	2660	109	440	585	675	765	825	1075	//	1895	2050	Øi300/Øe380	1"1/2	2"	1"
2000	1978	279	1300	2492	2820	91	467	587	692	797	867	842	1952	1877	2057	Øi350/Øe430	2"	2"	1"

EXTRA 1 WXC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Vol.	Weight	De	Df	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H15	H16	H17	P	B M-N	A	O
	[lt]	[kg]	[mm]																Connections F		
500	500	90	870	650	1841	1998	2090	101	416	451	501	551	611	801	//	1370	1526	Øi220/Øe300	1"1/4	1"1/2	1"1/4
800	794	139	970	750	2188	2220	2400	113	433	478	568	658	718	898	//	1638	1793	Øi300/Øe380	1"1/4	1"1/2	1"1/4
1000	1042	181	1070	850	2242	2270	2490	101	454	499	589	679	739	989	//	1660	1814	Øi300/Øe380	1"1/2	2"	1"1/2
1500	1445	224	1210	950	2440	2495	2730	109	440	585	675	765	825	1075	//	1895	2050	Øi300/Øe380	1"1/2	2"	1"
2000	1978	279	1360	1100	2492	2570	2850	91	467	587	692	797	867	842	1952	1877	2057	Øi350/Øe430	2"	2"	1"
2500	2315	328	1350	1250	2311	2480	2690	140	551	671	776	881	951	976	1816	1732	1891	Øi350/Øe430	2"	2"	1"
3000	2921	384	1350	1250	2811	2950	3130	140	551	731	836	941	1011	1036	2316	2232	2391	Øi350/Øe430	2"	2"	1"
4000	3769	521	1500	1400	2875	3050	3250	114	570	750	855	960	1030	1035	2315	2238	2410	Øi350/Øe430	2"	2"	1"
5000	4982	657	1700	1600	2915	3130	3380	94	580	750	855	960	1030	1035	2335	2265	2420	Øi350/Øe430	2"	2"	1"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

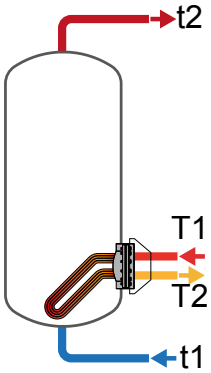
EXTRA **1 WX**
HEAT EXCHANGERS TECHNICAL DATA



Cordivari heat exchangers, with tubes bent to the bottom, are able to heat the complete volume in an homogeneus way.
Energy storaging is therefore improved and ignition time data refer to the complete volume of the tank, while in traditional straight heat exchangers equipped calorifires, a range between 9-17% of the volume remains cold.

Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	2	113	113	77	49	7,3	11,5	13,7	18	178	283	338	455
	1	147	148	102	65	5,8	8,9	10,5	13,9	141	218	258	344
300	3	112	113	76	48	11,1	17	21	28	274	435	520	701
	1,5	145	146	102	65	8,9	13,8	16,3	21,6	219	339	402	534
500	4	139	140	96	60	15	23,8	28,5	38	369	587	702	947
	2	180	181	125	80	12,1	18,7	22,1	29,4	297	460	545	725
800	6	146	147	101	64	23	36	44	59	570	908	1087	1465
	3	186	188	130	83	18	29	34	46	465	721	854	1136
1000	10	128	128	86	54	33	53	63	86	814	1309	1571	2127
	5	157	157	107,9	69	27	43	51	69	687	1077	1281	1711
1500	15	120	119	82	51	51	81	98	133	1256	2022	2428	3290
	7,5	145	146	100	64	44	68	81	108	1075	1687	2008	2684
2000	20	121	122	83	52	69	111	133	180	1699	2738	3288	4453
	10	146	147	101	65	59	93	111	148	1465	2302	2741	3665
2500	20	118	119	81	51	84	134	160	216	2066	3309	3964	5352
	10	145	146	101	65	71	111	131	174	1755	2734	3244	4314
3000	20	128	127	87	55	100	159	190	255	2461	3926	4694	6321
	10	456	157	110	70	84	130	154	204	2082	3224	3817	5053
4000	20	126	127	87	56	131	207	247	330	3236	5121	6105	8168
	10	159	161	112	73	110	168	198	260	2718	4151	4903	6443
5000	20	137	138	96	61	162	253	301	401	3992	6270	7450	9921
	10	176	179	125	82	135	204	239	312	3332	5049	5923	7727

LOWER
HEAT EXCHANGER



Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	2	247	319	328	347	360	498	542	635	309	30,3
	1	241	308	314	329	330	446	478	547	84,74	8,3
300	3	371	480	494	524	545	755	823	968	372	36,5
	1,5	362	464	474	496	501	678	729	834	101,02	9,9
500	4	616	791	810	851	849	1162	1254	1450	419	41,1
	2	604	770	784	814	792	1061	1129	1273	113,381	11,1
800	6	998	1280	1310	1373	1359	1855	1998	2301	718	70,4
	3	980	1249	1271	1318	1275	1705	1812	2037	189,22	18,6
1000	10	1273	1640	1683	1776	1788	2469	2678	3123	1380	135,3
	5	1252	1601	1635	1707	1687	2283	2446	2790	358,5	35,2
1500	15	1855	2394	2462	2605	2651	3675	4000	4689	2295	225,1
	7,5	1825	2338	2392	2504	2506	3407	3664	4204	589,6	57,8
2000	20	2546	3285	3377	3571	3622	5019	5459	6391	2996	293,8
	10	2507	3212	3285	3439	3435	4670	5021	5761	766,42	75,2
2500	20	2988	3856	3965	4196	4296	5951	6475	7586	2436	238,9
	10	2936	3760	3845	4023	4047	5491	5899	6755	624	61,2
3000	20	3748	4827	4955	5226	5307	7314	7928	9230	2836	278,1
	10	3685	4710	4809	5015	5004	6752	7226	8215	723	70,9
4000	20	4842	6232	6396	6740	6892	9475	10263	11913	3896	382,1
	10	4756	6070	6196	6452	6477	8699	9301	10533	989	97,0
5000	20	6362	8166	8363	8775	8891	12137	13081	15058	4707	461,6
	10	6252	7963	8109	8409	8363	11161	11860	13303	1192	116,9

MAXIMUM STORAGE EXPLOITATION WITH CURVED ANTILEGIONELLA® HEAT EXCHANGER



Model	Heated volume: Standard heat exchanger	Storage volume: Heat exchanger for 100% heated volume	Advantage in exploited volume	Advantage in percentage
	[lt]	[lt]	[lt]	[%]
200	165	190	25	**13%**
300	251	285	34	**12%**
500	438	485	47	**10%**
800	694	790	96	**12%**
1000	907	995	88	**9%**

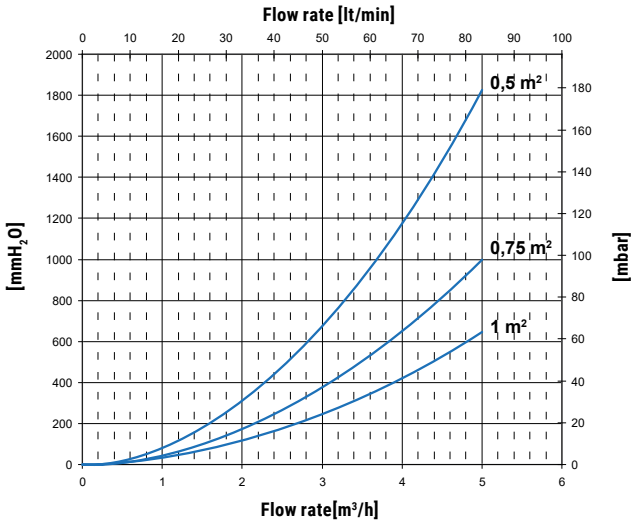


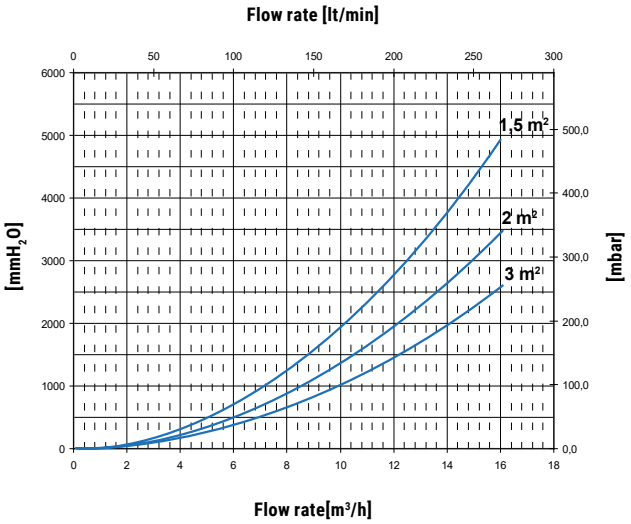
Model	Heated volume: Standard heat exchanger	Storage volume: Heat exchanger for 100% heated volume	Advantage in exploited volume	Advantage in percentage
	[lt]	[lt]	[lt]	[%]
1500	1224	1445	221	**15%**
2000	1684	1978	294	**15%**
2500	1905	2315	410	**18%**
3000	2438	2921	483	**17%**
4000	3113	3769	656	**17%**
5000	4116	4982	866	**17%**

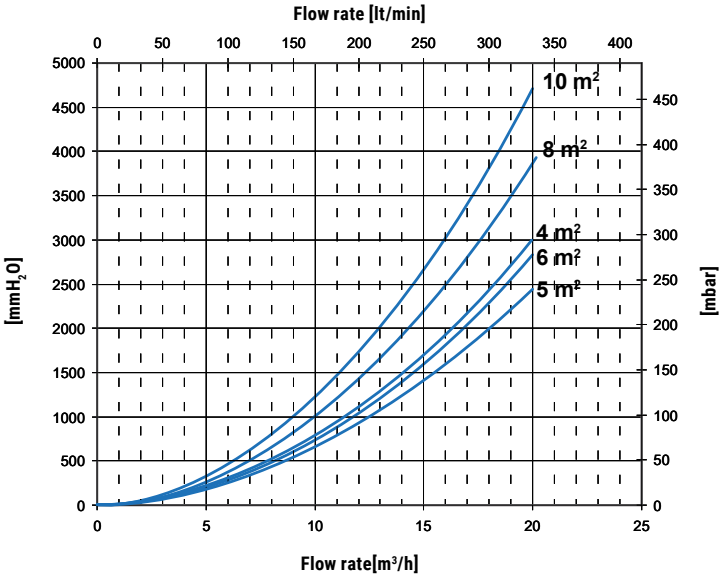
EXTRA **1 WX**

HEAT EXCHANGERS PRESSURE DROP



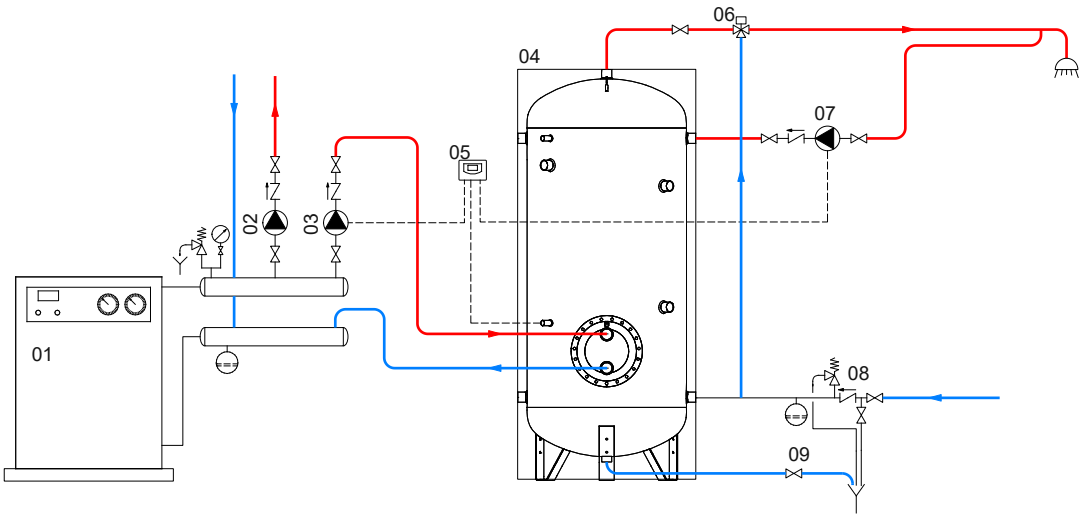






PERFORMANCE CHARTS AT PAGE 82-83

EXAMPLE OF INSTALLATION WITH **EXTRA 1**



1	Generator	4	EXTRA 1	7	D.H.W. recirculation group
2	Heating system circulation group	5	Electronic Control/thermostat	8	Hydraulic safety group
3	D.H.W. circulation group	6	Thermostatic mixing valve	9	Blowdown valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

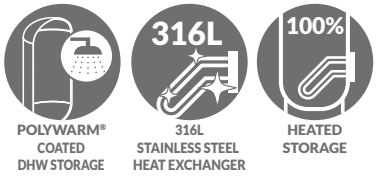
EXTRA **1 COMPACT**

POLYWARM® COATED CALORIFIERS, SUITABLE FOR LOW-CEILINGED ROOM, WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
Suitable for low-ceilinged room.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
Stainless steel 316L Antilegionella® heat exchanger, with tubes bent to the bottom
INSULATION (DISMOUNTABLE)
NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

CATHODE PROTECTION
n° 2 magnesium anodes.
DRAIN
External confluence through drain pipe.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.





EXTRA 1 COMPACT WXC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
1500	3072162360537	3	C
2000	3072162360538	4	C
2500	3072162360513	5	
3000	3072162360509	6	
4000	3072162360510	8	



ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	2 kW	3 kW	THREEPHASE 4 kW	5 kW	6 kW	9 kW	12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
1500	443	793	595	396	297	238	198	132	99
2000	577	1033	775	517	387	310	258	172	129
2500	797	1428	1071	714	535	428	357	238	178
3000	874	1565	1173	782	587	469	391	261	196
4000	924	1655	1241	828	621	497	414	276	207

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

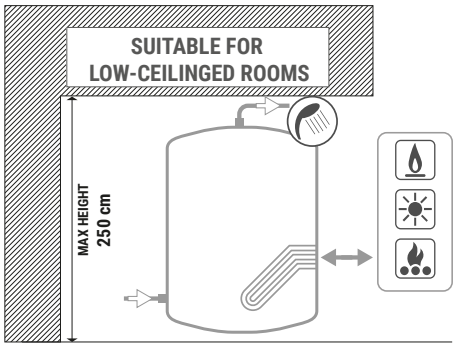


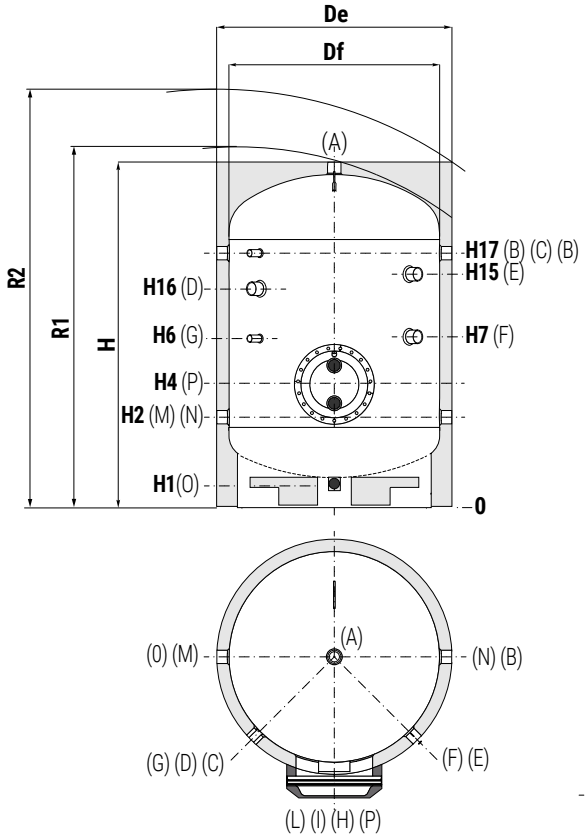
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

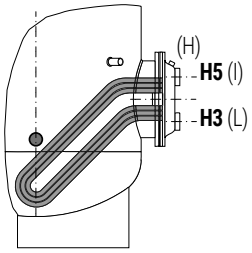
EXTRA **1 COMPACT**

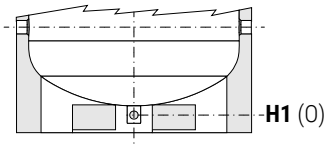
POLYWARM® COATED CALORIFIERS, SUITABLE FOR LOW-CEILINGED ROOM, WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	90 °C	12 bar	110 °C









A	Domestic hot water outlet 2" G F
B	Recirculation / Domestic hot water outlet 2" G F
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 2" G F
E	Connection for 2nd magnesium anode 1"1/4 G F
F	Connection for magnesium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
H	Heat exchanger drain 3/8" G F
I	Primary circuit inlet 2" G F
L	Primary circuit outlet 2" G F
M	Domestic cold water circuit inlet 2" G F
N	Alternative domestic cold water circuit inlet or connection for more tanks in series2" G F
O	Drain 1" F
P	Flange

All models are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

Model	Volume	Weight	De	DF	H	R1	R2	H1	H2
	[lt]	[kg]	[mm]						
1500	1509	221	1360	1100	1992	2104	2420	91	467
2000	2012	300	1510	1250	2111	2251	2610	140	551
2500	2627	393	1500	1400	2125	2363	2610	114	570
3000	3029	472	1600	1500	2140	2410	2680	109	575
4000	3990	565	1700	1600	2415	2678	2960	94	580

Model	H4	H5	H6	H7	H15	H16	H17	P
	[mm]							Connections F
1500	692	782	867	942	//	1377	1557	Øi300/Øe380
2000	776	881	951	976	1566	1482	1641	Øi350/Øe430
2500	795	900	970	975	1585	1488	1660	Øi350/Øe430
3000	800	905	975	980	1600	1520	1675	Øi350/Øe430
4000	835	940	1010	1015	1855	1765	1920	Øi350/Øe430

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

EXTRA **1 COMPACT**

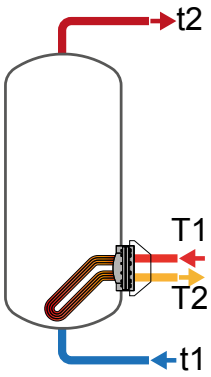
HEAT EXCHANGERS TECHNICAL DATA



Cordivari heat exchangers, with tubes bent to the bottom, are able to heat the complete volume in an homogeneus way.
Energy storaging is therefore improved and ignition time data refer to the complete volume of the tank, while in traditional straight heat exchangers equipped calorifires, a range between 9-17% of the volume remains cold.

Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m^3/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
1500	15	125	125	85	54	51	81	98	133	1256	2022	2428	3290
	7,5	152	152	105	67	44	68	81	108	1075	1687	2008	2684
2000	20	123	123	84	53	69	111	133	180	1699	2738	3288	4453
	10	148	148	103	65	59	93	111	148	1465	2302	2741	3665
2500	20	134	134	92	58	69	111	133	180	1699	2738	3288	4453
	10	164	164	114	73	59	93	111	148	1465	2302	2741	3665
3000	20	130	130	90	57	100	159	190	255	2461	3926	4694	6321
	10	162	162	113	73	84	130	154	204	2082	3224	3817	5053
4000	20	133	133	92	59	131	207	247	330	3236	5121	6105	8168
	10	170	170	119	77	110	168	198	260	2718	4151	4903	6443

LOWER
HEAT EXCHANGER



Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m^3/h]	T1/t2				T1/t2				[mmH_2O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
1500	15	1927	2484	2552	2695	2723	3765	4090	4779	2295	225,1
	7,5	1897	2428	2482	2594	2578	3497	3754	4294	589,6	57,8
2000	20	2573	3319	3411	3605	3649	5053	5493	6425	2996	293,8
	10	2534	3247	3320	3474	3462	4704	5056	5795	766,42	75,2
2500	20	3276	4198	4289	4484	4352	5932	6372	7304	2436	238,9
	10	3237	4125	4198	4352	4165	5583	5934	6673	624	61,2
3000	20	3862	4969	5097	5368	5420	7455	8069	9371	2836	278,1
	10	3798	4852	4950	5156	5117	6893	7368	8357	723	70,9
4000	20	5090	6542	6706	7050	7140	9785	10573	12223	3896	382,1
	10	5004	6380	6506	6762	6725	9009	9611	10843	989	97,0

MAXIMUM STORAGE EXPLOITATION WITH CURVED ANTILEGIONELLA® HEAT EXCHANGER



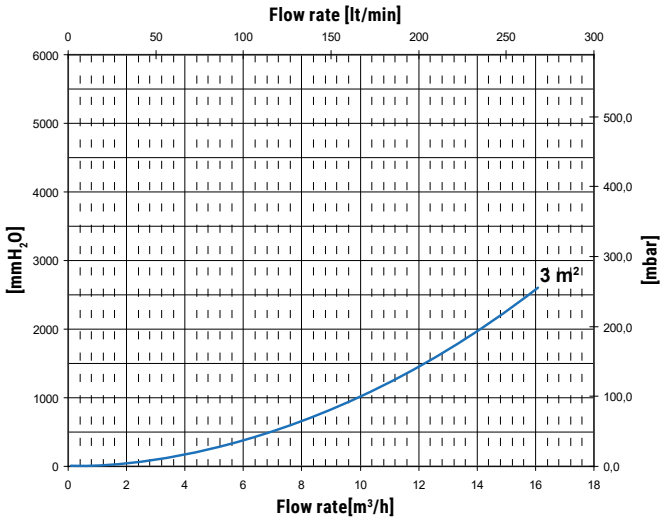


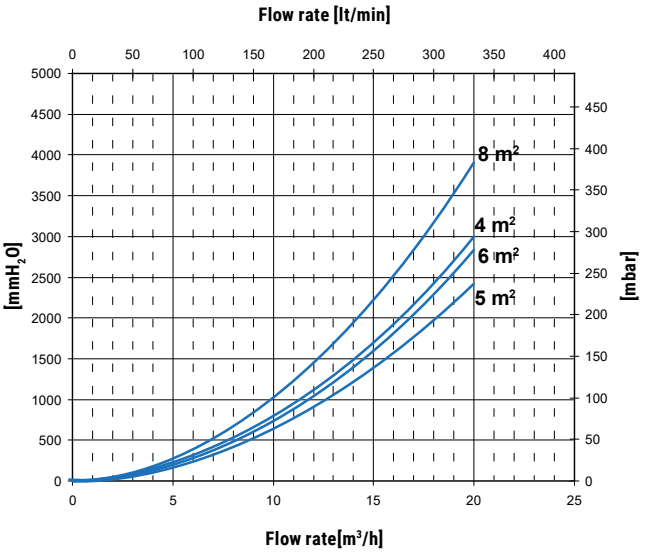
Model	Heated volume: Standard heat exchanger	Storage volume: Heat exchanger for 100% heated volume	Advantage in exploited volume	Advantage in percentage
	[lt]	[lt]	[lt]	[%]
1500	1224	1445	221	**15%**
2000	1684	1978	294	**15%**
2500	1905	2315	410	**18%**
3000	2438	2921	483	**17%**
4000	3113	3769	656	**17%**

EXTRA **1 COMPACT**

HEAT EXCHANGERS PRESSURE DROP

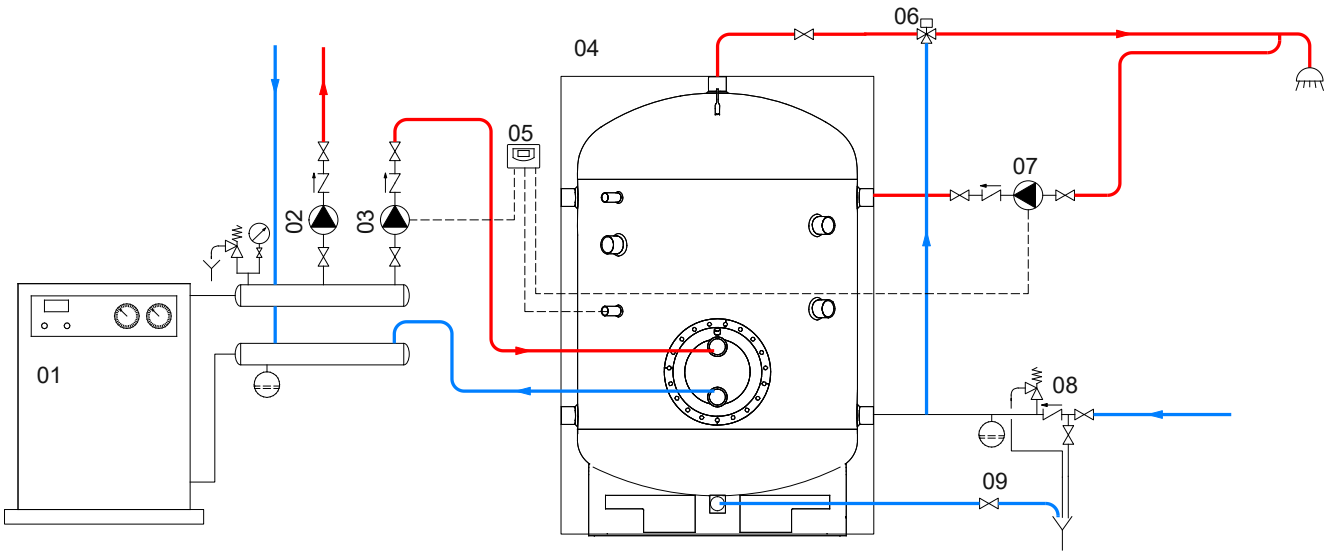






PERFORMANCE CHARTS AT PAGE 82-83

EXAMPLE OF INSTALLATION WITH **EXTRA 1 COMPACT**



01	Generator	04	EXTRA 1 COMPACT	07	D.H.W. recirculation group
02	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group
03	D.H.W. circulation group	06	Thermostatic mixing valve	09	Blowdown valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXTRA **2 WX**

POLYWARM® COATED CALORIFIERS WITH 2 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
N° 2 Stainless steel 316L heat exchangers (upper: straight - lower: Antilegionella® with tubes bent to the bottom)
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection. Models > 1000 external confluence through drain pipe.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.


POLYWARM® COATED DHW STORAGE



316L STAINLESS STEEL HEAT EXCHANGER



HEATED STORAGE

PROMPT AVAILABILITY





EXTRA 2 WXB

Model	HARD FOAM INSULATION	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Lower	Upper	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
200	3084162360001	0,5	0,5	**B**
300	3084162360002	0,75	0,75	**C**
500	3084162360003	1,5	1,5	**C**
800	3084162360004	2	2	**B**
1000	3084162360005	3	2	**C**
1500	3084162360006	3	3	**C**
2000	3084162360007	4	4	**B**



EXTRA 2 WXC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Lower	Upper	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
500	3082162360133	1,5	1,5	**C**
800	3082162360134	2	2	**C**
1000	3082162360135	3	2	**C**
1500	3082162360136	3	3	**C**
2000	3082162360137	4	4	**C**
2500	3082162360113	5	5	
3000	3082162360108	6	6	
4000	3082162360110	8	8	
5000	3082162360112	10	10	

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE **1,5** kW	**2** kW	**3** kW	THREEPHASE **4** kW	**5** kW	**6** kW	**9** kW	**12** kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	49	87	65	44	33	//	//	//	//
300	76	136	102	68	51	//	//	//	//
500	127	228	171	114	85	68	57	//	//
800	178	318	239	159	120	96	80	//	//
1000	243	436	327	218	163	131	109	73	54
1500	288	516	387	258	194	155	129	86	65
2000	443	793	595	396	297	238	198	132	99
2500	577	1033	775	517	387	310	258	172	129
3000	577	1033	775	517	387	310	258	172	129
4000	797	1428	1071	714	535	428	357	238	178
5000	1040	1864	1398	932	699	559	466	311	233

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

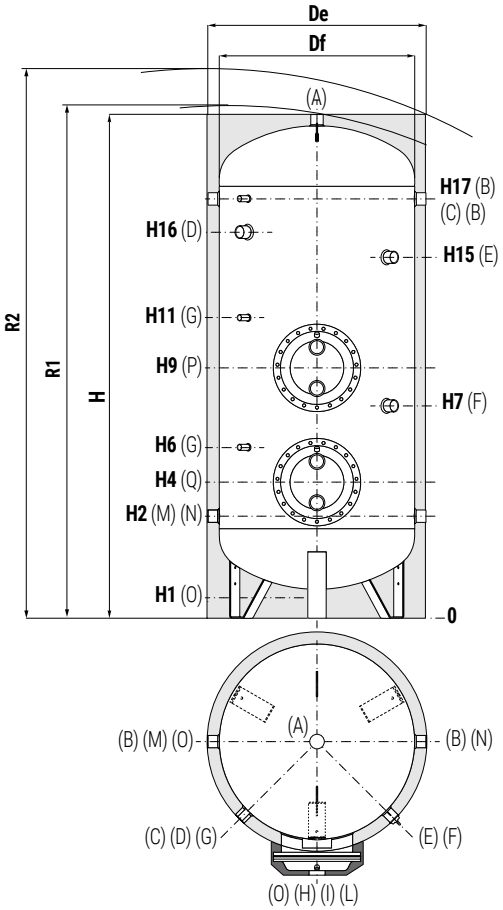


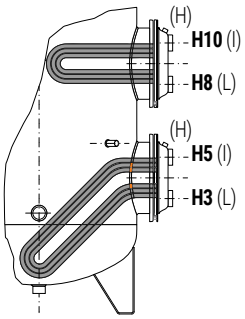
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

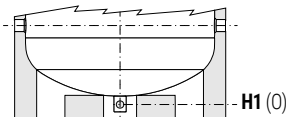
EXTRA **2 WX**

POLYWARM® COATED CALORIFIERS WITH 2 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS

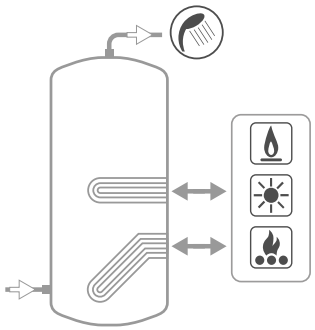
	STORAGE		HEAT EXCHANGER	
Model	Pmax	Tmax	Pmax	Tmax
200 ÷ 1000	8 bar	90 °C	12 bar	110 °C
1500 ÷ 5000	6 bar			







Models from 1500 to 5000 are equipped with a practical **skirt** support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.



A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 1" 1/2 F For models > 800 connection 2" G F
E	Connection for 2nd magnesium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode 1" 1/4 F
G	Connection for instrumentation 1/2" F
H	Heat exchanger drain 3/8" G F
I	Primary circuit inlet of the upper exchanger 2" F
L	Primary circuit outlet of the upper exchanger 2" F
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	Drain
P	Upper heat exchanger flange
Q	Lower heat exchanger flange

EXTRA 2 WXB - HARD FOAM INSULATION

Model	Volume	Weight	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H15	H16	H17	P - Q	M - N B	A	O
	[lt]	[kg]	[mm]																		Connections F		
200	193	70	550	1449	1560	85	325	360	410	460	520	650	810	860	910	970	//	1075	1185	Øi220/Øe300	1"1/4	1"1/4	1"1/4
300	295	84	650	1499	1640	85	350	385	435	485	545	735	835	885	935	995	//	1100	1210	Øi220/Øe300	1"1/4	1"1/4	1"1/4
500	503	112	750	1800	1960	85	375	410	460	510	570	760	860	910	960	1020	//	1329	1485	Øi220/Øe300	1"1/4	1"1/4	1"1/4
800	799	177	900	2135	2330	85	405	450	540	630	690	870	1000	1090	1180	1240	//	1610	1765	Øi300/Øe380	1"1/4	1"1/4	1"1/4
1000	1047	226	1000	2221	2450	105	458	503	593	683	743	993	1053	1143	1233	1293	//	1664	1818	Øi300/Øe380	1"1/2	1"1/2	1"1/2
1500	1450	269	1100	2415	2660	109	440	585	675	765	825	1075	1160	1250	1340	1400	//	1895	2050	Øi300/Øe380	1"1/2	2"	1"
2000	1985	337	1300	2492	2820	91	467	587	692	797	867	842	1157	1262	1367	1437	1952	1877	2057	Øi350/Øe430	2"	2"	1"

EXTRA 2 WXC - DISMOUNTABLE SOFT FLEECE INSULATION

Mod.	Vol.	Weight	De	Df	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H15	H16	H17	P - Q	M - N B	A	O
	[lt]	[kg]	[mm]																				Connections F		
500	503	105	870	650	1841	1998	2090	101	416	451	501	551	611	801	901	951	1001	1061	//	1370	1526	Øi220/Øe300	1"1/4	1"1/4	1"1/4
800	799	177	970	750	2188	2220	2400	113	433	478	568	658	718	898	1028	1118	1208	1268	//	1638	1793	Øi300/Øe380	1"1/4	1"1/4	1"1/4
1000	1047	226	1070	850	2242	2270	2490	101	454	499	589	679	739	989	1049	1139	1229	1289	//	1660	1814	Øi300/Øe380	1"1/2	1"1/2	1"1/4
1500	1450	269	1210	950	2440	2495	2730	109	440	585	675	765	825	1075	1160	1250	1340	1400	//	1895	2050	Øi300/Øe380	1"1/2	2"	1"1/4
2000	1985	337	1360	1100	2492	2570	2850	91	467	587	692	797	867	842	1157	1262	1367	1437	1952	1877	2057	Øi350/Øe430	2"	2"	1"1/2
2500	2322	399	1350	1250	2311	2480	2690	140	551	671	776	881	951	976	1271	1376	1481	1551	1816	1732	1891	Øi350/Øe430	2"	2"	1"
3000	2928	464	1350	1250	2811	2950	3130	140	551	731	836	941	1011	1036	1371	1476	1581	1651	2316	2232	2391	Øi350/Øe430	2"	2"	1"
4000	3776	618	1500	1400	2875	3050	3250	114	570	750	855	960	1030	1035	1390	1495	1600	1670	2315	2238	2410	Øi350/Øe430	2"	2"	1"
5000	4990	768	1700	1600	2915	3130	3380	94	580	750	855	960	1030	1035	1400	1505	1610	1680	2335	2265	2420	Øi350/Øe430	2"	2"	1"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

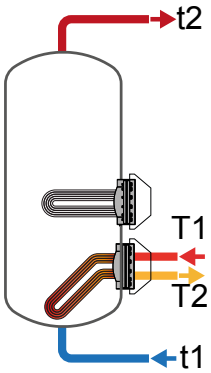
EXTRA **2 WX**

HEAT EXCHANGERS TECHNICAL DATA



Cordivari heat exchangers, with tubes bent to the bottom, are able to heat the complete volume in an homogeneus way.
Energy storaging is therefore improved and ignition time data refer to the complete volume of the tank, while in traditional straight heat exchangers equipped calorifires, a range between 9-17% of the volume remains cold.

LOWER
HEAT EXCHANGER

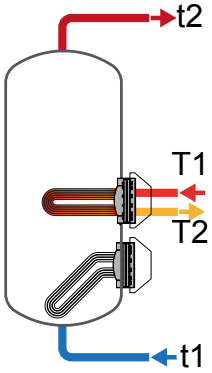


Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	2	113	113	77	49	7,3	12	14	18	178	283	338	455
	1	147	148	102	65	6	9	11	13,9	141	218	258	344
300	3	112	113	76	48	11	17	21	28	274	435	520	701
	1,5	145	146	102	65	9	14	16	21,6	219	339	402	534
500	6	90	90	62	39	23	37	44	59	571	909	1088	1467
	3	114	115	80	51	19	29	35	46	466	722	856	1137
800	10	101	101	69	44	33	53	64	86	815	1310	1572	2128
	5	124	125	86	55	28	44	52	69	688	1077	1282	1712
1000	15	82	83	56	36	51	82	98	133	1257	2024	2429	3293
	7,5	101	100	69	44	44	68	81	108	1076	1689	2010	2685
1500	15	120	119	82	51	51	81	98	133	1256	2022	2428	3290
	7,5	145	146	100	64	44	68	81	108	1075	1687	2008	2684
2000	20	121	122	83	52	69	111	133	180	1699	2738	3288	4453
	10	146	147	101	65	59	93	111	148	1465	2302	2741	3665
2500	20	118	119	81	51	69	111	133	180	1699	2738	3288	4453
	10	145	146	101	65	59	93	111	148	1465	2302	2741	3665
3000	20	128	127	87	55	100	159	190	255	2461	3926	4694	6321
	10	456	157	110	70	84	130	154	204	2082	3224	3817	5053
4000	20	126	127	87	56	131	207	247	330	3236	5121	6105	8168
	10	159	161	112	73	110	168	198	260	2718	4151	4903	6443
5000	20	137	138	96	61	162	253	301	401	3992	6270	7450	9921
	10	176	179	125	82	135	204	239	312	3332	5049	5923	7727

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	2	247	319	328	347	360	498	542	635	309	30,3
	1	241	308	314	329	330	446	478	547	84,74	8,3
300	3	371	480	494	524	545	755	823	968	372	36,5
	1,5	362	464	474	496	501	678	729	834	101,02	9,9
500	6	649	844	874	937	1011	1420	1563	1866	718	70,4
	3	632	813	836	882	927	1270	1378	1602	189,22	18,6
800	10	1039	1347	1391	1483	1555	2177	2386	2831	1380	135,3
	5	1018	1308	1342	1414	1453	1990	2154	2498	358,5	35,2
1000	15	1347	1759	1826	1970	2143	3041	3365	4056	2295	225,1
	7,5	1316	1703	1756	1869	1998	2773	3029	3569	589,6	57,8
1500	15	1855	2394	2462	2605	2651	3675	4000	4689	2295	225,1
	7,5	1825	2338	2392	2504	2506	3407	3664	4204	589,6	57,8
2000	20	2546	3285	3377	3571	3622	5019	5459	6391	2996	293,8
	10	2507	3212	3285	3439	3435	4670	5021	5761	766,42	75,2
2500	20	2927	3761	3852	4046	4003	5495	5935	6867	2436	238,9
	10	2888	3688	3761	3915	3815	5146	5497	6236	624	61,2
3000	20	3748	4827	4955	5226	5307	7314	7928	9230	2836	278,1
	10	3685	4710	4809	5015	5004	6752	7226	8215	723	70,9
4000	20	4842	6232	6396	6740	6892	9475	10263	11913	3896	382,1
	10	4756	6070	6196	6452	6477	8699	9301	10533	989	97,0
5000	20	6362	8166	8363	8775	8891	12137	13081	15058	4707	461,6
	10	6252	7963	8109	8409	8363	11161	11860	13303	1192	116,9



UPPER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	2	57	57	39	25	7	11	14	18	179	283	339	456
	1	74	75	52	33	6	9	11	14	142	219	259	344
300	3	57	57	39	25	11	18	21	28	275	436	521	702
	1,5	73	73	52	33	9	14	16	22	220	340	403	535
500	6	52	52	36	23	23	37	44	59	573	911	1090	1468
	3	66	55	46	30	19	29	35	46	468	724	857	1139
800	10	62	62	42	27	33	53	64	86	817	1312	1573	2129
	5	75	76	53	34	28	44	52	69	690	1079	1284	1715
1000	10	80	80	55	35	32	51	61	82	783	1252	1501	2029
	5	100	100	70	45	26	41	48	65	647	1008	1198	1599
1500	15	68	68	47	30	51	82	98	133	1259	2026	2430	3295
	7,5	82	83	57	37	44	68	81	109	1077	1690	2011	2687
2000	20	70	70	48	30	69	111	133	180	1702	2741	3293	4463
	10	84	85	59	37	59	93	111	148	1468	2306	2744	3668
2500	20	59	59	40	25	84	134	160	216	2069	3313	3969	5358
	10	71	72	50	32	71	111	131	174	1758	2738	3249	4318
3000	20	71	72	49	31	100	159	190	255	2465	3931	4698	6325
	10	88	89	62	40	84	130	154	204	2086	3229	3821	5057
4000	20	71	72	50	32	131	207	247	330	3242	5126	6112	8179
	10	89	90	63	41	110	168	198	260	2723	4167	4909	6448
5000	20	78	78	54	35	162	253	301	400	3998	6275	7459	9924
	10	99	100	71	46	135	204	239	312	3338	5055	5930	7735

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	2	140	184	194	213	253	364	408	502	294,35	28,9
	1	133	174	180	194	223	312	344	412	80,5	7,9
300	3	215	284	298	328	389	560	628	773	355,7	34,9
	1,5	206	268	279	301	345	483	534	639	95,97	9,4
500	6	418	555	585	648	781	1132	1275	1577	682	66,9
	3	400	524	546	593	697	982	1088	1314	179	17,6
800	10	689	910	954	1046	1207	1741	1950	2395	1311	128,6
	5	668	871	905	977	1105	1555	1719	2063	341	33,4
1000	10	816	1066	1107	1195	1312	1859	2058	2480	1311	128,6
	5	794	1025	1057	1124	1203	1664	1816	2136	341	33,4
1500	15	1149	1512	1579	1723	1947	2795	3118	3810	2181	213,9
	7,5	1119	1456	1509	1622	1801	2526	2783	3324	560	54,9
2000	20	1595	2095	2187	2382	2672	3831	4273	5209	2846	279,1
	10	1556	2023	2096	2250	2485	3483	3834	4573	728	71,4
2500	20	1652	2186	2296	2527	2963	4285	4809	5921	2314	226,9
	10	1600	2091	2176	2354	2714	3825	4233	5089	592	58,1
3000	20	2303	3021	3149	3420	3865	5511	6124	7426	2745	269,2
	10	2240	2904	3003	3209	3561	4949	5423	6411	700	68,6
4000	20	2972	3894	4059	4403	5026	7141	7930	9583	3701	362,9
	10	2886	3735	3858	4115	4610	6374	6967	8198	939	92,1
5000	20	3882	5066	5263	5674	6414	9040	9987	11959	4472	438,6
	10	3772	4863	5008	5309	5886	8064	8764	10208	1132	111,0

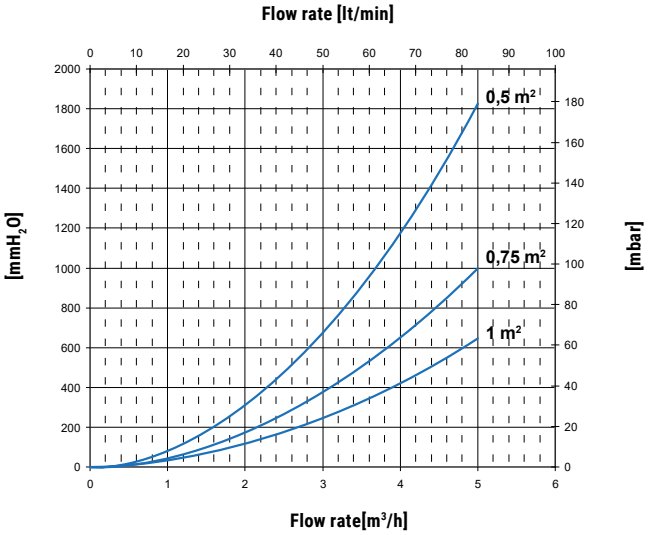
EXTRA **2**

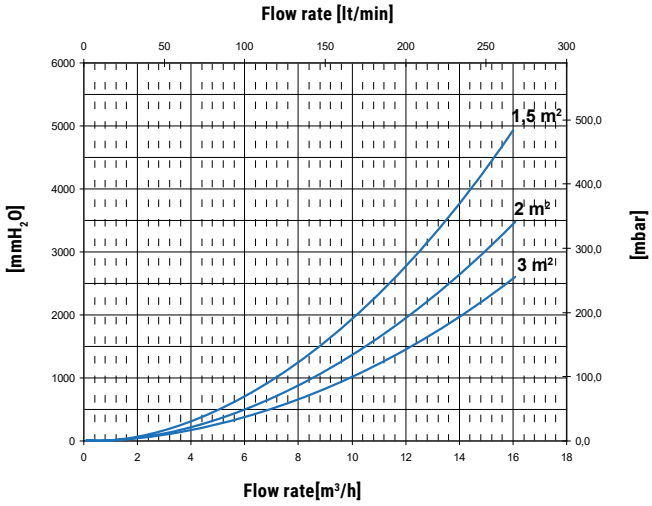
HEAT EXCHANGERS PRESSURE DROP

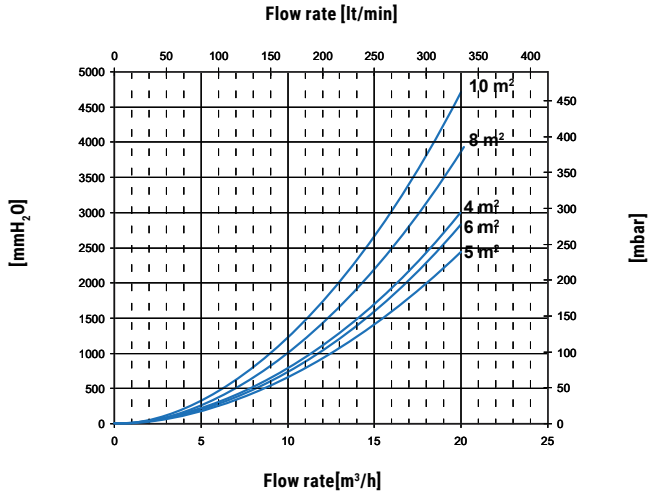




Lower heat exchanger surface [m²]	
200	0,5
300	0,75
500	1,5
800	2
1000	3
1500	3
2000	4
2500	5
3000	6
4000	8
5000	10





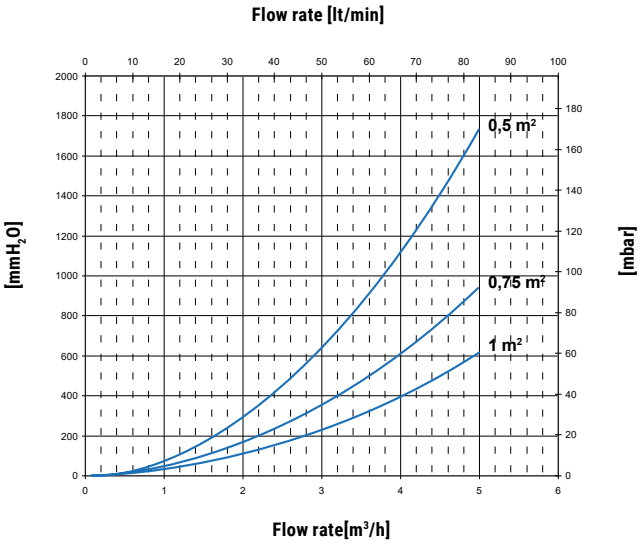


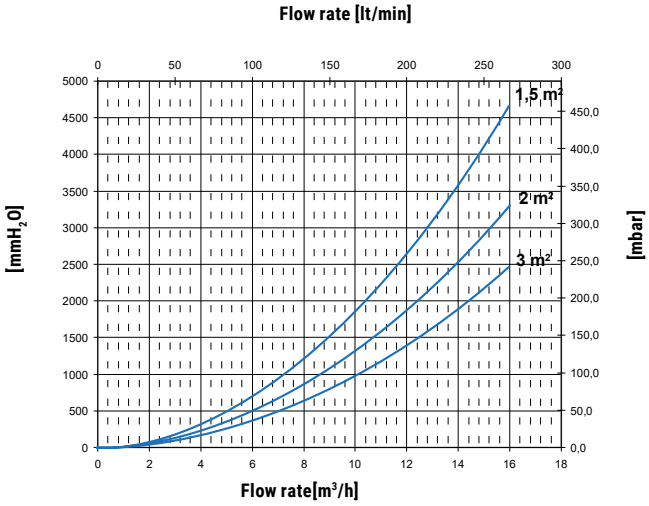
EXTRA **2**

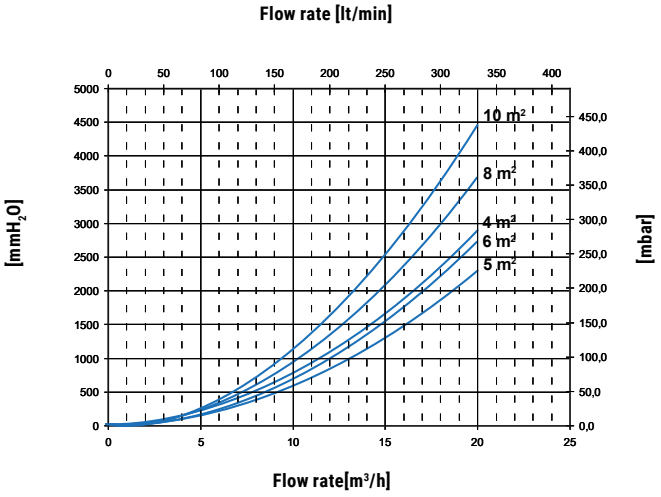
HEAT EXCHANGERS PRESSURE DROP



Heat exchanger surface [m²]	
200	0,5
300	0,75
500	1,5
800	2
1000	2
1500	3
2000	4
2500	5
3000	6
4000	8
5000	10

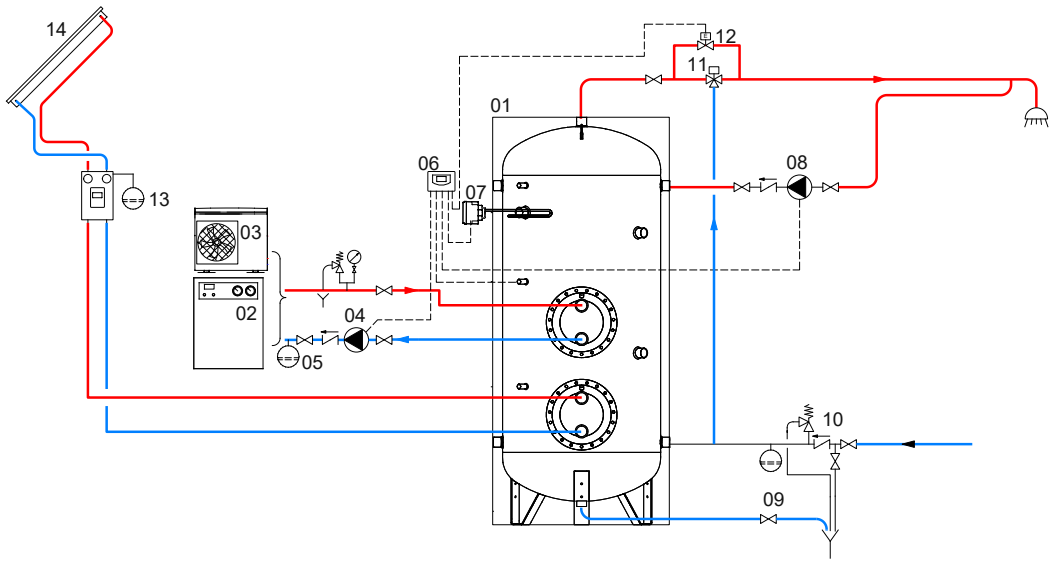






PERFORMANCE CHARTS AT PAGE 82-83

EXAMPLE OF INSTALLATION WITH **EXTRA 2**



1	Extra 2	5	Expansion vessel	9	Blowdown valve	13	Solar system circulation group
2	Generator	6	Electronic Control/thermostat	10	Hydraulic safety group	14	Solar panels
3	Generator (Heat pump)	7	Electric immersion heater (optional)	11	Thermostatic mixing valve		
4	Circulation group	8	D.H.W. recirculation group	12	By-pass solenoid valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

CORDIVARI

EXTRA **3 WX**

POLYWARM® COATED CALORIFIERS WITH 3 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
N° 3 Stainless steel 316L heat exchangers (upper and middle: straight - lower: Antilegionella® with tubes bent to the bottom)
INSULATION
- *SOFT:* NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

CATHODE PROTECTION
n° 2 magnesium anodes.
DRAIN
External confluence through drain pipe.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.


POLYWARM® COATED DHW STORAGE



316L STAINLESS STEEL HEAT EXCHANGER



HEATED STORAGE





EXTRA 3 WXC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE			ENERGY EFFICIENCY CLASS
		Lower	Middle	Upper	
	Art. Nr.	[m²]			
1500	3092162360136	3	3	1,5	C
2000	3092162360137	4	4	2	C
3000	3092162360109	6	6	3	
5000	3092162360112	10	10	5	

ACCESSORIES

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

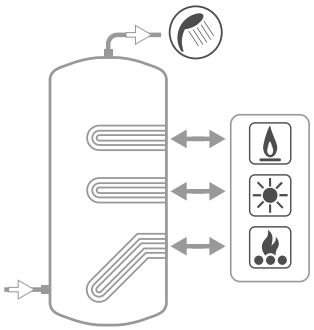


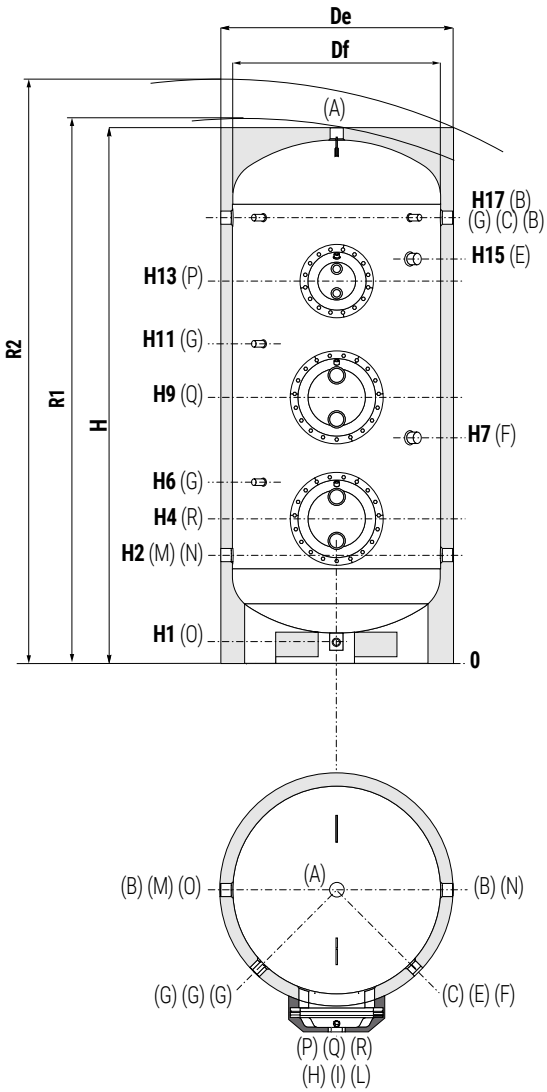
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

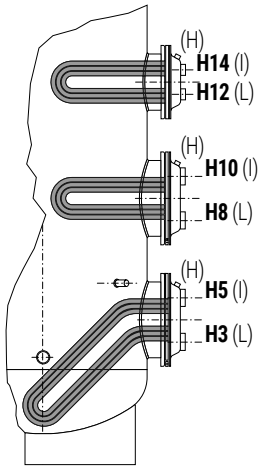
EXTRA **3 WX**

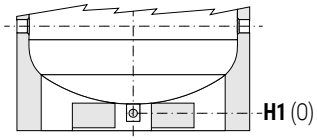
POLYWARM® COATED CALORIFIERS WITH 3 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	90 °C	12 bar	110 °C









All models are equipped with a practical **skirt** support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

A	Domestic hot water outlet 2" F
B	Recirculation / Domestic hot water outlet 1"1/2 F For models > 1500 connection 2" F
C-G	Connection for instrumentation 1/2" F
E	Connection for 2nd magnesium anode 1"1/4 F (only for models > 1500)
F	Connection for magnesium anode 1"1/4 F
H	Heat exchanger drain 3/8" G F
I	Primary circuit inlet of the upper exchanger 2" F
L	Primary circuit outlet of the upper exchanger 2" F
M	Domestic cold water circuit inlet 1"1/2 F For models > 1500 connection 2" F
N	Alternative domestic cold water circuit inlet or connection for more tanks in series1"1/2 F For models > 1500 connection 2" F
O	Drain 1" F
P	Upper heat exchanger flange
Q	Middle heat exchanger flange
R	Lower heat exchanger flange

Model	Volume	Weight	De	Df	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8
	[lt]	[kg]	[mm]												
1500	1455	291	1210	950	2440	2495	2730	109	440	585	675	765	825	1075	1160
2000	1991	430	1360	1100	2492	2570	2850	91	467	587	692	797	867	842	1157
3000	2933	557	1350	1250	2811	2950	3130	140	551	731	836	941	1011	1036	1371
5000	4996	882	1700	1600	2915	3130	3380	94	580	750	855	960	1030	1035	1400

Model	H9	H10	H11	H12	H13	H14	H15	H17	Q - R	P
	[mm]									
1500	1250	1340	1400	1785	1875	1965	//	2050	Øi300/Øe380	Øi300/Øe380
2000	1262	1367	1437	1727	1817	1907	1592	2057	Øi350/Øe430	Øi300/Øe380
3000	1476	1581	1651	2086	2176	2266	1926	2391	Øi350/Øe430	Øi300/Øe380
5000	1505	1610	1680	2010	2115	2220	1855	2420	Øi350/Øe430	Øi350/Øe430

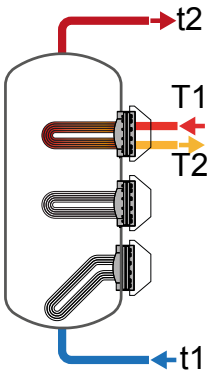
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

EXTRA **3 WX**
HEAT EXCHANGERS TECHNICAL DATA



Cordivari heat exchangers, with tubes bent to the bottom, are able to heat the complete volume in an homogeneus way.
Energy storaging is therefore improved and ignition time data refer to the complete volume of the tank, while in traditional straight heat exchangers equipped calorifires, a range between 9-17% of the volume remains cold.

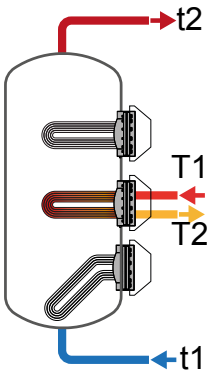
UPPER HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
1500	6	69	68	48	30	23	37	44	59	571	909	1088	1466
	3	88	89	61	39	19	29	35	46	465	722	855	1137
2000	10	76	77	52	33	33	53	64	86	815	1309	1572	2128
	5	93	94	65	41	28	44	52	69	688	1077	1281	1712
3000	15	63	63	43	27	51	82	98	133	1256	2023	2429	3293
	7,5	77	77	54	34	44	68	81	109	1075	1688	2009	2685
5000	20	81	81	56	35	84	134	160	216	2066	134	3965	5353
	10	99	100	69	44	71	111	131	174	1755	2734	3244	4314

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
1500	6	520	683	713	776	882	1259	1402	1704	682	66,9
	3	503	652	674	721	797	1109	1215	1441	179	17,6
2000	10	811	1062	1106	1199	1327	1891	2102	2547	1311	128,6
	5	790	1024	1058	1130	1226	1706	1869	2214	341	33,4
3000	15	1081	1427	1495	1639	1877	2708	3033	3724	2181	213,9
	7,5	1051	1371	1425	1538	1732	2440	2697	3238	560	54,9
5000	20	2152	2282	2921	3152	3461	2367	5432	6542	2314	226,9
	10	2101	2716	2801	2979	3212	4447	4855	5711	592	58,1

MIDDLE HEAT EXCHANGER

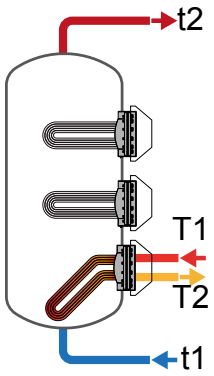


Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
1500	15	68	68	47	30	51	82	98	133	1259	2026	2430	3295
	7,5	82	83	57	37	44	68	81	109	1077	1690	2011	2687
2000	20	70	70	48	30	69	111	133	180	1702	2741	3293	4463
	10	84	85	59	37	59	93	111	148	1468	2306	2744	3668
3000	20	71	72	49	31	100	159	190	255	2465	3931	4698	6325
	10	88	89	62	40	84	130	154	204	2086	3229	3821	5057
5000	20	78	78	54	35	162	253	301	400	3998	6275	7459	9924
	10	99	100	71	46	135	204	239	312	3338	5055	5930	7735

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
1500	15	1149	1512	1579	1723	1947	2795	3118	3810	2181,03	213,9
	7,5	1119	1456	1509	1622	1801	2526	2783	3324	560,28	54,9
2000	20	1595	2095	2187	2382	2672	3831	4273	5209	2846,25	279,1
	10	1556	2023	2096	2250	2485	3483	3834	4573	728,1	71,4
3000	20	2303	3021	3149	3420	3865	5511	6124	7426	2745,34	269,2
	10	2240	2904	3003	3209	3561	4949	5423	6411	700,69	68,7
5000	20	3882	5066	5263	5674	6414	9040	9987	11959	4472,31	438,6
	10	3772	4863	5008	5309	5886	8064	8764	10208	290,29	28,5



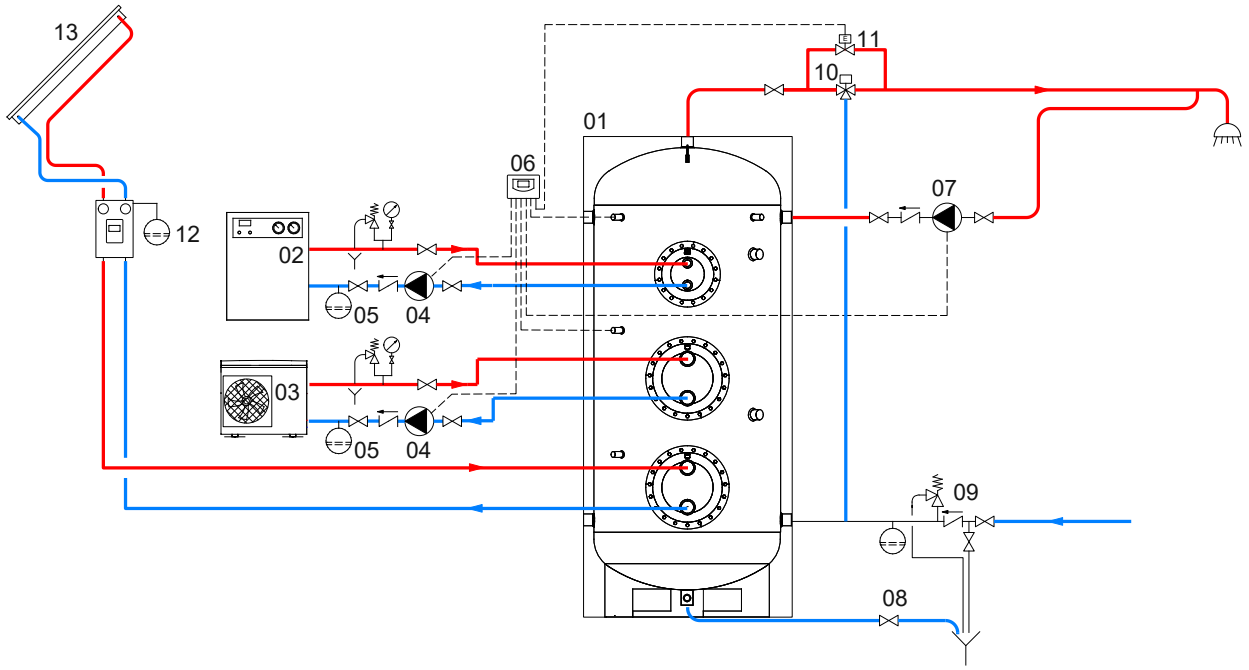
LOWER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
1500	15	120	119	82	51	51	81	98	133	1256	2022	2428	3290
	7,5	145	146	100	64	44	68	81	108	1075	1687	2008	2684
2000	20	121	122	83	52	69	111	133	180	1699	2738	3288	4453
	10	146	147	101	65	59	93	111	148	1465	2302	2741	3665
3000	20	128	127	87	55	100	159	190	255	2461	3926	4694	6321
	10	456	157	110	70	84	130	154	204	2082	3224	3817	5053
5000	20	137	138	96	61	162	253	301	401	3992	6270	7450	9921
	10	176	179	125	82	135	204	239	312	3332	5049	5923	7727

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
1500	15	1855	2394	2462	2605	2651	3675	4000	4689	2295	225,1
	7,5	1825	2338	2392	2504	2506	3407	3664	4204	589,6	57,8
2000	20	2546	3285	3377	3571	3622	5019	5459	6391	2996	293,8
	10	2507	3212	3285	3439	3435	4670	5021	5761	766,42	75,2
3000	20	3748	4827	4955	5226	5307	7314	7928	9230	2836	278,1
	10	3685	4710	4809	5015	5004	6752	7226	8215	723	70,9
5000	20	6362	8166	8363	8775	8891	12137	13081	15058	4707	461,6
	10	6252	7963	8109	8409	8363	11161	11860	13303	1192	116,9

EXAMPLE OF INSTALLATION WITH **EXTRA 3**



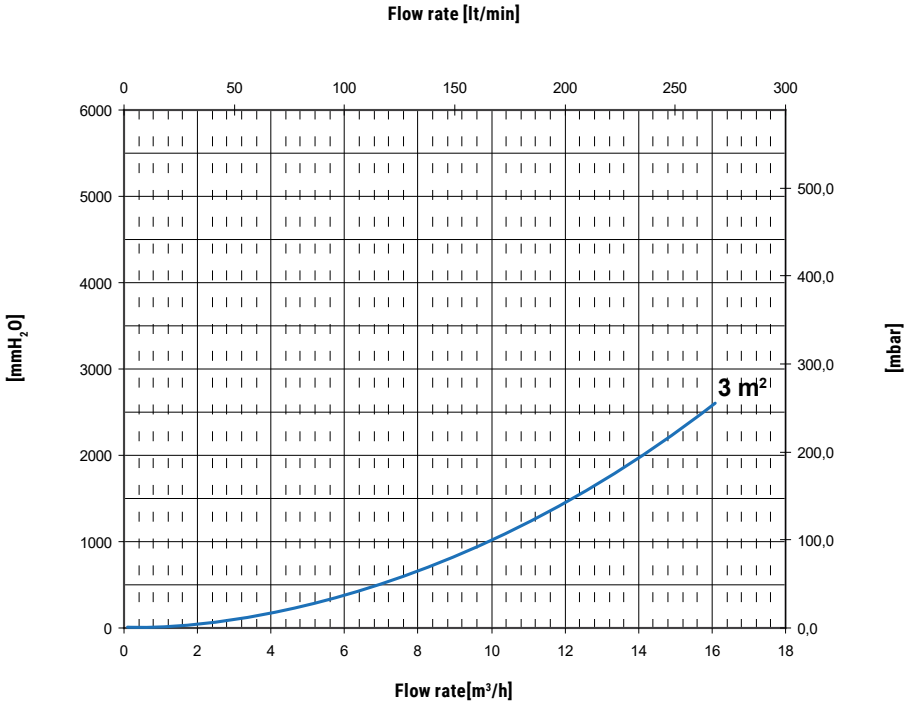
1	Extra 3	5	Expansion vessel	9	Hydraulic safety group
2	Generator	6	Electronic Control/thermostat	10	Thermostatic mixing valve
3	Generator (Heat pump)	7	D.H.W. recirculation group	11	By-pass solenoid valve
4	Circulation group	8	Blowdown valve	12	Solar system circulation group

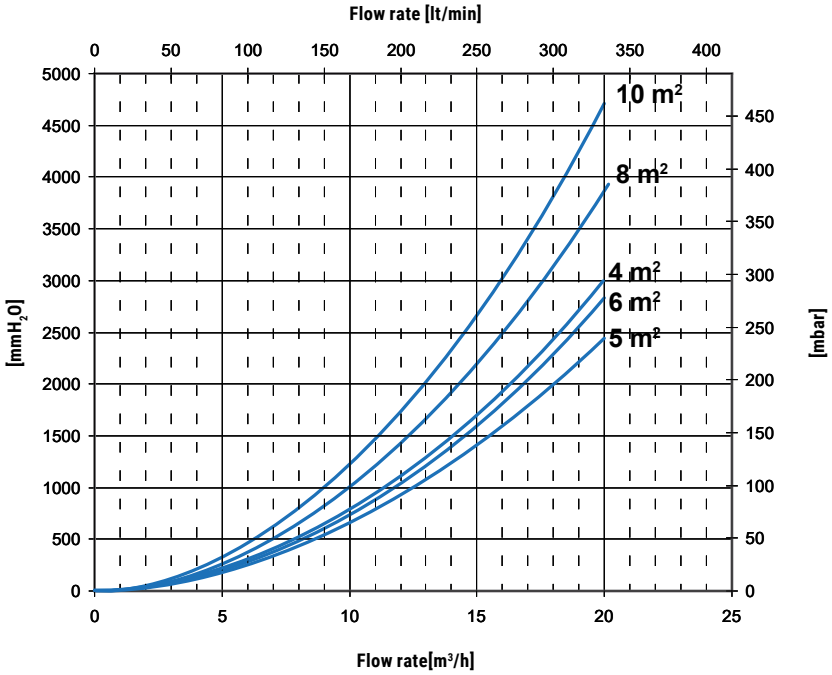
13	Solar panels

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.



Lower heat exchanger surface [m²]	
1500	3
2000	4
3000	6
5000	10



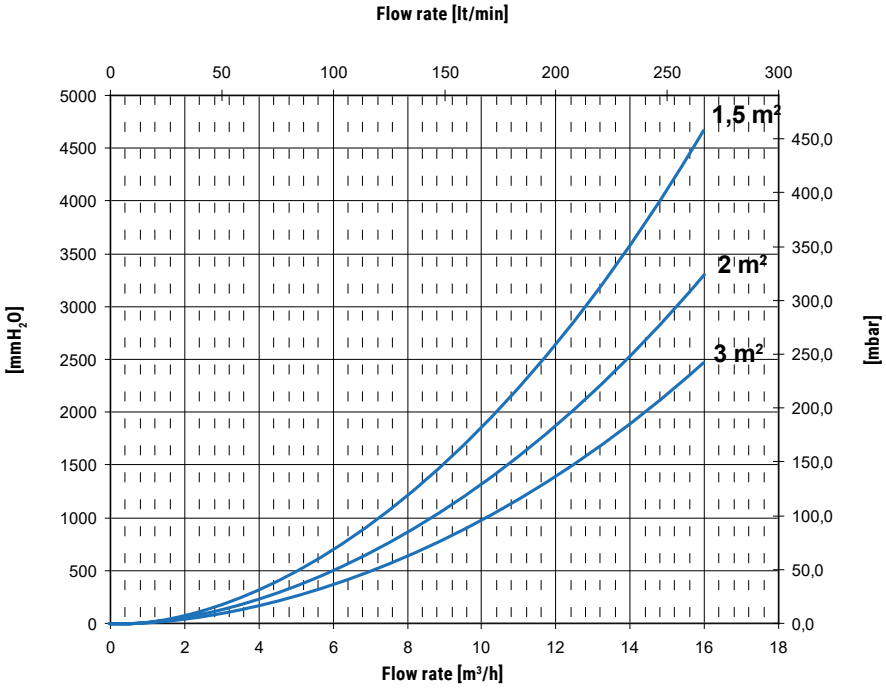


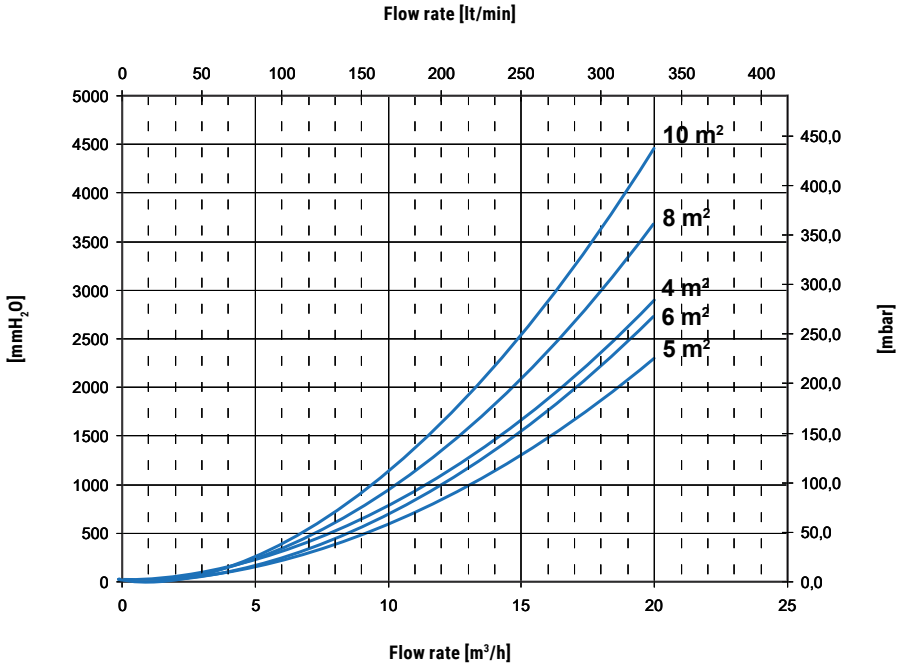
EXTRA **3 WX**

HEAT EXCHANGERS PRESSURE DROP



	Heat exchangers surface [m²]	
	Middle	Upper
1500	3	1,5
2000	4	2
3000	6	3
5000	10	5





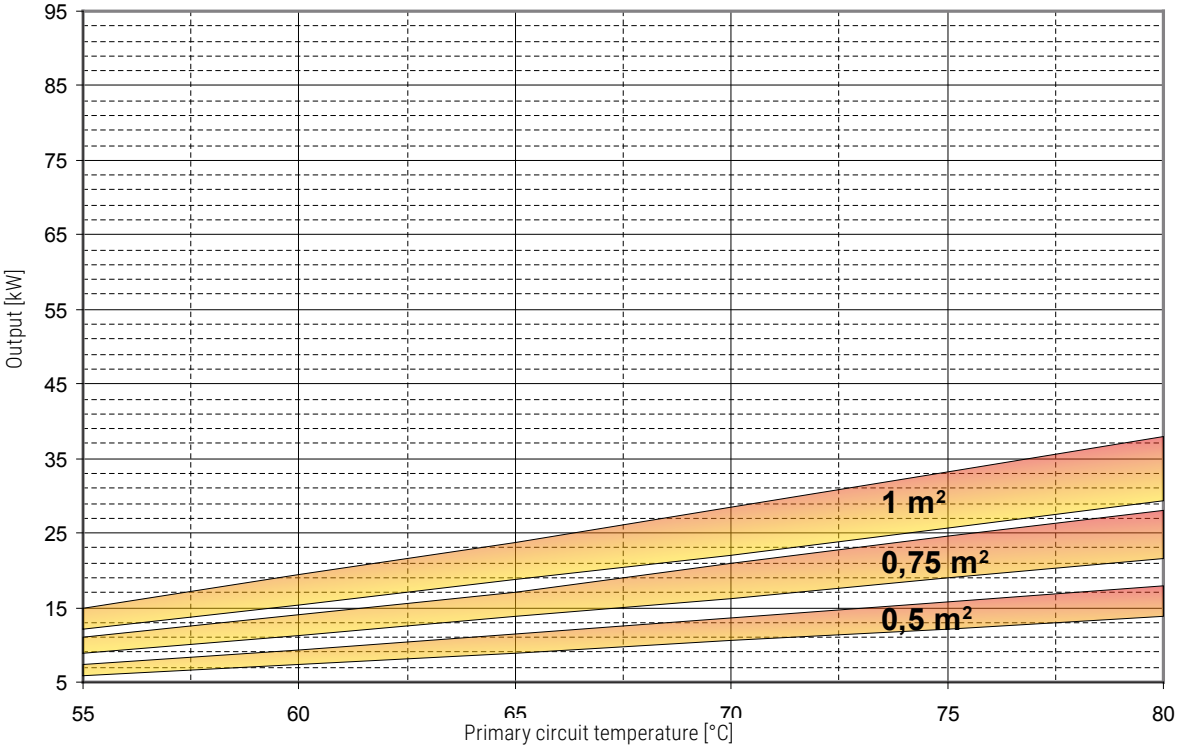
PERFORMANCE CHARTS AT PAGE 82-83

EXTRA **1-2-3 WXC-XXC /** EXTRA **1 COMPACT**

HEAT EXCHANGERS TECHNICAL DATA

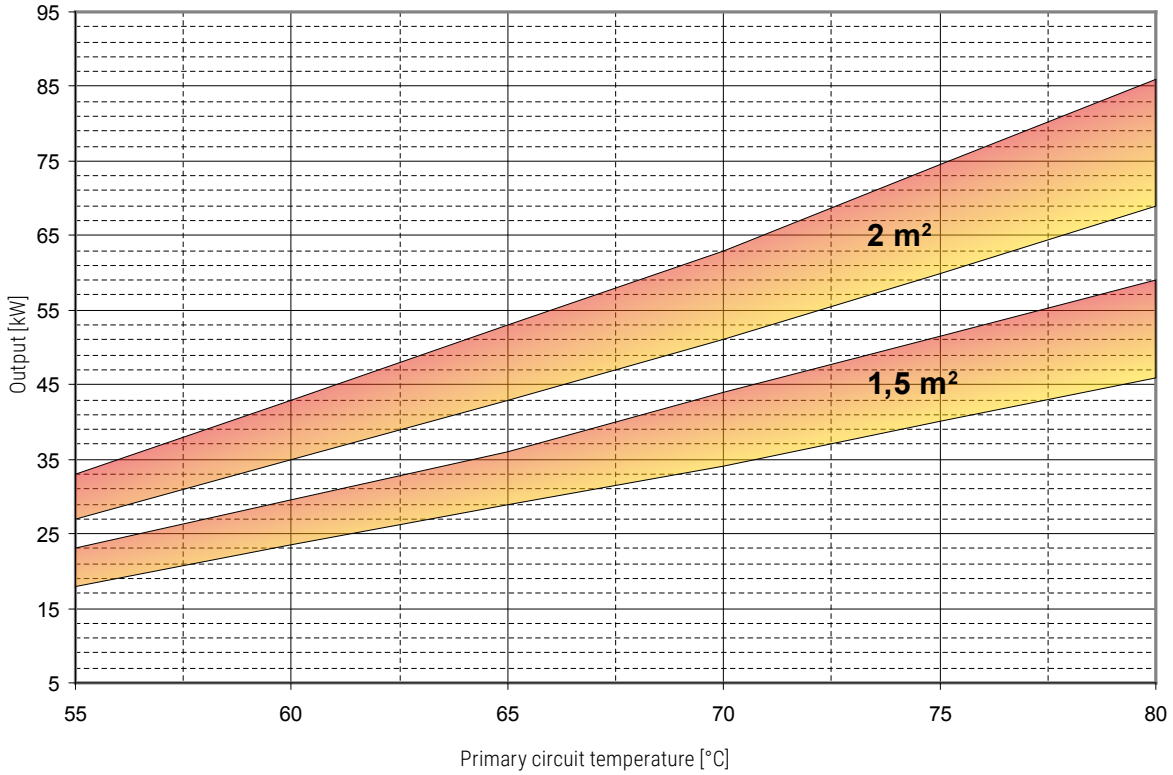
Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)



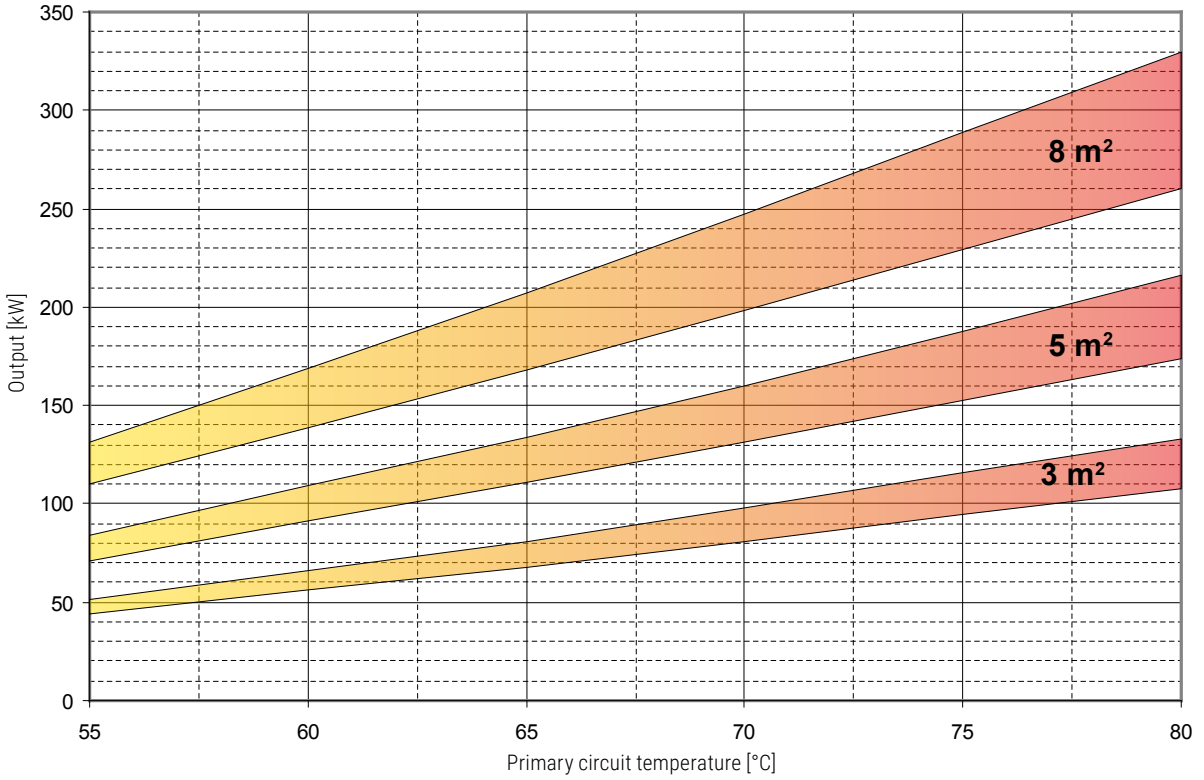


Extractable heat exchanger surface	0,5 m²		0,75 m²		1 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	3	1,5	4	2



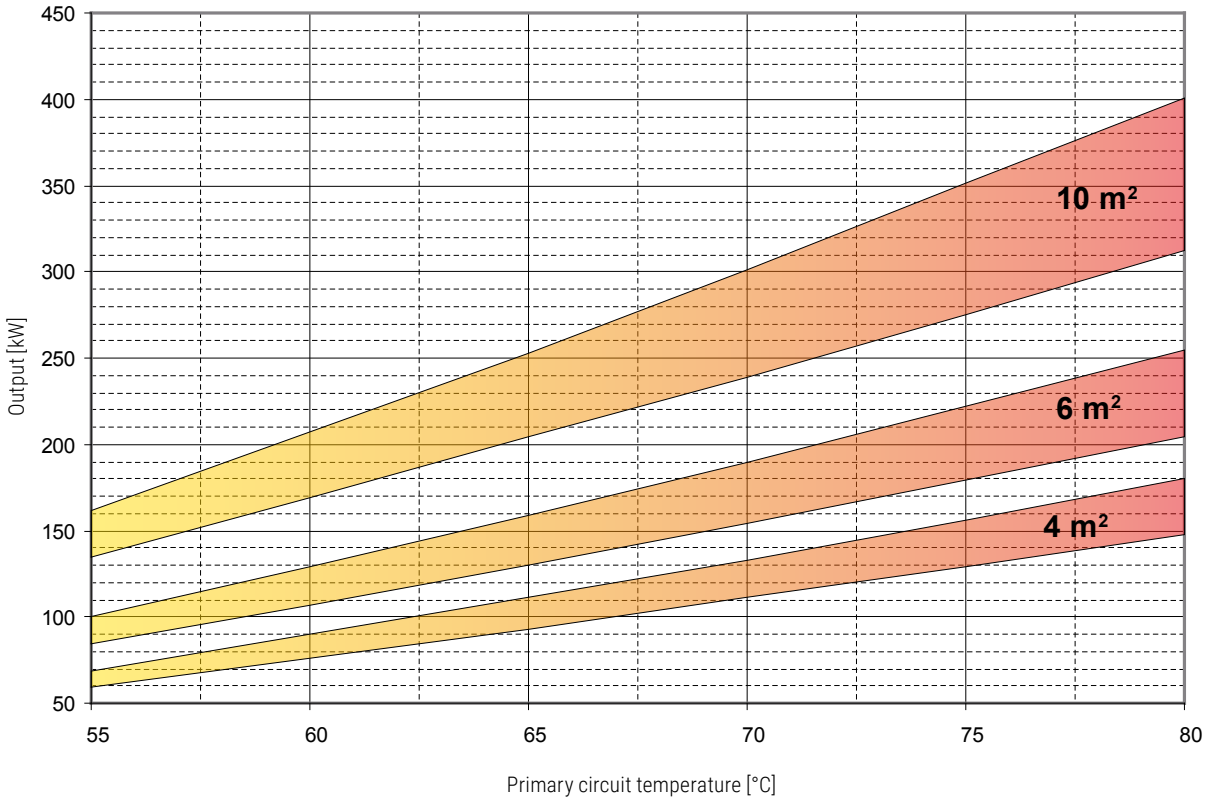


Extractable heat exchanger surface	1,5 m²		2 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN
	6	3	10	5





Extractable heat exchanger surface	3 m²		5 m²		8 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	15	7,5	20	10	20	10





Extractable heat exchanger surface	4 m²		6 m²		10 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	20	10	20	10	20	10

EXTRA **1 HORIZONTAL**

POLYWARM® COATED CALORIFIERS WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
Stainless steel 316L heat exchanger.
INSULATION (DISMOUNTABLE)
NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

316L STAINLESS STEEL HEAT EXCHANGER



EXTRA 1 WXC OR
DISMOUNTABLE SOFT FLEECE INSULATION

Model	Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE [m²]	ENERGY EFFICIENCY CLASS
200	3072161430031	0,5	C
300	3072161430032	0,75	C
500	3072161430033	1	C
800	3072161430034	1,5	C
1000	3072161430035	2	C
1500	3072161430036	3	C
2000	3072161430037	4	C
3000	3072161430008	5	
4000	3072161430009	8	
5000	3072161430011	10	

Data have been calculated on following basis: Primary circuit at 80 °C, and proper energy source; Production of DHW in continue way from 10 °C to 45 °C; DHW that can be taken in the first 10' and in the first hour from storage at 60°C, input 10°C and output 45°C; Sanitary water according to UNI CTI 8065.
Even if tanks are tested to resist till max temperature, the local legislation has always to be observed during the use.

Model	Ignition Time	Output	Continous production of DHW	DHW produced in the first 10 Min.	DHW produced in the first hour	Primary flow rate	Exchanger pressure drop	
	[min]	[Kw]	[lt/h]	[lt/10']	[lt/60']	[m³/h]	[mmH$_2$O]	[mbar]
200	49	18	455	347	635	2	309	30,3
300	48	28	701	524	968	3	372	36,5
500	60	38	947	844	1443	4	419	41,1
800	59	59	1466	1301	2230	6	718	70,4
1000	54	86	2127	1776	3123	10	1380	135,3
1500	53	133	3290	2677	4761	15	2295	225,1
2000	52	180	4453	3564	6384	20	2996	293,8
3000	65	216	5361	5144	8539	20	2436	238,9
4000	57	330	8168	6918	12092	20	3896	382,1
5000	60	401	9921	8639	14923	20	4707	461,6

ACCESSORIES

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

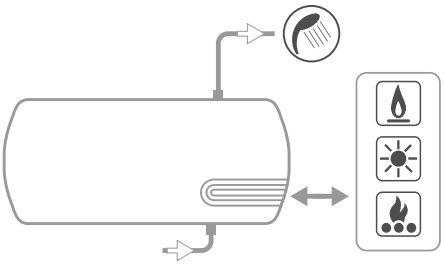


P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

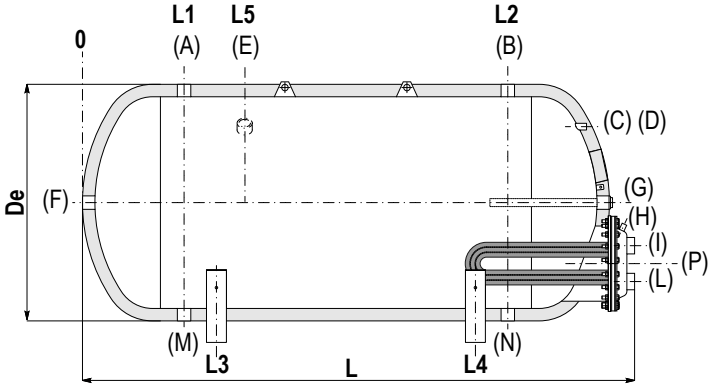
EXTRA **1 HORIZONTAL**

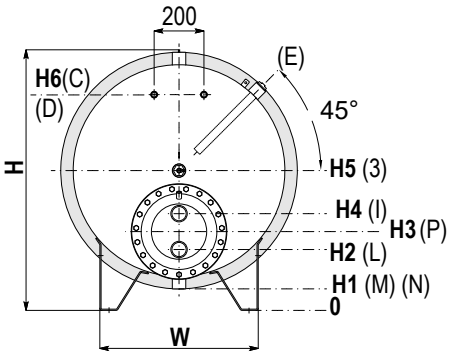
POLYWARM® COATED CALORIFIERS WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
8 bar	90 °C	12 bar	110 °C

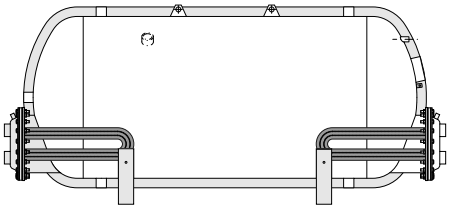


See TECHNICAL SUPPORT chapter for example of installation





A	Domestic hot water outlet
B	Recirculation
C-D	Connection for instrumentation 1/2" G F
E	Connection for 2nd magnesium anode 1"1/4 G F (only for models > 1500)
F-G	Connection for magnesium anode/Recirculation
H	Heat exchanger drain 3/8" G F
I	Primary circuit inlet
L	Primary circuit outlet
M-N	Domestic water inlet / Drain
P	Heat exchanger flange



VERSION WITH 2 EXTRACTABLE HEAT EXCHANGERS IS AVAILABLE UPON REQUEST

Model	Volume	De	L	H	L1	L2	L3	L4	L5	H1
	[lt]	[mm]								
200	191	670	1594	693	344	1144	409	1079	//	43
300	292	770	1645	849	370	1170	440	1100	//	99
500	500	870	1934	946	395	1445	490	1350	//	96
800	795	970	2251	1042	425	1725	555	1595	//	92
1000	1045	1070	2281	1137	458	1758	588	1628	//	87
1500	1498	1210	2651	1240	474	2024	629	1869	//	90
2000	2064	1360	2706	1380	520	2070	660	1930	908	80
3000	2997	1350	2956	1524	495	2295	695	2095	945	154
4000	4184	1550	3066	1707	560	2360	665	2255	1010	137
5000	5131	1700	3107	1845	583	2383	783	2183	1033	125

Model	H2	H3	H4	H5	H6	W	P	L-I	F-G	B	A-M-N	E
	[mm]							Connections F				
200	243	293	343	368	498	364	Øi220/Øe300	1"	1"1/4	1"1/4	1"1/4	-
300	336	386	436	474	668	404	Øi220/Øe300	1"	1"1/4	1"1/4	1"1/4	-
500	383	433	483	521	715	455	Øi220/Øe300	1"	1"1/4	1"1/4	1"1/4	-
800	348	438	528	567	817	583	Øi300/Øe380	2"	1"1/4	1"1/4	1"1/2	-
1000	277	367	457	612	917	644	Øi300/Øe380	2"	1"1/2	1"1/2	1"1/2	-
1500	315	405	495	665	1020	759	Øi300/Øe380	2"	2"	2"	2"	-
2000	330	435	540	730	1085	848	Øi350/Øe430	2"	2"	2"	2"	1"1/4
3000	324	429	534	829	1184	981	Øi350/Øe430	2"	2"	2"	2"	1"1/4
4000	307	412	517	912	1267	1101	Øi350/Øe430	2"	2"	2"	3"	1"1/4
5000	305	410	515	975	1330	1189	Øi350/Øe430	2"	2"	2"	3"	1"1/4

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

EXTRA **1 STEAM**

POLYWARM® COATED CALORIFIERS WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER FOR STEAM GENERATOR



APPLICATION
Production and storage of domestic hot water. Suitable for steam generators.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
Stainless steel 316L straight heat exchanger suitable for steam power (P.E.D. directive compliant).
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection. Models > 1000 external confluence through drain pipe.
GASKET- FLANGE PLATE
Asbestos-free fiber gaskets.
Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list


POLYWARM® COATED DHW STORAGE



316L STAINLESS STEEL HEAT EXCHANGER





EXTRA 1 VAPORE WXB

Model	HARD FOAM INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE [m²]	ENERGY EFFICIENCY CLASS
500	3069162360123	1	C
800	3069162360124	1,5	B
1000	3069162360125	2	C
1500	3069162360126	3	C
2000	3069162360127	3	B



EXTRA 1 VAPORE WXC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE [m²]	ENERGY EFFICIENCY CLASS
500	3069162360133	1	C
800	3069162360134	1,5	C
1000	3069162360135	2	C
1500	3069162360136	3	C
2000	3069162360137	3	C
2500	3069162360111	3	
3000	3069162360108	3	
4000	3069162360109	4	
5000	3069162360110	5	

HEAT EXCHANGERS FOR STEAM GENERATOR TECHNICAL DATA

Model	PED	Heat exchangers performance calculated with primary circuit at **6 bar** saturated steam and production of DHW from 10° to 45°C				Heat exchangers performance calculated with primary circuit at **3 bar** saturated steam and production of DHW from 10° to 45°C			
		Output	DHW production		Ignition time	Output	DHW production		Ignition time
		[KW]	[l/h]	[l/10']	[min]	[KW]	[l/h]	[l/10']	[min]
500	Art. 4.3	141	3464	1189	9	114	2793	1077	11
800	Cat. I	212	5196	1869	9	171	4189	1701	12
1000	Cat. I	282	6928	2463	9	227	5585	2239	11
1500	Cat. I	423	10393	3554	9	341	8378	3218	11
2000	Cat. I	423	10393	4228	12	341	8378	3892	15
2500	Cat. I	423	10393	4571	13	341	8378	4235	17
3000	Cat. I	423	10393	5438	17	341	8378	5102	22
4000	Cat. I	564	13857	7031	17	455	11171	6583	21
5000	Cat. I	705	17321	9097	17	568	13963	8537	22

ACCESSORIES

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

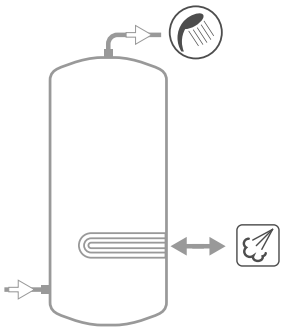


P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

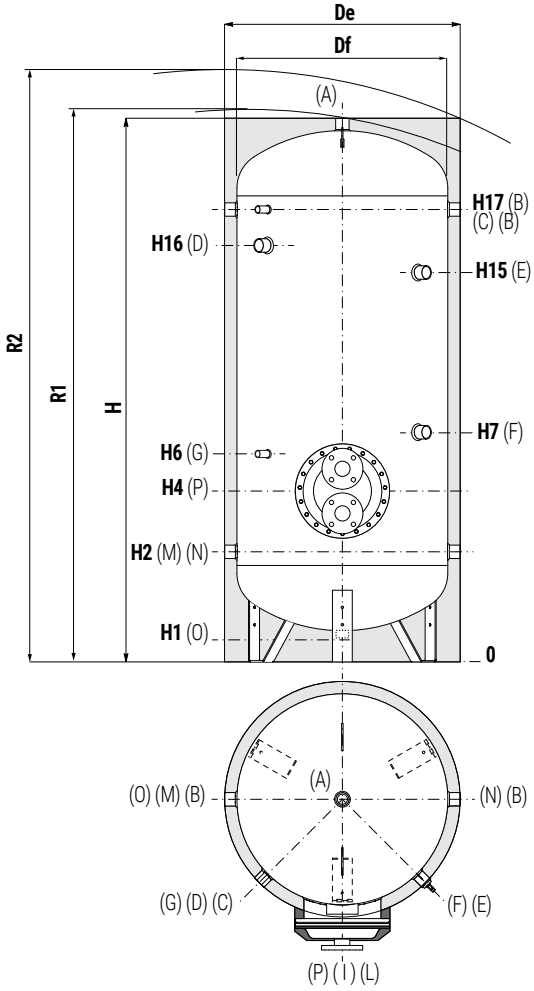
EXTRA **1 STEAM**

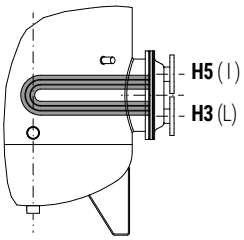
POLYWARM® COATED CALORIFIERS WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER FOR STEAM GENERATOR

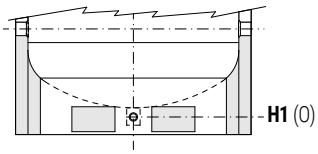
	STORAGE		HEAT EXCHANGER	
Model	Pmax	Tmax	Pmax	Tmax
500 ÷ 1000	8 bar	90 °C	6 bar	165 °C
1500 ÷ 5000	6 bar			



See TECHNICAL SUPPORT chapter for example of installation







Models from 1500 to 5000 are equipped with a practical **skirt** support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying.**

A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation 1/2" F
D	Connection for electric immersion heater 1" 1/2 F For models > 800 connection 2" F
E	Connection for 2nd magnesium anode 1"1/4 F (only for models > 1000)
F	Connection for magnesium anode 1" 1/4 F
G	Connection for instrumentation 1/2" F
I	Steam circuit inlet
L	Outlet for condense
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	Drain
P	Heat exchanger flange

EXTRA 1 VAPORE WXB - HARD FOAM INSULATION

Model	Vol.	Weight	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H15	H16	H17	P	B-N M	I-L	A	O
	[lt]	[kg]	[mm]														Connections F			
500	500	99	750	1800	1960	85	375	410	460	510	570	760	//	1329	1485	Øi220/Øe300	1"1/4	DN25 PN16	1"1/4	1"1/4
800	794	161	900	2135	2330	85	405	450	540	630	690	870	//	1610	1765	Øi300/Øe380	1"1/4	DN50 PN16	1"1/4	1"1/4
1000	1042	204	1000	2221	2450	105	458	503	593	683	743	993	//	1664	1818	Øi300/Øe380	1"1/4	DN50 PN16	1"1/2	1"1/2
1500	1445	250	1100	2415	2660	109	440	485	575	665	725	1075	//	1895	2050	Øi300/Øe380	1"1/2	DN50 PN16	1"1/2	1"
2000	1977	288	1300	2492	2820	91	467	602	692	782	867	842	1952	1877	2057	Øi300/Øe380	2"	DN50 PN16	2"	1"

EXTRA 1 VAPORE WXC - DISMOUNTABLE SOFT FLEECE INSULATION

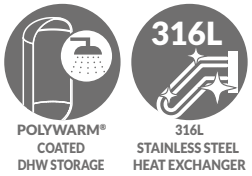
Model	Vol.	Weight	De	Df	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H15	H16	H17	P	B-N M	I-L	A	O
	[lt]	[kg]	[mm]																Connections F			
500	500	90	870	650	1891	1870	2090	126	416	451	501	551	611	801	//	1370	1526	Øi220/Øe300	1"1/4	DN25 PN16	1"1/4	1"1/4
800	794	161	970	750	2188	2220	2400	113	433	478	568	658	718	898	//	1638	1793	Øi300/Øe380	1"1/4	DN50 PN16	1"1/4	1"1/4
1000	1042	204	1070	850	2242	2270	2490	101	454	499	589	679	739	989	//	1660	1814	Øi300/Øe380	1"1/4	DN50 PN16	1"1/4	1"1/2
1500	1445	250	1210	950	2440	2495	2730	109	440	485	575	665	725	1075	//	1895	2050	Øi300/Øe380	1"1/4	DN50 PN16	1"1/2	1"
2000	1977	288	1360	1100	2492	2570	2850	91	467	602	692	782	867	842	1952	1877	2057	Øi350/Øe430	1"1/2	DN50 PN16	1"1/2	1"
2500	2312	331	1350	1250	2311	2480	2690	140	551	686	776	866	951	976	1816	1732	1891	Øi350/Øe430	2"	DN50 PN16	2"	1"
3000	2918	377	1350	1250	2811	2950	3130	140	551	686	776	866	951	1036	2316	2232	2391	Øi350/Øe430	2"	DN50 PN16	2"	1"
4000	3769	530	1500	1400	2875	3050	3250	114	570	690	795	900	970	1035	2315	2238	2410	Øi350/Øe430	2"	DN50 PN16	2"	1"
5000	4982	663	1700	1600	2915	3130	3380	94	580	700	805	910	980	1035	2335	2265	2420	Øi350/Øe430	2"	DN50 PN16	2"	1"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

EXTRA **2 STEAM**

POLYWARM® COATED CALORIFIERS WITH 2 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS FOR STEAM GENERATOR





POLYWARM® COATED DHW STORAGE

316L STAINLESS STEEL HEAT EXCHANGER

APPLICATION
Production and storage of domestic hot water (DHW). Suitable for steam generators.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
N° 2 Stainless steel 316L straight heat exchanger suitable for steam power (P.E.D. directive compliant).
INSULATION (DISMOUNTABLE)
NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.

CATHODE PROTECTION
n° 2 magnesium anodes.
DRAIN
External confluence through drain pipe.
GASKET- FLANGE PLATE
Asbestos-free fiber gaskets.
Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list



EXTRA 2 VAPORE WXC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Lower	Middle
	Art. Nr.	[m²]	
3000	3069162363008	3	3
4000	3069162363009	4	4
5000	3069162363010	5	5

HEAT EXCHANGERS FOR STEAM GENERATOR TECHNICAL DATA

Model	PED	Categoria PED	Heat exchangers performance calculated with primary circuit at **6 bar** saturated steam and production of DHW from 10° to 45°C				Heat exchangers performance calculated with primary circuit at **3 bar** saturated steam and production of DHW from 10° to 45°C			
			Output	DHW production		Ignition time	Output	DHW production		Ignition time
			[KW]	[l/h]	[l/10']	[min]	[KW]	[l/h]	[l/10']	[min]
Middle	**3000**	Cat. I	423	10393	4098	11	341	8378	3762	14
	4000	Cat. I	564	13857	5349	11	455	11171	4902	13
	5000	Cat. I	705	17321	6907	11	568	13963	6347	14
Lower	**3000**	Cat. I	423	10393	5438	17	341	8378	5102	22
	4000	Cat. I	564	13857	7031	17	455	11171	6583	21
	5000	Cat. I	705	17321	9097	17	568	13963	8537	22

ACCESSORIES

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

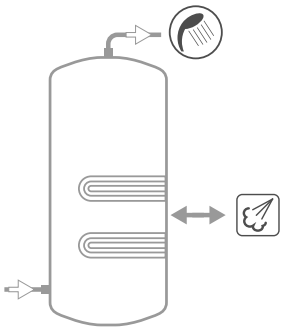


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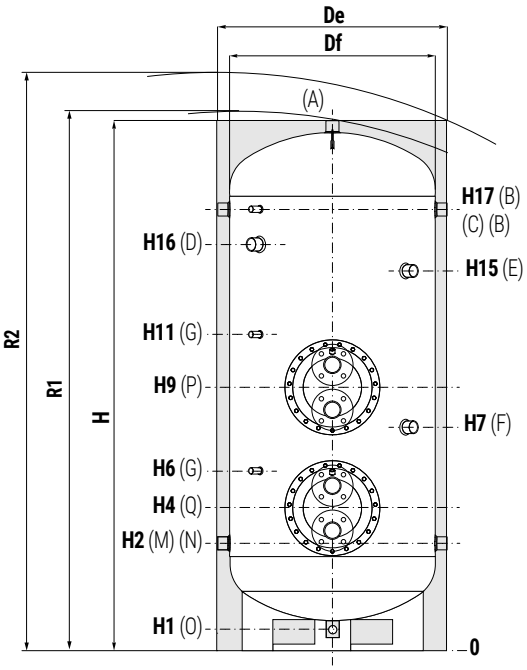
EXTRA **2 STEAM**

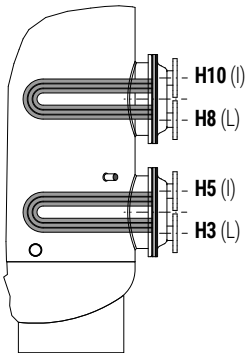
POLYWARM® COATED CALORIFIERS WITH 2 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS FOR STEAM GENERATOR

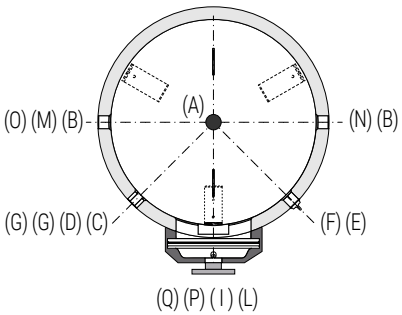
STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	90 °C	6 bar	165 °C



See TECHNICAL SUPPORT chapter for example of installation







Models from 3000 to 5000 are equipped with a practical **skirt** support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying.**

A	Domestic hot water outlet 2" G F
B	Recirculation / Domestic hot water outlet 2" G F
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 2" G F
E	Connection for 2nd magnesium anode 1"1/4 G F
F	Connection for magnesium anode 1"1/4 G F
G	Connection for instrumentation 1/2" G F
I	Steam circuit inlet DN50 PN16
L	Outlet for condense DN50 PN16
M	Domestic cold water circuit inlet 2" G F
N	Alternative domestic cold water circuit inlet or connection for more tanks in series2" G F
O	Drain 1" G F
P	Upper heat exchanger flange
Q	Lower heat exchanger flange

Model	Volume	Weight	De	Df	H	R1	R2	H1	H2	H3	H4	H5	H6	H7
	[lt]	[Kg]	[mm]											
3000	2923	440	1350	1250	2811	2950	3130	140	551	686	776	866	951	1036
4000	3776	620	1500	1400	2875	3050	3250	114	570	690	795	900	970	1035
5000	4990	763	1700	1600	2915	3130	3380	94	580	700	805	910	980	1035

Model	H8	H9	H10	H11	H15	H16	H17	P-Q
	[mm]							
3000	1386	1476	1566	1651	2316	2232	2391	Øi300/Øe380
4000	1390	1495	1600	1670	2315	2238	2410	Øi350/Øe430
5000	1400	1505	1610	1680	2335	2265	2420	Øi350/Øe430

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

EXTRA **1 PLUS**

POLYWARM® COATED CALORIFIERS WITH 1 EXTRACTABLE FINNED COPPER HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
1 copper finned and tinned heat exchanger.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection. Models > 1000 external confluence through drain pipe.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

PROMPT AVAILABILITY

POLYWARM® COATED DHW STORAGE



EXTRA 1 PLUS WRB

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
200	3074162352302	0,76	B
300	3074162352303	0,94	C
500	3074162352304	1,58	C
800	3074162352310	2,63	B
1000	3074162352311	3,17	C
1500	3074162352312	4,54	C
2000	3074162352313	5,26	B

EXTRA 1 PLUS WRC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
500	3072162352334	1,58	C
800	3072162352340	2,63	C
1000	3072162352341	3,17	C
1500	3072162352342	4,54	C
2000	3072162352343	5,26	C
2500	3072162352344	6,34	
3000	3072162352345	6,34	
4000	3072162352346	6,34	
5000	3072162352347	6,34	

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	2 kW	3 kW	THREEPHASE 4 kW	5 kW	6 kW	9 kW	12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	49	87	65	44	33	//	//	//	//
300	76	136	102	68	51	//	//	//	//
500	127	228	171	114	85	68	57	//	//
800	178	318	239	159	120	96	80	//	//
1000	243	436	327	218	163	131	109	73	54
1500	288	516	387	258	194	155	129	86	65
2000	443	793	595	396	297	238	198	132	99
2500	577	1033	775	517	387	310	258	172	129
3000	577	1033	775	517	387	310	258	172	129
4000	797	1428	1071	714	535	428	357	238	178
5000	1040	1864	1398	932	699	559	466	311	233

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

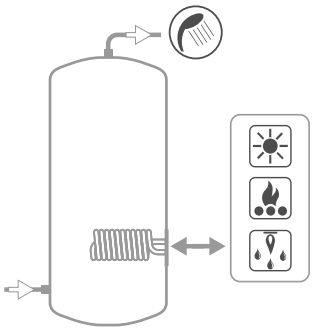


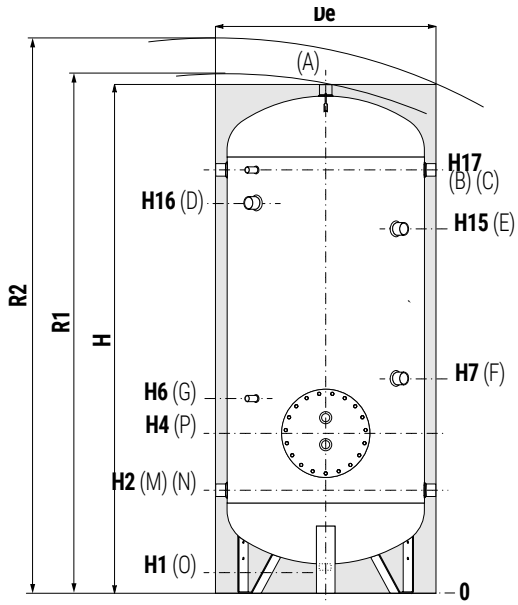
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

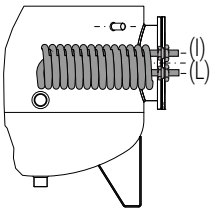
EXTRA **1 PLUS**

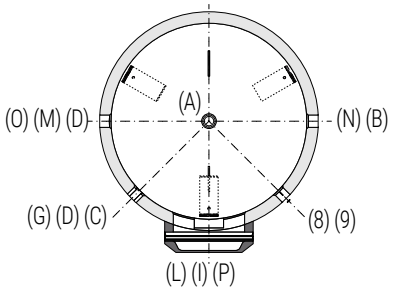
POLYWARM® COATED CALORIFIERS WITH 1 EXTRACTABLE FINNED COPPER HEAT EXCHANGER

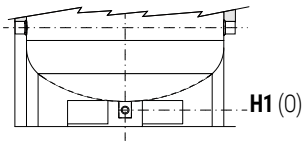
	STORAGE		HEAT EXCHANGER	
Model	Pmax	Tmax	Pmax	Tmax
200 ÷ 1000	8 bar	90 °C	12 bar	110 °C
1500 ÷ 5000	6 bar			











Models from 1500 to 5000 are equipped with a practical **skirt** support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 1" 1/2 G F For models > 800 connection 2" G F
E	Connection for 2nd magnesium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
I	Primary circuit inlet
L	Primary circuit outlet
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	Drain
P	Heat exchanger flange

EXTRA 1 PLUS WRB - HARD FOAM INSULATION

Model	Volume	De	H	R2	H1	H2	H4	H6	H7	H15	H16	H17	P	B-M-N	A	O	I-L
	[lt]	[mm]												Connections F			
200	191	550	1449	1560	85	325	410	520	650	//	1075	1185	Øi220/Øe300	1"1/4	1"1/4	1"1/4	1"
300	292	650	1499	1640	85	350	435	545	735	//	1100	1210	Øi220/Øe300	1"1/4	1"1/4	1"1/4	1"
500	500	750	1800	1960	85	375	460	570	760	//	1329	1485	Øi220/Øe300	1"1/4	1"1/4	1"1/4	1"
800	791	900	2135	2330	85	405	490	600	870	//	1610	1765	Øi300/Øe380	1"1/4	1"1/4	1"1/4	1"
1000	1040	1000	2221	2450	105	458	543	653	993	//	1664	1818	Øi300/Øe380	1"1/2	1"1/2	1"1/2	1"
1500	1442	1100	2415	2660	109	440	525	635	1075	//	1895	2050	Øi300/Øe380	1"1/2	2"	1"	1"1/4
2000	1974	1300	2492	2820	91	467	542	652	842	1952	1877	2057	Øi350/Øe430	2"	2"	1"	1"1/4

EXTRA 1 PLUS WRC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	De	Df	H	R1	R2	H1	H2	H4	H6	H7	H15	H16	H17	P	B-M-N	A	O	I-L
	[lt]	[mm]														Connections F			
500	500	870	650	1841	1998	2090	101	416	501	611	801	//	1370	1526	Øi220/Øe300	1"1/4	1"1/4	1"1/4	1"
800	791	970	750	2188	2220	2400	113	433	518	628	898	//	1638	1793	Øi300/Øe380	1"1/4	1"1/4	1"1/4	1"
1000	1040	1070	850	2242	2270	2490	101	454	539	649	989	//	1660	1814	Øi300/Øe380	1"1/2	1"1/2	1"1/2	1"
1500	1442	1210	950	2440	2495	2730	109	440	525	635	1075	//	1895	2050	Øi300/Øe380	1"1/2	2"	1"	1"1/4
2000	1974	1360	1100	2492	2570	2850	91	467	542	652	842	1952	1877	2057	Øi350/Øe430	2"	2"	1"	1"1/4
2500	2310	1350	1250	2311	2480	2690	140	551	626	736	976	1816	1732	1891	Øi350/Øe430	2"	2"	1"	1"1/4
3000	2916	1350	1250	2811	2950	3130	140	551	626	736	876	2316	2232	2391	Øi350/Øe430	2"	2"	1"	1"1/4
4000	3764	1500	1400	2875	3050	3250	114	570	645	755	895	2315	2238	2410	Øi350/Øe430	2"	2"	1"	1"1/4
5000	4978	1700	1600	2915	3130	3380	94	580	655	765	935	2335	2265	2420	Øi350/Øe430	2"	2"	1"	1"1/4

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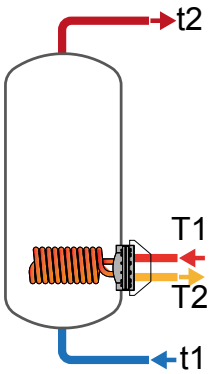
EXTRA **1 PLUS**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

LOWER
HEAT EXCHANGER

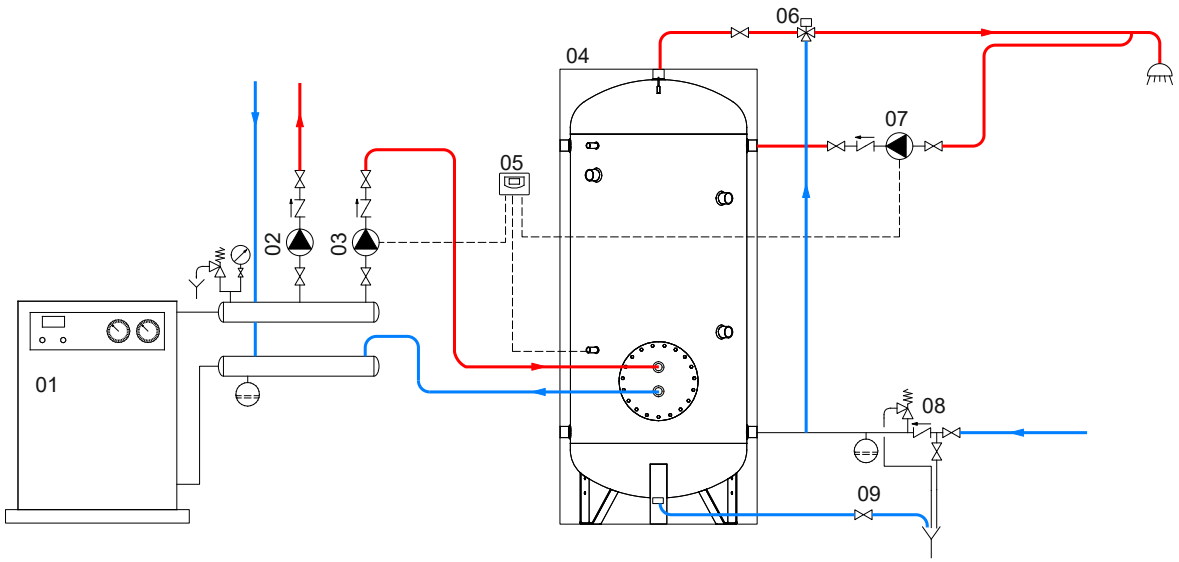


Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	1,4	95	97	65	40	7	11	14	19	172	270	342	467
	0,7	106	107	72	45	6	10	12	17	147	246	295	418
300	1,4	119	118	79	49	9	14	17	24	214	353	428	586
	0,7	130	131	87	54	8	13	16	21	203	329	396	535
500	1,4	132	132	89	55	14	23	28	37	347	565	680	923
	0,7	150	151	103	65	13	21	25	33	321	509	606	809
800	1,4	137	138	94	59	23	36	44	56	562	900	1076	1443
	0,7	164	167	115	73	21	32	38	49	510	789	931	1222
1000	1,4	154	155	105	67	27	43	51	68	668	1062	1265	1688
	0,7	187	191	132	85	24	37	44	57	602	921	1082	1409
1500	3	139	140	95	59	40	65	77	104	988	1594	1910	2577
	1,5	162	164	113	72	37	57	68	90	906	1417	1678	2218
2000	3	168	169	115	72	46	74	88	118	1133	1820	2177	2925
	1,5	199	202	139	89	42	65	77	101	1033	1605	1895	2493
2500	3	163	164	112	71	55	87	104	139	1349	2150	2564	3428
	1,5	197	200	139	102	50	76	89	117	1221	1876	2206	2881
3000	3	214	216	147	93	55	87	104	139	1349	2150	2564	3428
	1,5	258	263	181	117	50	76	89	117	1221	1876	2206	2881
4000	3	274	276	187	118	55	87	104	139	1349	2150	2564	3428
	1,5	330	337	232	149	50	76	89	117	1221	1876	2206	2881
5000	3	361	364	247	156	55	87	104	139	1349	2150	2564	3428
	1,5	436	445	305	196	50	76	89	117	1221	1876	2206	2881

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	1,4	212	274	285	306	320	445	502	602	895	88
	0,7	207	270	278	298	301	425	464	563	223	22
300	1,4	313	406	418	445	449	630	690	816	1936	190
	0,7	312	402	413	436	440	610	664	775	484	47
500	1,4	547	706	725	765	767	1063	1155	1350	1861	183
	0,7	543	696	712	746	746	1019	1096	1259	465	46
800	1,4	896	1153	1182	1243	1252	1723	1864	2157	3097	304
	0,7	887	1134	1158	1207	1210	1634	1748	1980	774	76
1000	1,4	1158	1486	1519	1590	1581	2158	2321	2659	3733	366
	0,7	1147	1462	1489	1543	1528	2045	2174	2436	933	91
1500	3	1622	2087	2140	2251	2248	3097	3349	3883	2878	282
	1,5	1608	2058	2101	2191	2182	2955	3164	3596	720	71
2000	3	2185	2799	2859	2983	2903	3952	4237	4836	2878	282
	1,5	2169	2763	2812	2911	2823	3780	4012	4490	720	71
2500	3	2496	3197	3266	3410	3350	4559	4890	5581	4588	450
	1,5	2474	3151	3206	3319	3248	4339	4603	5143	1147	112
3000	3	3189	4064	4133	4277	4044	5426	5757	6448	5530	542
	1,5	3168	4018	4073	4186	3941	5207	5471	6011	1382	136
4000	3	4002	5080	5149	5293	4856	6441	6773	7464	5530	542
	1,5	3981	5034	5089	5202	4754	6222	6486	7026	1382	136
5000	3	5193	6568	6637	6781	6047	7930	8261	8952	5530	542
	1,5	5172	6523	6578	6690	5945	7711	7975	8515	1382	136



EXAMPLE OF INSTALLATION WITH **EXTRA 1 PLUS**



1	Generator	04	EXTRA 1 PLUS	07	D.H.W. recirculation group
2	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group
3	D.H.W. circulation group	06	Thermostatic mixing valve	09	Blowdown valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

PRESSURE DROP AND PERFORMANCE CHARTS AT PAGE 102-103

EXTRA **2 PLUS**

POLYWARM® COATED CALORIFIERS WITH 2 EXTRACTABLE FINNED COPPER HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
2 copper finned and tinned heat exchangers.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection. Models > 1000 external confluence through drain pipe.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

EXTRA 2 PLUS WRB

Model	HARD FOAM INSULATION	HEAT EXCHANGER SURFACE Lower	Middle	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
200	3084162352301	0,76	0,76	**B**
300	3084162352302	0,94	0,76	**C**
500	3084162352303	1,58	0,76	**C**
800	3084162352310	2,63	0,94	**B**
1000	3084162352311	3,17	1,58	**C**
1500	3084162352312	4,54	2,63	**C**
2000	3084162352313	5,26	3,17	**B**



EXTRA 2 PLUS WRC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	HEAT EXCHANGER SURFACE Lower	Middle	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
500	3082162352333	1,58	0,76	**C**
800	3082162352340	2,63	0,94	**C**
1000	3082162352341	3,17	1,58	**C**
1500	3082162352342	4,54	2,63	**C**
2000	3082162352343	5,26	3,17	**C**
2500	3082162352344	6,34	4,54	
3000	3082162352345	6,34	5,26	
4000	3082162352346	6,34	6,34	
5000	3082162352347	6,34	6,34	

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE **1,5** kW	**2** kW	**3** kW	THREEPHASE **4** kW	**5** kW	**6** kW	**9** kW	**12** kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	49	87	65	44	33	//	//	//	//
300	76	136	102	68	51	//	//	//	//
500	127	228	171	114	85	68	57	//	//
800	178	318	239	159	120	96	80	//	//
1000	243	436	327	218	163	131	109	73	54
1500	288	516	387	258	194	155	129	86	65
2000	443	793	595	396	297	238	198	132	99
2500	577	1033	775	517	387	310	258	172	129
3000	577	1033	775	517	387	310	258	172	129
4000	797	1428	1071	714	535	428	357	238	178
5000	1040	1864	1398	932	699	559	466	311	233

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

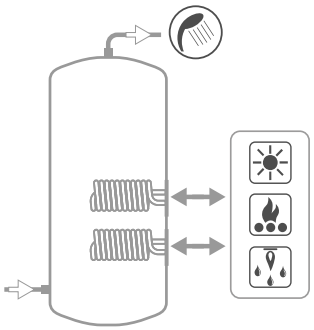


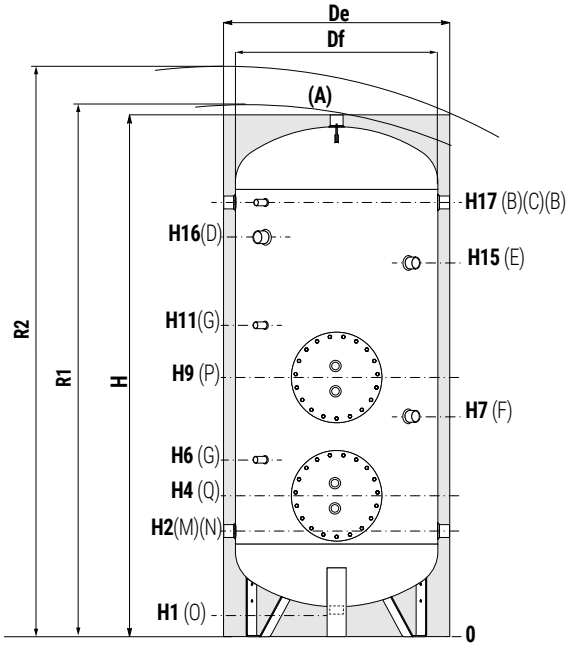
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

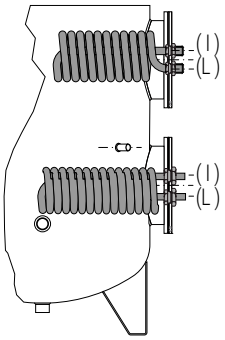
EXTRA **2 PLUS**

POLYWARM® COATED CALORIFIERS WITH 2 EXTRACTABLE FINNED COPPER HEAT EXCHANGERS

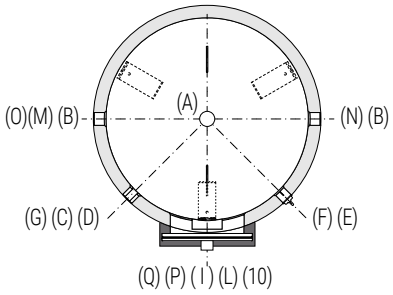
	STORAGE		HEAT EXCHANGER	
Model	Pmax	Tmax	Pmax	Tmax
200 ÷ 1000	8 bar	90 °C	12 bar	110 °C
1500 ÷ 5000	6 bar			

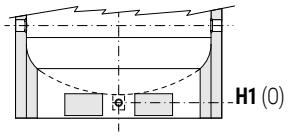






A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C-G	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 1" 1/2 G F (For models >800 connection 2" G F)
E	Connection for 2nd magnesium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode 1"1/4 G F
I	Primary circuit inlet heat exchanger
L	Primary circuit outlet heat exchanger
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	Drain
P	Upper heat exchanger flange
Q	Lower heat exchanger flange





Models from 1500 to 5000 are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

EXTRA 2 PLUS WRB - HARD FOAM INSULATION

Model	Volume	De	H	R2	H1	H2	H4	H6	H7	H9	H11	H15	H16	H17	P Q	A	B-M-N	O	I-L lower	I-L upper
	[lt]	[mm]														Connections F				
200	193	550	1449	1560	85	325	410	520	650	860	970	//	1075	1185	Øi220/Øe300	1"1/4	1"1/4	1"1/4	1"	1"
300	295	650	1499	1640	85	350	435	545	735	885	995	//	1100	1210	Øi220/Øe300	1"1/4	1"1/4	1"1/4	1"	1"
500	503	750	1800	1960	85	375	460	570	760	910	1020	//	1329	1485	Øi220/Øe300	1"1/4	1"1/4	1"1/4	1"	1"
800	794	900	2135	2330	85	405	540	690	870	1090	1240	//	1610	1765	Øi300/Øe380	1"1/4	1"1/4	1"1/4	1"	1"
1000	1043	1000	2221	2450	105	458	593	743	993	1143	1293	//	1664	1818	Øi300/Øe380	1"1/2	1"1/2	1"1/2	1"	1"
1500	1445	1100	2415	2660	109	440	675	825	1075	1250	1400	//	1895	2050	Øi300/Øe380	2"	1"1/2	1"	1"1/4	1"
2000	1977	1300	2492	2820	91	467	692	867	842	1262	1437	1952	1877	2057	Øi350/Øe430	2"	2"	1"	1"1/4	1"

EXTRA 2 PLUS WRC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	De	Df	H	R1	R2	H1	H2	H4	H6	H7	H9	H11	H15	H16	H17	P Q	A	B-M-N	O	I-L lower	I-L middle
	[lt]	[mm]																Connections F				
500	503	870	650	1841	1990	2090	101	416	501	611	801	951	1061	//	1370	1526	Øi220/Øe300	1"1/4	1"1/4	1"1/4	1"	1"
800	794	970	750	2188	2220	2400	113	433	518	628	898	1118	1228	//	1638	1793	Øi300/Øe380	1"1/4	1"1/4	1"1/4	1"	1"
1000	1043	1070	850	2242	2270	2490	101	454	539	649	989	1139	1249	//	1660	1814	Øi300/Øe380	1"1/2	1"1/2	1"1/2	1"	1"
1500	1445	1210	950	2440	2495	2730	109	440	525	635	1075	1250	1360	//	1895	2050	Øi300/Øe380	2"	1"1/2	1"	1"1/4	1"
2000	1977	1360	1100	2492	2570	2850	91	467	542	652	842	1262	1372	1952	1877	2057	Øi350/Øe430	2"	2"	1"	1"1/4	1"
2500	2313	1350	1250	2311	2480	2690	140	551	626	736	876	1201	1311	1816	1732	1891	Øi350/Øe430	2"	2"	1"	1"1/4	1"1/4
3000	2919	1350	1250	2811	2950	3130	140	551	626	736	876	1476	1586	2316	2232	2391	Øi350/Øe430	2"	2"	1"	1"1/4	1"1/4
4000	3767	1500	1400	2875	3050	3250	114	570	645	755	895	1495	1605	2315	2238	2410	Øi350/Øe430	2"	2"	1"	1"1/4	1"1/4
5000	4981	1700	1600	2915	3130	3380	94	580	655	765	935	1505	1615	2335	2265	2420	Øi350/Øe430	2"	2"	1"	1"1/4	1"1/4

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

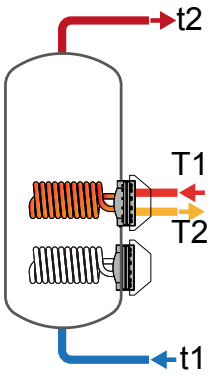
EXTRA **2 PLUS**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

UPPER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	1,4	58	58	39	24	7	11	14	19	172	270	342	467
	0,7	64	64	43	27	6	10	12	17	147	246	295	418
300	1,4	89	89	59	36	7	11	14	19	172	270	342	467
	0,7	96	96	64	40	6	10	12	17	147	246	295	418
500	1,4	175	175	115	70	7	11	14	19	172	270	342	467
	0,7	192	193	127	79	6	10	12	17	147	246	295	418
800	1,4	247	248	162	99	9	14	17	24	214	353	428	586
	0,7	274	276	182	112	8	13	16	21	203	329	396	535
1000	1,4	187	187	125	77	14	23	28	37,4	347	565	680	923
	0,7	213	216	145	91	13	21	25	33	321	509	606	809
1500	1,4	168	170	115	72	23	36	44	56	562	900	1076	1443
	0,7	204	208	142	91	21	32	38	49	510	789	931	1222
2000	1,4	201	203	138	87	27	43	51	68	668	1062	1265	1688
	0,7	249	254	174	112	24	37	44	57	602	921	1082	1409
2500	3	126	126	85	53	40	65	77	104	988	1594	1910	2577
	1,5	146	148	102	65	37	57	68	90	906	1417	1678	2218
3000	3	160	161	109	69	46	74	88	118	1133	1820	2177	2925
	1,5	190	193	132	85	42	65	77	101	1033	1605	1895	2493
4000	3	176	178	121	76	55	87	104	139	1349	2150	2564	3428
	1,5	212	217	149	96	50	76	89	117	1221	1876	2206	2881
5000	3	234	236	160	101	55	87	104	139	1349	2150	2564	3428
	1,5	282	288	198	127	50	76	89	117	1221	1876	2206	2881

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH_2O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	1,4	138	182	194	215	247	353	410	511	895	88
	0,7	134	178	186	207	228	334	373	471	223	22
300	1,4	198	256	268	289	307	428	485	585	895	88
	0,7	194	252	261	281	287	408	447	546	223	22
500	1,4	351	448	460	481	460	619	676	776	895	88
	0,7	347	444	452	472	440	599	639	737	223	22
800	1,4	519	663	676	702	655	887	947	1073	1936	190
	0,7	517	659	670	693	646	867	921	1032	484	47
1000	1,4	744	951	970	1011	963	1309	1401	1596	1861	183
	0,7	739	942	958	992	943	1264	1342	1504	465	46
1500	1,4	1033	1324	1354	1415	1389	1894	2035	2329	3097	304
	0,7	1024	1306	1329	1378	1347	1805	1919	2152	774	76
2000	1,4	1422	1816	1849	1920	1845	2488	2651	2989	3733	366
	0,7	1411	1792	1819	1873	1792	2375	2504	2766	933	91
2500	3	1472	1900	1953	2064	2098	2909	3162	3696	2878	282
	1,5	1458	1870	1914	2004	2032	2768	2977	3409	720	71
3000	3	2081	2669	2729	2853	2799	3822	4107	4706	2878	282
	1,5	2065	2633	2682	2781	2719	3650	3882	4360	720	71
4000	3	2657	3398	3467	3611	3511	4760	5091	5782	5530	542
	1,5	2636	3353	3408	3520	3409	4541	4805	5345	1382	136
5000	3	3441	4378	4447	4591	4295	5740	6071	6762	5530	542
	1,5	3420	4333	4388	4500	4193	5521	5785	6325	1382	136

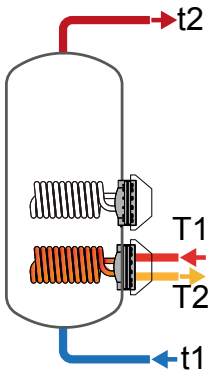
PRESSURE DROP AND PERFORMANCE CHARTS AT PAGE 102-103

EXTRA **2 PLUS**

HEAT EXCHANGERS TECHNICAL DATA



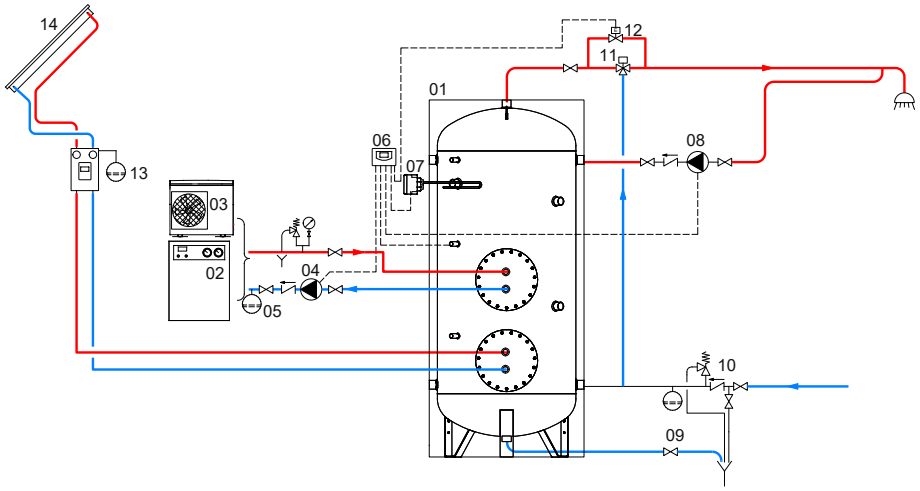
LOWER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	1,4	95	97	65	40	7	11	14	19	172	270	342	467
	0,7	106	107	72	45	6	10	12	17	147	246	295	418
300	1,4	119	118	79	49	9	14	17	24	214	353	428	586
	0,7	130	131	87	54	8	13	16	21	203	329	396	535
500	1,4	132	132	89	55	14	23	28	37	347	565	680	923
	0,7	150	151	103	65	13	21	25	33	321	509	606	809
800	1,4	137	138	94	59	23	36	44	56	562	900	1076	1443
	0,7	164	167	115	73	21	32	38	49	510	789	931	1222
1000	1,4	154	155	105	67	27	43	51	68	668	1062	1265	1688
	0,7	187	191	132	85	24	37	44	57	602	921	1082	1409
1500	3	139	140	95	59	40	65	77	104	988	1594	1910	2577
	1,5	162	164	113	72	37	57	68	90	906	1417	1678	2218
2000	3	168	169	115	72	46	74	88	118	1133	1820	2177	2925
	1,5	199	202	139	89	42	65	77	101	1033	1605	1895	2493
2500	3	163	164	112	71	55	87	104	139	1349	2150	2564	3428
	1,5	197	200	139	102	50	76	89	117	1221	1876	2206	2881
3000	3	214	216	147	93	55	87	104	139	1349	2150	2564	3428
	1,5	258	263	181	117	50	76	89	117	1221	1876	2206	2881
4000	3	274	276	187	118	55	87	104	139	1349	2150	2564	3428
	1,5	330	337	232	149	50	76	89	117	1221	1876	2206	2881
5000	3	361	364	247	156	55	87	104	139	1349	2150	2564	3428
	1,5	436	445	305	196	50	76	89	117	1221	1876	2206	2881

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	1,4	212	274	285	306	320	445	502	602	895	88
	0,7	207	270	278	298	301	425	464	563	223	22
300	1,4	313	406	418	445	449	630	690	816	1936	190
	0,7	312	402	413	436	440	610	664	775	484	47
500	1,4	547	706	725	765	767	1063	1155	1350	1861	183
	0,7	543	696	712	746	746	1019	1096	1259	465	46
800	1,4	896	1153	1182	1243	1252	1723	1864	2157	3097	304
	0,7	887	1134	1158	1207	1210	1634	1748	1980	774	76
1000	1,4	1158	1486	1519	1590	1581	2158	2321	2659	3733	366
	0,7	1147	1462	1489	1543	1528	2045	2174	2436	933	91
1500	3	1622	2087	2140	2251	2248	3097	3349	3883	2878	282
	1,5	1608	2058	2101	2191	2182	2955	3164	3596	720	71
2000	3	2185	2799	2859	2983	2903	3952	4237	4836	2878	282
	1,5	2169	2763	2812	2911	2823	3780	4012	4490	720	71
2500	3	2496	3197	3266	3410	3350	4559	4890	5581	4588	450
	1,5	2474	3151	3206	3319	3248	4339	4603	5143	1147	112
3000	3	3189	4064	4133	4277	4044	5426	5757	6448	5530	542
	1,5	3168	4018	4073	4186	3941	5207	5471	6011	1382	136
4000	3	4002	5080	5149	5293	4856	6441	6773	7464	5530	542
	1,5	3981	5034	5089	5202	4754	6222	6486	7026	1382	136
5000	3	5193	6568	6637	6781	6047	7930	8261	8952	5530	542
	1,5	5172	6523	6578	6690	5945	7711	7975	8515	1382	136

EXAMPLE OF INSTALLATION WITH **EXTRA 2 PLUS**



1	Extra 2 Plus	5	Expansion vessel	9	Blowdown valve	13	Solar system circulation group
2	Generator	6	Electronic Control/thermostat	10	Hydraulic safety group	14	Solar panels
3	Generator (Heat pump)	7	Electric immersion heater (optional)	11	Thermostatic mixing valve		
4	Circulation group	8	D.H.W. recirculation group	12	By-pass solenoid valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXTRA **3 PLUS**

POLYWARM® COATED CALORIFIERS WITH 3 EXTRACTABLE FINNED COPPER HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
3 copper finned and tinned heat exchangers.
INSULATION
SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain pipe.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM®
COATED
DHW STORAGE



EXTRA 3 PLUS WRC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	HEAT EXCHANGER SURFACE			ENERGY EFFICIENCY CLASS
		Lower	Middle	Upper	
	Art. Nr.	[m²]			
500	3092162352340	1,58	0,76	0,76	**C**
1000	3092162352341	3,17	1,58	0,94	**C**
1500	3092162352342	4,54	2,63	1,58	**C**
2000	3092162352343	5,26	4,54	2,63	**C**
3000	3092162352345	6,34	5,26	3,17	
5000	3092162352347	6,34	6,34	5,26	

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Titanium anode

Art. Nr.	**Model**
5200000000011	1500
5200000000013	2000÷5000



Magnesium anodes kit and anoden tester

See Accessories section

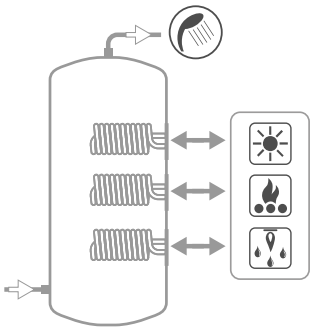


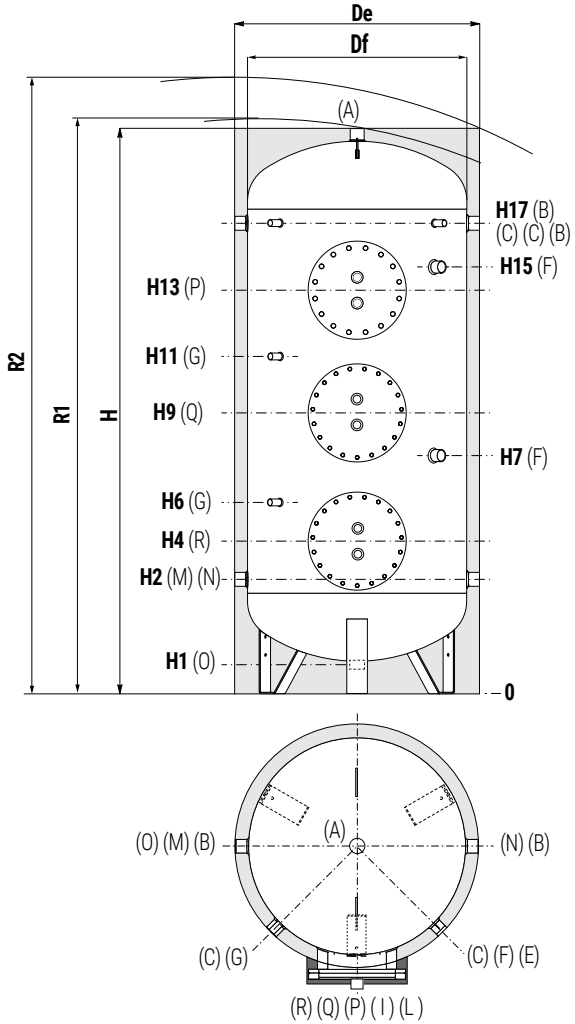
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

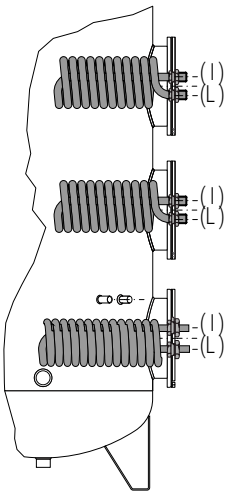
EXTRA **3 PLUS**

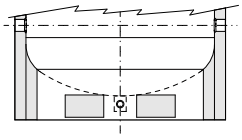
POLYWARM® COATED CALORIFIERS WITH 3 EXTRACTABLE FINNED COPPER HEAT EXCHANGERS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	90 °C	12 bar	110 °C









A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet 1" 1/2 F
C-G	Connection for instrumentation 1/2" F
E	Connection for 2nd magnesium anode 1"1/4 F (only for models > 1500)
F	Connection for magnesium anode 1"1/4 F
I	Primary circuit inlet heat exchanger
L	Primary circuit outlet heat exchanger
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	Drain
P	Upper heat exchanger flange
Q	Middle heat exchanger flange
R	Lower heat exchanger flange

Models from 1500 to 5000 are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

Mod.	Vol.	Weight	De	Df	H	R1	R2	H1	H2	H4	H6	H7
	[lt]	[kg]	[mm]									
500	500	120	870	650	1891	1990	2090	126	416	501	611	801
1000	1360	220	1070	850	2198	2240	3140	89	454	562	649	989
1500	1455	227	1210	950	2440	2495	2730	109	440	675	825	1075
2000	1991	278	1360	1100	2492	2570	2850	91	467	692	867	842
3000	2933	377	1350	1250	2811	2950	3130	140	551	836	1011	1036
5000	4996	634	1700	1600	2915	3130	3380	94	580	855	1030	1035

Mod.	H9	H11	H15	H16	H17	R-Q	P	A - B - M - N	O	I-L Lower	I-L Middle	I-L Upper
	[mm]							Connections F				
500	951	1061	1401	//	1526	Øi220/Øe300	Øi220/Øe300	1"1/4	1"1/4	1"	1"	1"
1000	1112	1249	1612	//	1760	Øi300/Øe380	Øi300/Øe380	1"1/2	1"1/2	1"	1"	1"
1500	1250	1400	1875	//	2050	Øi300/Øe380	Øi300/Øe380	2"	1"	1"1/4	1"	1"
2000	1262	1437	1817	1592	2057	Øi350/Øe430	Øi300/Øe380	2"	1"	1"1/4	1"1/4	1"
3000	1476	1651	2176	1926	2391	Øi350/Øe430	Øi300/Øe380	2"	1"	1"1/4	1"1/4	1"
5000	1505	1680	2115	1855	2420	Øi350/Øe430	Øi350/Øe430	2"	1"	1"1/4	1"1/4	1"1/4

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

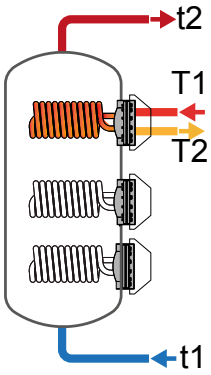
EXTRA **3 PLUS**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

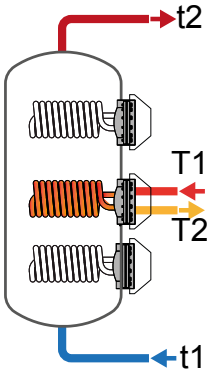
UPPER HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
500	1,4	175	175	115	70	7	11	14	19	172	270	342	467
	0,7	192	193	127	79	6	10	12	17	147	246	295	418
1000	1,4	247	248	162	99	9	14	17	24	214	353	428	586
	0,7	274	276	182	112	8	13	16	21	203	329	396	535
1500	1,4	122	122	81	50	14,1	22,9	27,6	37,4	562	900	1076	1443
	0,7	142	144	96	60	13	21	25	33	510	789	931	1222
2000	1,4	122	123	83	52	23	36	44	56	668	1062	1265	1688
	0,7	148	151	103	66	21	32	38	49	602	921	1082	1409
3000	1,4	128	129	87	56	27	43	51	68	668	1062	1265	1688
	0,7	156	159	110	71	24	37	44	57	602	921	1082	1409
5000	3	154	156	105	66	46	74	88	118	1349	2150	2564	3428
	1,5	183	186	127	81	42	65	77	101	1221	1876	2206	2881

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
500	1,4	178	232	244	265	287	403	460	561	895	88
	0,7	174	228	236	257	268	384	423	521	223	22
1000	1,4	325	420	433	459	460	644	704	830	1936	190
	0,7	323	416	427	451	452	625	678	789	484	47
1500	1,4	456	603	632	693	812	1173	1314	1607	1861	182,5
	0,7	447	584	608	657	770	1084	1198	1430	465	45,6
2000	1,4	694	906	939	1010	1117	1578	1741	2079	3097	303,7
	0,7	683	882	909	963	1064	1465	1594	1856	774	75,9
3000	1,4	902	1166	1199	1270	1325	1838	2001	2339	3733	366
	0,7	891	1142	1169	1223	1272	1725	1854	2116	933	91,5
5000	3	1831	2365	2434	2578	2685	3727	4058	4750	2878	282,2
	1,5	1809	2320	2375	2487	2583	3508	3772	4312	720	70,6

MIDDLE HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
500	1,4	175	175	115	70	7	11	14	19	172	270	342	467
	0,7	192	193	127	79	6	10	12	17	147	246	295	418
1000	1,4	187	187	125	77	14	23	28	37	347	565	680	923
	0,7	213	216	145	91	13	21	25	33	321	509	606	809
1500	1,4	168	170	115	72	23	36	44	56	562	900	1076	1443
	0,7	204	208	142	91	21	32	38	49	510	789	931	1222
2000	3	136	134	91	57	40	65	77	104	988	1594	1910	2577
	1,5	162	165	113	71	37	57	68	90	906	1417	1678	2218
3000	3	160	161	109	69	46	74	88	118	1133	1820	2177	2925
	1,5	190	193	132	85	42	65	77	101	1033	1605	1895	2493
5000	3	234	236	160	101	55	87	104	139	1349	2150	2564	3428
	1,5	282	288	198	127	50	76	89	117	1221	1876	2206	2881

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
500	1,4	346	442	454	475	455	613	670	771	1861	183
	0,7	342	438	446	467	436	594	633	731	465	46
1000	1,4	684	877	896	937	904	1235	1327	1521	3733	366
	0,7	680	868	884	918	883	1190	1268	1430	933	91
1500	1,4	1033	1324	1354	1415	1389	1894	2035	2329	3097	303,7
	0,7	1024	1306	1329	1378	1347	1805	1919	2152	774	75,9
2000	3	1476	1904	1957	2068	2101	2914	3167	3700	2878	282,2
	1,5	1462	1875	1918	2008	2036	2772	2981	3413	720	70,6
3000	3	2081	2669	2729	2853	2799	3822	4107	4706	2878	282,2
	1,5	2065	2633	2682	2781	2719	3650	3882	4360	720	70,6
5000	3	3441	4378	4447	4591	4295	5740	6071	6762	5530	542,3
	1,5	3420	4333	4388	4500	4193	5521	5785	6325	1382	135,5

PRESSURE DROP AND PERFORMANCE CHARTS AT PAGE 102-103

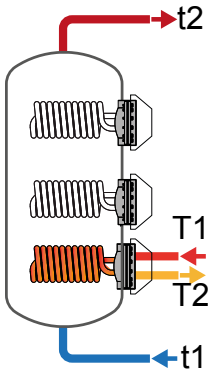
EXTRA **3 PLUS**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

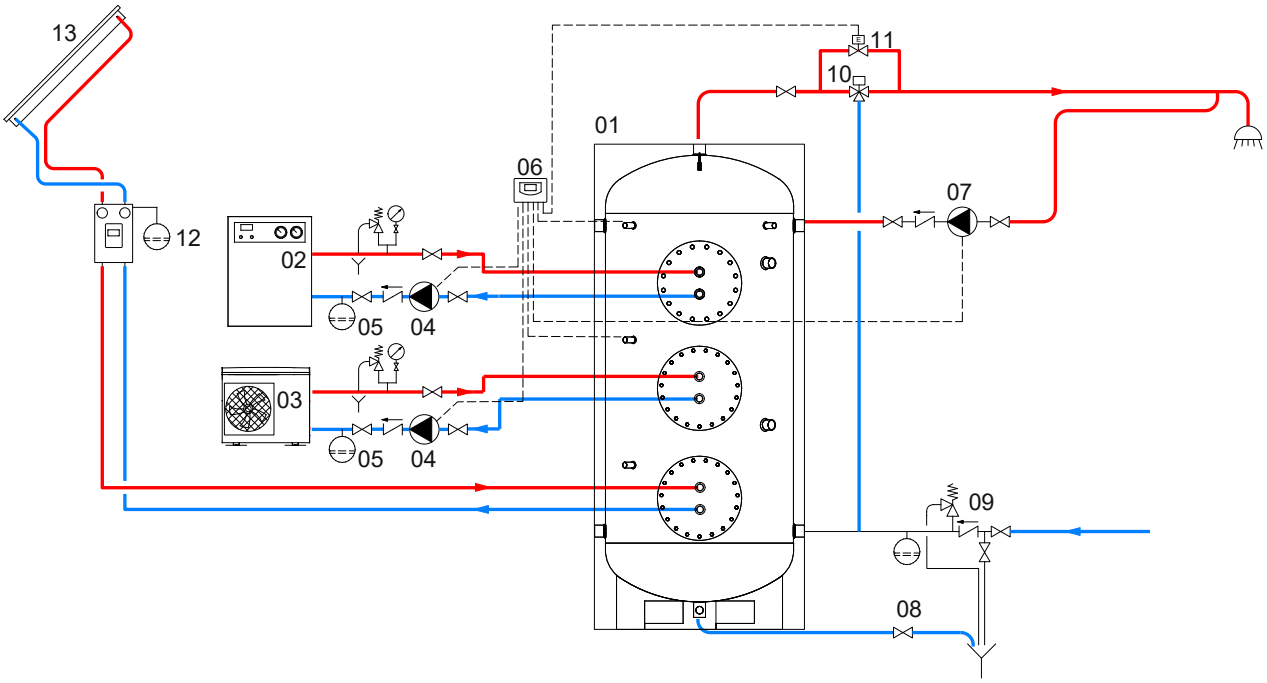
LOWER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
500	1,4	132	132	89	55	14	23	28	37	347	565	680	923
	0,7	150	151	103	65	13	21	25	33	321	509	606	809
1000	1,4	154	155	105	67	27	43	51	68	668	1062	1265	1688
	0,7	187	191	132	85	24	37	44	57	602	921	1082	1409
1500	3	139	140	95	59	40	65	77	104	988	1594	1910	2577
	1,5	162	164	113	72	37	57	68	90	906	1417	1678	2218
2000	3	168	169	115	72	46	74	88	118	1133	1820	2177	2925
	1,5	199	202	139	89	42	65	77	101	1033	1605	1895	2493
3000	3	214	216	147	93	55	87	104	139	1349	2150	2564	3428
	1,5	258	263	181	117	50	76	89	117	1221	1876	2206	2881
5000	3	361	364	247	156	55	87	104	139	1349	2150	2564	3428
	1,5	436	445	305	196	50	76	89	117	1221	1876	2206	2881

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
500	1,4	549	708	728	768	769	1066	1158	1353	1861	183
	0,7	545	699	715	749	748	1021	1099	1261	465	46
1000	1,4	1096	1408	1442	1513	1520	2081	2243	2582	3733	366
	0,7	1085	1385	1412	1466	1467	1968	2097	2359	933	91
1500	1,4	1622	2087	2140	2251	2248	3097	3349	3883	2878	282,2
	0,7	1608	2058	2101	2191	2182	2955	3164	3596	720	70,6
2000	1,4	2185	2799	2859	2983	2903	3952	4237	4836	2878	282,2
	0,7	2169	2763	2812	2911	2823	3780	4012	4490	720	70,6
3000	1,4	3189	4064	4133	4277	4044	5426	5757	6448	5530	542,3
	0,7	3168	4018	4073	4186	3941	5207	5471	6011	1382	135,5
5000	3	5193	6568	6637	6781	6047	7930	8261	8952	5530	542,3
	1,5	5172	6523	6578	6690	5945	7711	7975	8515	1382	135,5

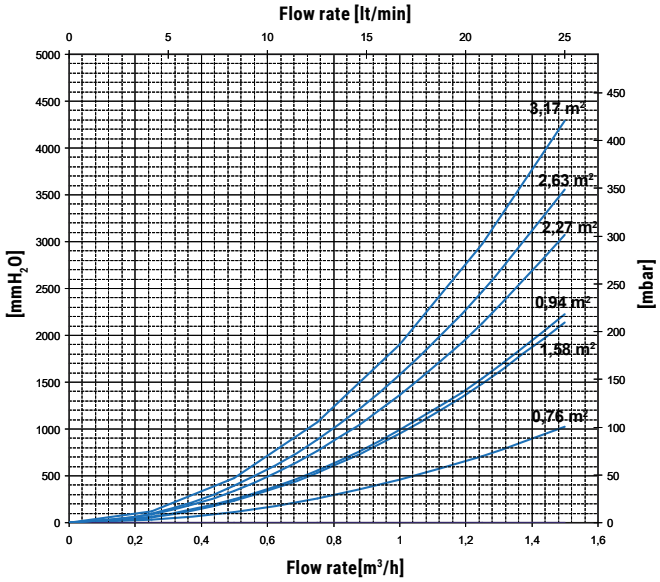
EXAMPLE OF INSTALLATION WITH **EXTRA 3 PLUS**



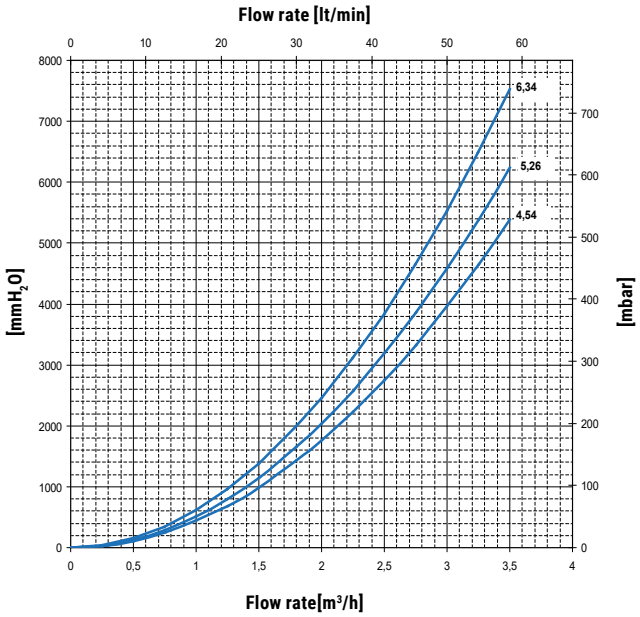
1	Extra 3 Plus	5	Expansion vessel	9	Hydraulic safety group	13	Solar panels
2	Generator	6	Electronic Control/thermostat	10	Thermostatic mixing valve		
3	Generator (Heat pump)	7	D.H.W. recirculation group	11	By-pass solenoid valve		
4	Circulation group	8	Blowdown valve	12	Solar system circulation group		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

Heat exchanger surface [m²]:
0,76 - 0,94 - 1,58 - 2,63 - 3,17

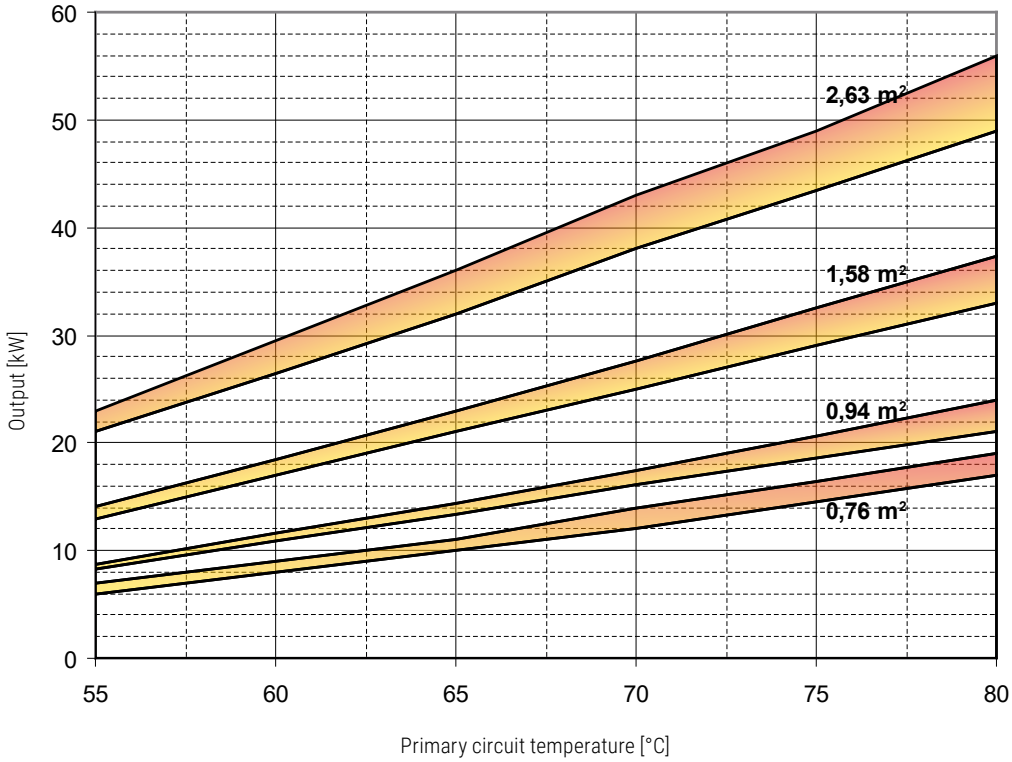


Heat exchanger surface [m²]:
4,54 - 5,26 - 6,34



EXTRA **PLUS**
HEAT EXCHANGERS TECHNICAL DATA

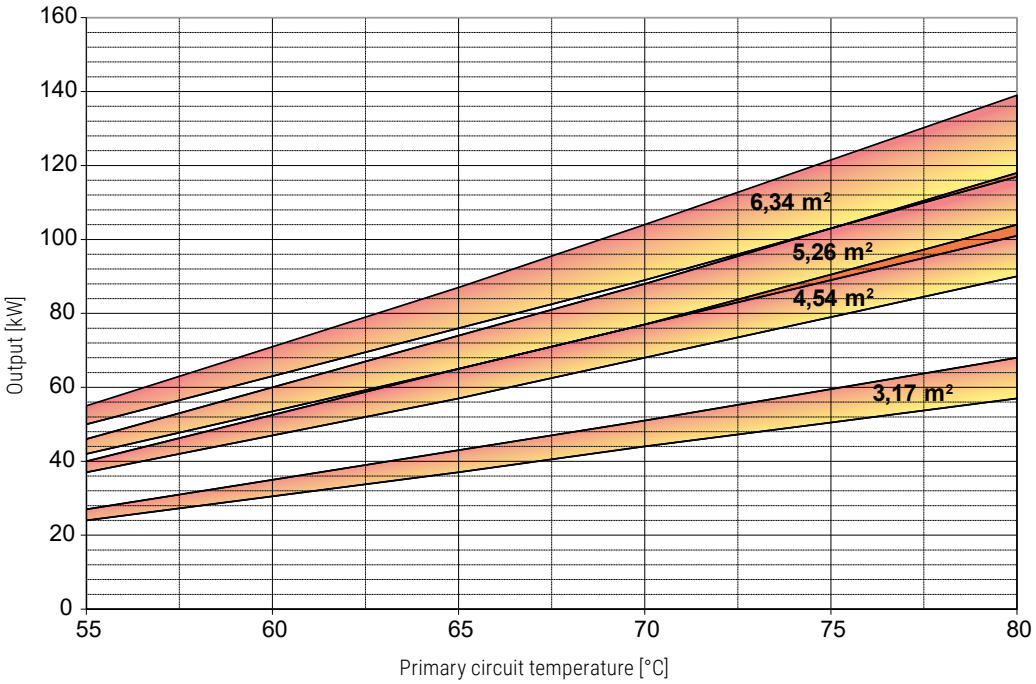
Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curve refers to the minimum primary flow rate)



Heat exchanger surface	0,76 m²		0,94 m²		1,58 m²		2,63 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	1,4	0,7	1,4	0,7	1,4	0,7	1,4	0,7

HEAT EXCHANGERS TECHNICAL DATA

Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curve refers to the minimum primary flow rate)



Heat exchanger surface	3,17 m²		4,54 m²		5,26 m²		6,34 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	1,4	0,7	3	1,5	3	1,5	3	1,5

VASO **INERZIALE**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK



APPLICATION
Domestic hot water storage.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.
CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.

DRAIN
External confluence through drain connection. Models > 1000 external confluence through drain pipe.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

PROMPT AVAILABILITY



VASO INERZIALE WB

Model	HARD FOAM INSULATION Art. Nr.	ENERGY EFFICIENCY CLASS
200	3060162310110	B
300	3060162310111	C
500	3060162310112	C
800	3060162310113	B
1000	3060162310114	C
1500	3060162310115	C
2000	3060162310116	B

VASO INERZIALE WC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	ENERGY EFFICIENCY CLASS
500	3060161620166	C
800	3060161620167	C
1000	3060161620168	C
1500	3060161620169	C
2000	3060161620170	C
2500	3060161620171	
3000	3060161620172	
4000	3060161620173	
5000	3060161620174	

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE			THREEPHASE				
		1,5 kW	**2** kW	**3** kW	**4** kW	**5** kW	**6** kW	**9** kW	**12** kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	49	87	65	44	33	//	//	//	//
300	76	136	102	68	51	//	//	//	//
500	127	228	171	114	85	68	57	//	//
800	178	318	239	159	120	96	80	//	//
1000	243	436	327	218	163	131	109	73	54
1500	288	516	387	258	194	155	129	86	65
2000	443	793	595	396	297	238	198	132	99
2500	577	1033	775	517	387	310	258	172	129
3000	577	1033	775	517	387	310	258	172	129
4000	797	1428	1071	714	535	428	357	238	178
5000	1040	1864	1398	932	699	559	466	311	233

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section

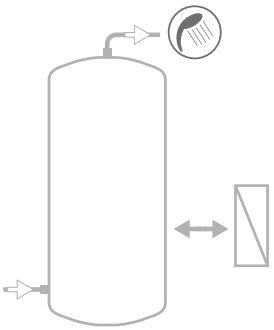


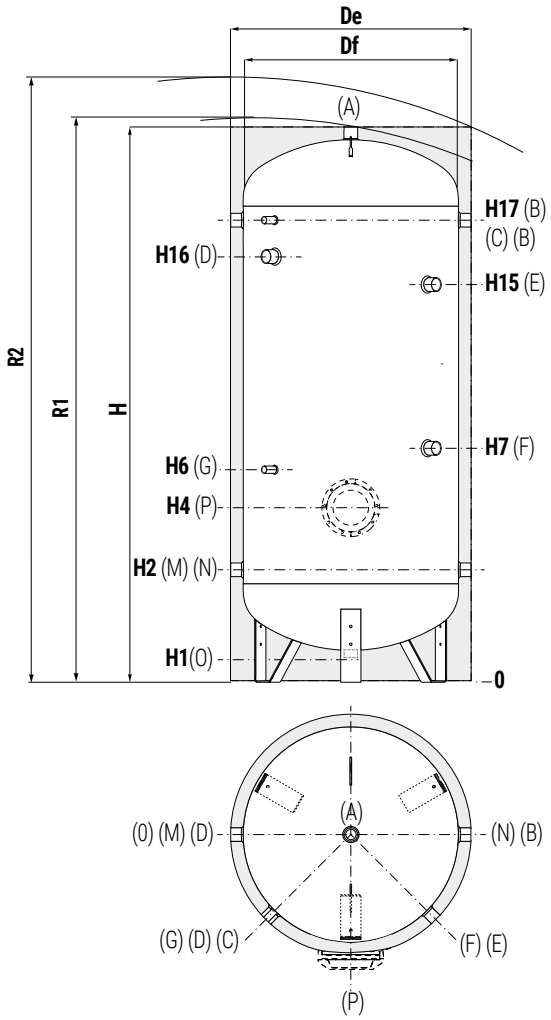
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **INERZIALE**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK

	STORAGE	
Model	Pmax	Tmax
200 ÷ 1000	8 bar	90 °C
1500 ÷ 5000	6 bar	



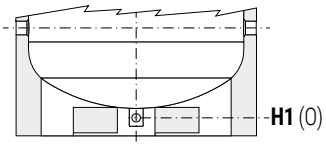


COMPLETE YOUR SYSTEM WITH THE NEW PRS MODULE *(FOR IMMEDIATE DHW PREPARATION)*



SEE HYDRONIC SECTION

A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 1"1/2 G F For models > 800 connection 2" G F
E	Connection for 2nd magnesium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	Drain
P	Flange (only for models > 1000)



Models from 1500 to 5000 are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

VASO INERZIALE WB - HARD FOAM INSULATION

Mod.	Vol.	Weight	De	H	R2	H1	H2	H4	H6	H7	H15	H16	H17	P	A	B-M-N	O
	[lt]	[kg]	[mm]												Connections F		
200	192	41	550	1449	1560	85	325	//	520	650	//	1075	1185	//	1"1/4	1"1/4	1"1/4
300	293	52	650	1499	1640	85	350	//	545	735	//	1100	1210	//	1"1/4	1"1/4	1"1/4
500	501	69	750	1800	1960	85	375	//	570	760	//	1329	1485	//	1"1/4	1"1/4	1"1/4
800	792	111	900	2135	2330	85	405	//	600	870	//	1610	1765	//	1"1/4	1"1/4	1"1/4
1000	1041	150	1000	2221	2450	105	458	//	653	993	//	1664	1818	//	1"1/2	1"1/2	1"1/2
1500	1443	186	1100	2415	2660	109	440	525	635	1075	//	1895	2050	Øi170/Øe240	1"1/2	2"	1"
2000	1975	223	1300	2492	2820	91	467	542	652	842	1952	1877	2057	Øi170/Øe240	2"	2"	1"

VASO INERZIALE WC - DISMOUNTABLE SOFT FLEECE INSULATION

Mod.	Vol.	Weight	De	Df	H	R1	R2	H1	H2	H4	H6	H7	H15	H16	H17	P	A	B-M-N	O
	[lt]	[kg]	[mm]														Connections F		
500	500	83	870	650	1891	1998	2090	101	416	//	611	801	//	1370	1526	//	1"1/4	1"1/4	1"1/4
800	792	111	970	750	2188	2220	2400	113	433	//	628	898	//	1638	1793	//	1"1/4	1"1/4	1"1/4
1000	1041	150	1070	850	2242	2270	2490	101	454	//	649	989	//	1660	1814	//	1"1/2	1"1/2	1"1/4
1500	1443	186	1210	950	2440	2495	2730	109	440	525	635	1075	//	1895	2050	Øi170/Øe240	1"1/2	2"	1"1/4
2000	1975	223	1360	1100	2492	2570	2850	91	467	542	652	842	1952	1877	2057	Øi170/Øe240	2"	2"	1"1/2
2500	2311	267	1350	1250	2311	2480	2690	140	551	626	736	976	1816	1732	1891	Øi170/Øe240	2"	2"	1"
3000	2917	313	1350	1250	2811	2950	3130	140	551	626	736	876	2316	2232	2391	Øi170/Øe240	2"	2"	1"
4000	3765	435	1500	1400	2875	3050	3250	114	570	645	755	895	2315	2238	2410	Øi170/Øe240	2"	2"	1"
5000	4979	558	1700	1600	2915	3130	3380	94	580	655	765	935	2335	2265	2420	Øi170/Øe240	2"	2"	1"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **INERZIALE A1 W**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK WITH FIREPROOF INSULATION AND ALUMINIUM EXTERNAL COVER



APPLICATION
Domestic hot water storage.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
INSULATION
Complete fireproof class A1 insulation in compliance with EN 13501, consisting of:
- Glass/rock wool high thermal insulation
- Aluminium cover hinged and removable.

The models 3000-4000-5000 are supplied with non-assembled insulation.
CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection. Models > 1000 external confluence through drain pipe.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

VASO INERZIALE A1 W

Model	NON-REMOVABLE metallic cover Art. Nr.	Energy efficiency class
300	3060161621403	C
500	3060161621174	C
800	3060161621175	C
1000	3060161621176	C
1500	3060161621177	C
2000	3060161621178	C



VASO INERZIALE A1 W

Model	REMOVABLE metallic cover Art. Nr.
2500	3060161621409
3000	3060161621411
5000	3060161621414

VASO INERZIALE A1 W

	Model	REMOVABLE metallic cover Art. Nr.
Compact models	**2500**	3060161621410
	3000	3060161621412
	4000	3060161621413

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	THREEPHASE **4** kW	**5** kW	**6** kW	**9** kW	**12** kW
		5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
300	229	154	//	//	//	//
500	411	276	221	184	//	//
800	640	430	344	287	//	//
1000	718	482	386	322	214	161
1500	1031	693	554	462	308	231
2000	1345	903	723	602	402	301
2500	1652	1109	888	740	493	370
3000	2266	1522	1217	1014	676	507
4000	2810	1887	1510	1258	839	629
5000	3814	2561	2049	1708	1138	854

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **INERZIALE A1 W**

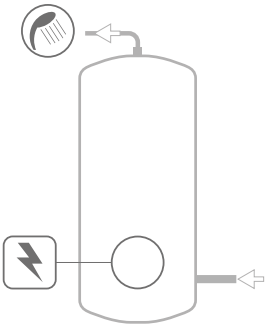
POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK WITH FIREPROOF INSULATION AND ALUMINIUM EXTERNAL COVER

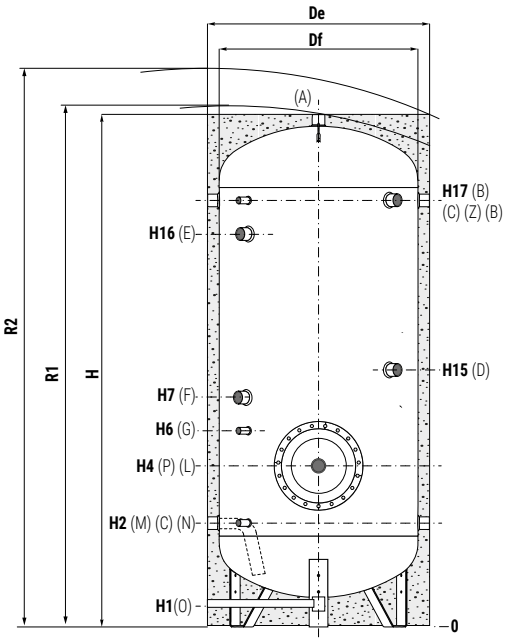
STORAGE	
Pmax	Tmax
7 bar	90 °C

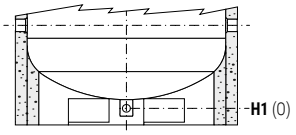
COMPLETE YOUR SYSTEM WITH THE NEW PRS MODULE *(FOR IMMEDIATE DHW PREPARATION)*

SEE HYDRONIC SECTION

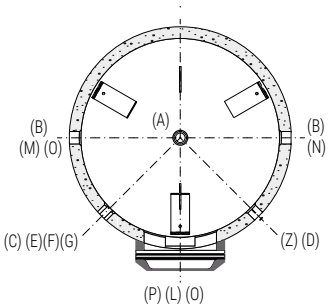








Models from 1500 to 5000 are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.



A	Domestic hot water outlet
B	Backflow external heat exchanger / Recirculation
C-G	Connection for instrumentation 1/2" G F
D-L	Connection for electric immersion heater
E	Connection for 2nd magnesium anode 1" 1/4 G F (Models >1500)
F	Connection for magnesium anode 1" 1/4 G F
M	Domestic cold water circuit inlet
N	Delivery to external heat exchanger
O	Drain
P	Flange for inspection
Z	Connection for electric immersion heater 1" 1/2 G F

	Model	Volume	Weight	Df	De	H	R1	R2	H1	H2	H4
		[lt]	[kg]	[mm]							
	300	289	52	//	750	1599	//	1770	135	400	485
	500	501	69	//	850	1901	//	2080	126	416	501
	800	789	111	//	950	2188	//	2390	113	433	568
	1000	1007	150	//	1050	2188	//	2430	101	454	739
	1500	1421	186	//	1200	2228	//	2530	107	458	743
	2000	2005	223	//	1450	2111	//	2560	140	551	826
	2500	2308	267	1250	1450	2361	2670	2770	140	551	826
	3000	2913	313	1250	1450	2861	3120	3210	140	551	826
	5000	4975	558	1600	1800	2965	3370	3470	94	580	855
Compact models	**2500**	2620	450	1400	1600	2175	2590	2700	114	570	845
	3000	3021	491	1500	1700	2190	2660	2770	109	575	850
	4000	3983	665	1600	1800	2465	2940	3050	94	580	855

	Model	H6	H7	H15	H16	H17	P	O	M-N-B	D	L	A
		[mm]						Connections F				
	300	595	735	835	//	1260	Øi220/Øe300	1"1/4	1"1/4	1"1/2	2"	1"1/4
	500	611	881	981	//	1536	Øi220/Øe300	1"1/4	1"1/4	1"1/2	2"	1"1/4
	800	718	1018	1118	//	1793	Øi300/Øe380	1"1/4	1"1/4	1"1/2	2"	1"1/4
	1000	939	1139	1239	//	1760	Øi430/Øe512	1"1/2	1"1/2	2"1/2	2"1/2	1"1/2
	1500	943	1143	1243	//	1818	Øi430/Øe512	1"	1"1/2	2"1/2	2"1/2	2"
	2000	1026	1176	1286	1491	1641	Øi430/Øe512	1"	2"	2"1/2	2"1/2	2"
	2500	1026	1221	1321	1666	1891	Øi430/Øe512	1"	2"	2"1/2	2"1/2	2"
	3000	1026	1376	1476	2166	2391	Øi430/Øe512	1"	2"	2"1/2	2"1/2	2"
	5000	1055	1355	1475	2195	2420	Øi430/Øe512	1"	2"	2"1/2	2"1/2	2"
Compact models	**2500**	1045	1195	1295	1510	1660	Øi430/Øe512	1"	2"	2"1/2	2"1/2	2"
	3000	1050	1200	1300	1515	1665	Øi430/Øe512	1"	2"	2"1/2	2"1/2	2"
	4000	1055	1205	1325	1770	1920	Øi430/Øe512	1"	2"	2"1/2	2"1/2	2"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **STORAGE 1**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK WITH 1 BLIND FLANGE



APPLICATION
Domestic hot water storage.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.
CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection. Models > 1000 external confluence through drain pipe.
GASKET- FLANGE PLATE
N° 1 blind flange
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE



VASO STORAGE 1 WB

Model	HARD FOAM INSULATION Art. Nr.	ENERGY EFFICIENCY CLASS
200	3072162360540	B
300	3072162360541	C
500	3072162360542	C
800	3072162360543	B
1000	3072162360544	C
1500	3072162360545	C
2000	3072162360546	B

VASO STORAGE 1 WC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	ENERGY EFFICIENCY CLASS
500	3072162360547	C
800	3072162360548	C
1000	3072162360549	C
1500	3072162360550	C
2000	3072162360551	C
2500	3072162360552	
3000	3072162360553	
4000	3072162360554	
5000	3072162360555	

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	2 kW	3 kW	THREEPHASE 4 kW	5 kW	6 kW	9 kW	12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	49	87	65	44	33	//	//	//	//
300	76	136	102	68	51	//	//	//	//
500	127	228	171	114	85	68	57	//	//
800	178	318	239	159	120	96	80	//	//
1000	243	436	327	218	163	131	109	73	54
1500	288	516	387	258	194	155	129	86	65
2000	443	793	595	396	297	238	198	132	99
2500	577	1033	775	517	387	310	258	172	129
3000	577	1033	775	517	387	310	258	172	129
4000	797	1428	1071	714	535	428	357	238	178
5000	1040	1864	1398	932	699	559	466	311	233

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Heat Exchangers

See page 116-117

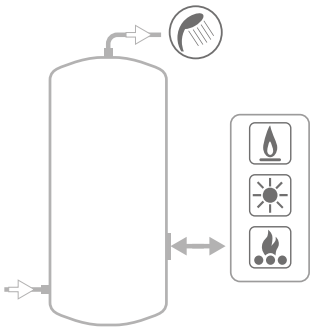


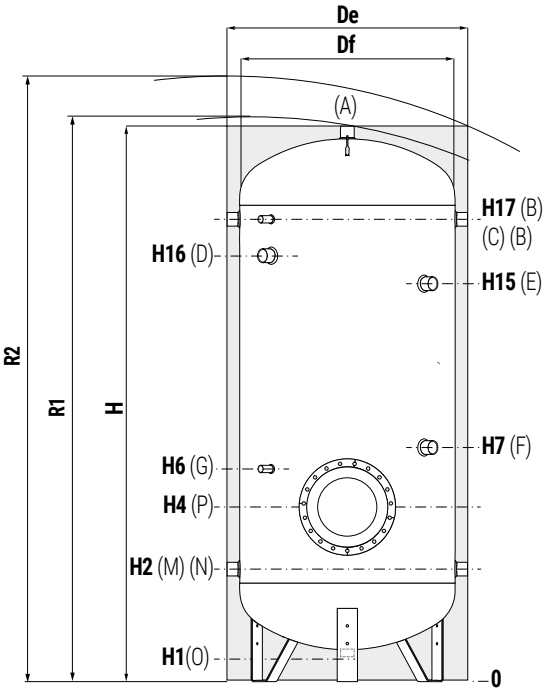
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

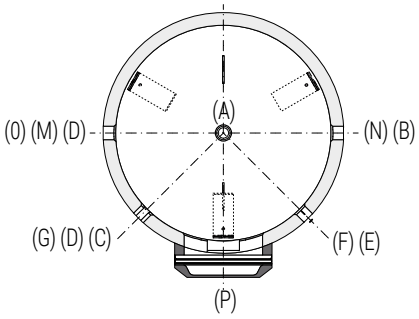
VASO **STORAGE 1**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK WITH 1 BLIND FLANGE

	STORAGE	
Model	Pmax	Tmax
200 ÷ 1000	8 bar	90 °C
1500 ÷ 5000	6 bar	





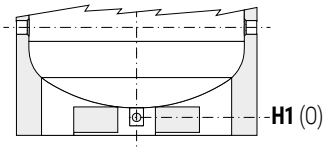


COMPLETE YOUR SYSTEM WITH THE NEW PRS MODULE *(FOR IMMEDIATE DHW PREPARATION)*



SEE HYDRONIC SECTION

A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation G 1/2" F
D	Connection for electric immersion heater 1"1/2 G F For models > 800 connection 2" G F
E	Connection for 2nd magnesium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode 1" 1/4 G F
G	Connection for instrumentation G 1/2" F
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	Drain
P	Flange



Models from 1500 to 5000 are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

VASO STORAGE 1 WB - HARD FOAM INSULATION

Model	Volume	Weight	De	H	R2	H1	H2	H4	H6	H7	H15	H16	H17	P	B-M-N	A	O
	[lt]	[kg]	[mm]												Connections F		
200	191	51	550	1449	1560	85	325	410	520	650	//	1075	1185	Øi220/Øe300	1" 1/4	1" 1/4	1"1/4
300	292	64	650	1499	1640	85	350	435	545	735	//	1100	1210	Øi220/Øe300	1" 1/4	1" 1/4	1"1/4
500	500	89	750	1800	1960	85	375	460	570	760	//	1329	1485	Øi220/Øe300	1" 1/4	1" 1/4	1"1/4
800	794	149	900	2135	2330	85	405	540	690	870	//	1610	1765	Øi300/Øe380	1" 1/4	1" 1/2	1"1/4
1000	1042	170	1000	2221	2450	105	458	593	743	993	//	1664	1818	Øi300/Øe380	1" 1/2	2"	1"1/2
1500	1445	231	1100	2415	2660	109	440	675	825	1075	//	1895	2050	Øi300/Øe380	1" 1/2	2"	1"
2000	1978	367	1300	2492	2820	91	467	692	867	842	1952	1877	2057	Øi350/Øe430	2"	2"	1"

VASO STORAGE 1 WC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	Weight	De	DF	H	R1	R2	H1	H2	H4	H6	H7	H15	H16	H17	P	B-M-N	A	O
	[lt]	[kg]	[mm]														Connections F		
500	500	94	870	650	1891	1998	2090	101	416	501	611	801	//	1370	1526	Øi220/Øe300	1" 1/4	1" 1/2	1"1/4
800	794	147	970	750	2188	2220	2400	113	433	568	718	898	//	1638	1793	Øi300/Øe380	1" 1/4	1" 1/2	1"1/4
1000	1042	167	1070	850	2242	2270	2490	101	454	589	739	989	//	1660	1814	Øi300/Øe380	1" 1/2	2"	1"1/4
1500	1445	228	1210	950	2440	2495	2730	109	440	675	825	1075	//	1895	2050	Øi300/Øe380	1" 1/2	2"	1"1/4
2000	1978	352	1360	1100	2492	2570	2850	91	467	692	867	842	1952	1877	2057	Øi350/Øe430	2"	2"	1"1/2
2500	2315	366	1350	1250	2311	2480	2690	140	551	776	951	976	1816	1732	1891	Øi350/Øe430	2"	2"	1"
3000	2921	432	1350	1250	2811	2950	3130	140	551	836	1011	1036	2316	2232	2391	Øi350/Øe430	2"	2"	1"
4000	3769	555	1500	1400	2875	3050	3250	114	570	855	1030	1035	2315	2238	2410	Øi350/Øe430	2"	2"	1"
5000	4982	732	1700	1600	2915	3130	3380	94	580	855	1030	1035	2335	2265	2420	Øi350/Øe430	2"	2"	1"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **STORAGE 2**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK WITH 2 BLIND FLANGES



APPLICATION
Domestic hot water storage.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.
CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.

DRAIN
External confluence through drain connection. Models > 1000 external confluence through drain pipe.
GASKET- FLANGE PLATE
N° 2 blind flanges
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE



VASO STORAGE 2 WB

Model	HARD FOAM INSULATION Art. Nr.	ENERGY EFFICIENCY CLASS
200	3084162360010	B
300	3084162360011	C
500	3084162360012	C
800	3084162360013	B
1000	3084162360014	C
1500	3084162360015	C
2000	3084162360016	B

VASO STORAGE 2 WC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	ENERGY EFFICIENCY CLASS
500	3082162360140	C
800	3082162360141	C
1000	3082162360142	C
1500	3082162360143	C
2000	3082162360144	C
2500	3082162360145	
3000	3082162360146	
4000	3082162360147	
5000	3082162360148	

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW	THREEPHASE 6 kW	THREEPHASE 9 kW	THREEPHASE 12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	49	87	65	44	33	//	//	//	//
300	76	136	102	68	51	//	//	//	//
500	127	228	171	114	85	68	57	//	//
800	178	318	239	159	120	96	80	//	//
1000	243	436	327	218	163	131	109	73	54
1500	288	516	387	258	194	155	129	86	65
2000	443	793	595	396	297	238	198	132	99
2500	577	1033	775	517	387	310	258	172	129
3000	577	1033	775	517	387	310	258	172	129
4000	797	1428	1071	714	535	428	357	238	178
5000	1040	1864	1398	932	699	559	466	311	233

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Heat Exchangers

See page 116-117

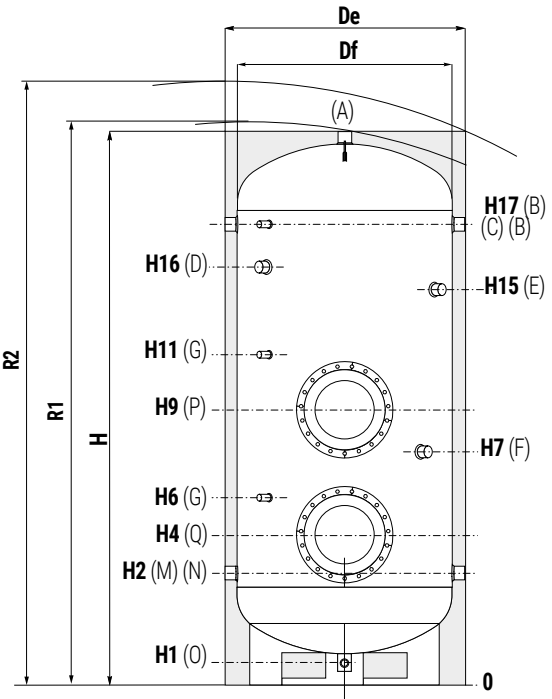


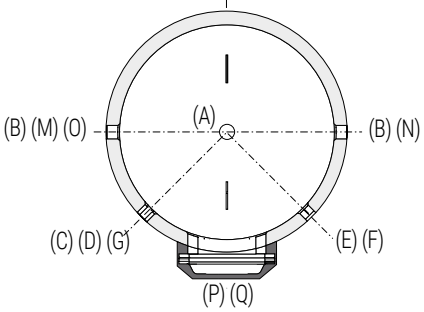
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VASO **STORAGE 2**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK WITH 2 BLIND FLANGES

	STORAGE	
Model	Pmax	Tmax
200 ÷ 1000	8 bar	90 °C
1500 ÷ 5000	6 bar	

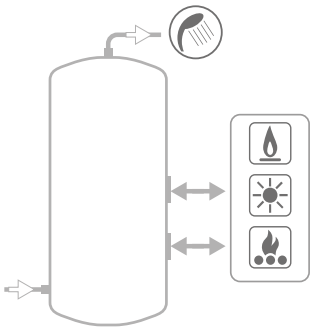




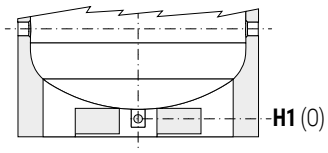
COMPLETE YOUR SYSTEM WITH THE NEW PRS MODULE *(FOR IMMEDIATE DHW PREPARATION)*



SEE HYDRONIC SECTION



A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation G 1/2" F
D	Connection for electric immersion heater 1"1/2 G F For models > 800 connection 2" G F
E	Connection for 2nd magnesium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	Drain
P-Q	Flange



Models from 1500 to 5000 are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

VASO STORAGE 2 WB - HARD FOAM INSULATION

Model	Volume	Weight	De	H	R2	H1	H2	H4	H6	H7	H9	H11	H15	H16	H17	P-Q	B-M-N	A	O
	[lt]	[kg]	[mm]														Connections F		
200	193	54	550	1449	1560	85	325	410	520	650	860	970	//	1075	1185	Øi220/Øe300	1"1/4	1"1/4	1"1/4
300	295	68	650	1499	1640	85	350	435	545	735	885	995	//	1100	1210	Øi220/Øe300	1"1/4	1"1/4	1"1/4
500	503	95	750	1800	1960	85	375	460	570	760	910	1020	//	1329	1485	Øi220/Øe300	1"1/4	1"1/4	1"1/4
800	799	154	900	2135	2330	85	405	540	690	870	1090	1240	//	1610	1765	Øi300/Øe380	1"1/4	1"1/4	1"1/4
1000	1047	176	1000	2221	2450	105	458	593	743	993	1143	1293	//	1664	1818	Øi300/Øe380	1"1/2	1"1/2	1"1/2
1500	1450	236	1100	2415	2660	109	440	675	825	1075	1250	1400	//	1895	2050	Øi300/Øe380	1"1/2	2"	1"
2000	1985	374	1300	2492	2820	91	467	692	867	842	1262	1437	1952	1877	2057	Øi350/Øe430	2"	2"	1"

VASO STORAGE 2 WC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	Weight	De	DF	H	R1	R2	H1	H2	H4	H6	H7	H9	H11	H15	H16	H17	P-Q	B-M-N	A	O
	[lt]	[kg]	[mm]																Connections F		
500	500	100	870	650	1891	1998	2090	101	416	501	611	801	951	1061	//	1370	1526	Øi220/Øe300	1" 1/4	1" 1/4	1"1/4
800	798	153	970	750	2188	2220	2400	113	433	568	718	898	1118	1268	//	1638	1793	Øi300/Øe380	1" 1/4	1" 1/4	1"1/4
1000	1047	173	1070	850	2242	2270	2490	101	454	589	739	989	1139	1289	//	1660	1814	Øi300/Øe380	1" 1/2	1" 1/2	1"1/4
1500	1450	234	1210	950	2440	2495	2730	109	440	675	825	1075	1250	1400	//	1895	2050	Øi300/Øe380	1" 1/2	2"	1"1/4
2000	1985	359	1360	1100	2492	2570	2850	91	467	692	867	842	1262	1437	1952	1877	2057	Øi350/Øe430	2"	2"	1"1/2
2500	2322	373	1350	1250	2311	2480	2690	140	551	776	951	976	1376	1551	1816	1732	1891	Øi350/Øe430	2"	2"	1"
3000	2928	439	1350	1250	2811	2950	3130	140	551	836	1011	1036	1476	1651	2316	2232	2391	Øi350/Øe430	2"	2"	1"
4000	3776	561	1500	1400	2875	3050	3250	114	570	855	1030	1035	1495	1670	2315	2238	2410	Øi350/Øe430	2"	2"	1"
5000	4990	739	1700	1600	2915	3130	3380	94	580	855	1030	1035	1505	1680	2335	2265	2420	Øi350/Øe430	2"	2"	1"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **STORAGE 3**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK WITH 3 BLIND FLANGES



APPLICATION
Domestic hot water storage.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
INSULATION
SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.
CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection. Models > 1000 external confluence through drain pipe.
GASKET- FLANGE PLATE
N° 3 blind flanges
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM®
COATED
DHW STORAGE





VASO STORAGE 3 WC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	ENERGY EFFICIENCY CLASS
500	3092162360140	C
1000	3092162360141	C
1500	3092162360142	C
2000	3092162360143	C
3000	3092162360144	
5000	3092162360145	

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ACCESSORIES

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Heat Exchangers

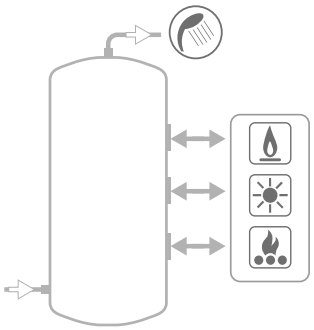
See page 116-117

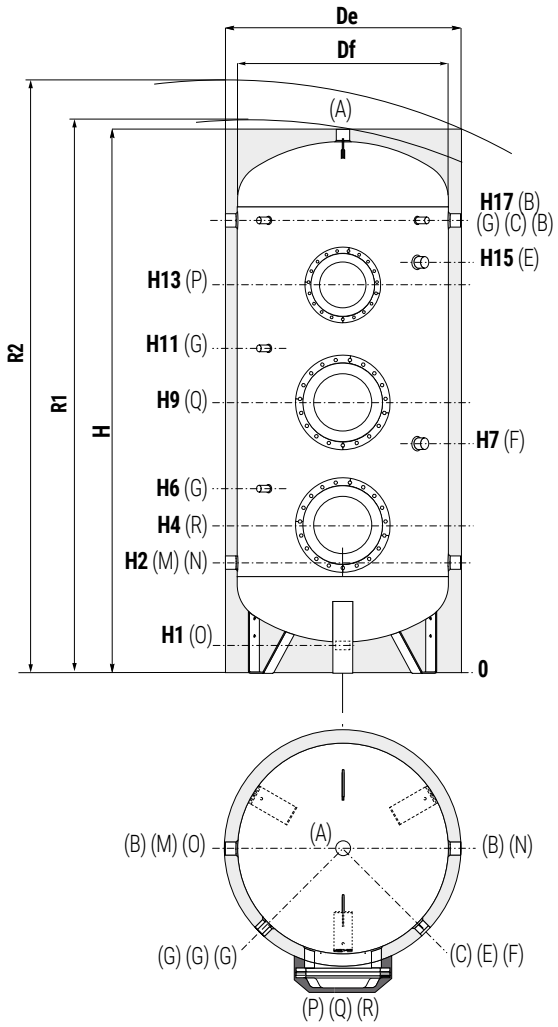


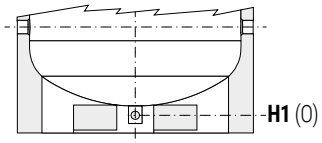
VASO **STORAGE 3**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK WITH 3 BLIND FLANGES

	STORAGE	
Model	Pmax	Tmax
500 ÷ 1000	8 bar	90 °C
1500 ÷ 5000	6 bar	







Models from 1500 to 5000 are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

COMPLETE YOUR SYSTEM WITH THE NEW PRS MODULE *(FOR IMMEDIATE DHW PREPARATION)*



SEE HYDRONIC SECTION

A	Domestic hot water outlet 2" G F
B	Recirculation / Domestic hot water outlet 1" 1/2 G F. For models > 1500 2" G F
C	Connection for instrumentation 1/2" G F
E	Connection for 2nd magnesium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
M	Domestic cold water circuit inlet 1" 1/2 G F. For models > 1500 2" G F
N	Alternative domestic cold water circuit inlet or connection for more tanks in series1" 1/2 G F. For models > 1500 2" G F
O	Drain
P-Q-R	Flange

Model	Volume	Weight	De	Df	H	R1	R2	H1	H2	H4	H6	H7
	[lt]	[kg]	[mm]									
500	500	105	870	650	1891	1990	2090	126	416	501	611	801
1000	1360	178	1070	850	2198	2240	3140	89	454	562	649	989
1500	1455	239	1210	950	2440	2495	2730	109	440	675	825	1075
2000	1991	366	1360	1100	2492	2570	2850	91	467	692	867	842
3000	2933	446	1350	1250	2811	2950	3130	140	551	836	1011	1036
5000	4996	746	1700	1600	2915	3130	3380	94	580	855	1030	1035

Model	H9	H11	H13	H15	H17	Q-R	P	O
	[mm]							
500	951	1061	1401	//	1526	Øi220/Øe300	Øi220/Øe300	1"1/4
1000	1112	1249	1612	//	1760	Øi300/Øe380	Øi300/Øe380	1"1/2
1500	1250	1400	1875	//	2050	Øi300/Øe380	Øi300/Øe380	1"
2000	1262	1437	1817	1592	2057	Øi350/Øe430	Øi300/Øe380	1"
3000	1476	1651	2176	1926	2391	Øi350/Øe430	Øi300/Øe380	1"
5000	1505	1680	2115	1855	2420	Øi350/Øe430	Øi350/Øe430	1"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **STORAGE COMPACT**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK SUITABLE FOR LOW-CEILINGED ROOMS



APPLICATION
Domestic hot water storage.
Suitable for low-ceilinged room.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
INSULATION (DISMOUNTABLE)
NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.
CATHODE PROTECTION
n° 2 magnesium anodes.

DRAIN
External confluence through drain pipe.
GASKET- FLANGE PLATE
N° 1 blind flange.
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM®
COATED
DHW STORAGE



VASO STORAGE COMPACT WC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	ENERGY EFFICIENCY CLASS
1500	3072162360556	C
2000	3072162360557	C
2500	3072162360558	
3000	3072162360559	
4000	3072162360560	

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW	THREEPHASE 6 kW	THREEPHASE 9 kW	THREEPHASE 12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
1500	443	793	595	396	297	238	198	132	99
2000	577	1033	775	517	387	310	258	172	129
2500	797	1428	1071	714	535	428	357	238	178
3000	874	1565	1173	782	587	469	391	261	196
4000	924	1655	1241	828	621	497	414	276	207

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



See Accessories section

Titanium anode

See Accessories section



Heat Exchangers

See page 116-117

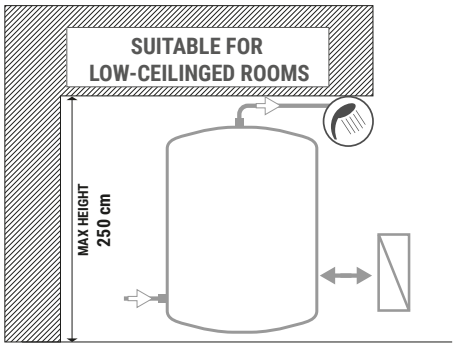


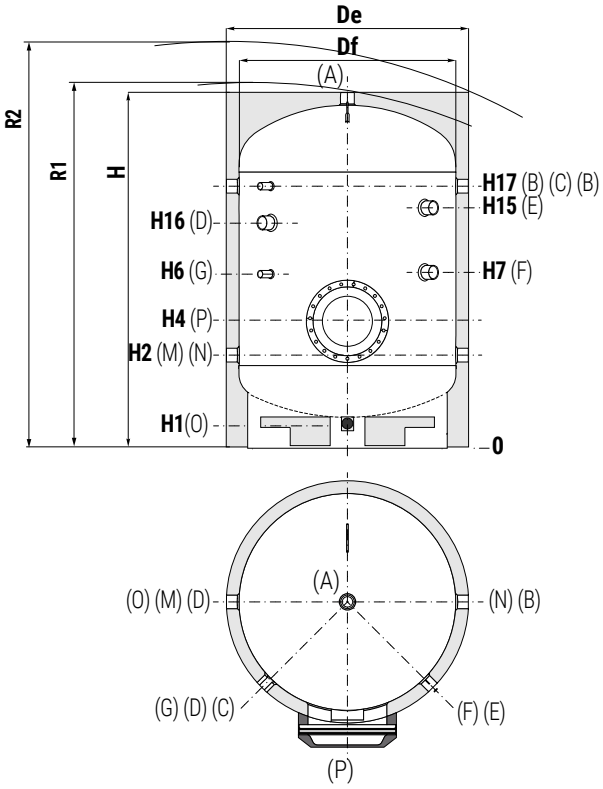
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **STORAGE COMPACT**

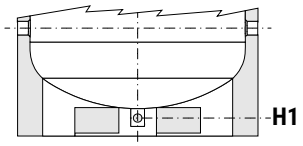
POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK SUITABLE FOR LOW-CEILINGED ROOMS

STORAGE	
Pmax	Tmax
6 bar	90 °C





A	Domestic hot water outlet 2" G F
B	Recirculation / Domestic hot water outlet 2" G F
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 1"1/2 G F For models > 800 connection 2" G F
E	Connection for 2nd magnesium anode 1"1/4 G F
F	Connection for magnesium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
M	Domestic cold water circuit inlet 2" G F
N	Alternative domestic cold water circuit inlet or connection for more tanks in series2" G F
O	Drain 1" G F
P	Flange



All models are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

Model	Volume	Weight	De	Df	H	R1	R2	H1
	[lt]	[kg]	[mm]					
1500	1509	286	1360	1100	1992	2104	2420	91
2000	2012	351	1510	1250	2111	2251	2610	140
2500	2627	443	1500	1400	2125	2363	2610	114
3000	3029	479	1600	1500	2140	2410	2680	109
4000	3990	627	1700	1600	2415	2678	2960	94

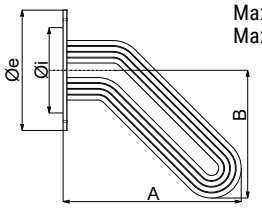
Model	H2	H4	H6	H7	H15	H16	H17	P
	[mm]							
1500	467	692	867	942	//	1377	1557	Øi300/Øe380
2000	551	776	951	976	1566	1482	1641	Øi350/Øe430
2500	570	795	970	975	1585	1488	1660	Øi350/Øe430
3000	575	800	975	980	1600	1520	1675	Øi350/Øe430
4000	580	835	1010	1015	1855	1765	1920	Øi350/Øe430

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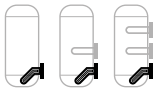
INTEGRATIVE COMPONENTS FOR VASO STORAGE

COMPATIBILITY TABLES VASO STORAGE/HEAT EXCHANGERS

ANTILEGIONELLA® HEAT EXCHANGER KIT



Antilegionella® 316L staninless steel curved heat exchanger kit + gaskets + bolts and insulated bushes.
Max working pressure: 12 bar
Max working temperature: 110 °C

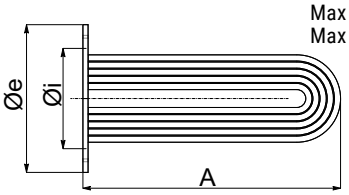


Antilegionella® heat exchanger kit + gaskets + bolts and insulated bushes.

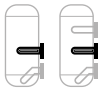
ANTILEGIONELLA® HEAT EXCHANGER

Heat exchanger surface	Øi / Øe flange	A	B	Art. Nr.	Storage 1 - 2		Storage 1-2-3	Storage 1-2	Storage 1-2-3	Storage 1 - 2 - 3	Storage 1 - 2	Storage 1-2-3	Storage 1 - 2	Storage 1-2-3
					Model						Storage COMPACT			
[m²]	[mm]				200	300	500	800	1000	1500	2000	2500	3000	4000	5000
0,5	Øi220/Øe300	350	240	5221000010100	✓	✓	✓								
0,75	Øi220/Øe300	350	240	5221000010101	✓	✓	✓								
1	Øi220/Øe300	371	261	5221000010102			✓								
1,5	Øi220/Øe300	561	311	5221000010113			✓								
1,5	Øi300/Øe380	496	336	5221000010103				✓	✓	✓					
2	Øi300/Øe380	496	336	5221000010104				✓	✓	✓					
3	Øi300/Øe380	607	452	5221000010105					✓	✓					
4	Øi350/Øe430	636	457	5221000010106							✓	✓	✓	✓	✓
5	Øi350/Øe430	678	498	5221000010107							✓	✓	✓	✓	✓
6	Øi350/Øe430	828	585	5221000010123									✓	✓	✓
8	Øi350/Øe430	1250	598	5221000010108										✓	✓
10	Øi350/Øe430	1550	538	5221000010109											✓

STRAIGHT HEAT EXCHANGER KIT



Straight 316L staninless steel heat exchanger kit + gaskets + bolts and insulated bushes.
Max working pressure: 12 bar
Max working temperature: 110 °C





Straight heat exchanger kit + gaskets + bolts and insulated bushes.

MIDDLE HEAT EXCHANGER

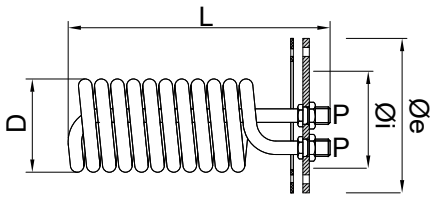
UPPER HEAT EXCHANGER

Heat exchanger surface	Øi / Øe flange	A	Art. Nr.	Storage 2-3											Storage 2-3					
				Model											Model					
[m²]		[mm]		200	300	500	800	1000	1500	2000	2500	3000	4000	5000	500	1000	1500	2000	3000	5000
0,5	Øi220/Øe300	445	5221000010074	✓	✓	✓									✓					
0,75	Øi220/Øe300	445	5221000010075	✓	✓	✓									✓					
1	Øi220/Øe300	475	5221000010076	✓	✓	✓									✓					
1,5	Øi220/Øe300	690	5221000010077			✓									✓					
1,5	Øi300/Øe380	600	5221000010078				✓	✓	✓							✓	✓	✓	✓	
2	Øi300/Øe380	560	5221000010079				✓	✓	✓							✓	✓	✓	✓	
3	Øi300/Øe380	720	5221000010080				✓	✓	✓							✓	✓	✓	✓	
4	Øi350/Øe430	750	5221000010081							✓	✓	✓	✓	✓						✓
5	Øi350/Øe430	780	5221000010082							✓	✓	✓	✓	✓						✓
6	Øi350/Øe430	890	5221000010122							✓	✓	✓	✓	✓						✓
8	Øi350/Øe430	1250	5221000010083								✓	✓	✓	✓						✓
10	Øi350/Øe430	1510	5221000010084											✓						✓

INTEGRATIVE COMPONENTS FOR VASO STORAGE

COMPATIBILITY TABLES VASO STORAGE/HEAT EXCHANGERS

FINNED HEAT EXCHANGER KIT



Copper finned and tinned heat exchangers+ flange plate + gaskets + bolts and insulated bushes.
Max working pressure: 12 bar
Max working temperature: 110 °C

Finned heat exchanger kit + flange plate + gaskets + bolts and insulated bushes.

MIDDLE AND LOWER HEAT EXCHANGER — **UPPER** HEAT EXCHANGER

Heat exchanger surface	Øi / Øe flange	D	L	P	Capacity	Art. Nr.	Storage 1 - 1 COMPACT -2											Storage 3					
							Model											Model					
[m²]	[mm]				[lt]		200	300	500	800	1000	1500	2000	2500	3000	4000	5000	500	1000	1500	2000	3000	5000
0,76	Øi220/Øe300	142	400	1"	0,6	5221000061003	✓	✓	✓									✓					
0,94	Øi220/Øe300	142	410	1"	0,54	5221000061002	✓	✓	✓									✓					
1,58	Øi220/Øe300	170	440	1"	1,21	5221000061004	✓	✓	✓									✓					
0,94	Øi300/Øe380	142	410	1"	0,54	5221000061011				✓	✓	✓							✓	✓	✓	✓	
1,58	Øi300/Øe380	170	440	1"	1,21	5221000061012				✓	✓	✓							✓	✓	✓	✓	
2,63	Øi300/Øe380	190	570	1"	2,07	5221000061006				✓	✓	✓							✓	✓	✓	✓	
3,17	Øi300/Øe380	190	665	1"	2,51	5221000061007				✓	✓	✓							✓	✓	✓	✓	
4,54	Øi300/Øe380	190	750	1"1/4	3,6	5221000061008				✓	✓	✓							✓	✓	✓	✓	
3,17	Øi350/Øe430	190	665	1"	2,51	5221000061013							✓	✓	✓	✓	✓						✓
4,54	Øi350/Øe430	190	750	1"1/4	3,6	5221000061014							✓	✓	✓	✓	✓						✓
5,26	Øi350/Øe430	190	850	1"1/4	4,14	5221000061009							✓	✓	✓	✓	✓						✓
6,34	Øi350/Øe430	190	980	1"1/4	5,1	5221000061010							✓	✓	✓	✓	✓						✓

FLANGE PLATE FOR D.H.W. STORAGE TANKS

After choosing the heat exchanger according to the compatibility tables and to the needs of the installation, it is necessary to choose the flange plate of the corresponding diameter.



Art. Nr.	Connection	Ø outer [mm]
5206000000001	1"	300
5206000000002	2"	380
5206000000003	2"	430

Includes 2 gaskets, bolts and insulated bushes.
Applicable only on stainless steel tube heat exchangers.

The Flange plate includes 2 sleeve collars for the connection to the operating system. This allows the circulation of the liquid within the heat exchanger's serpentine doing the real separation between the incoming liquid and the outgoing one. The flange plate is in mild steel. Blind flange for accumulation tank in Polywarm® available also with 1 connection. Including: gaskets, bolts and bushes

FLANGE PLATE FOR VASI STORAGE (POLYWARM®)



Art. Nr.	Connection	Ø outer [mm]
5206000000051	1"1/2	300
5206000000054	1"1/2	380
5206000000056	1"1/2	430
5206000000053	2"	430

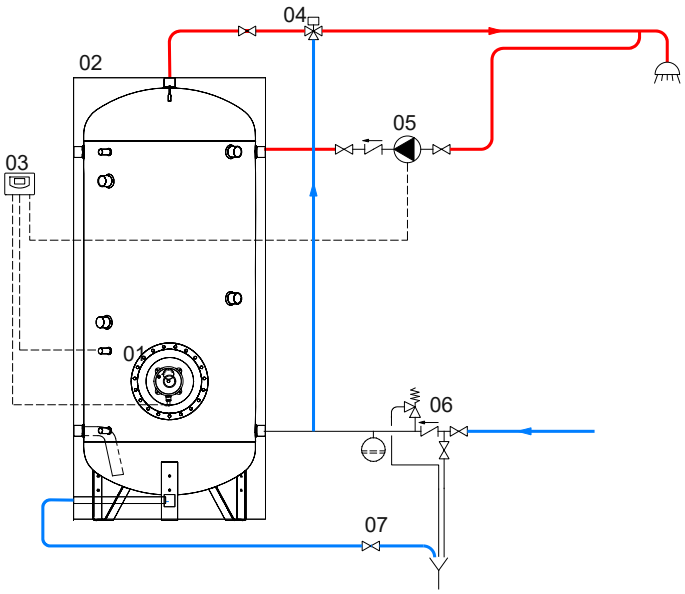
Includes 1 gasket and bolts
1 connection for electric immersion heater (applicable on Vaso storage only)



Art. Nr.	Ø outer [mm]
5206000000101	300
5206000000102	380
5206000000103	430

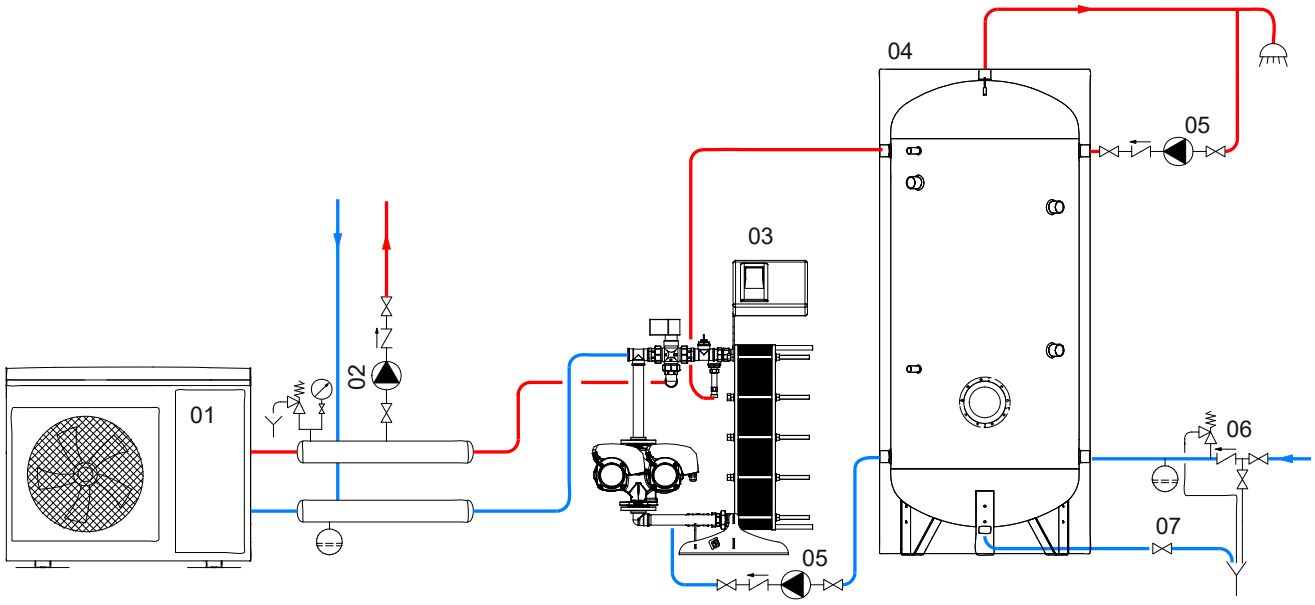
Includes 1 gasket and bolts
Blind flange available (available on storage tanks)

EXAMPLE OF INSTALLATION WITH **VASO INERZIALE A1**



01	Electric immersion heater ad immersione	03	Electronic Control/thermostat	05	D.H.W. recirculation group	07	Blowdown valve
02	VASO INERZIALE A1	04	Thermostatic mixing valve	06	Hydraulic safety group		

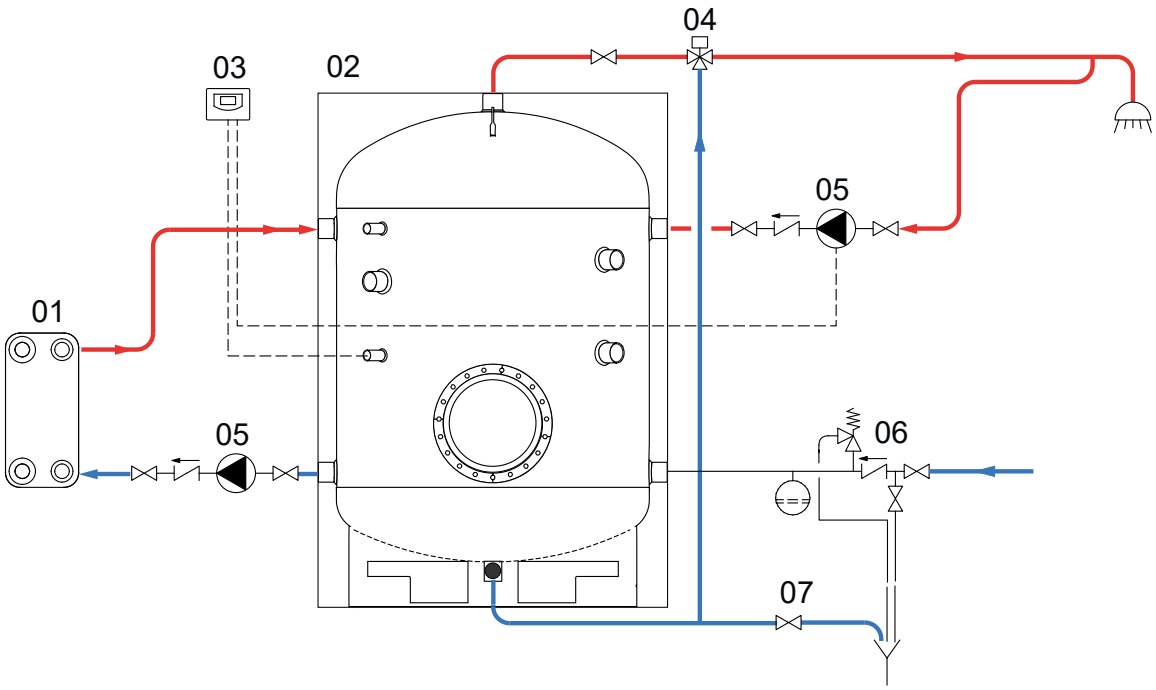
EXAMPLE OF INSTALLATION WITH **PRS MODULE -** FOR DHW ACCUMULATION



01	Generator	04	VASO INERZIALE	07	Blowdown valve
02	Heating system circulation group	05	D.H.W. recirculation group		
03	PRS module	06	Hydraulic safety group		

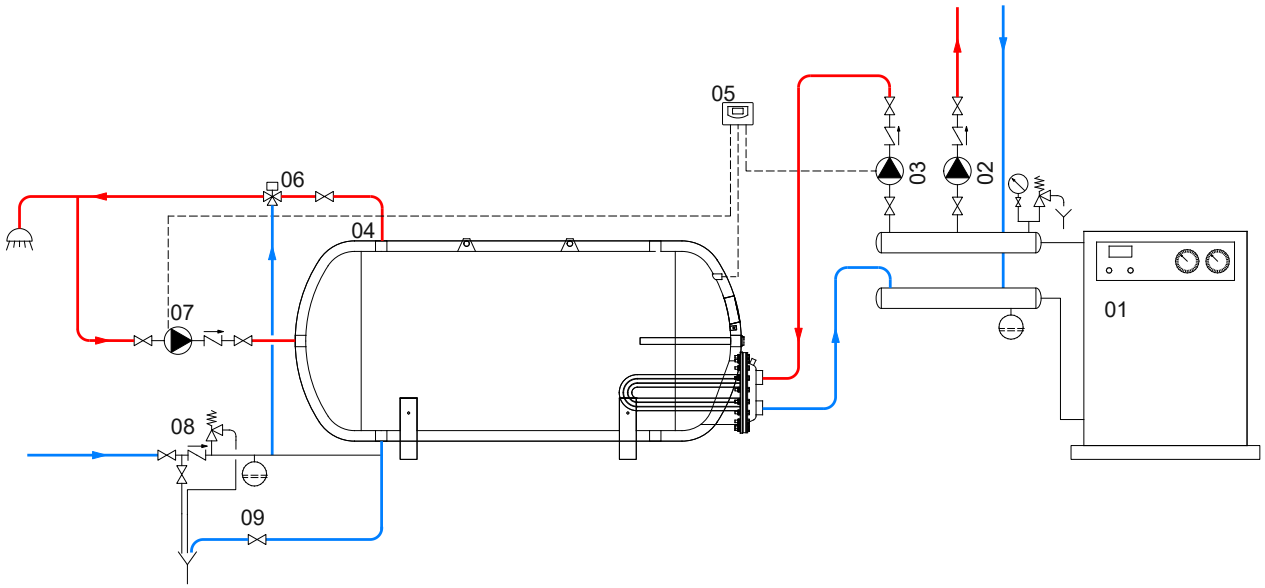
The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXAMPLE OF INSTALLATION WITH **VASO STORAGE COMPACT**



01	Generator / Plate heat exchanger	03	Electronic Control/thermostat	05	D.H.W. recirculation group	07	Blowdown valve
02	VASO STORAGE COMPACT	04	Thermostatic mixing valve	06	Hydraulic safety group		

EXAMPLE OF INSTALLATION WITH **EXTRA HORIZONTAL**

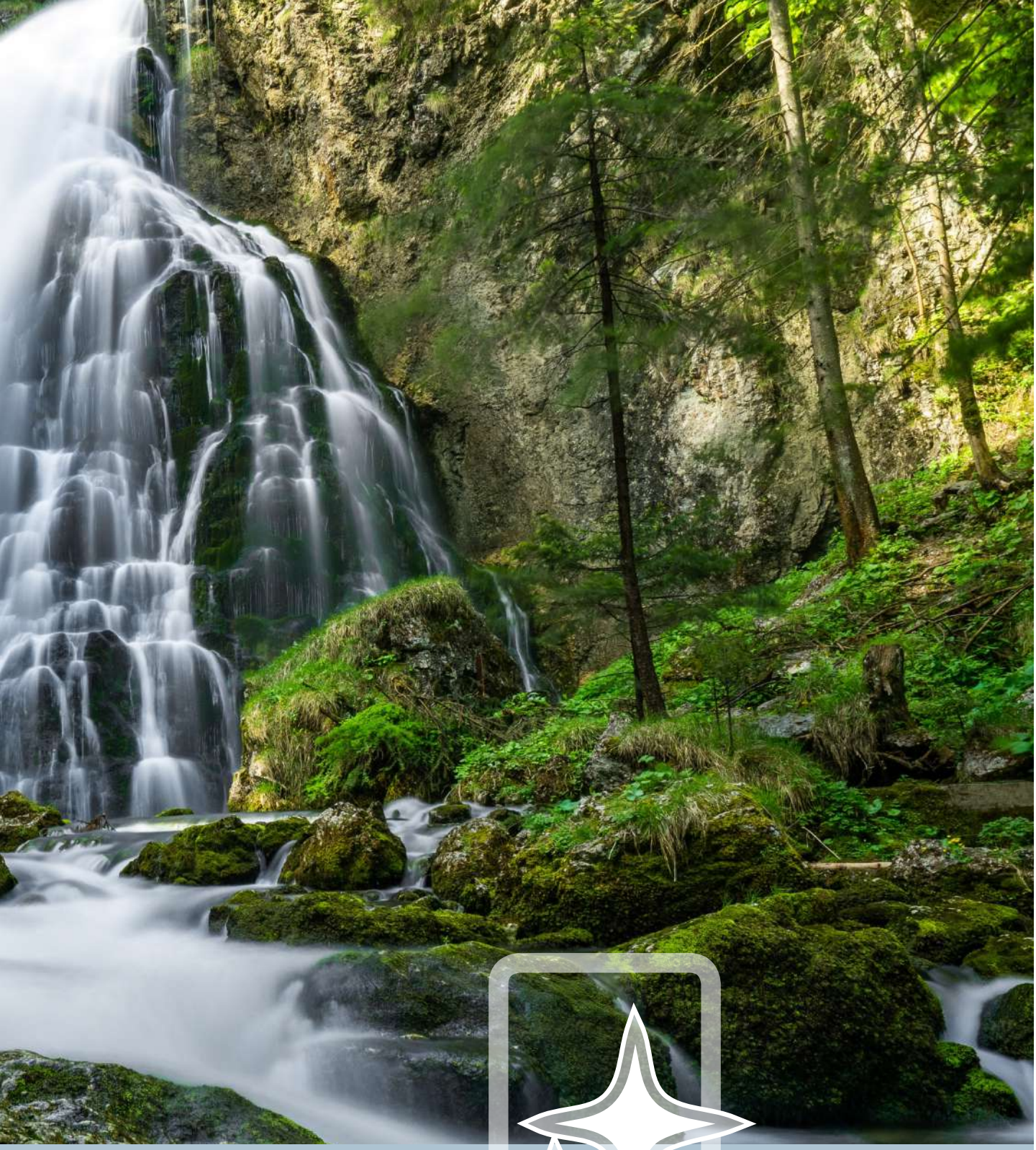


01	Generator	04	EXTRA HORIZONTAL	07	D.H.W. recirculation group
02	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group
03	D.H.W. circulation group	06	Thermostatic mixing valve	09	Blowdown valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.



CALORIFIERS IN STAINLESS STEEL



EXTRA **1 INOX**

STAINLESS STEEL 316L CALORIFIER WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
HEAT EXCHANGER:
Stainless steel 316L Antilegionella® heat exchanger, with tubes bent to the bottom
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode - Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



316L STAINLESS STEEL DHW STORAGE
316L STAINLESS STEEL HEAT EXCHANGER
HEATED STORAGE



EXTRA 1 XXB

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE INOX 316L [m²]	ENERGY EFFICIENCY CLASS
200	3072052300422	0,5	**B**
300	3072052300423	0,75	**C**
500	3072052300424	1	**C**

EXTRA 1 XXC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	HEAT EXCHANGER SURFACE INOX 316L [m²]	ENERGY EFFICIENCY CLASS
800	3072052300430	1,5	**C**
1000	3072052300435	2	**C**
1300	3072052300432	3	**C**
1500	3072052300433	3	**C**
2000	3072052300434	4	**C**
2500	3072052300410	5	
3000	3072052300412	6	
4000	3072052300414	8	
5000	3072052300416	10	

ACCESSORIES

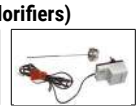
ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW	THREEPHASE 6 kW	THREEPHASE 9 kW	THREEPHASE 12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	49	87	65	44	33	//	//	//	//
300	76	136	102	68	51	//	//	//	//
500	127	228	171	114	85	68	57	//	//
800	178	318	239	159	120	96	80	//	//
1000	243	436	327	218	163	131	109	73	54
1300	274	450	340	230	194	155	129	86	65
1500	288	516	387	258	297	238	198	132	99
2000	443	793	595	396	387	310	258	172	129
2500	577	1033	775	517	387	310	258	172	129
3000	577	1033	775	517	535	428	357	238	178
4000	797	1428	1071	714	699	559	466	311	233
5000	1040	1864	1398	932	699	559	466	311	233

Titanium anode (for stainless steel calorifiers)

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

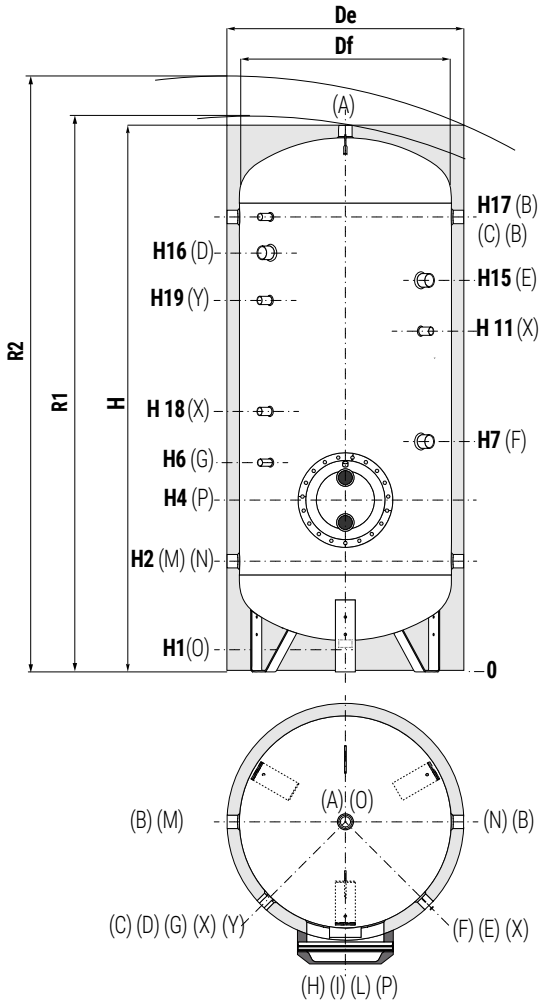


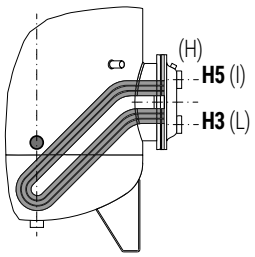
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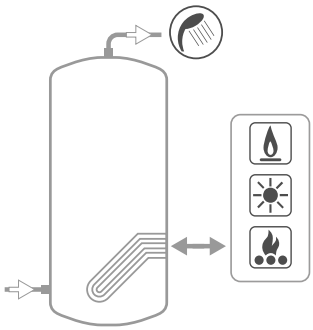
EXTRA **1 INOX**

STAINLESS STEEL 316L CALORIFIER WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C







A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for 2nd magnesium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode/Titanium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
H	Heat exchanger drain 3/8" G F
I	Primary circuit inlet
L	Primary circuit outlet
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	DrainFor model 1000 Connection 1"1/2 G F. For models > 1000 1" G F
P	Flange
X	Connection for titanium anode 3/4" G F (>1500)
Y	Connection for titanium anode 3/4" G F (>3000)

Model	Volume	Weight	Df (vers. XXC)	De (vers. XXC)	De (vers. XXB)	H	R1	R2	H1	H2	H3	H4	H5	H6
	[lt]	[kg]	[mm]											
200	192	57	//	//	550	1451	//	1552	81	316	351	401	451	511
300	294	72	//	//	650	1569	//	1698	149	409	444	494	544	604
500	504	98	//	//	750	1861	//	2006	141	426	461	511	561	621
800	762	137	790	1010	//	1943	2008	2200	113	428	473	563	653	713
1000	905	159	790	1010	//	2212	2270	2450	112	437	482	572	662	722
1300	1277	199	950	1210	//	2193	2275	2510	118	433	578	668	758	818
1500	1403	208	1000	1260	//	2177	2266	2530	112	447	592	682	772	832
2000	2024	332	1250	1510	//	2099	2231	2600	134	529	649	754	859	929
2500	2320	396	1250	1350	//	2299	2396	2680	134	529	649	754	859	929
3000	2925	466	1250	1350	//	2799	2879	3120	134	529	709	814	919	989
4000	3776	568	1400	1500	//	2872	2968	3250	117	557	737	842	947	1017
5000	4995	734	1600	1700	//	2909	3031	3380	94	564	734	839	944	1014

Model	H7	H11	H15	H16	H17	H18	H19	P	O	B M N	L I	D	A
									Connections F				
200	701	//	//	1066	1176	//	//	Øi220/Øe300	3/4"	1"1/4	1"	1"1/2	1"1/4
300	794	//	//	1159	1269	//	//	Øi220/Øe300	3/4"	1"1/4	1"	1"1/2	1"1/4
500	811	//	//	1380	1536	//	//	Øi220/Øe300	3/4"	1"1/4	1"	1"1/2	1"1/4
800	863	//	//	1382	1538	//	//	Øi300/Øe380	3/4"	1"1/4	2"	1"1/2	1"1/2
1000	922	//	//	1642	1797	//	//	Øi300/Øe380	3/4"	1"1/2	2"	2"	1"1/2
1300	918	//	//	1638	1793	//	//	Øi300/Øe380	1"	1"1/2	2"	2"	2"
1500	982	1522	//	1602	1757	1057	//	Øi300/Øe380	1"	1"1/2	2"	2"	2"
2000	1004	//	1524	1473	1629	1159	//	Øi300/Øe380	1"	2"	2"	2"	2"
2500	954	1529	1794	1710	1879	1179	//	Øi350/Øe430	1"	2"	2"	2"	2"
3000	1014	1629	2294	2210	2369	1279	//	Øi350/Øe430	1"	2"	2"	2"	2"
4000	1022	1657	2302	2225	2397	1307	2090	Øi350/Øe430	1"	2"	2"	2"	2"
5000	1019	1664	2319	2159	2404	1314	2024	Øi350/Øe430	1"	2"	2"	2"	2"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

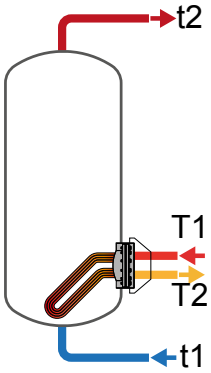
EXTRA **1 INOX**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

LOWER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	2	113	113	77	49	7,3	11,5	13,7	18	178	283	338	455
	1	147	148	102	65	5,8	8,9	10,5	13,9	141	218	258	344
300	3	112	113	76	48	11,1	17	21	28	274	435	520	701
	1,5	145	146	102	65	8,9	13,8	16,3	21,6	219	339	402	534
500	4	139	140	96	60	15	23,8	28,5	38	369	587	702	947
	2	180	181	125	80	12,1	18,7	22,1	29,4	297	460	545	725
800	6	146	147	101	64	23	36	44	59	570	908	1087	1465
	3	186	188	130	83	18	29	34	46	465	721	854	1136
1000	10	128	128	86	54	33	53	63	86	814	1309	1571	2127
	5	157	157	107,9	69	27	43	51	69	687	1077	1281	1711
1300	10	147	152	107	70	31	39	51	72	674	683	884	1253
	5	158	164	116	76	30	38	49	69	659	669	858	1201
1500	15	120	119	82	51	51	81	98	133	1256	2022	2428	3290
	7,5	145	146	100	64	44	68	81	108	1075	1687	2008	2684
2000	20	121	122	83	52	69	111	133	180	1699	2738	3288	4453
	10	146	147	101	65	59	93	111	148	1465	2302	2741	3665
2500	20	118	119	81	51	84	134	160	216	2066	3309	3964	5352
	10	145	146	101	65	71	111	131	174	1755	2734	3244	4314
3000	20	128	127	87	55	100	159	190	255	2461	3926	4694	6321
	10	456	157	110	70	84	130	154	204	2082	3224	3817	5053
4000	20	126	127	87	56	131	207	247	330	3236	5121	6105	8168
	10	159	161	112	73	110	168	198	260	2718	4151	4903	6443
5000	20	137	138	96	61	162	253	301	401	3992	6270	7450	9921
	10	176	179	125	82	135	204	239	312	3332	5049	5923	7727

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	2	247	319	328	347	360	498	542	635	309	30,3
	1	241	308	314	329	330	446	478	547	84,74	8,3
300	3	371	480	494	524	545	755	823	968	372	36,5
	1,5	362	464	474	496	501	678	729	834	101,02	9,9
500	4	616	791	810	851	849	1162	1254	1450	419	41,1
	2	604	770	784	814	792	1061	1129	1273	113,381	11,1
800	6	998	1280	1310	1373	1359	1855	1998	2301	718	70,4
	3	980	1249	1271	1318	1275	1705	1812	2037	189,22	18,6
1000	10	1273	1640	1683	1776	1788	2469	2678	3123	1380	135,3
	5	1252	1601	1635	1707	1687	2283	2446	2790	358,5	35,2
1300	10	1572	1938	1972	2033	1999	2006	2167	2462	1380	135
	5	1569	1936	1967	2024	1987	1995	2146	2420	358	35
1500	15	1855	2394	2462	2605	2651	3675	4000	4689	2295	225,1
	7,5	1825	2338	2392	2504	2506	3407	3664	4204	589,6	57,8
2000	20	2546	3285	3377	3571	3622	5019	5459	6391	2996	293,8
	10	2507	3212	3285	3439	3435	4670	5021	5761	766,42	75,2
2500	20	2988	3856	3965	4196	4296	5951	6475	7586	2436	238,9
	10	2936	3760	3845	4023	4047	5491	5899	6755	624	61,2
3000	20	3748	4827	4955	5226	5307	7314	7928	9230	2836	278,1
	10	3685	4710	4809	5015	5004	6752	7226	8215	723	70,9
4000	20	4842	6232	6396	6740	6892	9475	10263	11913	3896	382,1
	10	4756	6070	6196	6452	6477	8699	9301	10533	989	97,0
5000	20	6362	8166	8363	8775	8891	12137	13081	15058	4707	461,6
	10	6252	7963	8109	8409	8363	11161	11860	13303	1192	116,9

MAXIMUM STORAGE EXPLOITATION WITH CURVED ANTILEGIONELLA® HEAT EXCHANGER



Model	Heated volume: Standard heat exchanger	Storage volume: Heat exchanger for 100% heated volume	Advantage in exploited volume	Advantage in percentage
	[lt]	[lt]	[lt]	[%]
200	165	190	25	**13%**
300	251	285	34	**12%**
500	438	485	47	**10%**
800	680	750	70	**10%**
1000	800	900	100	**13%**
1300	1150	1260	110	**10%**



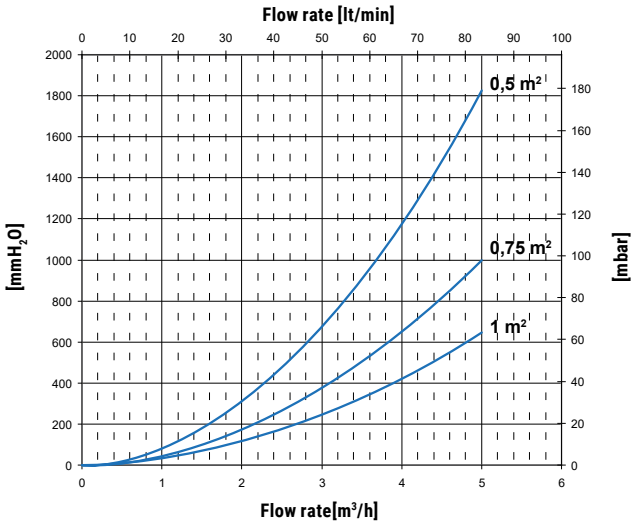
Model	Heated volume: Standard heat exchanger	Storage volume: Heat exchanger for 100% heated volume	Advantage in exploited volume	Advantage in percentage
	[lt]	[lt]	[lt]	[%]
1500	1224	1445	221	**15%**
2000	1684	1978	294	**15%**
2500	1905	2315	410	**18%**
3000	2438	2921	483	**17%**
4000	3113	3769	656	**17%**
5000	4116	4982	866	**17%**

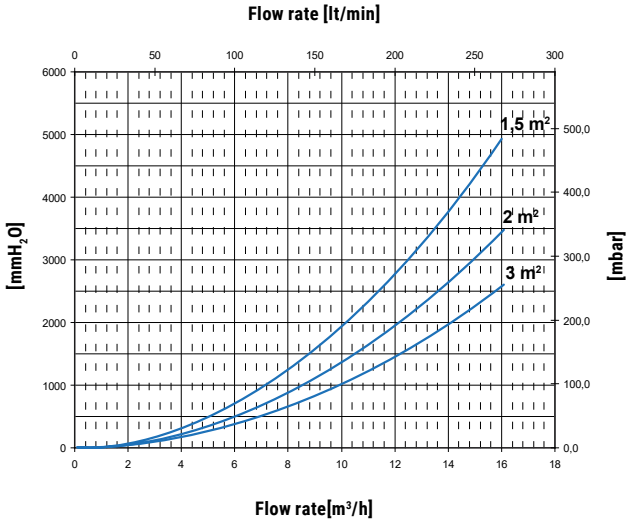
EXTRA **1 INOX**

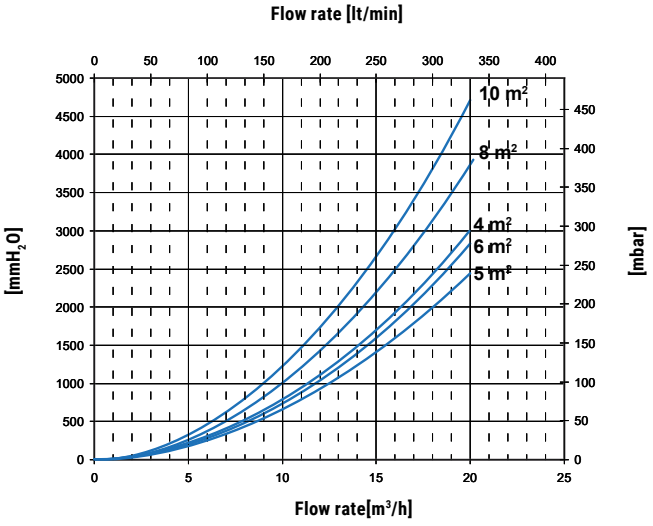
HEAT EXCHANGERS PRESSURE DROP



Lower heat exchanger surface [m²]	
200	0,5
300	0,75
500	1,5
800	2
1000	3
1300	3
1500	3
2000	4
2500	5
3000	6
4000	8
5000	10

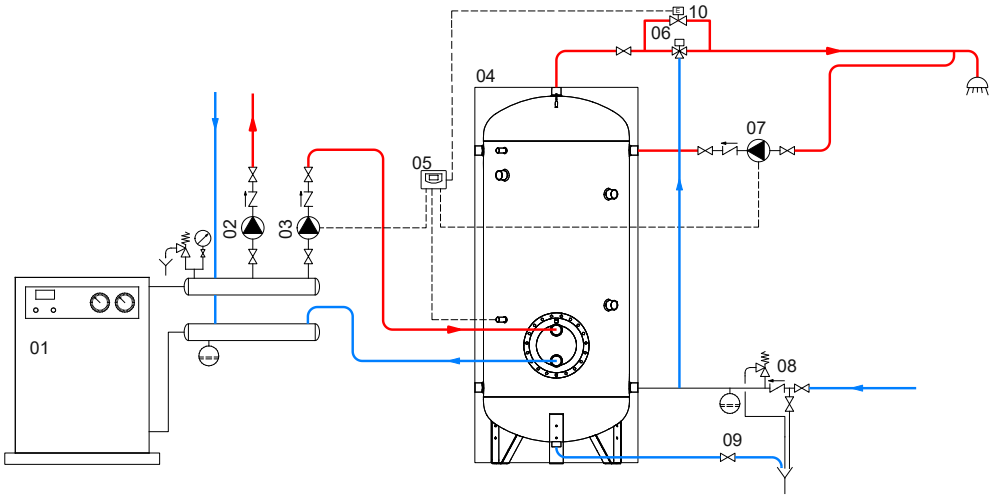






PERFORMANCE CHARTS AT PAGE 82-83

EXAMPLE OF INSTALLATION WITH **EXTRA 1 INOX**



1	Generator	4	EXTRA 1 INOX	7	D.H.W. recirculation group	10	By-pass solenoid valve
2	Heating system circulation group	5	Electronic Control/thermostat	8	Hydraulic safety group		
3	D.H.W. circulation group	6	Thermostatic mixing valve	9	Blowdown valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

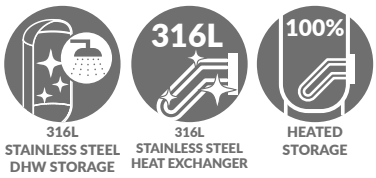
EXTRA **1 INOX COMPACT**

STAINLESS STEEL 316L CALORIFIERS, SUITABLE FOR LOW-CEILINGED ROOM, WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
Suitable for low-ceilinged room.
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
HEAT EXCHANGER:
Stainless steel 316L Antilegionella® heat exchanger, with tubes bent to the bottom
INSULATION (DISMOUNTABLE)
NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

CATHODE PROTECTION
n° 2 magnesium anodes.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



316L STAINLESS STEEL DHW STORAGE
316L STAINLESS STEEL HEAT EXCHANGER
HEATED STORAGE



EXTRA 1 COMPACT XXC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	HEAT EXCHANGER SURFACE INOX 316L
	Art. Nr.	[m²]
2500	3072052300411	5
3000	3072052300413	6
4000	3072052300415	8



ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW	THREEPHASE 6 kW	THREEPHASE 9 kW	THREEPHASE 12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
2500	797	1428	1071	714	535	428	357	238	178
3000	874	1565	1173	782	587	469	391	261	196
4000	924	1655	1241	828	621	497	414	276	207

Titanium anode (for stainless steel calorifiers)

See Accessories section	

Thermometer

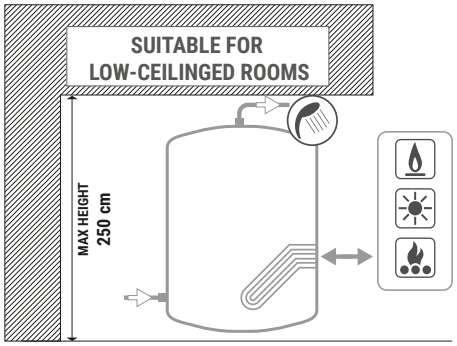
Art. Nr.	
5032240000107	
5 units box	

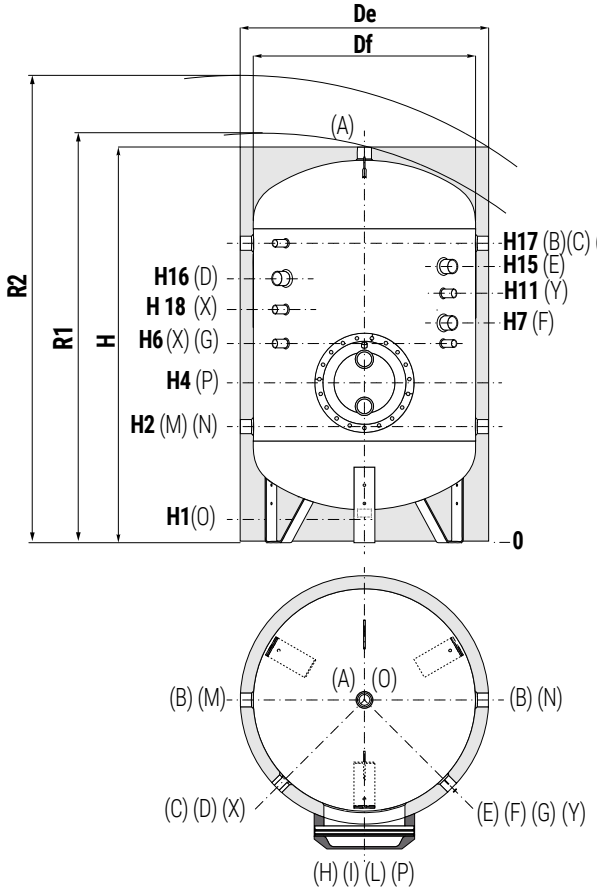
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

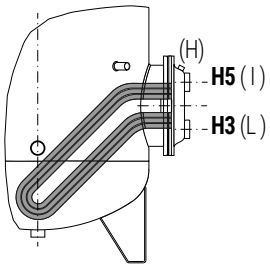
EXTRA **1 INOX COMPACT**

STAINLESS STEEL 316L CALORIFIERS, SUITABLE FOR LOW-CEILINGED ROOM, WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGER

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C







A	Domestic hot water outlet 2" G F
B	Recirculation / Domestic hot water outlet 2" G F
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 2" G F
E	Connection for 2nd magnesium anode/Titanium anode 1"1/4 G F
F	Connection for magnesium anode/Titanium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
H	Heat exchanger drain 3/8" G F
I	Primary circuit inlet 2" G F
L	Primary circuit outlet 2" G F
M	Domestic cold water circuit inlet 2" G F
N	Alternative domestic cold water circuit inlet or connection for more tanks in series 2" G F
O	Drain 1" G F
P	Flange
X	Connection for titanium anode 3/4" G F
Y	Connection for titanium anode 3/4" G F (only 4000)

Model	Volume	Weight	Df	De	H	R1	R2	H1	H2	H3
	[lt]	[kg]	[mm]							
2500	2627	382	1400	1500	2122	2251	2610	117	557	677
3000	3029	415	1500	1600	2131	2276	2670	106	556	736
4000	3990	553	1600	1700	2409	2555	2960	94	564	744

Model	H4	H5	H6	H7	H11	H15	H16	H17	H18	P
	[mm]									
2500	782	887	957	982	//	1552	1501	1657	1180	Øi350/Øe430
3000	841	946	1016	981	//	1551	1500	1656	1180	Øi350/Øe430
4000	849	954	1024	1029	1611	1809	1732	1904	1250	Øi350/Øe430

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

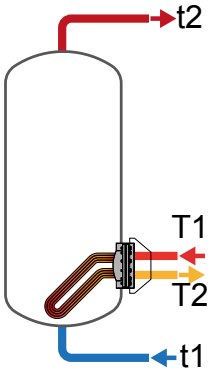
EXTRA **1 INOX COMPACT**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

LOWER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
2500	20	134	134	92	58	69	111	133	180	1699	2738	3288	4453
	10	164	164	114	73	59	93	111	148	1465	2302	2741	3665
3000	20	130	130	90	57	100	159	190	255	2461	3926	4694	6321
	10	162	162	113	73	84	130	154	204	2082	3224	3817	5053
4000	20	133	133	92	59	131	207	247	330	3236	5121	6105	8168
	10	170	170	119	77	110	168	198	260	2718	4151	4903	6443

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
2500	20	3276	4198	4289	4484	4352	5932	6372	7304	2436	238,9
	10	3237	4125	4198	4352	4165	5583	5934	6673	624	61,2
3000	20	3862	4969	5097	5368	5420	7455	8069	9371	2836	278,1
	10	3798	4852	4950	5156	5117	6893	7368	8357	723	70,9
4000	20	5090	6542	6706	7050	7140	9785	10573	12223	3896	382,1
	10	5004	6380	6506	6762	6725	9009	9611	10843	989	97,0

MAXIMUM STORAGE EXPLOITATION WITH CURVED ANTILEGIONELLA® HEAT EXCHANGER

Cordivari heat exchangers, with tubes bent to the bottom, are able to heat the complete volume in an homogeneus way.
Energy storaging is therefore improved and ignition time data refer to the complete volume of the tank, while in traditional straight heat exchangers equipped calorifires, a range between 9-17% of the volume remains cold.





Model	Heated volume: Standard heat exchanger	Storage volume: Heat exchanger for 100% heated volume	Advantage in exploited volume	Advantage in percentage
	[lt]	[lt]	[lt]	[%]
2500	1905	2315	410	**18%**
3000	2438	2921	483	**17%**
4000	3113	3769	656	**17%**

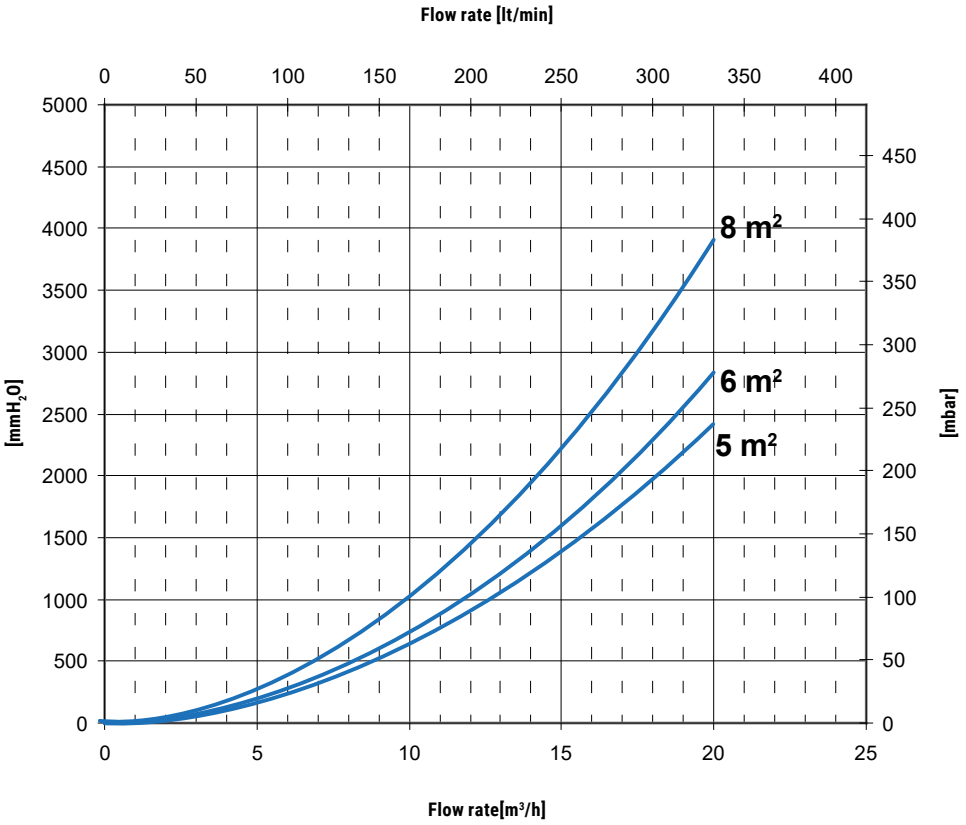
EXTRA **1 INOX COMPACT**

HEAT EXCHANGERS PRESSURE DROP **ANTILEGIONELLA®**



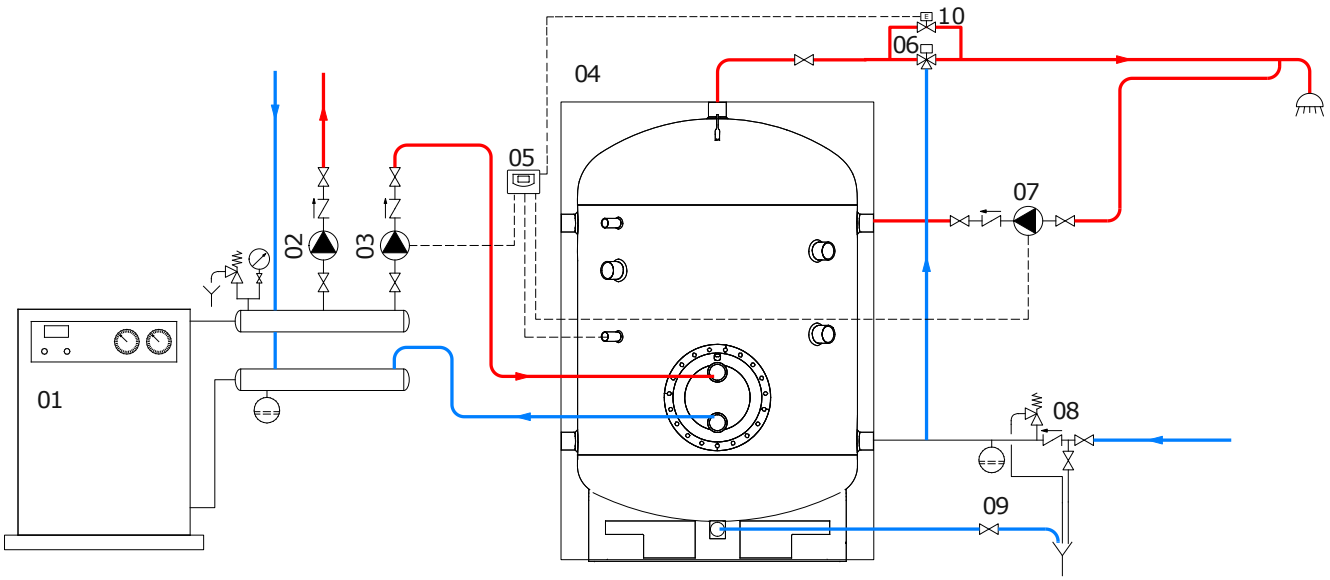


Lower heat exchanger surface [m²]	
2500	5
3000	6
4000	8



PERFORMANCE CHARTS AT PAGE 82-83

EXAMPLE OF INSTALLATION WITH **EXTRA 1 INOX COMPACT**



1	Generator	4	EXTRA 1 INOX COMPACT	7	D.H.W. recirculation group	10	By-pass solenoid valve
2	Heating system circulation group	5	Electronic Control/thermostat	8	Hydraulic safety group		
3	D.H.W. circulation group	6	Thermostatic mixing valve	9	Blowdown valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

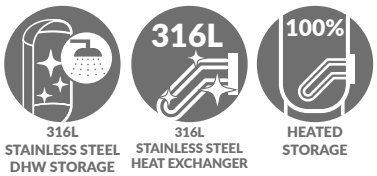
EXTRA **2 INOX**

STAINLESS STEEL 316L CALORIFIER WITH 2 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
HEAT EXCHANGER:
N° 2 stainless steel 316l antilegionella® heat exchangers (upper exchanger is straight and the lower is bent to the bottom)
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode - Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



316L STAINLESS STEEL DHW STORAGE
316L STAINLESS STEEL HEAT EXCHANGER
HEATED STORAGE

EXTRA 2 XXB

Model	HARD FOAM INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Lower [m²]	Upper [m²]	ENERGY EFFICIENCY CLASS
200	3082052300222	0,5	0,5	**B**
300	3082052300223	0,75	0,75	**C**
500	3082052300224	1,5	1,5	**C**

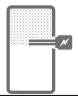


EXTRA 2 XXC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Lower [m²]	Upper [m²]	ENERGY EFFICIENCY CLASS
800	3082052300230	2	2	**C**
1000	3082052300235	3	2	**C**
1300	3082052300232	3	3	**C**
1500	3082052300233	3	3	**C**
2000	3082052300234	4	4	**C**
2500	3082052300210	5	5	
3000	3082052300212	6	6	
4000	3082052300214	8	8	
5000	3082052300216	10	10	

ACCESSORIES

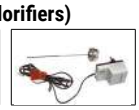
ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE **1,5** kW	**2** kW	**3** kW	THREEPHASE **4** kW	**5** kW	**6** kW	**9** kW	**12** kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	49	87	65	44	33	//	//	//	//
300	76	136	102	68	51	//	//	//	//
500	127	228	171	114	85	68	57	//	//
800	178	318	239	159	120	96	80	//	//
1000	243	436	327	218	163	131	109	73	54
1300	274	450	340	230	194	155	129	86	65
1500	288	516	387	258	297	238	198	132	99
2000	443	793	595	396	387	310	258	172	129
2500	577	1033	775	517	387	310	258	172	129
3000	577	1033	775	517	535	428	357	238	178
4000	797	1428	1071	714	699	559	466	311	233
5000	1040	1864	1398	932	699	559	466	311	233

Titanium anode (for stainless steel calorifiers)

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

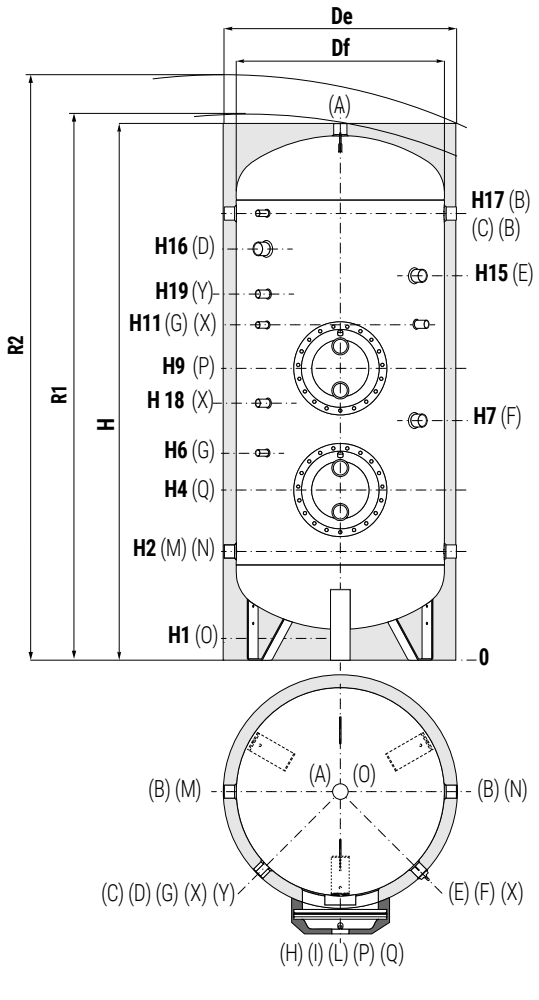


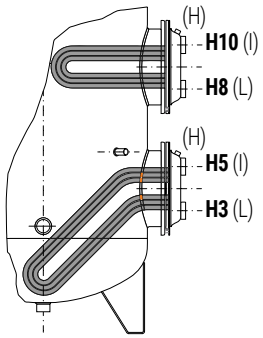
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

EXTRA **2 INOX**

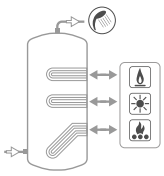
STAINLESS STEEL 316L CALORIFIER WITH 2 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS

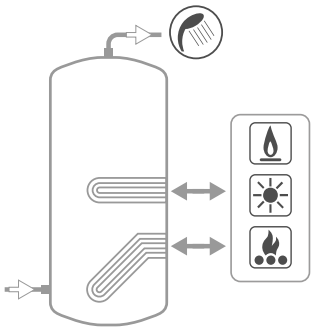
STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C





Models with 3 heat exchangers are available on request





A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet 2" G F
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for 2nd magnesium anode/Titanium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode/Titanium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
H	Heat exchanger drain 3/8" G F
I	Primary circuit inlet
L	Primary circuit outlet
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	DrainFor model 1000 Connection 1"1/2 G F. For models > 1000 1" G F
P	Flange
X	Connection for titanium anode 3/4" G F (>1300)
Y	Connection for titanium anode 3/4" G F (>2500)

Model	Volume	Weight	Df (vers. XXC)	De (vers. XXC)	De (vers. XXB)	H	R1	R2	H1	H2	H3	H4	H5	H6	H7
	[lt]	[kg]	[mm]			[mm]									
200	195	73	//	//	550	1451	-	1560	81	316	351	401	451	511	701
300	297	91	//	//	650	1569	-	1700	149	409	444	494	544	604	794
500	507	119	//	//	750	1861	-	2010	141	426	461	511	561	621	811
800	768	161	790	1010	//	1943	2008	2190	113	428	473	563	653	713	863
1000	910	185	790	1010	//	2212	2270	2440	112	437	482	572	662	722	922
1300	1283	228	950	1210	//	2193	2275	2510	118	433	578	668	758	818	918
1500	1409	237	1000	1260	//	2177	2266	2520	112	447	592	682	772	832	982
2000	2032	370	1250	1510	//	2099	2231	2590	134	529	649	754	859	929	1004
2500	2320	383	1250	1350	//	2299	2396	2670	134	529	649	754	859	929	954
3000	2925	518	1250	1350	//	2799	2879	3110	134	529	709	814	919	989	1014
4000	3776	634	1400	1500	//	2872	2968	3250	117	557	737	842	947	1017	1022
5000	4995	820	1600	1700	//	2909	3031	3370	94	564	734	839	944	1014	1019

Model	H8	H9	H10	H11	H12	H15	H16	H17	H18	H19	Q P	O	B M N	I L	D	A
	[mm]											Connections F				
200	801	851	901	961	//	//	1066	1176	//	//	Øi220/Øe300	3/4"	1"1/4	1"	1"1/2	1"1/4
300	894	944	994	1054	//	//	1159	1269	//	//	Øi220/Øe300	3/4"	1"1/4	1"	1"1/2	1"1/4
500	911	961	1011	1071	//	//	1380	1536	//	//	Øi220/Øe300	3/4"	1"1/4	1"	1"1/2	1"1/4
800	1003	1093	1183	1243	//	//	1382	1538	//	//	Øi300/Øe380	3/4"	1"1/4	2"	1"1/2	1"1/2
1000	1032	1122	1212	1272	//	//	1642	1797	//	//	Øi300/Øe380	3/4"	1"1/2	2"	2"	1"1/2
1300	1078	1168	1258	1318	//	//	1638	1793	//	//	Øi300/Øe380	1"	1"1/2	2"	2"	2"
1500	1142	1232	1322	1382	//	1552	1602	1757	1057	//	Øi300/Øe380	1"	1"1/2	2"	2"	2"
2000	1229	1334	1439	1404	//	1524	1473	1629	1159	//	Øi350/Øe430	1"	2"	2"	2"	2"
2500	1249	1354	1459	1529	//	1794	1710	1879	1179	//	Øi350/Øe430	1"	2"	2"	2"	2"
3000	1349	1454	1559	1629	//	2294	2210	2369	1279	2075	Øi350/Øe430	1"	2"	2"	2"	2"
4000	1377	1482	1587	1657	1980	2302	2225	2397	1307	2090	Øi350/Øe430	1"	2"	2"	2"	2"
5000	1384	1489	1594	1664	1992	2319	2159	2404	1314	2024	Øi350/Øe430	1"	2"	2"	2"	2"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

EXTRA **2 INOX**

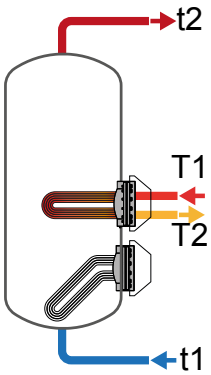
HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	2	113	113	77	49	7,3	12	14	18	178	283	338	455
	1	147	148	102	65	6	9	11	13,9	141	218	258	344
300	3	112	113	76	48	11	17	21	28	274	435	520	701
	1,5	145	146	102	65	9	14	16	21,6	219	339	402	534
500	6	90	90	62	39	23	37	44	59	571	909	1088	1467
	3	114	115	80	51	19	29	35	46	466	722	856	1137
800	10	101	101	69	44	33	53	64	86	815	1310	1572	2128
	5	124	125	86	55	28	44	52	69	688	1077	1282	1712
1000	15	82	83	56	36	51	82	98	133	1257	2024	2429	3293
	7,5	101	100	69	44	44	68	81	108	1076	1689	2010	2685
1300	15	66	68	48	31	32	40	52	73	680	688	893	1272
	7,5	70	72	50	33	31	39	50	71	669	678	875	1235
1500	15	120	119	82	51	51	81	98	133	1256	2022	2428	3290
	7,5	145	146	100	64	44	68	81	108	1075	1687	2008	2684
2000	20	121	122	83	52	69	111	133	180	1699	2738	3288	4453
	10	146	147	101	65	59	93	111	148	1465	2302	2741	3665
2500	20	118	119	81	51	69	111	133	180	1699	2738	3288	4453
	10	145	146	101	65	59	93	111	148	1465	2302	2741	3665
3000	20	128	127	87	55	100	159	190	255	2461	3926	4694	6321
	10	456	157	110	70	84	130	154	204	2082	3224	3817	5053
4000	20	126	127	87	56	131	207	247	330	3236	5121	6105	8168
	10	159	161	112	73	110	168	198	260	2718	4151	4903	6443
5000	20	137	138	96	61	162	253	301	401	3992	6270	7450	9921
	10	176	179	125	82	135	204	239	312	3332	5049	5923	7727

UPPER
HEAT EXCHANGER



Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	2	247	319	328	347	360	498	542	635	309	30,3
	1	241	308	314	329	330	446	478	547	84,74	8,3
300	3	371	480	494	524	545	755	823	968	372	36,5
	1,5	362	464	474	496	501	678	729	834	101,02	9,9
500	6	649	844	874	937	1011	1420	1563	1866	718	70,4
	3	632	813	836	882	927	1270	1378	1602	189,22	18,6
800	10	1039	1347	1391	1483	1555	2177	2386	2831	1380	135,3
	5	1018	1308	1342	1414	1453	1990	2154	2498	358,5	35,2
1000	15	1347	1759	1826	1970	2143	3041	3365	4056	2295	225,1
	7,5	1316	1703	1756	1869	1998	2773	3029	3569	589,6	57,8
1300	15	786	956	990	1053	1217	1224	1388	1691	2295	225
	7,5	785	954	987	1047	1208	1216	1373	1661	590	58
1500	15	1855	2394	2462	2605	2651	3675	4000	4689	2295	225,1
	7,5	1825	2338	2392	2504	2506	3407	3664	4204	589,6	57,8
2000	20	2546	3285	3377	3571	3622	5019	5459	6391	2996	293,8
	10	2507	3212	3285	3439	3435	4670	5021	5761	766,42	75,2
2500	20	2927	3761	3852	4046	4003	5495	5935	6867	2436	238,9
	10	2888	3688	3761	3915	3815	5146	5497	6236	624	61,2
3000	20	3748	4827	4955	5226	5307	7314	7928	9230	2836	278,1
	10	3685	4710	4809	5015	5004	6752	7226	8215	723	70,9
4000	20	4842	6232	6396	6740	6892	9475	10263	11913	3896	382,1
	10	4756	6070	6196	6452	6477	8699	9301	10533	989	97,0
5000	20	6362	8166	8363	8775	8891	12137	13081	15058	4707	461,6
	10	6252	7963	8109	8409	8363	11161	11860	13303	1192	116,9

Cordivari heat exchangers, with tubes bent to the bottom, are able to heat the complete volume in an homogeneus way.
Energy storaging is therefore improved and ignition time data refer to the complete volume of the tank, while in traditional straight heat exchangers equipped calorifires, a range between 9-17% of the volume remains cold.

EXTRA **2 INOX**

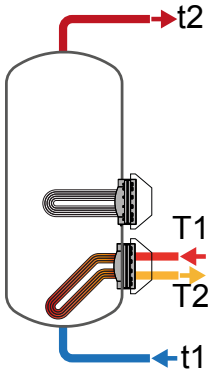
HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m^3/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	2	113	113	77	49	7,3	11,5	13,7	18	178	283	338	455
	1	147	148	102	65	5,8	8,9	10,5	13,9	141	218	258	344
300	3	112	113	76	48	11,1	17	21	28	274	435	520	701
	1,5	145	146	102	65	8,9	13,8	16,3	21,6	219	339	402	534
500	4	139	140	96	60	15	23,8	28,5	38	369	587	702	947
	2	180	181	125	80	12,1	18,7	22,1	29,4	297	460	545	725
800	6	146	147	101	64	23	36	44	59	570	908	1087	1465
	3	186	188	130	83	18	29	34	46	465	721	854	1136
1000	10	128	128	86	54	33	53	63	86	814	1309	1571	2127
	5	157	157	107,9	69	27	43	51	69	687	1077	1281	1711
1300	10	147	152	107	70	31	39	51	72	674	683	884	1253
	5	158	164	116	76	30	38	49	69	659	669	858	1201
1500	15	120	119	82	51	51	81	98	133	1256	2022	2428	3290
	7,5	145	146	100	64	44	68	81	108	1075	1687	2008	2684
2000	20	121	122	83	52	69	111	133	180	1699	2738	3288	4453
	10	146	147	101	65	59	93	111	148	1465	2302	2741	3665
2500	20	118	119	81	51	84	134	160	216	2066	3309	3964	5352
	10	145	146	101	65	71	111	131	174	1755	2734	3244	4314
3000	20	128	127	87	55	100	159	190	255	2461	3926	4694	6321
	10	456	157	110	70	84	130	154	204	2082	3224	3817	5053
4000	20	126	127	87	56	131	207	247	330	3236	5121	6105	8168
	10	159	161	112	73	110	168	198	260	2718	4151	4903	6443
5000	20	137	138	96	61	162	253	301	401	3992	6270	7450	9921
	10	176	179	125	82	135	204	239	312	3332	5049	5923	7727

LOWER
HEAT EXCHANGER



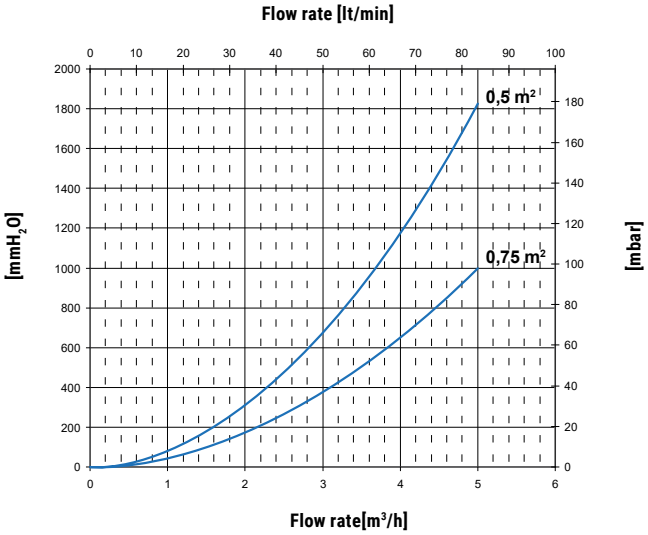
Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m^3/h]	T1/t2				T1/t2				[mmH_2O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	2	247	319	328	347	360	498	542	635	309	30,3
	1	241	308	314	329	330	446	478	547	84,74	8,3
300	3	371	480	494	524	545	755	823	968	372	36,5
	1,5	362	464	474	496	501	678	729	834	101,02	9,9
500	4	616	791	810	851	849	1162	1254	1450	419	41,1
	2	604	770	784	814	792	1061	1129	1273	113,381	11,1
800	6	998	1280	1310	1373	1359	1855	1998	2301	718	70,4
	3	980	1249	1271	1318	1275	1705	1812	2037	189,22	18,6
1000	10	1273	1640	1683	1776	1788	2469	2678	3123	1380	135,3
	5	1252	1601	1635	1707	1687	2283	2446	2790	358,5	35,2
1300	10	1572	1938	1972	2033	1999	2006	2167	2462	1380	135
	5	1569	1936	1967	2024	1987	1995	2146	2420	358	35
1500	15	1855	2394	2462	2605	2651	3675	4000	4689	2295	225,1
	7,5	1825	2338	2392	2504	2506	3407	3664	4204	589,6	57,8
2000	20	2546	3285	3377	3571	3622	5019	5459	6391	2996	293,8
	10	2507	3212	3285	3439	3435	4670	5021	5761	766,42	75,2
2500	20	2988	3856	3965	4196	4296	5951	6475	7586	2436	238,9
	10	2936	3760	3845	4023	4047	5491	5899	6755	624	61,2
3000	20	3748	4827	4955	5226	5307	7314	7928	9230	2836	278,1
	10	3685	4710	4809	5015	5004	6752	7226	8215	723	70,9
4000	20	4842	6232	6396	6740	6892	9475	10263	11913	3896	382,1
	10	4756	6070	6196	6452	6477	8699	9301	10533	989	97,0
5000	20	6362	8166	8363	8775	8891	12137	13081	15058	4707	461,6
	10	6252	7963	8109	8409	8363	11161	11860	13303	1192	116,9

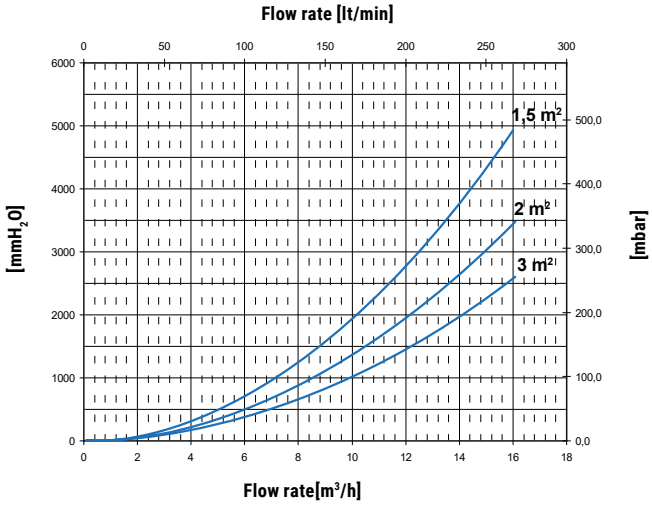
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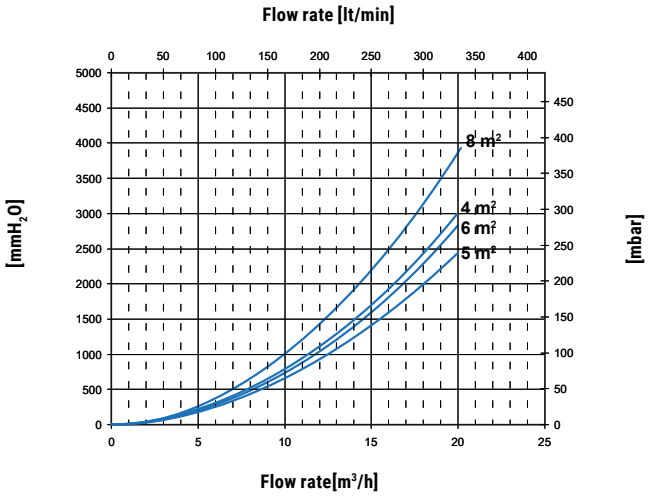
LOWER HEAT EXCHANGERS PRESSURE DROP (**ANTILEGIONELLA®**)



Lower heat exchanger surface [m²]	
200	0,5
300	0,75
500	1,5
800	2
1000	3
1300	3
1500	3
2000	4
2500	5
3000	6
4000	8
5000	10





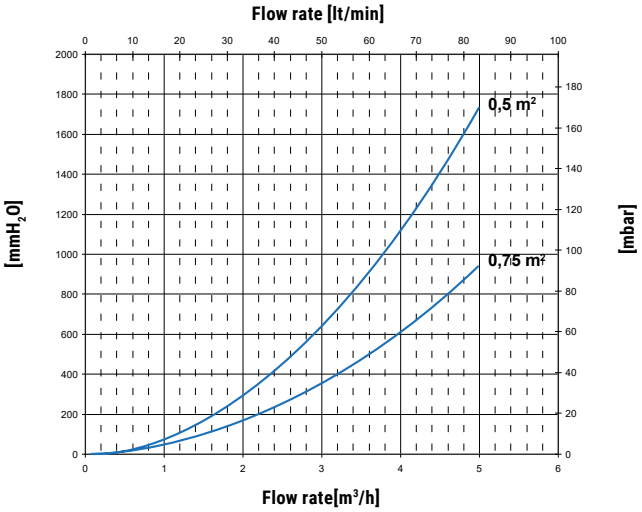


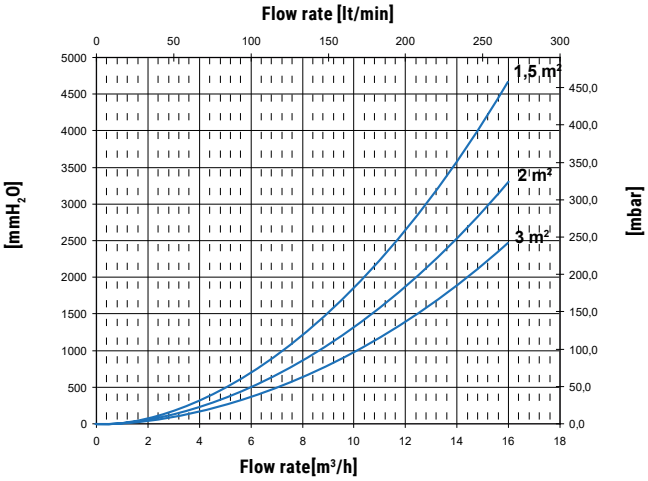
EXTRA **2 INOX**

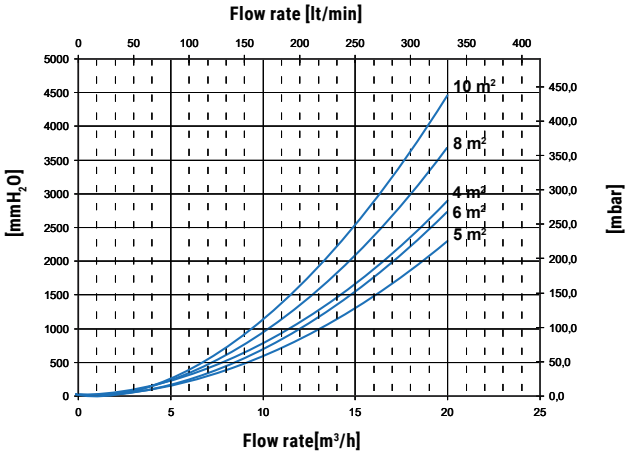
UPPER HEAT EXCHANGERS PRESSURE DROP



Upper heat exchangers surface [m²]	
200	0,5
300	0,75
500	1,5
800	2
1000	2
1300	3
1500	3
2000	4
2500	5
3000	6
4000	8
5000	10

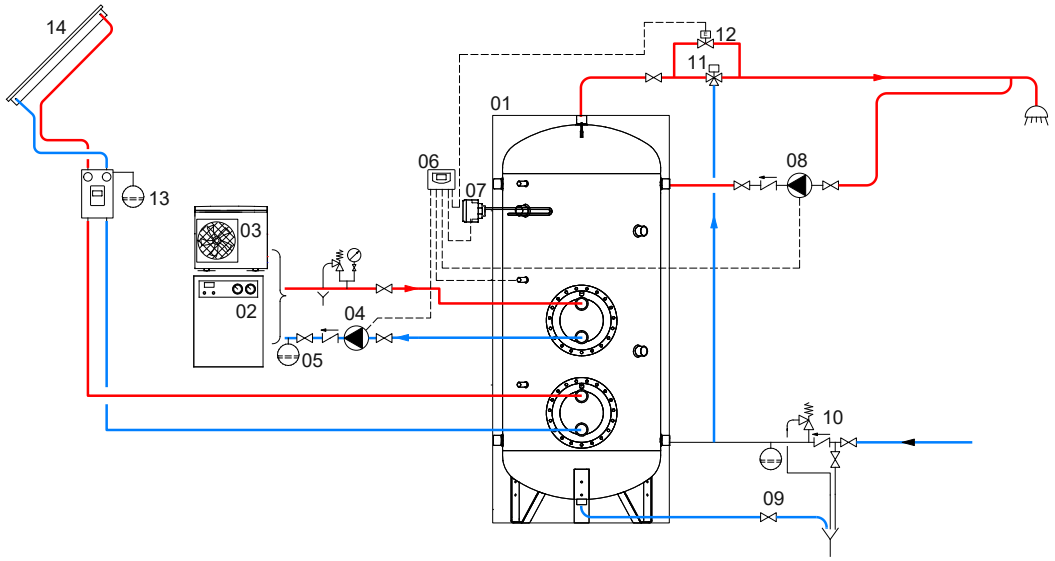






PERFORMANCE CHARTS AT PAGE 82-83

EXAMPLE OF INSTALLATION WITH **EXTRA 2 INOX**



1	Extra 2 INOX	5	Expansion vessel	9	Blowdown valve	13	Solar system circulation group
2	Generator	6	Electronic Control/thermostat	10	Hydraulic safety group	14	Solar panels
3	Generator (Heat pump)	7	Electric immersion heater (optional)	11	Thermostatic mixing valve		
4	Circulation group	8	D.H.W. recirculation group	12	By-pass solenoid valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

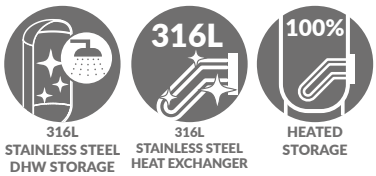
EXTRA **2 INOX COMPACT**

STAINLESS STEEL 316L CALORIFIER, SUITABLE FOR LOW-CEILINGED ROOMS, WITH 2 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
Suitable for low-ceilinged room.
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
HEAT EXCHANGER:
N° 2 Stainless steel 316L Antilegionella® heat exchangers (upper exchanger is straight and the lower is bent to the bottom)
INSULATION (DISMOUNTABLE)
NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.

CATHODE PROTECTION
n° 2 magnesium anodes.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.





EXTRA 2 COMPACT XXC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Lower	Upper
	Art. Nr.	[m²]	
2500	3082052300211	5	5
3000	3082052300213	6	6
4000	3082052300215	8	8

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE **1,5** kW	**2** kW	**3** kW	THREEPHASE **4** kW	**5** kW	**6** kW	**9** kW	**12** kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
2500	797	1428	1071	714	535	428	357	238	178
3000	874	1565	1173	782	587	469	391	261	196
4000	924	1655	1241	828	621	497	414	276	207

Titanium anode (for stainless steel calorifiers)

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

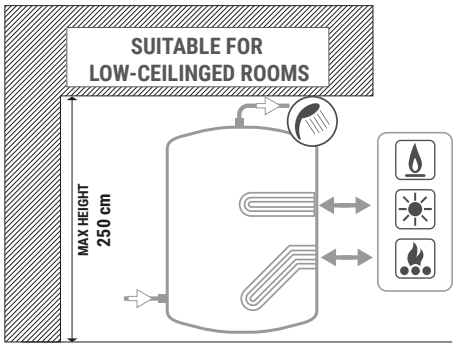


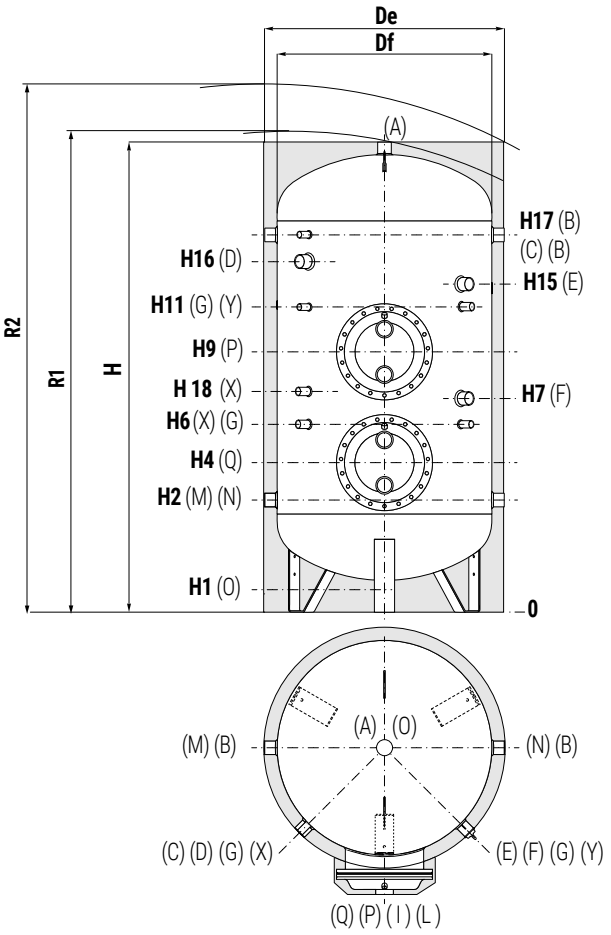
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

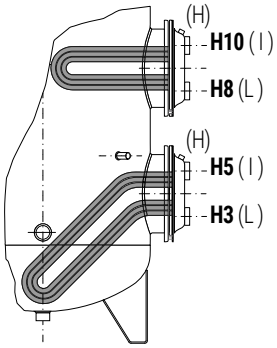
EXTRA **2 INOX COMPACT**

STAINLESS STEEL 316L CALORIFIER, SUITABLE FOR LOW-CEILINGED ROOMS, WITH 2 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C







A	Domestic hot water outlet 2" G F
B	Recirculation / Domestic hot water outlet 2" G F
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 2" G F
E	Connection for 2nd magnesium anode/Titanium anode 1"1/4 G F
F	Connection for magnesium anode/Titanium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
H	Heat exchanger drain 3/8" G F
I	Primary circuit inlet 2" G F
L	Primary circuit outlet 2" G F
M	Domestic cold water circuit inlet 2" G F
N	Alternative domestic cold water circuit inlet or connection for more tanks in series 2" G F
O	Drain 1" G F
P	Flange
X	Connection for titanium anode 3/4" G F
Y	Connection for titanium anode 3/4" G F (only 4000)

Model	Volume	Weight	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6
	[lt]	[kg]	[mm]										
2500	2635	450	1400	1500	2122	2251	2610	117	557	677	782	887	957
3000	3038	472	1500	1600	2131	2276	2670	106	556	736	841	946	956
4000	4002	620	1600	1700	2409	2555	2960	94	564	744	849	954	1024

Model	H7	H8	H9	H10	H11	H12	H15	H16	H17	H18	P Q
	[mm]										
2500	1077	1257	1362	1537	1432	1177	1552	1501	1657	1180	Øi350/Øe430
3000	1076	1256	1361	1466	1431	1176	1551	1500	1656	1180	Øi350/Øe430
4000	1144	1331	1436	1716	1611	1251	1809	1732	1904	1250	Øi350/Øe430

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

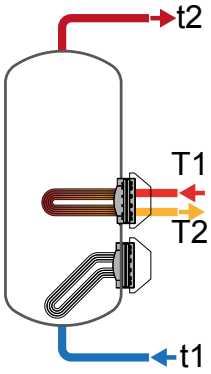
EXTRA **2 INOX COMPACT**

HEAT EXCHANGERS TECHNICAL DATA



Cordivari heat exchangers, with tubes bent to the bottom, are able to heat the complete volume in an homogeneus way.
Energy storaging is therefore improved and ignition time data refer to the complete volume of the tank, while in traditional straight heat exchangers equipped calorifires, a range between 9-17% of the volume remains cold.

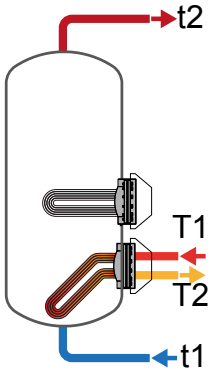
UPPER HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
2500	20	118	119	81	51	69	111	133	180	1699	2738	3288	4453
	10	145	146	101	65	59	93	111	148	1465	2302	2741	3665
3000	20	128	127	87	55	100	159	190	255	2461	3926	4694	6321
	10	456	157	110	70	84	130	154	204	2082	3224	3817	5053
4000	20	126	127	87	56	131	207	247	330	3236	5121	6105	8168
	10	159	161	112	73	110	168	198	260	2718	4151	4903	6443

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
2500	20	2927	3761	3852	4046	4003	5495	5935	6867	2436	238,9
	10	2888	3688	3761	3915	3815	5146	5497	6236	624	61,2
3000	20	3748	4827	4955	5226	5307	7314	7928	9230	2836	278,1
	10	3685	4710	4809	5015	5004	6752	7226	8215	723	70,9
4000	20	4842	6232	6396	6740	6892	9475	10263	11913	3896	382,1
	10	4756	6070	6196	6452	6477	8699	9301	10533	989	97,0

LOWER HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
2500	20	59	59	40	25	84	134	160	216	2069	3313	3969	5358
	10	71	72	50	32	71	111	131	174	1758	2738	3249	4318
3000	20	71	72	49	31	100	159	190	255	2465	3931	4698	6325
	10	88	89	62	40	84	130	154	204	2086	3229	3821	5057
4000	20	71	72	50	32	131	207	247	330	3242	5126	6112	8179
	10	89	90	63	41	110	168	198	260	2723	4167	4909	6448

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
2500	20	1652	2186	2296	2527	2963	4285	4809	5921	2314	226,9
	10	1600	2091	2176	2354	2714	3825	4233	5089	592	58,1
3000	20	2303	3021	3149	3420	3865	5511	6124	7426	2745	269,2
	10	2240	2904	3003	3209	3561	4949	5423	6411	700	68,6
4000	20	2972	3894	4059	4403	5026	7141	7930	9583	3701	362,9
	10	2886	3735	3858	4115	4610	6374	6967	8198	939	92,1

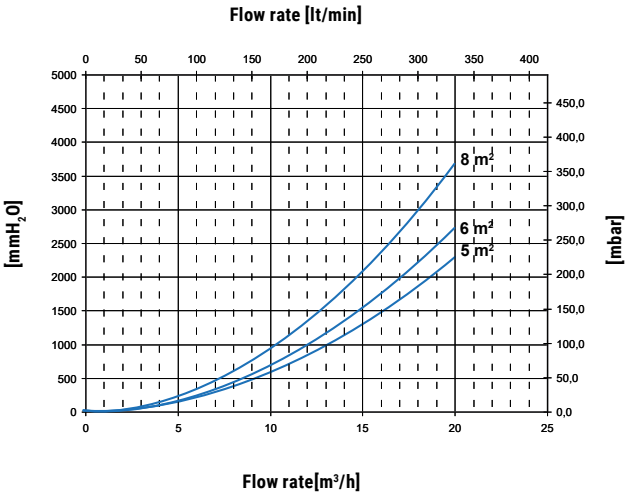
EXTRA **2 INOX COMPACT**

UPPER HEAT EXCHANGERS PRESSURE DROP





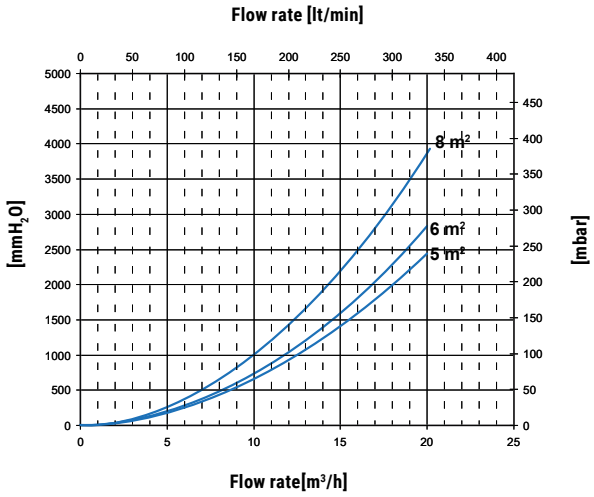
Upper heat exchangers surface [m²]	
2500	5
3000	6
4000	8



LOWER HEAT EXCHANGERS PRESSURE DROP (**ANTILEGIONELLA®**)

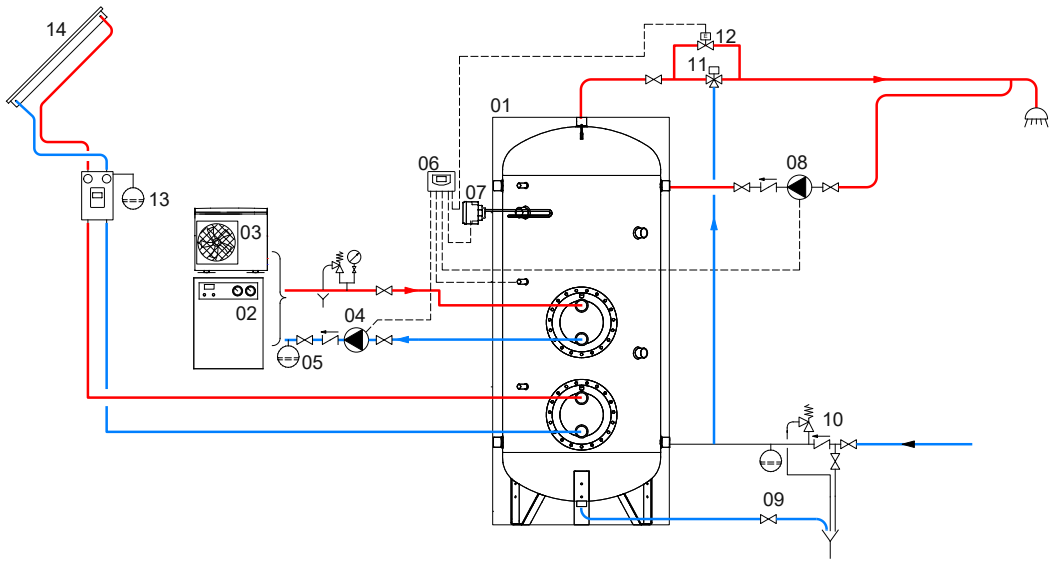


Lower heat exchanger surface [m²]	
2500	5
3000	6
4000	8



PERFORMANCE CHARTS AT PAGE 82-83

EXAMPLE OF INSTALLATION WITH **EXTRA 2 INOX COMPACT**



1	Extra 2 INOX COMPACT	5	Expansion vessel	9	Blowdown valve	13	Solar system circulation group
2	Generator	6	Electronic Control/thermostat	10	Hydraulic safety group	14	Solar panels
3	Generator (Heat pump)	7	Electric immersion heater (optional)	11	Thermostatic mixing valve		
4	Circulation group	8	D.H.W. recirculation group	12	By-pass solenoid valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

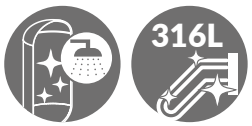
EXTRA **1 INOX STEAM**

STAINLESS STEEL 316L CALORIFIER WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS SPECIFIC FOR STEAM GENERATORS



APPLICATION
Production and storage of domestic hot water (DHW). Suitable for steam generators.
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
HEAT EXCHANGER:
Stainless steel 316L straight heat exchanger suitable for steam power (P.E.D. directive compliant).
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection
GASKET- FLANGE PLATE
Asbestos-free fiber gaskets.
Mild steel exchanger head with anticorrosion treatment.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list



316L STAINLESS STEEL DHW STORAGE
316L STAINLESS STEEL HEAT EXCHANGER

EXTRA 1 VAPORE XXB

Model	HARD FOAM INSULATION	HEAT EXCHANGER SURFACE INOX 316L	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]	
500	3069052300123	1	C



EXTRA 1 VAPORE XXC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	HEAT EXCHANGER SURFACE INOX 316L	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]	
800	3069052300134	1,5	C
1000	3069052300139	2	C
1300	3069052300136	3	C
1500	3069052300137	3	C
2000	3069052300138	3	C
2500	3069052300109	3	
3000	3069052300111	3	
4000	3069052300113	4	
5000	3069052300115	5	

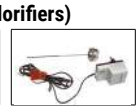
Heat exchangers for steam generator technical data

Model	PED	Heat exchangers performance calculated with primary circuit at 6 bar saturated steam and production of DHW from 10° to 45°C				Heat exchangers performance calculated with primary circuit at 3 bar saturated steam and production of DHW from 10° to 45°C			
		Output	DHW production		Ignition time	Output	DHW production		Ignition time
		[KW]	[l/h]	[l/10']	[min]	[KW]	[l/h]	[l/10']	[min]
500	Art. 4.3	141	3464	1189	9	114	2793	1077	11
800	Cat. I	212	5196	1869	9	171	4189	1701	12
1000	Cat. I	282	6928	2463	9	227	5585	2239	11
1300	Cat. I	423	10393	3340	7	341	8378	3030	9
1500	Cat. I	423	10393	3554	9	341	8378	3218	11
2000	Cat. I	423	10393	4228	12	341	8378	3892	15
2500	Cat. I	423	10393	4571	13	341	8378	4235	17
3000	Cat. I	423	10393	5438	17	341	8378	5102	22
4000	Cat. I	564	13857	7031	17	455	11171	6583	21
5000	Cat. I	705	17321	9097	17	568	13963	8537	22

ACCESSORIES

Titanium anode (for stainless steel calorifiers)

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

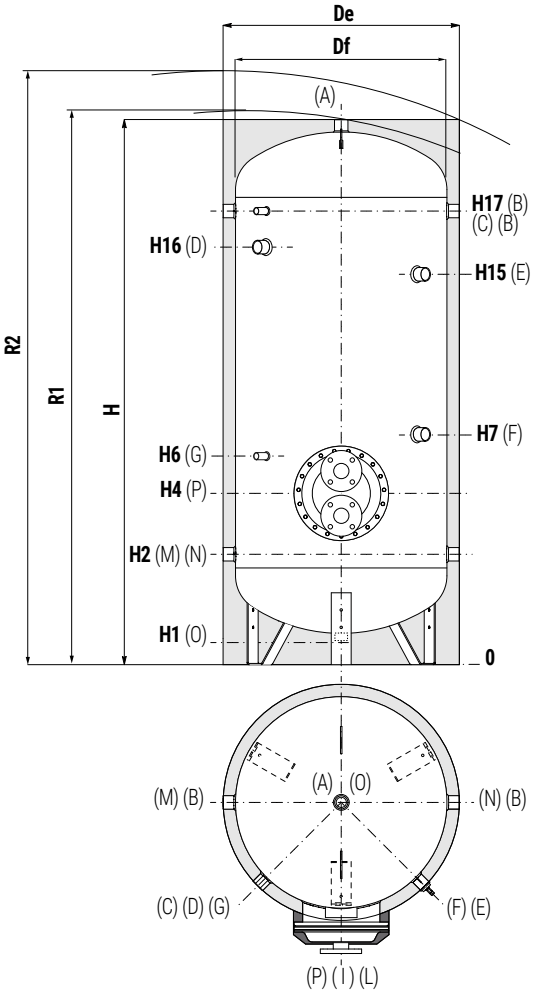


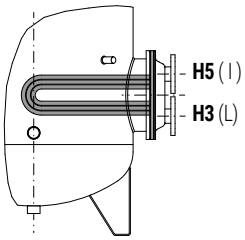
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

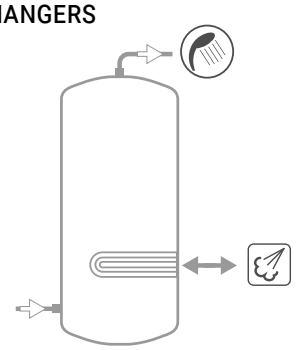
EXTRA **1 INOX STEAM**

STAINLESS STEEL 316L CALORIFIER WITH 1 EXTRACTABLE STAINLESS STEEL HEAT EXCHANGERS SPECIFIC FOR STEAM GENERATORS

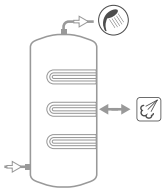
STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	6 bar	165 °C







A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for 2nd magnesium anode/Titanium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode/Titanium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
I	Steam circuit inlet DN50 PN16
L	Outlet for condense DN50 PN16
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	Drain
P	Flange



Models with 2 or 3 heat exchangers are available on request

Model	Volume	Weight	Df (vers. XXC)	De (vers. XXC)	De (vers. XXB)	H	R1	R2	H1	H2	H3	H4
	[lt]	[kg]	[mm]			[mm]						
500	504	99	//	//	750	1861	2006	2010	141	426	421	511
800	762	139	790	1010	//	1893	2008	2190	113	428	473	563
1000	905	161	790	1010	//	2212	2270	2440	112	437	482	572
1300	1277	204	950	1210	//	2193	2275	2510	118	433	478	568
1500	1403	209	1000	1260	//	2177	2266	2520	112	447	592	682
2000	2024	333	1250	1510	//	2099	2231	2590	134	529	664	754
2500	2320	398	1250	1350	//	2299	2396	2670	134	529	664	754
3000	2925	466	1250	1350	//	2799	2879	3110	134	529	664	754
4000	3776	570	1400	1500	//	2872	2968	3250	117	557	737	842
5000	4995	741	1600	1700	//	2909	3031	3370	94	564	639	789

Model	H5	H6	H7	H15	H16	H17	P	A	O	B M N	D
	[mm]							Connections F			
500	601	621	811	//	1380	1536	Øi220/Øe300	1"1/4	3/4"	1"1/4	1"1/2
800	653	713	863	//	1382	1538	Øi300/Øe380	1"1/2	3/4"	1"1/4	1"1/2
1000	662	722	922	//	1642	1797	Øi300/Øe380	1"1/2	3/4"	1"1/2	2"
1300	658	718	918	//	1638	1793	Øi300/Øe380	2"	1"	1"1/2	2"
1500	772	832	982	//	1602	1757	Øi300/Øe380	2"	1"	1"1/2	2"
2000	844	904	1004	1524	1473	1629	Øi300/Øe380	2"	1"	2"	2"
2500	844	904	954	1794	1710	1879	Øi300/Øe380	2"	1"	2"	2"
3000	844	904	1014	2294	2210	2369	Øi300/Øe380	2"	1"	2"	2"
4000	992	1017	1022	2302	2225	2397	Øi350/Øe430	2"	1"	2"	2"
5000	939	964	1019	2319	2159	2404	Øi350/Øe430	2"	1"	2"	2"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **INERZIALE INOX**

STAINLESS STEEL 316L DOMESTIC HOT WATER ACCUMULATION TANK



APPLICATION
Domestic hot water storage
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.
CATHODE PROTECTION
Magnesium anode - Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); stainless steel counterflange for inspection(>1000).
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L
STAINLESS STEEL
DHW STORAGE

VASO INERZIALE XB

Model	HARD FOAM INSULATION Art. Nr.	ENERGY EFFICIENCY CLASS
200	3060052140435	**B**
300	3060052140436	**B**
500	3060052140437	**C**



VASO INERZIALE XC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	ENERGY EFFICIENCY CLASS
800	3060052140441	**C**
1000	3060052140443	**C**
1300	3060052140432	**C**
1500	3060052140433	**C**
2000	3060052140434	**C**
2500	3060052140410	
3000	3060052140412	
4000	3060052140414	
5000	3060052140416	

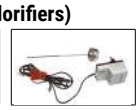
ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW	THREEPHASE 6 kW	THREEPHASE 9 kW	THREEPHASE 12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	49	87	65	44	33	//	//	//	//
300	76	136	102	68	51	//	//	//	//
500	127	228	171	114	85	68	57	//	//
800	178	318	239	159	120	96	80	//	//
1000	243	436	327	218	163	131	109	73	54
1300	274	450	340	230	194	155	129	86	65
1500	288	516	387	258	297	238	198	132	99
2000	443	793	595	396	387	310	258	172	129
2500	577	1033	775	517	387	310	258	172	129
3000	577	1033	775	517	535	428	357	238	178
4000	797	1428	1071	714	699	559	466	311	233
5000	1040	1864	1398	932	699	559	466	311	233

Titanium anode (for stainless steel calorifiers)

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box

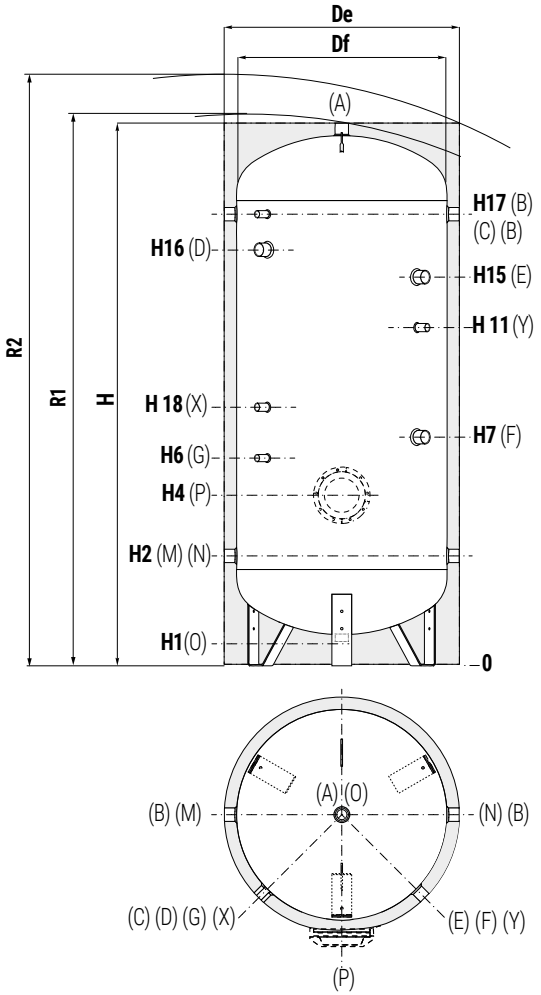


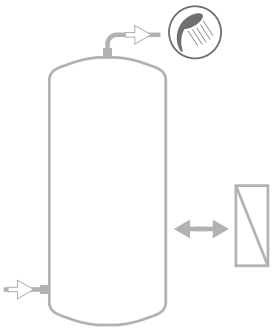
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **INERZIALE INOX**

STAINLESS STEEL 316L DOMESTIC HOT WATER ACCUMULATION TANK

STORAGE	
Pmax	Tmax
6 bar	95 °C





COMPLETE YOUR SYSTEM WITH THE NEW PRS MODULE *(FOR DHW IMMEDIATE PREPARATION)*



SEE HYDRONIC SECTION

A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation 1/2" G F
D-L	Connection for electric immersion heater
E	Connection for 2nd magnesium anode/Titanium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode/ Titanium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	Drain
P	Flange (>1000)
X	Connection for titanium anode 3/4" G F (>1500)
Y	Connection for titanium anode 3/4" G F (> 3000)

Model	Volume	Weight	Df (vers. XC)	De (vers. XC)	De (vers. XB)	H	R1	R2	H1	H2	H4	H6	H7
	[lt]	[kg]	[mm]						[mm]				
200	191	45	//	//	550	1451	-	1560	81	316	341	511	701
300	293	52	//	//	650	1569	-	1700	149	409	434	604	794
500	502	71	//	//	750	1861	-	2010	141	426	451	621	811
800	760	112	790	1010	//	1943	2040	2190	113	428	483	623	863
1000	902	148	790	1010	//	2212	2300	2440	112	437	492	632	922
1300	1274	151	950	1210	//	2193	2310	2510	118	433	488	628	918
1500	1399	181	1000	1260	//	2177	2310	2520	112	447	502	642	982
2000	2019	220	1250	1510	//	2099	2300	2590	134	529	574	714	1004
2500	2320	269	1250	1350	//	2299	2490	2670	134	529	574	714	954
3000	2925	315	1250	1350	//	2799	2960	3110	134	529	574	714	1014
4000	3776	665	1400	1500	//	2872	3060	3250	117	557	602	742	1022
5000	4995	558	1600	1700	//	2909	3150	3370	94	564	609	749	1019

Model	H11	H15	H16	H17	H18	P	O	M N B	C G	F	E	D-L	A
	[mm]						Connections F						
200	//	//	1066	1176	//	//	3/4"	1"1/4	1/2"	1"1/4	//	1"1/2	1"1/4
300	//	//	1159	1269	//	//	3/4"	1"1/4	1/2"	1"1/4	//	1"1/2	1"1/4
500	//	//	1380	1536	//	//	3/4"	1"1/4	1/2"	1"1/4	//	1"1/2	1"1/4
800	//	//	1382	1538	//	//	3/4"	1"1/4	1/2"	1"1/4	//	1"1/2	1"1/2
1000	//	//	1642	1797	//	//	3/4"	1"1/2	1/2"	1"1/4	//	2"	1"1/2
1300	//	//	1638	1793	//	Øi170/Øe240	1"	1"1/2	1/2"	1"1/4	//	2"	2"
1500	//	//	1602	1757	//	Øi170/Øe240	1"	1"1/2	1/2"	1"1/4	1"1/4	2"	2"
2000	//	1524	1473	1629	1159	Øi170/Øe240	1"	2"	1/2"	1"1/4	1"1/4	2"	2"
2500	//	1794	1710	1879	1179	Øi170/Øe240	1"	2"	1/2"	1"1/4	1"1/4	2"	2"
3000	//	2294	2210	2369	1279	Øi170/Øe240	1"	2"	1/2"	1"1/4	1"1/4	2"	2"
4000	1657	2302	2225	2397	1307	Øi170/Øe240	1"	2"	1/2"	1"1/4	1"1/4	2"	2"
5000	1664	2319	2159	2404	1314	Øi170/Øe240	1"	2"	1/2"	1"1/4	1"1/4	2"	2"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **STORAGE INOX A1**

STAINLESS STEEL 316L DOMESTIC HOT WATER ACCUMULATION TANK WITH FIREPROOF INSULATION AND ALUMINIUM EXTERNAL COVER



APPLICATION
Domestic hot water storage.
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
INSULATION (DISMOUNTABLE)
Complete fireproof class A1 insulation in compliance with EN 13501, consisting of:
- Glass/rock wool with high thermal insulation
- Removable aluminium cover for models > 2000.

The models 3000-4000-5000 are supplied with non-assembled insulation.
CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); max temperature up to 200°C. Stainless steel blind flange.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L
STAINLESS STEEL
DHW STORAGE

VASO STORAGE A1 X

Model	NON-REMOVABLE ALUMINIUM COVER Art. Nr.	ENERGY EFFICIENCY CLASS
800	3060052140330	C
1000	3060052140335	C
1500	3060052140332	C
2000	3060052140333	C



VASO STORAGE A1 X

Model	REMOVABLE ALUMINIUM COVER Art. Nr.
2500	3060052140310
3000	3060052140312
5000	3060052140315

VASO STORAGE A1 X COMPACT

	Model	REMOVABLE ALUMINIUM COVER Art. Nr.
Compact models	**2500**	3060052140311
	3000	3060052140313
	4000	3060052140314

ACCESSORIES

ELECTRIC IMMERSION HEATERS

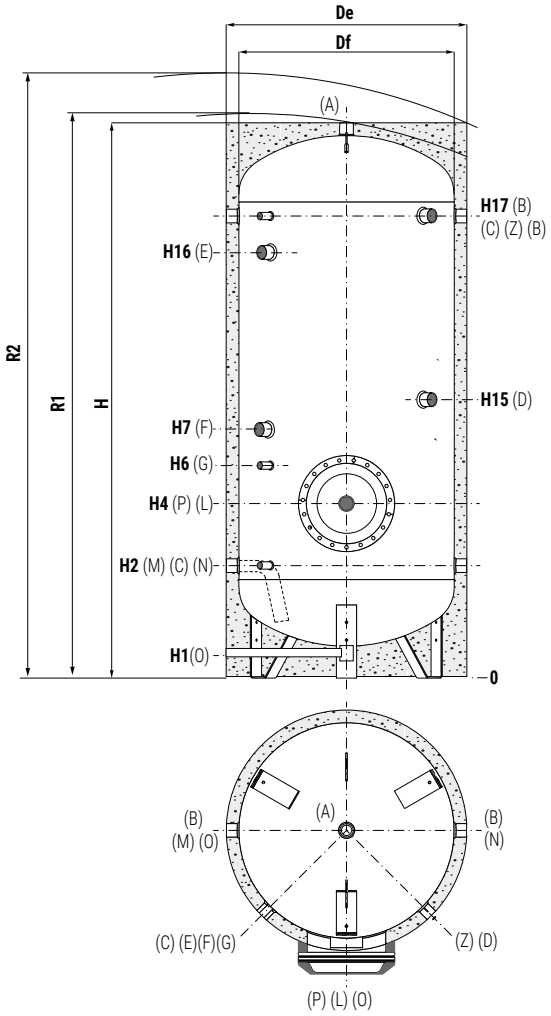
Mod.	Heated volume by electric immersion heater [lt]	**5** kW	**6** kW	**9** kW	**12** kW
		5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			
800	640	344	287	//	//
1000	718	386	322	214	161
1500	1031	554	462	308	231
2000	1345	723	602	402	301
2500	1652	888	740	493	370
3000	2266	1217	1014	676	507
4000	2810	1510	1258	839	629
5000	3814	2049	1708	1138	854

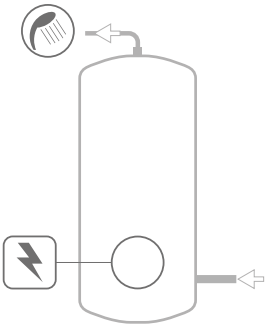
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **STORAGE INOX A1**

STAINLESS STEEL 316L DOMESTIC HOT WATER ACCUMULATION TANK WITH FIREPROOF INSULATION AND ALUMINIUM EXTERNAL COVER

STORAGE	
Pmax	Tmax
7 bar	95 °C





COMPLETE YOUR SYSTEM WITH THE NEW PRS MODULE (FOR IMMEDIATE DHW PREPARATION)



SEE HYDRONIC SECTION

A	Domestic hot water outlet
B	Backflow external heat exchanger / Recirculation
C-G	Connection for instrumentation 1/2" G F
D-L	Connection for electric immersion heater
E	Connection for 2nd magnesium anode 1" 1/4 G F (Models >1500)
F	Connection for magnesium anode 1" 1/4 G F
M	Domestic cold water circuit inlet
N	Delivery to external heat exchanger
O	Drain
P	Flange for inspection
Z	Connection for electric immersion heater 1" 1/2 G F

	Model	Volume	Weight	Df	De	H	R1	R2	H1	H2	H4
		[lt]	[kg]	[mm]							
	800	793	161	750	950	2188	//	2390	89	433	568
	1000	112	191	790	990	2188	//	2430	84	437	722
	1500	1427	312	1000	1200	2228	//	2530	74	447	732
	2000	2017	374	1250	1450	2111	//	2560	96	529	804
	2500	2319	443	1250	1450	2361	2670	2770	96	529	804
	3000	2925	477	1250	1450	2861	3120	3210	96	529	804
	5000	4995	755	1600	1800	2965	3370	3470	56	564	839
Compact models	**2500**	2635	469	1400	1600	2175	2590	2700	79	557	832
Compact models	**3000**	3039	515	1500	1700	2190	2660	2770	106	556	831
Compact models	**4000**	4002	648	1600	1800	2465	2940	3050	56	564	839

Model	H6	H7	H15	H16	H17	P	O	M-N-B	D-L	A
	[mm]						Connections F			
800	718	1018	1118	//	1793	Øi300/Øe380	1"1/4	1"1/4	1"1/2	1"1/4
1000	922	1122	1222	//	1743	Øi430/Øe512	1"1/2	1"1/2	2"1/2	1"1/2
1500	932	1132	1232	//	1807	Øi430/Øe512	1"	1"1/2	2"1/2	2"
2000	1004	1154	1264	1469	1619	Øi430/Øe512	1"	2"	2"1/2	2"
2500	1004	1199	1299	1644	1869	Øi430/Øe512	1"	2"	2"1/2	2"
3000	1004	1354	1454	2144	2369	Øi430/Øe512	1"	2"	2"1/2	2"
5000	1039	1339	1459	2179	2404	Øi430/Øe512	1"	2"	2"1/2	2"
Compact models **2500**	1032	1182	1282	1507	1657	Øi430/Øe512	1"	2"	2"1/2	2"
Compact models **3000**	1031	1181	1281	1506	1656	Øi430/Øe512	1"	2"	2"1/2	2"
Compact models **4000**	1039	1189	1309	1764	1914	Øi430/Øe512	1"	2"	2"1/2	2"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

VASO **STORAGE INOX COMPACT**

STAINLESS STEEL 316L DOMESTIC HOT WATER ACCUMULATION TANK SUITABLE FOR LOW-CEILINGED ROOMS

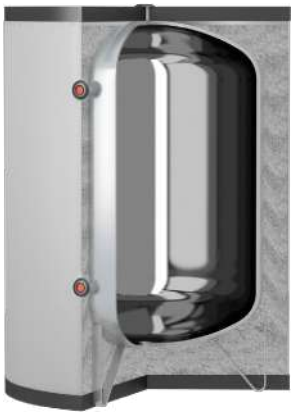


APPLICATION
Domestic hot water storage.
Suitable for low-ceilinged room.
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
INSULATION (DISMUOUNTABLE)
NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.
CATHODE PROTECTION
n° 2 magnesium anodes.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Stainless steel blind flange.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L
STAINLESS STEEL
DHW STORAGE

VASO STORAGE COMPACT XC

Model	DISMOUNTABLE SOFT FLEECE INSULATION
	Art. Nr.
2500	3060052140411
3000	3060052140413
4000	3060052140415



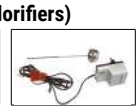
ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE			THREEPHASE				
		1,5 kW	**2** kW	**3** kW	**4** kW	**5** kW	**6** kW	**9** kW	**12** kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
2500	797	1428	1071	714	535	428	357	238	178
3000	874	1565	1173	782	587	469	391	261	196
4000	924	1655	1241	828	621	497	414	276	207

Titanium anode (for stainless steel calorifiers)

See Accessories section



Thermometer

Art. Nr.
5032240000107
5 units box



Heat Exchangers

See Accessories section

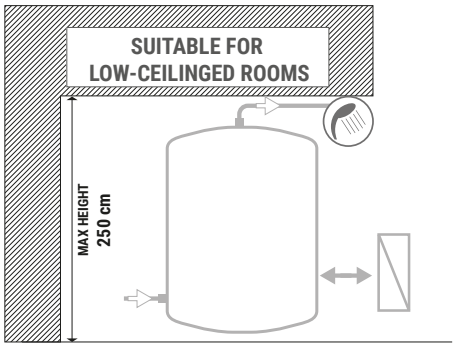


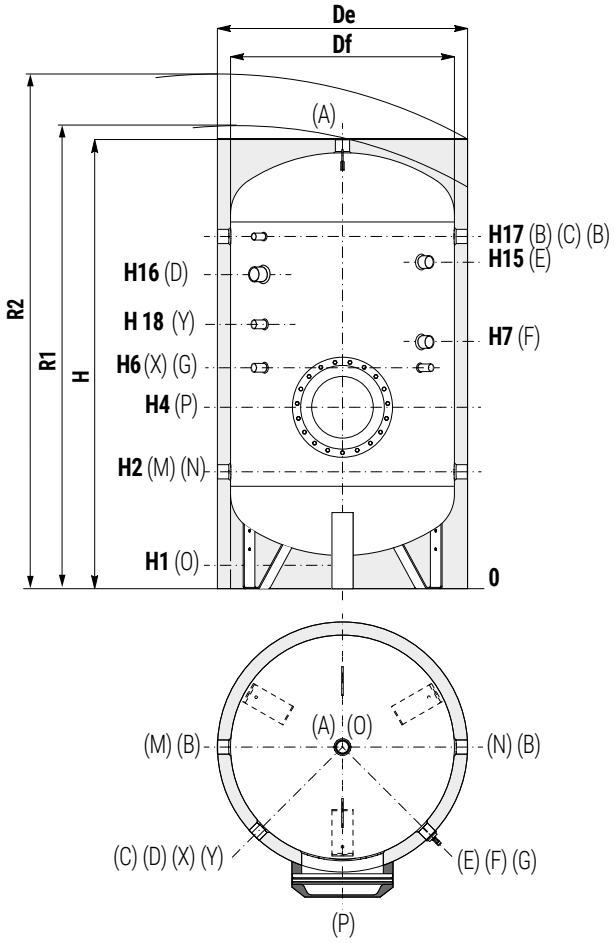
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VASO **STORAGE INOX COMPACT**

STAINLESS STEEL 316L DOMESTIC HOT WATER ACCUMULATION TANK
SUITABLE FOR LOW-CEILINGED ROOMS

STORAGE	
Pmax	Tmax
6 bar	95 °C





A	Domestic hot water outlet 2" G F
B	Recirculation / Domestic hot water outlet 2" G F
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 2" G F
E	Connection for 2nd magnesium anode/Titanium anode 1"1/4 G F
F	Connection for magnesium anode/Titanium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
M	Domestic cold water circuit inlet 2" G F
N	Alternative domestic cold water circuit inlet or connection for more tanks in series 2" G F
O	Drain 1" G F
P	Flange
X	Connection for titanium anode 3/4" G F
Y	Connection for titanium anode 3/4" G F (Only 4000)

COMPLETE YOUR SYSTEM WITH THE NEW PRS MODULE *(FOR IMMEDIATE DHW PREPARATION)*



SEE HYDRONIC SECTION

Model	Volume	Weight	Df	De	H	R1	R2	H1	H2	H4	H6	H7
	[lt]	[kg]	[mm]									
2500	2635	269	1400	1500	2122	2542	2600	117	557	602	742	982
3000	3038	315	1500	1600	2131	2606	2670	106	556	601	741	981
4000	4002	665	1600	1700	2409	2892	2950	94	564	609	749	1029

Model	H15	H16	H17	H18	P
	[mm]				
2500	1552	1501	1657	//	Øi170/Øe240
3000	1551	1500	1656	//	Øi170/Øe240
4000	1809	1732	1904	1261	Øi170/Øe240

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

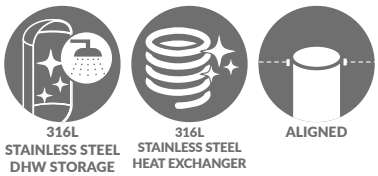
BOLLY® **1 ST INOX**

STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED STAINLESS STEEL HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
HEAT EXCHANGER:
1 Fixed stainless steel 316L heat exchanger.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode - Models > 800 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Stainless steel blind flange.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



PROMPT AVAILABILITY





BOLLY® 1 ST XB

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE INOX 316L [m²]	ENERGY EFFICIENCY CLASS
150	3104052010001	0,6	**B**
200	3104052010002	0,7	**B**
300	3104052010003	1	**B**
400	3104052010004	1,4	**C**
500	3104052010005	1,7	**C**



BOLLY® 1 ST XC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	HEAT EXCHANGER SURFACE INOX 316L [m²]	ENERGY EFFICIENCY CLASS
800	3103052010281	2,4	**C**
1000	3103052010282	2,9	**C**
1500	3103052010283	3,6	**C**
2000	3103052010284	3,8	**C**

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	2 kW	3 kW	THREEPHASE 4 kW	5 kW	6 kW	9 kW	12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
150	46	82	62	41	31	//	//	//	//
200	53	95	71	47	36	//	//	//	//
300	83	148	111	74	56	45	//	//	//
400	138	247	185	124	93	74	//	//	//
500	150	269	202	135	101	81	67	//	//
800	279	500	375	250	188	150	125	83	63
1000	381	682	511	341	256	205	170	114	85
1500	640	1147	860	573	430	344	287	191	143
2000	919	1646	1235	823	617	494	412	274	206

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Thermometer

Art. Nr.
5032240000107
5 units box

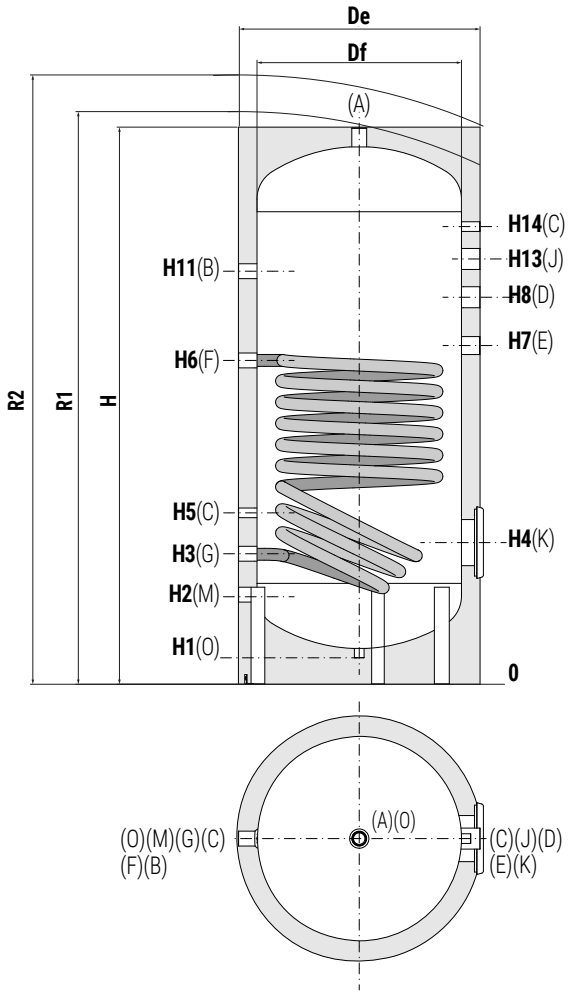


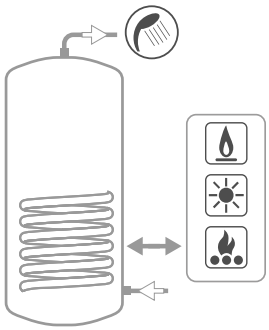
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **1 ST INOX**

STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED STAINLESS STEEL HEAT EXCHANGER

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C





A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F	Primary circuit inlet 1" G F
G	Primary circuit outlet 1" G F
J	Connection for 2nd magnesium anode 1"1/4 G F (Models > 800)
K	Flange for inspection
M	Domestic cold water circuit inlet
O	Drain

BOLLY® 1 ST INOX - HARD FOAM INSULATION (XB)

Model	Volume	Weight	Df	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H11	H14
	[lt]	[kg]	[mm]													
150	150	31	400	500	1420	1510	65	200	310	310	420	799	830	960	1060	1180
200	192	35	450	550	1440	1540	65	210	320	320	430	847	880	1010	1094	1200
300	293	56	550	650	1495	1638	70	240	350	380	460	870	910	1040	1110	1230
400	425	73	600	700	1770	1907	65	250	360	390	470	1010	1040	1170	1325	1480
500	503	81	650	750	1796	1950	65	260	370	405	480	1060	1090	1220	1335	1490

Model	A	B	C	D	E	F	G	K	M	O
	Connections F									
150	1"	3/4"	1/2"	1"1/2	1"1/4	1"	1"	Øi120/Øe180	3/4"	1/2"
200	1"	3/4"	1/2"	1"1/2	1"1/4	1"	1"	Øi120/Øe180	3/4"	1/2"
300	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	Øi120/Øe180	1"	1/2"
400	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	Øi120/Øe180	1"	1/2"
500	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	Øi120/Øe180	1"	1/2"

BOLLY® 1 ST INOX - DISMOUNTABLE SOFT FLEECE INSULATION (XC)

Model	Volume	Weight	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H11	H13	H14
	[lt]	[kg]	[mm]															
800	759	140	790	990	1943	1968	2185	114	323	443	473	563	998	1033	1193	1413	//	1563
1000	902	160	790	990	2193	2231	2415	114	318	443	473	563	996	1047	1233	1493	1683	1813
1500	1398	238	1000	1240	2197	2260	2530	114	327	462	492	582	1012	1042	1182	1432	1652	1782
2000	2018	346	1250	1470	2070	2204	2555	85	350	485	515	605	939	965	1105	1305	1485	1605

Model	A	B	C	D	E	F	G	J	K	M	O
	Connections F										
800	1"1/4	1"	1/2"	1"1/2	1"1/4	1"1/4	1"1/4	//	Øi120/Øe180	1"	3/4"
1000	1"1/4	1"	1/2"	2"	1"1/4	1"1/4	1"1/4	1"1/4	Øi120/Øe180	1"	3/4"
1500	2"	2"	1/2"	2"	1"1/4	1"1/4	1"1/4	1"1/4	Øi170/Øe240	2"	1"
2000	2"	2"	1/2"	2"	1"1/4	1"1/4	1"1/4	1"1/4	Øi170/Øe240	2"	1"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

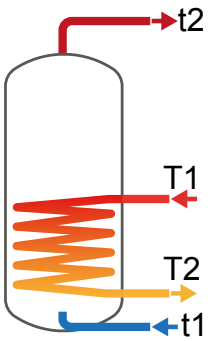
BOLLY® **1 ST INOX**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

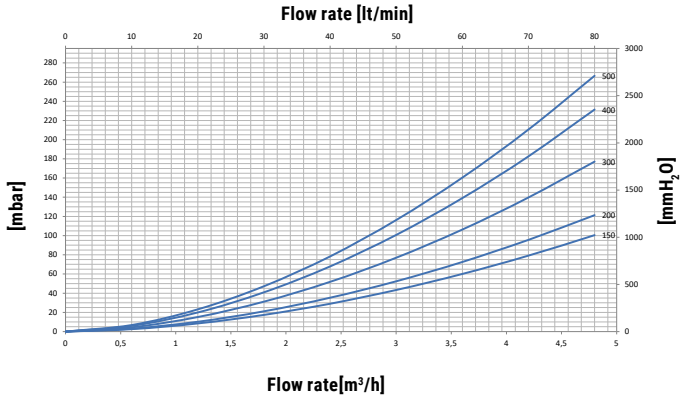
LOWER
HEAT EXCHANGER

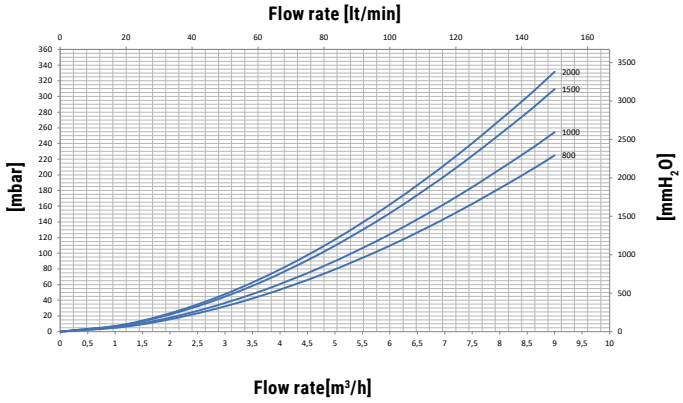


Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
150	2	112	118	79	50	5,3	6,6	8,5	12,0	108	110	142	203
	1	128	135	89	57	4,9	6,2	7,9	11,0	100	102	131	185
200	2,5	111	116	79	51	6,7	8,4	10,8	15,2	139	141	182	259
	1,25	124	131	88	57	6,3	7,9	10,1	14,0	130	132	169	238
300	3	108	112	78	50	10,3	13,0	16,7	23,4	218	221	285	403
	1,5	121	127	87	57	9,7	12,3	15,6	21,6	206	209	266	371
400	3,5	115	120	83	55	13,9	17,6	22,5	31,5	297	301	386	544
	1,75	130	136	95	62	13,2	16,6	21,0	29,0	280	284	361	501
500	3,5	118	123	86	56	16,2	20,4	26,0	36,4	345	350	449	630
	1,75	135	141	99	65	15,2	19,3	24,3	33,4	325	330	418	577
800	6	121	126	89	58	23,3	29,3	37,4	52,2	500	506	647	906
	3	136	142	100	66	22,0	27,8	35,1	48,3	473	480	607	837
1000	6	127	132	93	61	26,6	33,4	42,6	59,3	571	578	738	1031
	3	144	150	106	70	25,1	31,7	39,8	54,6	539	547	690	948
1500	6	163	169	120	79	32,6	41,1	52,1	72,4	703	711	905	1259
	3	187	195	139	92	30,7	38,7	48,5	66,1	660	671	842	1149
2000	6	220	229	162	107	35,0	44,1	56,0	77,5	755	765	972	1349
	3	254	265	189	126	32,9	41,6	52,0	70,6	709	720	902	1228

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
150	2	188	231	237	247	257	258	284	333	213	21
	1	187	230	235	244	250	252	275	318	62	6
200	2,5	241	296	303	316	329	331	364	425	413	40
	1,25	240	295	301	313	322	324	353	409	120	12
300	3	371	455	466	486	509	512	563	657	782	77
	1,5	369	453	463	480	500	502	548	632	229	23
400	3,5	535	657	671	698	723	727	795	921	1345	132
	1,75	532	654	667	691	710	713	775	887	395	39
500	3,5	632	777	793	824	851	855	934	1079	1551	152
	1,75	629	774	788	815	835	839	909	1036	456	45
800	6	951	1169	1192	1235	1267	1272	1385	1592	1118	110
	3	946	1164	1185	1224	1246	1251	1353	1537	328	32
1000	6	1126	1385	1412	1460	1488	1493	1621	1856	1266	124
	3	1121	1380	1404	1447	1462	1468	1583	1789	375	36
1500	6	1715	2116	2148	2207	2160	2167	2322	2605	1542	151
	3	1708	2109	2137	2189	2126	2135	2271	2517	454	45
2000	6	2432	3010	3045	3108	2910	2918	3084	3385	1653	162
	3	2424	3003	3033	3088	2873	2882	3028	3289	487	48

HEAT EXCHANGERS PRESSURE DROP



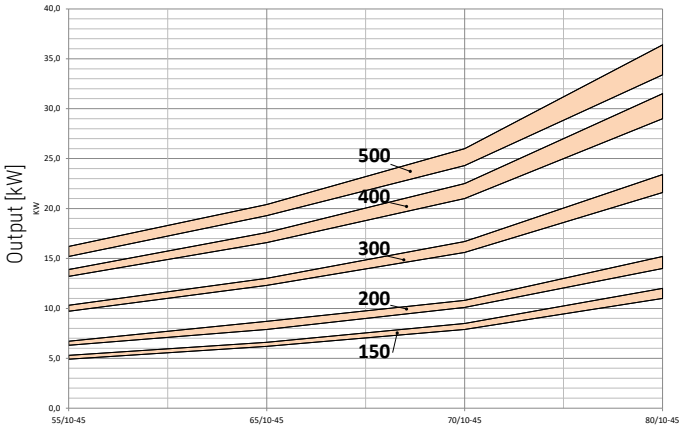


BOLLY® **1 ST INOX**

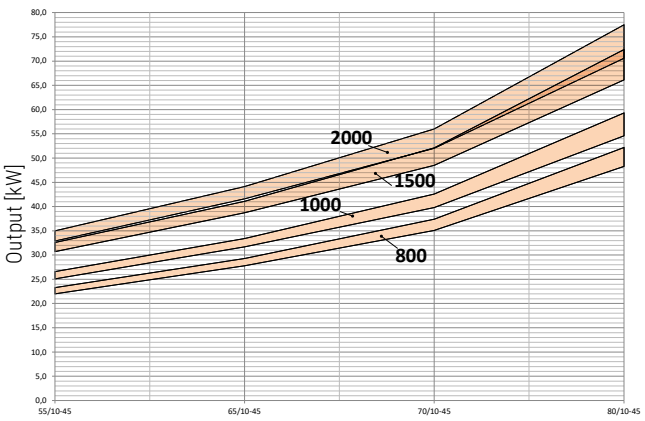
HEAT EXCHANGERS TECHNICAL DATA



Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate).



Primary circuit temperature [°C]

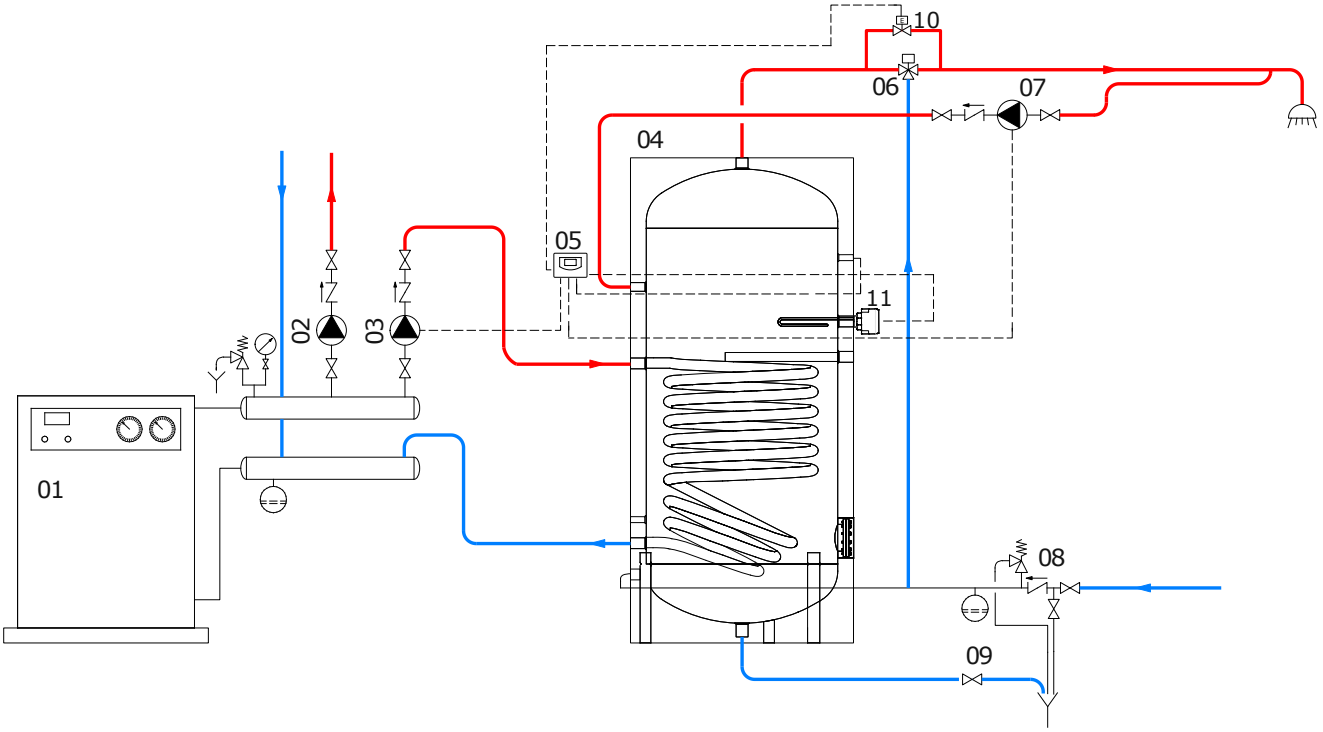


Primary circuit temperature [°C]

Model	150		200		300		400		500	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	2,5	1,25	3	1,5	3,5	1,75	3,5	1,75

Model	800		1000		1500		2000	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	6	3	6	3	6	3	6	3

EXAMPLE OF INSTALLATION WITH **BOLLY® 1 ST INOX**



01	Generator	04	BOLLY® 1 ST INOX	07	D.H.W. recirculation group	10	By-pass solenoid valve
02	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group	11	Electric immersion heater (optional)
03	D.H.W. circulation group	06	Thermostatic mixing valve	09	Blowdown valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

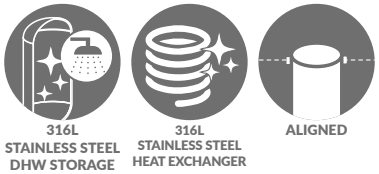
BOLLY® **2 ST INOX**

STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED STAINLESS STEEL HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
HEAT EXCHANGER:
N° 2 fixed stainless steel 316L heat exchangers.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode - Models > 800 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Stainless steel blind flange.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



PROMPT AVAILABILITY





BOLLY® 2 ST XB

Model	HARD FOAM INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Upper [m²]	Lower [m²]	ENERGY EFFICIENCY CLASS
150	3134052010200	0,4	0,6	**B**
200	3134052010201	0,5	0,7	**B**
300	3134052010202	0,7	1	**B**
400	3134052010203	1,1	1,4	**C**
500	3134052010204	1,2	1,7	**C**



BOLLY® 2 ST XC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Upper [m²]	Lower [m²]	ENERGY EFFICIENCY CLASS
800	3138052010200	1,6	2,4	**C**
1000	3138052010201	1,7	2,9	**C**
1500	3138052010202	2,1	3,6	**C**
2000	3138052010203	2,3	3,8	**C**

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	2 kW	3 kW	THREEPHASE 4 kW	5 kW	6 kW	9 kW	12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
150	55	98	73	49	37	//	//	//	//
200	65	117	88	59	44	//	//	//	//
300	113	203	152	101	76	61	//	//	//
400	171	307	230	154	115	92	//	//	//
500	188	337	253	168	126	101	84	//	//
800	279	500	375	250	188	150	125	83	63
1000	381	682	511	341	256	205	170	114	85
1500	640	1147	860	573	430	344	287	191	143
2000	919	1646	1235	823	617	494	412	274	206

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Thermometer

Art. Nr.
5032240000107
5 units box

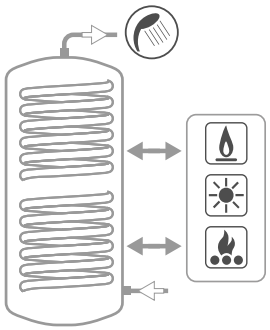


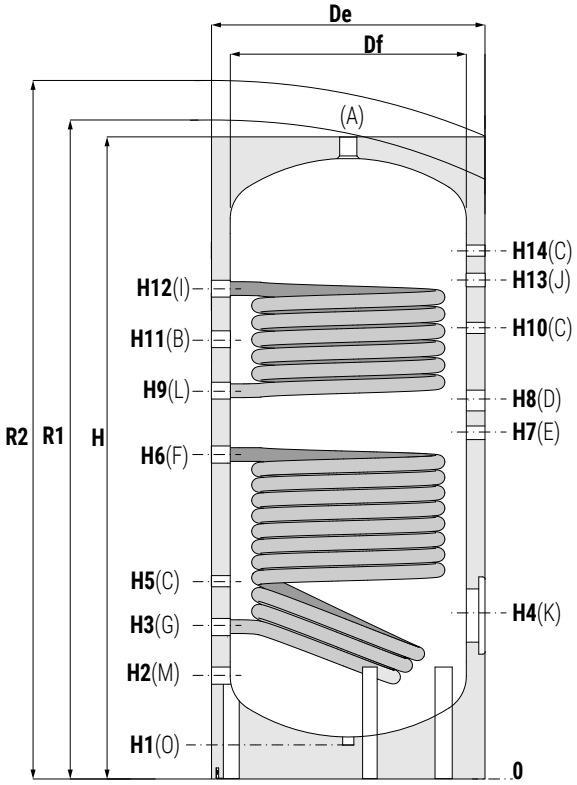
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 ST INOX**

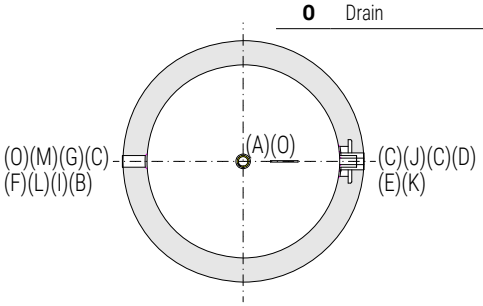
STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED STAINLESS STEEL HEAT EXCHANGERS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C





A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F	Lower heat exchanger inlet 1" G F
G	Lower heat exchanger outlet 1" G F
J	Connection for 2nd magnesium anode 1"1/4 G F (Models > 800)
K	Flange for inspection
M	Domestic cold water circuit inlet
L	Upper heat exchanger outlet 1"1/4 G F
I	Upper heat exchanger inlet 1"1/4 G F
O	Drain



BOLLY® 2 ST INOX - HARD FOAM INSULATION (XB)

Model	Volume	Weight	Df	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H14
	[lt]	[kg]									[mm]								
150	150	35	400	500	1420	1510	65	200	310	340	480	718	750	890	935	1030	1060	1180	1180
200	192	43	450	550	1440	1540	65	210	320	310	430	788	810	930	962	1070	1094	1200	1200
300	293	69	550	650	1495	1638	70	240	350	380	460	755	780	910	957	1050	1110	1230	1230
400	425	85	600	700	1770	1907	65	250	360	390	470	895	925	1050	1082	1190	1325	1469	1480
500	503	99	650	750	1796	1950	65	260	370	400	480	923	970	1105	1155	1268	1335	1479	1490

Model	A	B	C	D	E	F	G	M	O	L	I	K
						Connections F						[mm]
150	1"	3/4"	1/2"	1"1/2	1"1/4	1"	1"	3/4"	1/2"	1"	1"	Øi120/Øe180
200	1"	3/4"	1/2"	1"1/2	1"1/4	1"	1"	3/4"	1/2"	1"	1"	Øi120/Øe180
300	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	1"	1/2"	1"	1"	Øi120/Øe180
400	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	1"	1/2"	1"	1"	Øi120/Øe180
500	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	1"	1/2"	1"	1"	Øi120/Øe180

BOLLY® 2 ST INOX - DISMOUNTABLE SOFT FLEECE INSULATION (XC)

Model	Volume	Weight	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14
	[lt]	[kg]										[mm]									
800	759	156	790	990	1943	1968	2185	114	323	443	473	563	998	1033	1193	1413	1339	1413	1563	//	1563
1000	902	193	790	990	2193	2231	2415	114	318	443	473	563	996	1043	1233	1333	1412	1493	1633	1683	1813
1500	1398	271	1000	1240	2197	2260	2530	114	327	462	492	582	1012	1042	1182	1217	1381	1432	1637	1652	1782
2000	2018	381	1250	1470	2070	2204	2555	85	350	485	515	605	939	965	1105	1155	1258	1305	1455	1485	1605

Model	A	B	C	D	E	F	G	J	K	M	O	L	I
						Connections F							
800	1"1/4	1"	1/2"	1"1/2	1"1/4	1"1/4	1"1/4	//	Øi120/Øe180	1"	3/4"	1"1/4	1"1/4
1000	1"1/4	1"	1/2"	2"	1"1/4	1"1/4	1"1/4	1"1/4	Øi120/Øe180	1"	3/4"	1"1/4	1"1/4
1500	2"	2"	1/2"	2"	1"1/4	1"1/4	1"1/4	1"1/4	Øi170/Øe240	2"	1"	1"1/4	1"1/4
2000	2"	2"	1/2"	2"	1"1/4	1"1/4	1"1/4	1"1/4	Øi170/Øe240	2"	1"	1"1/4	1"1/4

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

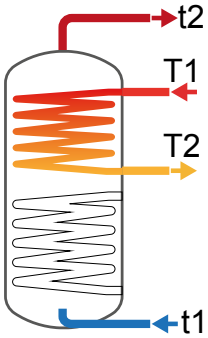
BOLLY® **2 ST INOX**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

UPPER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
150	2	57	62	38	24	3,3	4,2	5,4	7,6	66	67	87	126
	1	65	70	43	27	3,1	3,9	5,0	7,0	61	62	81	116
200	2,5	47	49	32	21	4,9	6,2	7,9	11,2	100	101	132	189
	1,25	52	55	36	23	4,6	5,8	7,4	10,4	94	95	123	175
300	3	50	52	35	23	6,8	8,5	10,9	15,4	140	142	185	263
	1,5	55	58	39	25	6,4	8,1	10,3	14,4	133	135	173	245
400	3,5	57	59	41	26	10,2	12,8	16,4	23,1	214	217	280	397
	1,75	63	66	45	29	9,6	12,2	15,5	21,5	203	206	264	369
500	3,5	54	56	39	25	11,2	14,1	18,1	25,4	237	240	310	438
	1,75	60	63	43	28	10,6	13,4	17,0	23,6	224	228	291	406
800	6	60	62	43	28	15,0	18,9	24,2	34,0	320	324	416	588
	3	65	68	48	31	14,3	18,0	22,9	31,8	305	309	394	550
1000	6	49	51	36	23	15,7	19,7	25,2	35,4	334	338	435	613
	3	54	57	40	26	14,9	18,8	23,9	33,1	318	322	411	573
1500	6	82	85	60	39	19,6	24,7	31,6	44,2	421	425	545	766
	3	91	95	67	44	18,6	23,5	29,7	41,1	399	404	513	711
2000	6	98	101	71	47	21,5	27,0	34,5	48,2	460	466	596	836
	3	109	114	80	53	20,3	25,7	32,4	44,7	436	442	560	775

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
150	2	62	75	79	85	104	105	121	152	146	14
	1	62	75	78	84	100	101	116	144	42	4
200	2,5	83	100	105	114	146	147	172	217	295	29
	1,25	82	99	103	112	141	142	165	206	85	8
300	3	124	149	157	170	213	214	249	311	533	52
	1,5	123	148	155	167	207	209	239	297	155	15
400	3,5	211	255	265	285	346	348	399	492	1002	98
	1,75	209	253	263	280	337	340	386	470	293	29
500	3,5	224	270	282	303	374	376	432	534	1096	107
	1,75	221	268	279	298	363	366	417	509	321	31
800	6	331	401	416	445	534	537	611	748	749	73
	3	329	399	413	439	522	525	593	718	218	21
1000	6	296	356	373	402	507	510	588	730	777	76
	3	293	354	369	396	494	498	569	698	227	22
1500	6	566	691	711	748	833	836	932	1109	954	94
	3	563	687	706	739	815	819	906	1065	279	27
2000	6	722	885	906	946	1014	1019	1123	1315	1036	102
	3	718	881	900	936	995	999	1094	1266	304	30

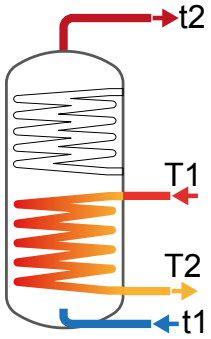
BOLLY® **2 ST INOX**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

LOWER
HEAT EXCHANGER



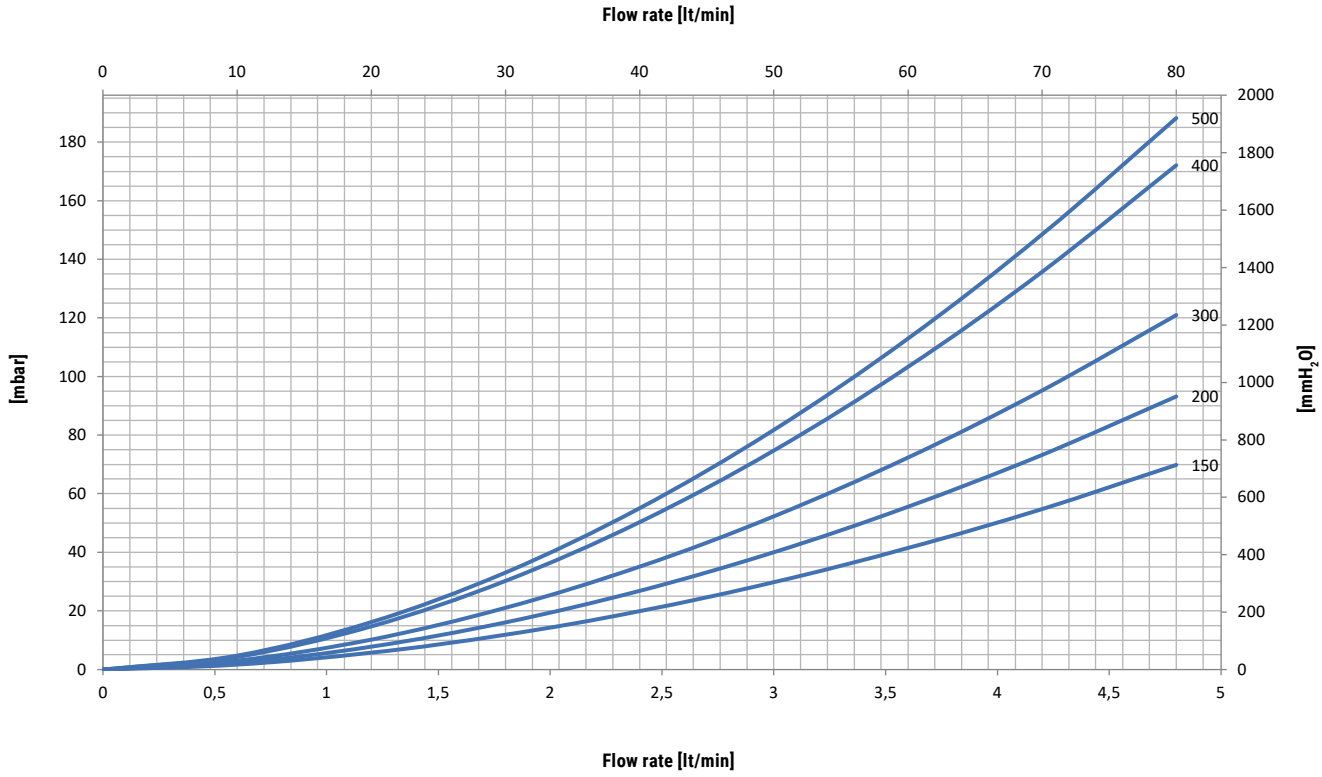
Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
150	2	112	118	79	50	5,3	6,6	8,5	12,0	108	110	142	203
	1	128	135	89	57	4,9	6,2	7,9	11,0	100	102	131	185
200	2,5	111	116	79	51	6,7	8,4	10,8	15,2	139	141	182	259
	1,25	124	131	88	57	6,3	7,9	10,1	14,0	130	132	169	238
300	3	108	112	78	50	10,3	13,0	16,7	23,4	218	221	285	403
	1,5	121	127	87	57	9,7	12,3	15,6	21,6	206	209	266	371
400	3,5	115	120	83	55	13,9	17,6	22,5	31,5	297	301	386	544
	1,75	130	136	95	62	13,2	16,6	21,0	29,0	280	284	361	501
500	3,5	118	123	86	56	16,2	20,4	26,0	36,4	345	350	449	630
	1,75	135	141	99	65	15,2	19,3	24,3	33,4	325	330	418	577
800	6	121	126	89	58	23,3	29,3	37,4	52,2	500	506	647	906
	3	136	142	100	66	22,0	27,8	35,1	48,3	473	480	607	837
1000	6	127	132	93	61	26,6	33,4	42,6	59,3	571	578	738	1031
	3	144	150	106	70	25,1	31,7	39,8	54,6	539	547	690	948
1500	6	163	169	120	79	32,6	41,1	52,1	72,4	703	711	905	1259
	3	187	195	139	92	30,7	38,7	48,5	66,1	660	671	842	1149
2000	6	220	229	162	107	35,0	44,1	56,0	77,5	755	765	972	1349
	3	254	265	189	126	32,9	41,6	52,0	70,6	709	720	902	1228

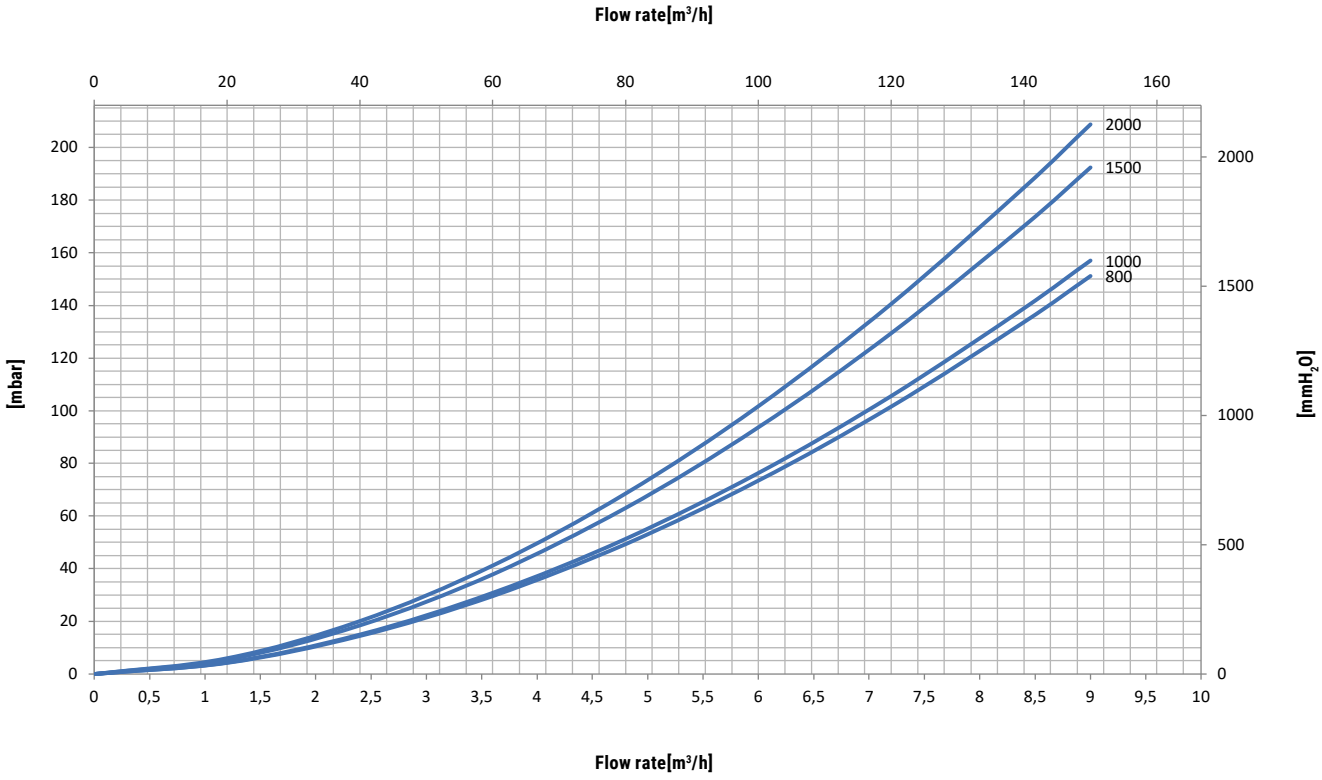
Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH_2O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
150	2	188	231	237	247	257	258	284	333	213	21
	1	187	230	235	244	250	252	275	318	62	6
200	2,5	241	296	303	316	329	331	364	425	413	40
	1,25	240	295	301	313	322	324	353	409	120	12
300	3	371	455	466	486	509	512	563	657	782	77
	1,5	369	453	463	480	500	502	548	632	229	23
400	3,5	535	657	671	698	723	727	795	921	1345	132
	1,75	532	654	667	691	710	713	775	887	395	39
500	3,5	632	777	793	824	851	855	934	1079	1551	152
	1,75	629	774	788	815	835	839	909	1036	456	45
800	6	951	1169	1192	1235	1267	1272	1385	1592	1118	110
	3	946	1164	1185	1224	1246	1251	1353	1537	328	32
1000	6	1126	1385	1412	1460	1488	1493	1621	1856	1266	124
	3	1121	1380	1404	1447	1462	1468	1583	1789	375	36
1500	6	1715	2116	2148	2207	2160	2167	2322	2605	1542	151
	3	1708	2109	2137	2189	2126	2135	2271	2517	454	45
2000	6	2432	3010	3045	3108	2910	2918	3084	3385	1653	162
	3	2424	3003	3033	3088	2873	2882	3028	3289	487	48

BOLLY® **2 ST INOX**

UPPER HEAT EXCHANGERS PRESSURE DROP







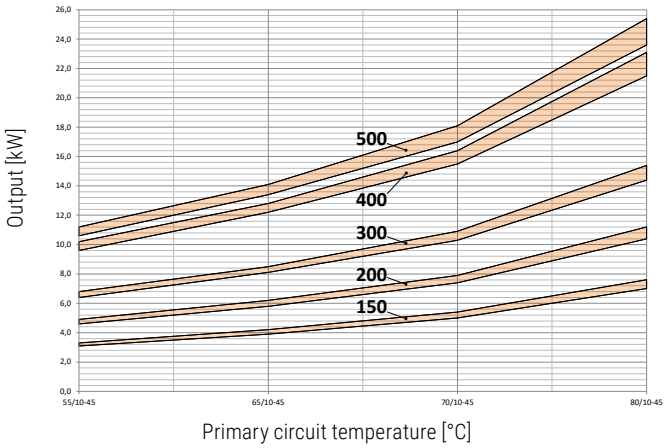
PLEASE NOTE: FOR HEAT EXCHANGERS PRESSURE DROP SEE BOLLY® 1 ST

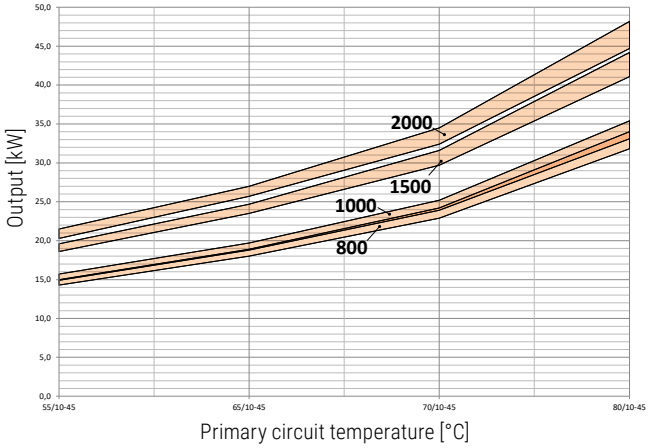
BOLLY® **2 ST INOX**

UPPER HEAT EXCHANGERS TECHNICAL DATA



Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate).
For Lower upper heat exchangers technical data- see BOLLY® 1 ST

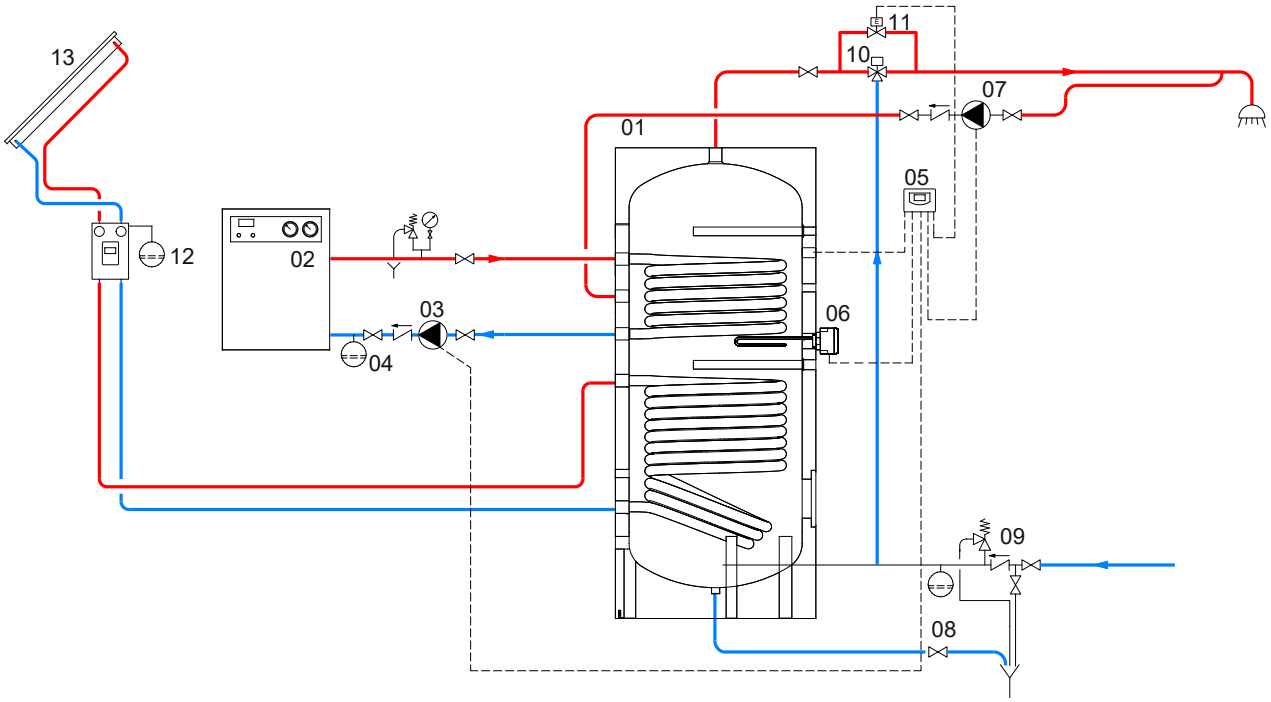




Model Bolly® 2 ST inox	150		200		300		400		500	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	2,5	1,25	3	1,5	3,5	1,75	3,5	1,75

Model Bolly® 2 ST inox	800		1000		1500		2000	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	6	3	6	3	6	3	6	3

EXAMPLE OF INSTALLATION WITH **BOLLY® 2 ST INOX**



1	BOLLY® 2 ST INOX	5	Electronic Control/thermostat	9	Hydraulic safety group	13	Solar panels
2	Generator	6	Electric immersion heater (optional)	10	Thermostatic mixing valve		
3	Circulation group	7	D.H.W. recirculation group	11	By-pass solenoid valve		
4	Expansion vessel	8	Blowdown valve	12	Solar system circulation group		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

BOLLY® 1 AP INOX - HIGH PERFORMANCES

STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED STAINLESS STEEL HEAT EXCHANGER FOR DHW PRODUCTION



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
HEAT EXCHANGER:
N° 1 fixed stainless steel 316L heat exchanger.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material. Grey PVC external lining.
CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Stainless steel blind flange and connection for electric heater.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.





BOLLY® 1 AP XB

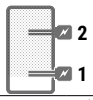
Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE INOX 316L [m²]	ENERGY EFFICIENCY CLASS
150	3104052010100	1,0	**B**
200	3104052010101	1,2	**B**
300	3104052010102	1,5	**B**
400	3104052010103	2,0	**C**
500	3104052010104	2,2	**C**

BOLLY® 1 AP XB CLASS A

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE INOX 316L [m²]	ENERGY EFFICIENCY CLASS
200	3104052010110	1,2	**A**
300	3104052010111	1,5	**A**
500	3104052010112	2,2	**A**

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Position electric immersion heater	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW	THREEPHASE 6 kW
			5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049
			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]		
150	1	126	225	169	113	//	//	//
	2	46	82	61	41	31	//	//
200	1	161	288	216	144	//	//	//
	2	53	94	71	47	35	//	//
300	1	237	425	319	213	159	//	//
	2	83	148	111	74	56	45	//
400	1	356	637	478	318	239	//	//
	2	138	247	185	124	93	74	//
500	1	417	746	560	373	280	224	//
	2	150	269	202	135	101	81	67

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Thermometer

Art. Nr.
5032240000107
5 units box

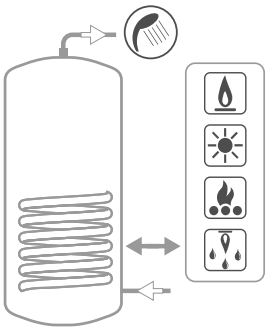


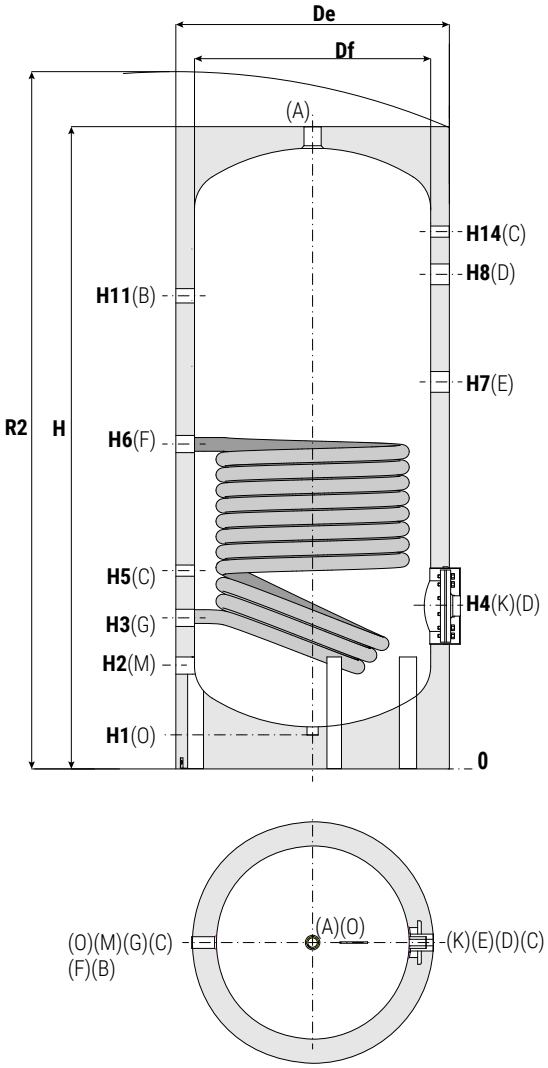
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **1 AP INOX - HIGH PERFORMANCES**

STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED STAINLESS STEEL HEAT EXCHANGER FOR DHW PRODUCTION

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C





A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F	Primary circuit inlet 1" G F
G	Primary circuit outlet 1" G F
K	Flange for inspection
M	Domestic cold water circuit inlet
O	Drain

BOLLY® 1 AP INOX - 1 AP INOX CLASS A (HARD FOAM INSULATION -XB)

Model	Volume	Weight	Df	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H11	H14
	[lt]	[kg]	[mm]													
150	150	35	400	500	1420	1510	65	205	310	310	420	719	830	960	1060	1180
200	192	41	450	550	1440	1540	65	215	320	320	430	780	880	1010	1094	1200
300	293	59	550	650	1495	1639	70	245	350	380	460	750	910	1040	1110	1230
400	425	79	600	700	1770	1907	65	255	360	390	470	895	1040	1170	1325	1480
500	503	84	650	750	1796	1950	65	265	370	480	405	1060	1090	1220	1335	1490

Model	A	B	C	D	E	F	G	K	M	O
	Connections F									
150	1"	3/4"	1/2"	1"1/2	1"1/4	1"	1"	Øi120/Øe180	3/4"	1/2"
200	1"	3/4"	1/2"	1"1/2	1"1/4	1"	1"	Øi120/Øe180	3/4"	1/2"
300	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	Øi120/Øe180	1"	1/2"
400	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	Øi120/Øe180	1"	1/2"
500	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	Øi120/Øe180	1"	1/2"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

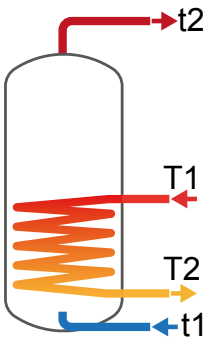
BOLLY® 1 AP INOX - HIGH PERFORMANCES

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

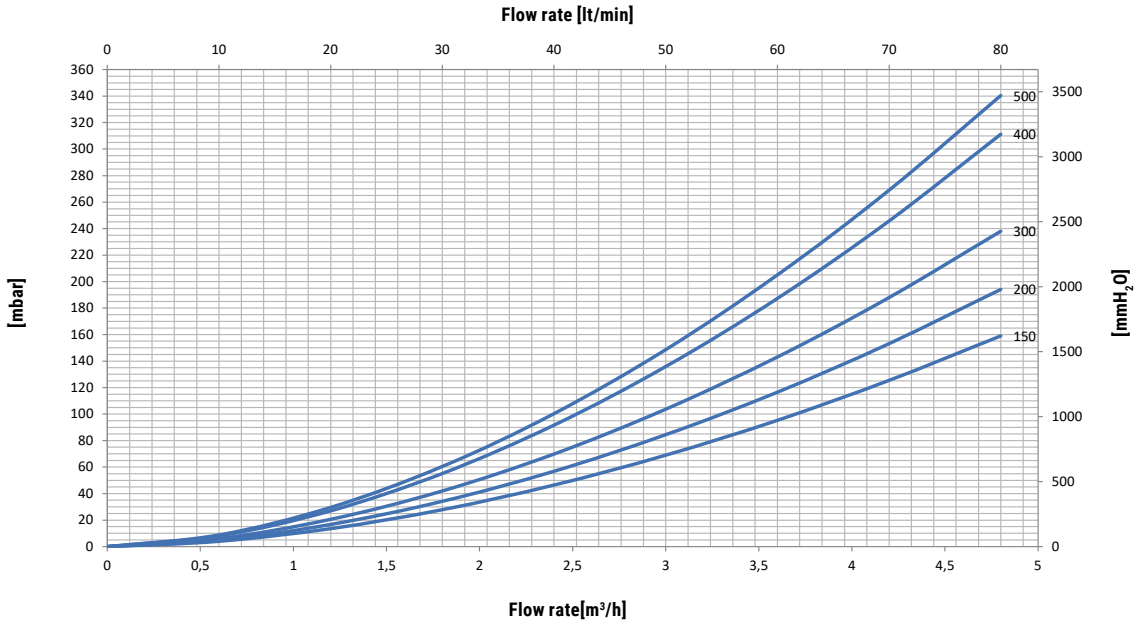
LOWER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
150	2	65	68	47	30	8,9	11,3	14,4	20,1	188	191	245	345
	1	76	78	55	36	8,3	10,5	13,2	18,1	173	176	224	310
200	2,5	65	68	47	31	11,3	14,3	18,2	25,4	240	243	315	438
	1,25	75	78	55	36	10,6	13,4	16,8	23,1	223	227	287	397
300	3	79	82	57	37	14,3	18,0	22,9	32,0	304	308	394	553
	1,5	90	94	66	43	13,4	16,9	21,3	29,2	284	289	366	504
400	3,5	85	89	62	41	19,1	24,0	30,1	42,7	408	414	529	739
	1,75	99	103	72	48	17,9	22,6	28,4	38,9	383	389	491	673
500	3,5	93	96	68	45	20,9	26,4	33,6	46,6	448	454	580	809
	1,75	108	113	80	53	19,6	24,8	31,1	42,3	420	427	537	734

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
150	2	202	245	254	270	321	323	366	446	342	34
	1	199	242	250	265	309	311	349	418	100	10
200	2,5	258	313	325	346	410	413	470	569	623	61
	1,25	255	311	321	339	397	400	448	536	183	18
300	3	386	470	484	511	578	581	650	777	1057	104
	1,5	382	467	480	503	562	566	628	738	311	30
400	3,5	554	676	695	730	812	817	909	1077	1817	178
	1,75	550	672	689	719	792	797	879	1024	536	53
500	3,5	650	794	815	853	933	938	1039	1222	1989	195
	1,75	645	790	808	841	911	916	1004	1162	587	58

HEAT EXCHANGERS PRESSURE DROP

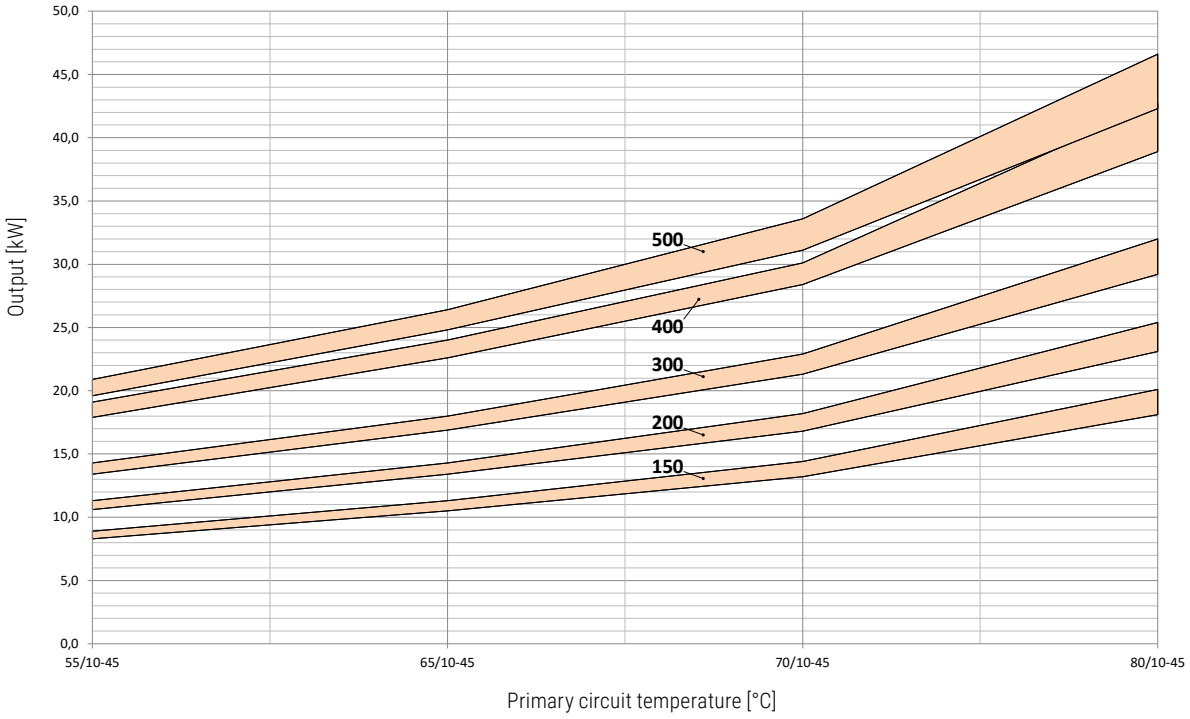


BOLLY® **1 AP INOX - HIGH PERFORMANCES**

HEAT EXCHANGERS TECHNICAL DATA

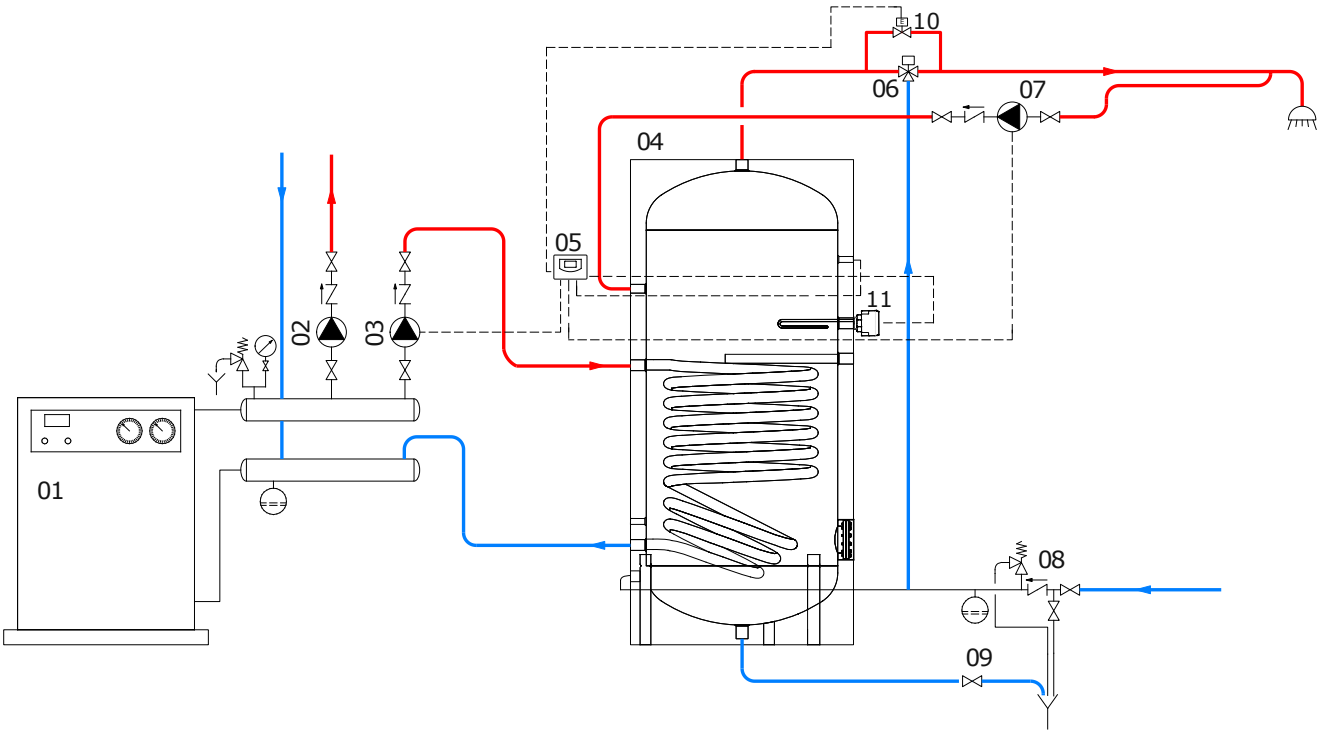


Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate).



Model Bolly® 1 AP XB	150		200		300		400		500	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	2,5	1,25	3	1,5	3,5	1,75	3,5	1,75

EXAMPLE OF INSTALLATION WITH **BOLLY® 1 AP INOX**



01	Generator	04	BOLLY® 1 AP INOX	07	D.H.W. recirculation group	10	By-pass solenoid valve
02	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group	11	Electric immersion heater (optional)
03	D.H.W. circulation group	06	Thermostatic mixing valve	09	Blowdown valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

BOLLY® 2 AP INOX - HIGH PERFORMANCES

STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED STAINLESS STEEL HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
HEAT EXCHANGER:
Nr. 2 fixed stainless steel 316L heat exchanger.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material. Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Stainless steel blind flange and connection for electric heater.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.





BOLLY® 2 AP XB

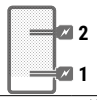
Model	HARD FOAM INSULATION	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
150	3134052010300	0,6	1,0	**B**
200	3134052010301	0,7	1,2	**B**
300	3134052010302	0,9	1,5	**B**
400	3134052010303	1,3	2,0	**C**
500	3134052010304	1,4	2,2	**C**

BOLLY® 2 AP XB CLASS A

Model	HARD FOAM INSULATION	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
200	3134052010310	0,7	1,2	**A**
300	3134052010311	0,9	1,5	**A**
500	3134052010312	1,4	2,2	**A**

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Position electric immersion heater	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	2 kW	3 kW	THREEPHASE 4 kW	5 kW	6 kW
			5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049
			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]		
150	1	126	225	169	113	//	//	//
	2	54	97	73	49	37	//	//
200	1	161	288	216	144	//	//	//
	2	65	117	88	58	44	//	//
300	1	237	425	319	213	159	//	//
	2	113	203	152	101	76	61	//
400	1	356	637	478	318	239	//	//
	2	171	307	230	154	115	92	//
500	1	417	746	560	373	280	224	//
	2	188	337	253	168	126	101	84

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Thermometer

Art. Nr.
5032240000107
5 units box

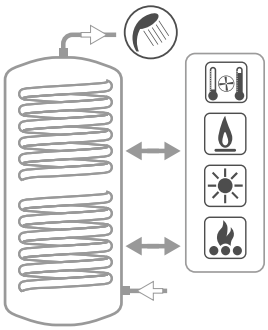


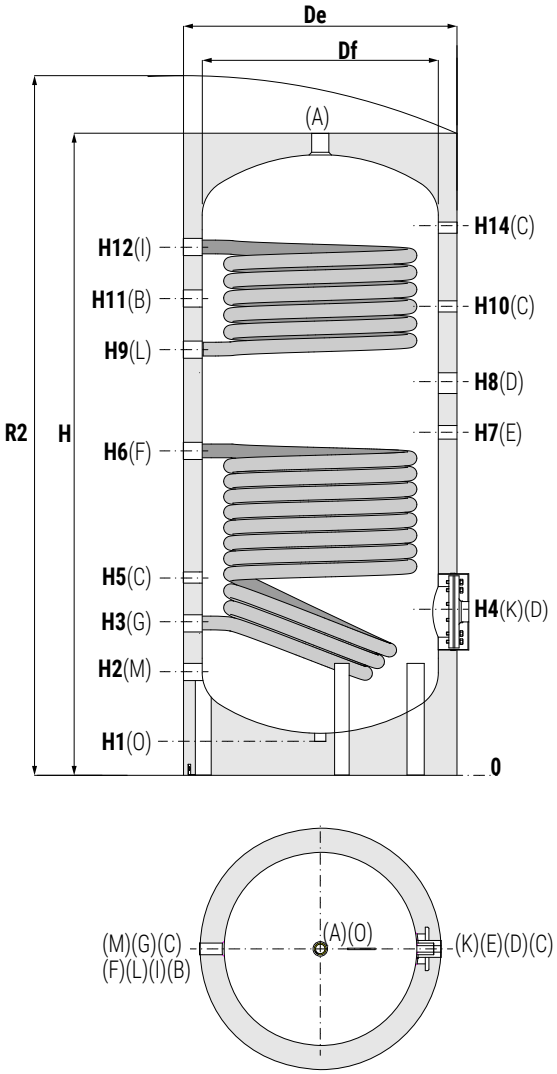
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 AP INOX - HIGH PERFORMANCES**

STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED STAINLESS STEEL HEAT EXCHANGERS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C





A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F	Lower heat exchanger inlet 1" G F
G	Lower heat exchanger outlet 1" G F
K	Flange for inspection
M	Domestic cold water circuit inlet
L	Upper heat exchanger outlet 1" G F
I	Upper heat exchanger inlet 1" G F
O	Drain

BOLLY® 2 AP INOX - 2 AP INOX CLASS A (HARD FOAM INSULATION -XB)

Model	Volume	Weight	Df	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H14
	[lt]	[kg]									[mm]								
150	150	42	400	500	1420	1510	65	205	310	340	480	718	750	890	935	1030	1060	1180	1180
200	192	49	450	550	1440	1540	65	215	320	310	430	488	810	930	962	1070	1094	1200	1200
300	293	70	550	650	1495	1638	70	245	350	380	460	755	780	910	957	1050	1110	1230	1230
400	425	95	600	700	1770	1907	65	255	360	390	470	895	925	1050	1082	1190	1325	1480	1480
500	503	101	650	750	1796	1950	65	265	370	400	480	923	970	1105	1155	1266	1335	1479	1490

Model	A	B	C	D	E	F	G	M	O	L	I	K
	Connections F											[mm]
150	1"	3/4"	1/2"	1"1/2	1"1/4	1"	1"	3/4"	1/2"	1"	1"	Øi120/Øe180
200	1"	3/4"	1/2"	1"1/2	1"1/4	1"	1"	3/4"	1/2"	1"	1"	Øi120/Øe180
300	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	1"	1/2"	1"	1"	Øi120/Øe180
400	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	1"	1/2"	1"	1"	Øi120/Øe180
500	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	1"	1/2"	1"	1"	Øi120/Øe180

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

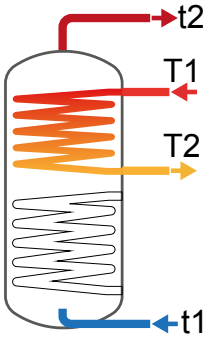
BOLLY® **2 AP INOX - HIGH PERFORMANCES**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

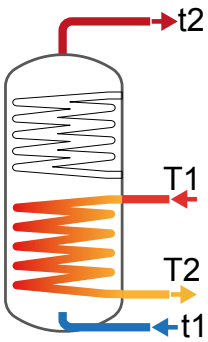
UPPER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
150	2	32	33	22	14	5,6	7,1	9,1	12,8	116	118	153	218
	1	36	38	25	16	5,3	6,6	8,4	11,7	108	110	141	198
200	2,5	36	38	25	16	6,2	7,8	10,0	14,1	128	130	169	241
	1,25	40	42	28	18	5,8	7,4	9,4	13,1	120	122	157	222
300	3	39	40	28	18	8,6	10,9	14,0	19,7	182	184	238	337
	1,5	43	45	31	20	8,2	10,3	13,1	18,2	171	174	223	312
400	3,5	46	48	33	22	12,5	15,8	20,2	28,4	266	269	347	489
	1,75	52	54	37	24	11,9	15,0	19,0	26,2	251	255	325	452
500	3,5	45	47	33	21	13,5	17,0	21,7	30,4	286	290	373	526
	1,75	51	53	37	24	12,7	16,1	20,3	28,1	270	275	349	485

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
150	2	71	84	90	101	144	146	174	226	226	22
	1	69	83	88	97	138	139	164	210	65	6
200	2,5	88	105	111	123	169	170	201	259	361	35
	1,25	86	103	109	120	162	164	192	244	105	10
300	3	131	156	165	182	246	248	291	370	664	65
	1,5	129	155	163	178	237	240	279	350	194	19
400	3,5	219	263	276	300	388	390	452	566	1217	119
	1,75	217	261	273	294	376	379	435	536	357	35
500	3,5	232	278	292	318	413	416	482	605	1302	128
	1,75	229	276	288	311	400	404	463	572	382	37

LOWER
HEAT EXCHANGER

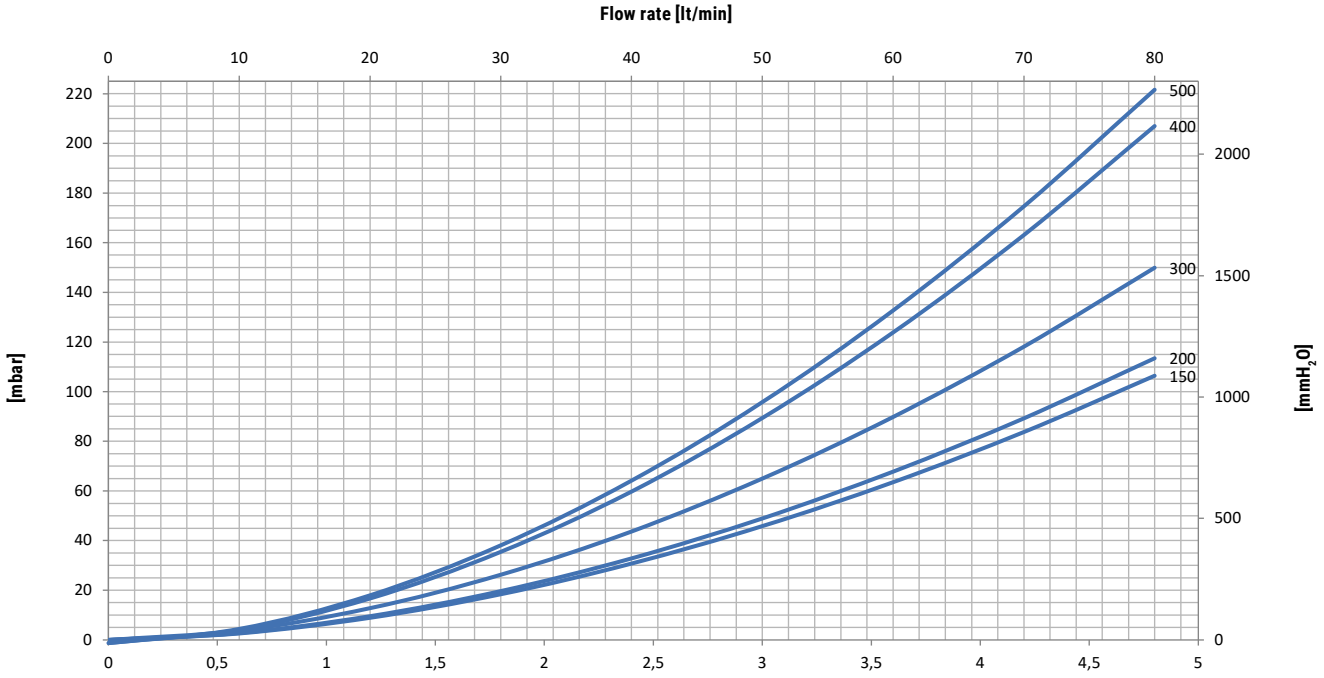


Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
150	2	65	68	47	30	8,9	11,3	14,4	20,1	188	191	245	345
	1	76	78	55	36	8,3	10,5	13,2	18,1	173	176	224	310
200	2,5	65	68	47	31	11,3	14,3	18,2	25,4	240	243	315	438
	1,25	75	78	55	36	10,6	13,4	16,8	23,1	223	227	287	397
300	3	79	82	57	37	14,3	18,0	22,9	32,0	304	308	394	553
	1,5	90	94	66	43	13,4	16,9	21,3	29,2	284	289	366	504
400	3,5	85	89	62	41	19,1	24,0	30,1	42,7	408	414	529	739
	1,75	99	103	72	48	17,9	22,6	28,4	38,9	383	389	491	673
500	3,5	93	96	68	45	20,9	26,4	33,6	46,6	448	454	580	809
	1,75	108	113	80	53	19,6	24,8	31,1	42,3	420	427	537	734

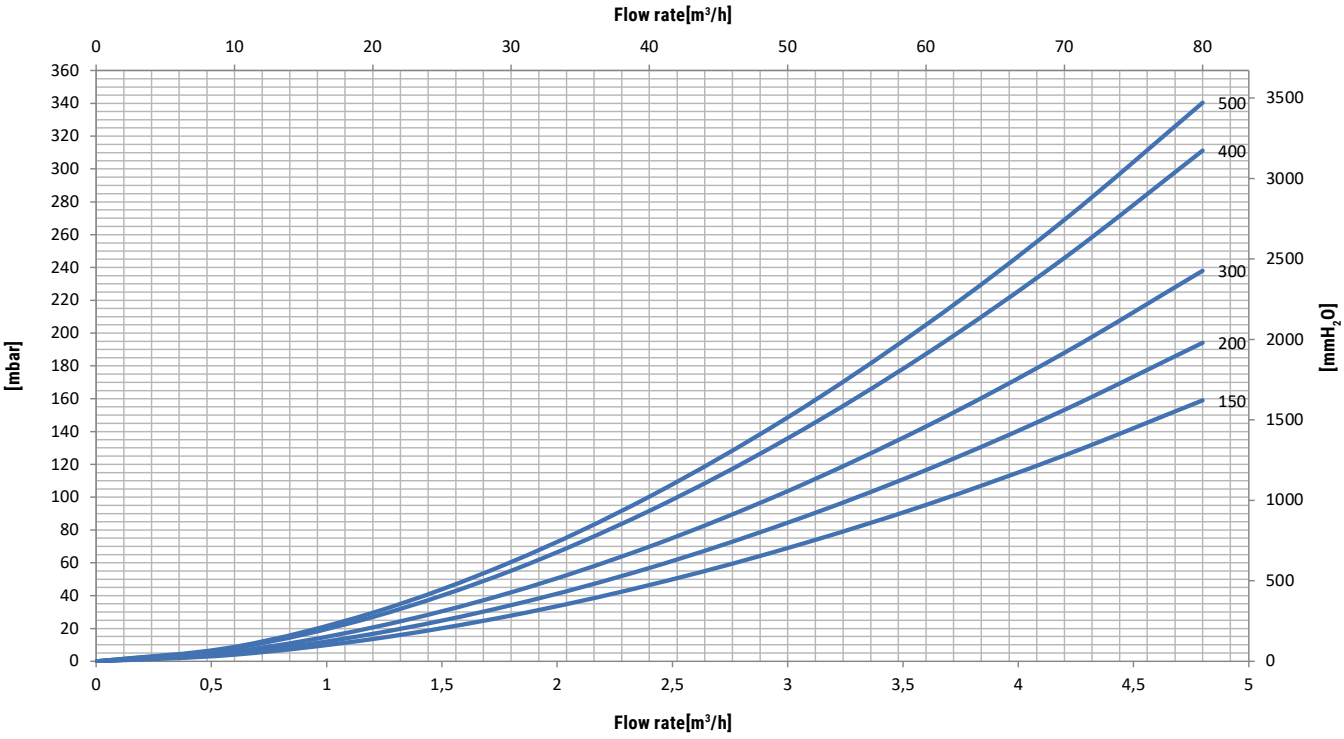
Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
150	2	202	245	254	270	321	323	366	446	342	34
	1	199	242	250	265	309	311	349	418	100	10
200	2,5	258	313	325	346	410	413	470	569	623	61
	1,25	255	311	321	339	397	400	448	536	183	18
300	3	386	470	484	511	578	581	650	777	1057	104
	1,5	382	467	480	503	562	566	628	738	311	30
400	3,5	554	676	695	730	812	817	909	1077	1817	178
	1,75	550	672	689	719	792	797	879	1024	536	53
500	3,5	650	794	815	853	933	938	1039	1222	1989	195
	1,75	645	790	808	841	911	916	1004	1162	587	58

UPPER HEAT EXCHANGERS PRESSURE DROP





LOWER HEAT EXCHANGERS PRESSURE DROP

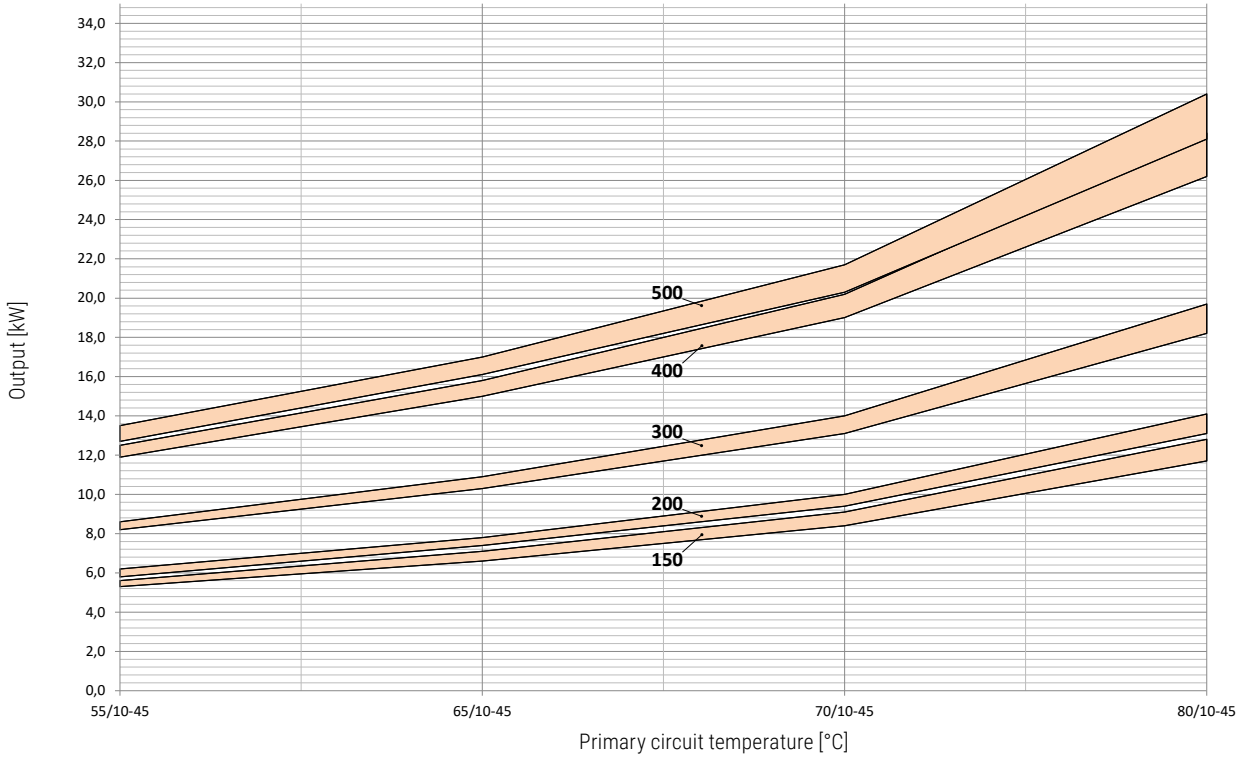


BOLLY® **2 AP INOX - HIGH PERFORMANCES**

UPPER HEAT EXCHANGERS TECHNICAL DATA

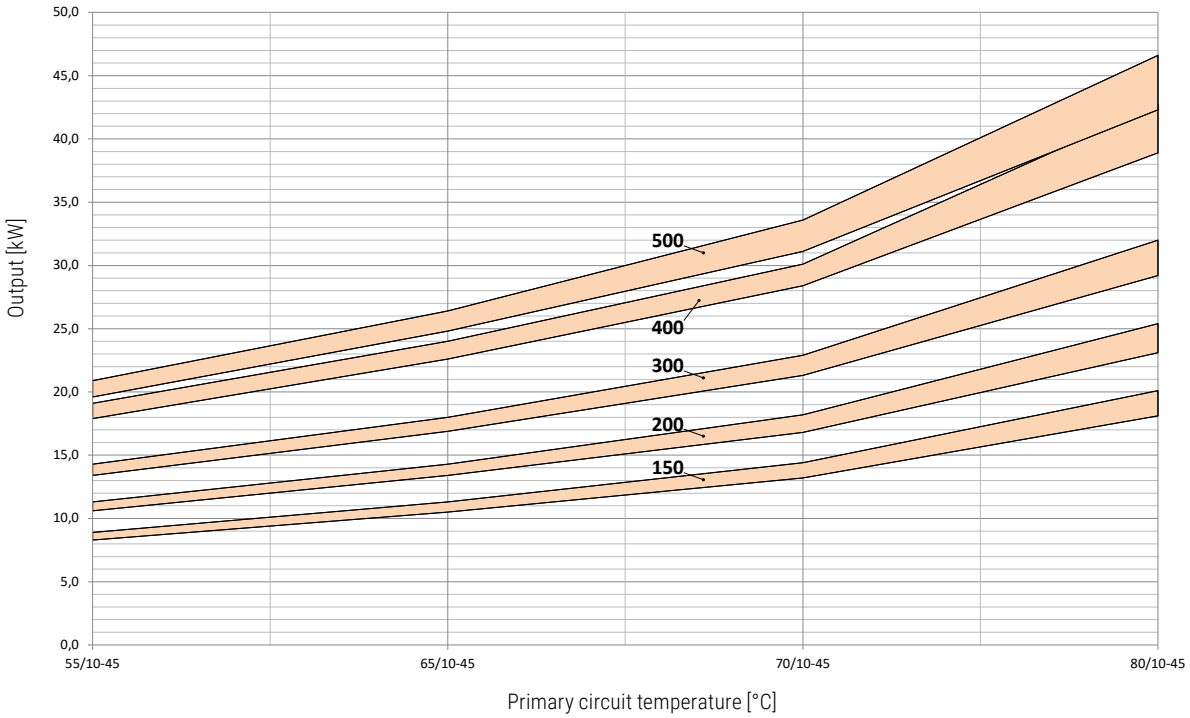


Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate).



Model Bolly® 2 AP INOX	150		200		300		400		500	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	2,5	1,25	3	1,5	3,5	1,75	3,5	1,75

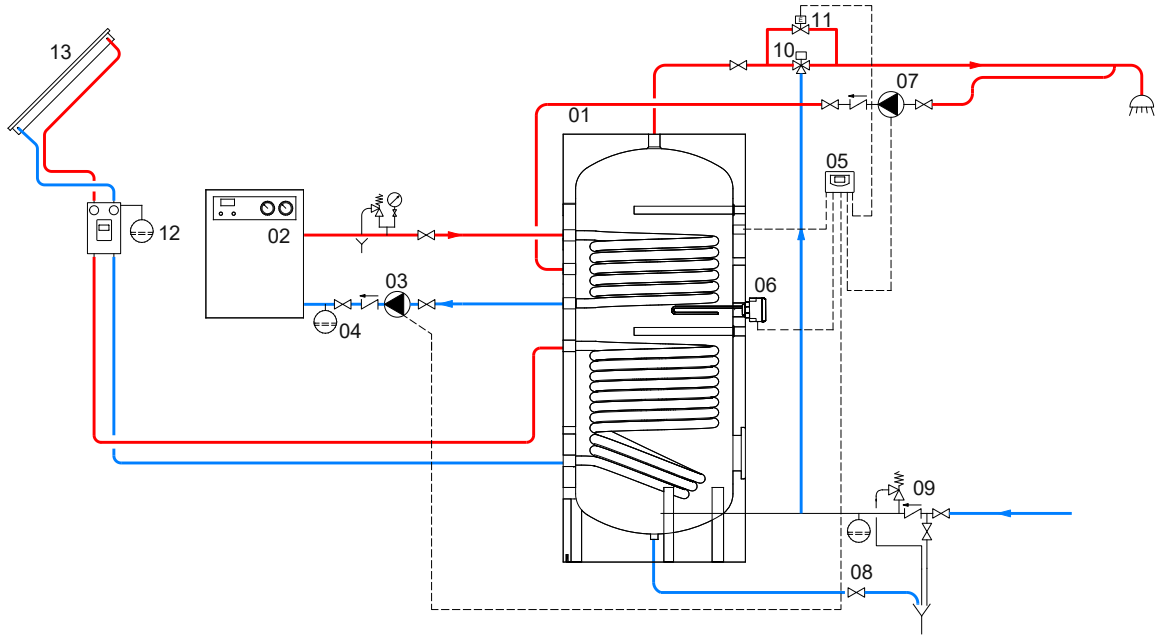
LOWER HEAT EXCHANGERS TECHNICAL DATA



Model Bolly® 2 AP INOX	150		200		300		400		500	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	2,5	1,25	3	1,5	3,5	1,75	3,5	1,75



EXAMPLE OF INSTALLATION WITH **BOLLY® 2 AP INOX**



1	BOLLY® 2 AP INOX	5	Electronic Control/thermostat	9	Hydraulic safety group	13	Solar panels
2	Generator	6	Electric immersion heater (optional)	10	Thermostatic mixing valve		
3	Circulation group	7	D.H.W. recirculation group	11	By-pass solenoid valve		
4	Expansion vessel	8	Blowdown valve	12	Solar system circulation group		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

BOLLY® 1 XL INOX

STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED OVERSIZE STAINLESS STEEL HEAT EXCHANGER



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
HEAT EXCHANGER:
Nr. 1 fixed oversize stainless steel heat exchanger with double spiral coil
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material. Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode.
Models > 800 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Flange for inspection and counterflange (standard) with provision for electric immersion heater.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.





BOLLY® 1 XL XB

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE INOX 316L [m²]	ENERGY EFFICIENCY CLASS
200	3104052010200	1,7	**B**
300	3104052010201	2,7	**B**
500	3104052010202	4	**C**

BOLLY® 1 XL XC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	HEAT EXCHANGER SURFACE INOX 316L [m²]	ENERGY EFFICIENCY CLASS
800	3103052010485	5,8	**C**
1000	3103052010486	5,8	**C**

BOLLY® 1 XL XB CLASS A

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE INOX 316L [m²]	ENERGY EFFICIENCY CLASS
200	3104052010220	1,7	**A**
300	3104052010221	2,7	**A**
500	3104052010222	4	**A**

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW	THREEPHASE 6 kW	THREEPHASE 9 kW	THREEPHASE 12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	161	288	216	144	//	//	//	//	//
300	237	425	319	213	159	//	//	//	//
500	417	746	560	373	280	224	//	//	//
800	668	1197	898	598	449	359	299	199	//
1000	874	1565	1174	783	587	470	391	261	196

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Thermometer

Art. Nr.
5032240000107
5 units box

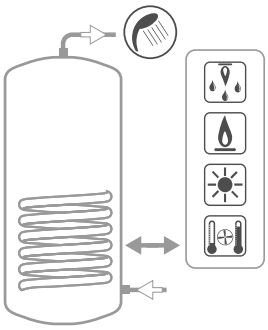


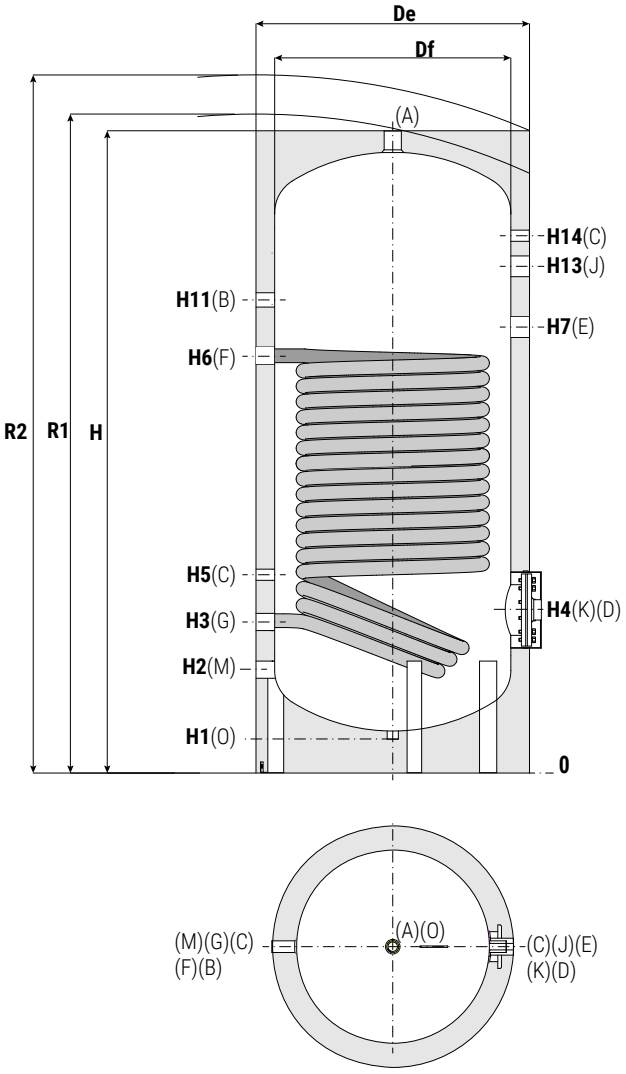
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **1 XL INOX**

STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED OVERSIZE STAINLESS STEEL HEAT EXCHANGER

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C





A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F	Primary circuit inlet 1" G F
G	Primary circuit outlet 1" G F
J	Connection for 2nd magnesium anode 1"1/4 G F (only for models standard > 800)
K	Flange for inspection and counterflange (standard) with provision for electric immersion heater 1"1/2
M	Domestic cold water circuit inlet
O	Drain

BOLLY® 1 XL INOX - 1 XL INOX CLASS A (HARD FOAM INSULATION -XB)

Model	Volume	Weight	Df	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H11	H14
	[lt]	[kg]	[mm]												
200	192	47	450	550	1440	1510	65	210	320	320	430	845	900	1090	1190
300	293	75	550	650	1495	1630	70	240	350	380	460	1059	1110	1170	1220
500	503	110	650	750	1796	1950	65	260	370	405	480	1285	1380	1400	1490

Model	A	B	C	D	E	F	G	M	O	K
	Connections F									[mm]
200	1"	3/4"	1"1/2	1"1/2	1"1/4	1"	1"	3/4"	1/2"	Øi120/Øe180
300	1"	1"	1"1/2	1"1/2	1"1/4	1"	1"	1"	1/2"	Øi120/Øe180
500	1"	1"	1"1/2	1"1/2	1"1/4	1"	1"	1"	1/2"	Øi120/Øe180

BOLLY® 1 XL INOX - DISMOUNTABLE SOFT FLEECE INSULATION (XC)

Model	Volume	Weight	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H11	H13	H14
	[lt]	[kg]	[mm]														
800	759	169	790	990	1943	2180	2195	114	323	443	478	553	1403	1483	1513	//	1563
1000	902	183	790	990	2193	2410	2425	114	323	443	478	553	1613	1463	1613	1703	1813

Model	A	B	C	D	E	F	G	J	M	O	K
	Connections F										[mm]
800	1"1/4	1"	1"1/2	2"	1"1/4	1"	1"	//	1"	3/4"	Øi120/Øe180
1000	1"1/2	1"	1"1/2	2"	1"1/4	1"	1"	1"1/4	1"1/4	3/4"	Øi120/Øe180

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

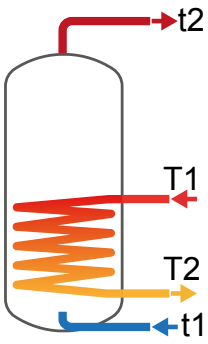
BOLLY® **1 XL INOX**

HEAT EXCHANGERS TECHNICAL DATA



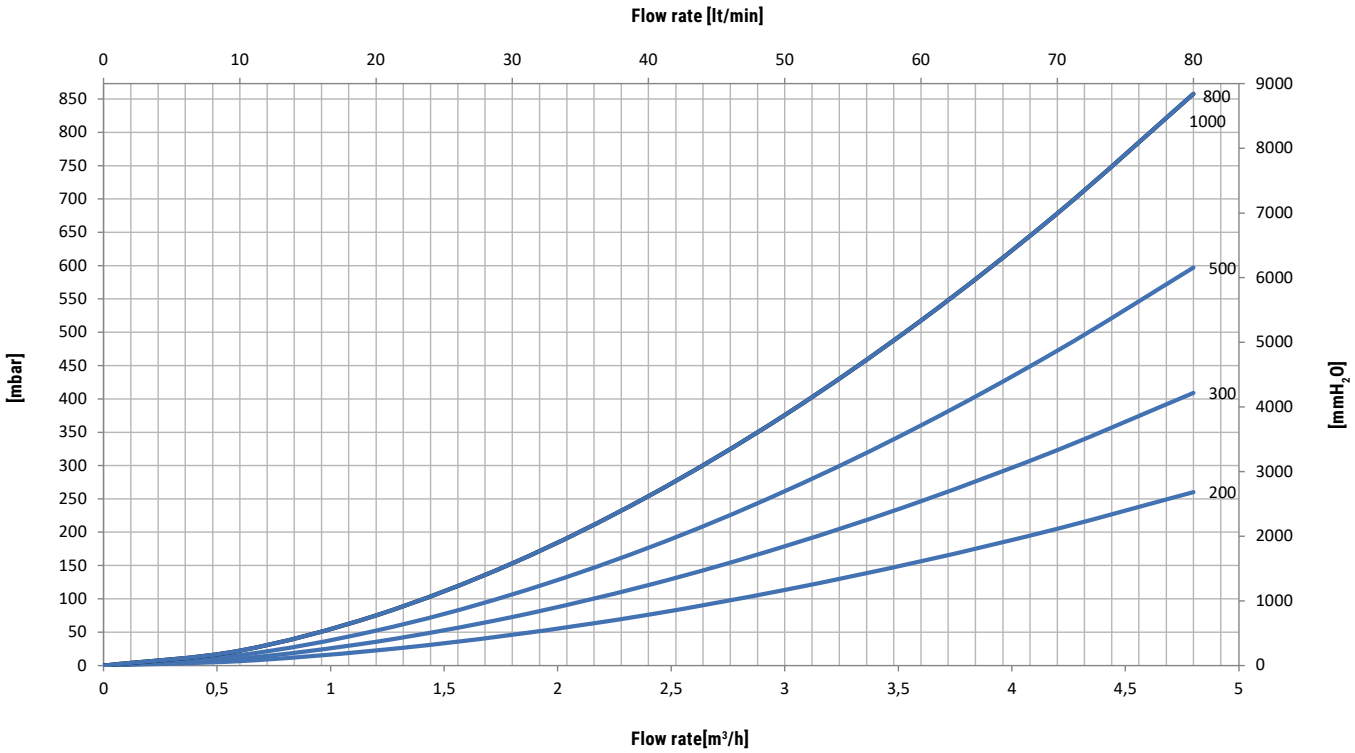
Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	3	47	49	34	22	15,6	19,7	25,1	35,0	334	338	433	606
	1,5	54	57	40	26	14,6	18,5	23,3	31,8	312	317	400	550
300	4	44	46	32	21	25,7	32,4	41,3	57,2	553	561	715	994
	2	51	54	38	25	24,0	30,6	38,3	52,0	519	528	663	902
500	5	52	54	38	25	38,1	48,1	61,0	84,3	823	835	1060	1468
	2,5	61	64	45	30	35,8	45,4	56,6	76,4	773	787	983	1329
800	6	55	57	41	27	55,1	69,6	87,9	120,9	1192	1210	1531	2107
	3	66	69	49	33	51,7	65,5	81,3	108,9	1118	1139	1416	1897
1000	6	65	68	48	32	55,1	69,6	87,9	120,9	1192	1210	1531	2107
	3	78	82	59	39	51,7	65,5	81,3	108,9	1118	1139	1415	1897



Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	3	274	329	345	374	485	543	619	758	1155	113
	1,5	270	326	340	365	468	526	593	713	340	33
300	4	427	512	538	584	777	867	991	1214	3059	299
	2	421	507	529	569	750	841	949	1140	903	88
500	5	712	858	895	963	1233	1387	1567	1893	6614	648
	2,5	704	850	882	940	1193	1348	1505	1782	1957	192
800	6	1066	1286	1339	1435	1821	2052	2309	2770	13081	1283
	3	1054	1274	1320	1400	1762	1995	2217	2602	3875	380
1000	6	1230	1490	1544	1640	1984	2257	2513	2974	13081	1283
	3	1217	1478	1524	1605	1925	2200	2421	2806	3875	380

HEAT EXCHANGERS PRESSURE DROP

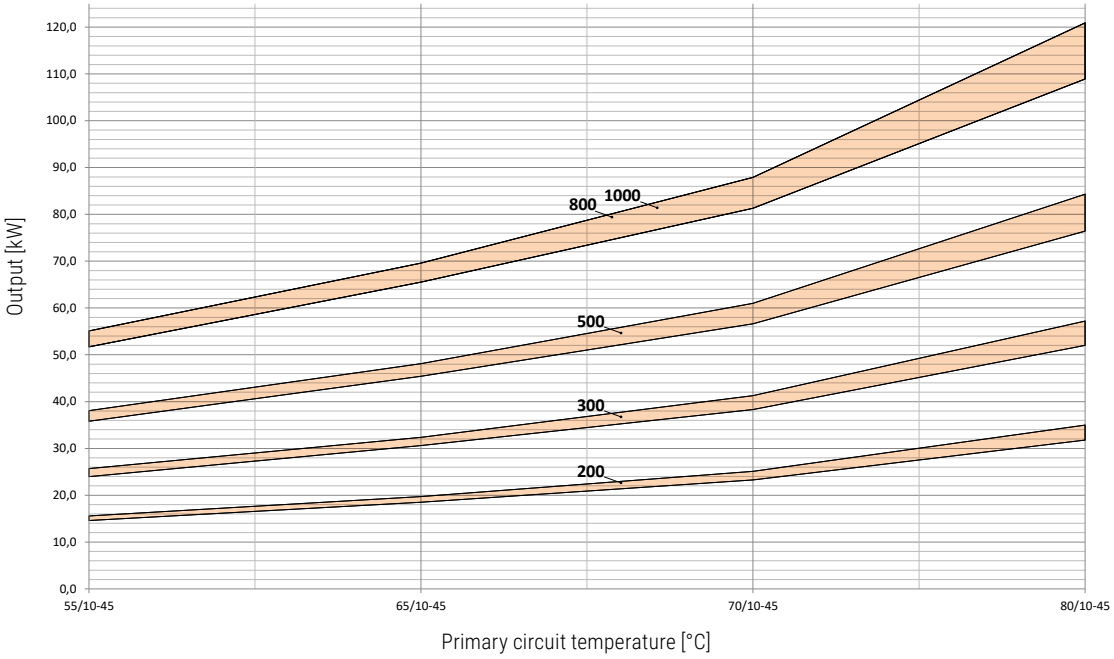


BOLLY® **1 XL INOX**

HEAT EXCHANGERS TECHNICAL DATA

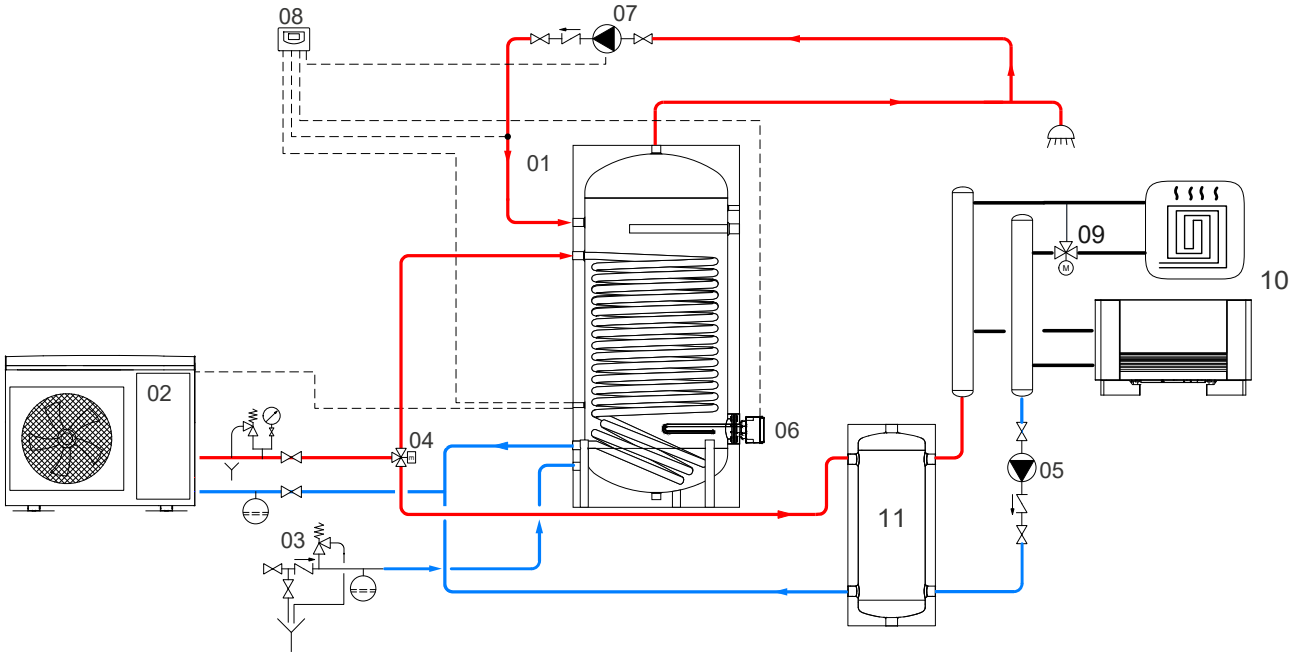


Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)



Model Bolly® 1 XL inox	200		300		500		800		1000	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2,5	1,25	3	1,5	3,5	1,75	6	3	6	3

EXAMPLE OF INSTALLATION WITH **BOLLY® 1 XL INOX**



1	BOLLY® 1 XL INOX	4	Motorized 3-way valve	7	D.H.W. recirculation group	10	Heating units
2	Generator (Heat pump)	5	Circulation group for heating/cooling system	8	Electronic Control/thermostat	11	Buffer tank
3	Hydraulic safety group	6	Electric immersion heater	9	Thermostatic mixing valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

BOLLY® **2 XL INOX**

STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED OVERSIZE STAINLESS STEEL HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Stainless Steel 316 L suitable for domestic hot water
HEAT EXCHANGER:
Nr. 2 fixed oversize stainless steel heat exchangers with double spiral coil
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode
Models > 800 n° 2 magnesium anodes.
DRAIN
External confluence through drain connection
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Flange for inspection and counterflange (standard) with provision for electric immersion heater.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



BOLLY® 2 XL XB

Model	HARD FOAM INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Upper [m²]	Lower [m²]	ENERGY EFFICIENCY CLASS
200	3134052010000	1,4	0,6	**B**
300	3134052010001	2,5	0,8	**B**
500	3134052010002	4,1	1,42	**C**



BOLLY® 2 XL XC

Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Upper [m²]	Lower [m²]	ENERGY EFFICIENCY CLASS
800	3138052010050	5	1,8	**C**
1000	3138052010051	5,2	2	**C**

BOLLY® 2 XL XB CLASS A

Model	HARD FOAM INSULATION Art. Nr.	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE Upper [m²]	Lower [m²]	ENERGY EFFICIENCY CLASS
200	3134052010020	1,4	0,6	**A**
300	3134052010021	2,5	0,8	**A**
500	3134052010022	4,1	1,42	**A**

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	2 kW	3 kW	THREEPHASE 4 kW	5 kW	6 kW	9 kW	12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	161	288	216	144	//	//	//	//	//
300	237	425	319	213	159	//	//	//	//
500	417	746	560	373	280	224	//	//	//
800	668	1197	898	598	449	359	299	199	//
1000	874	1565	1174	783	587	470	391	261	196

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Thermometer

Art. Nr.
5032240000107
5 units box

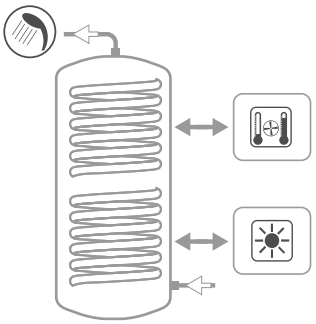


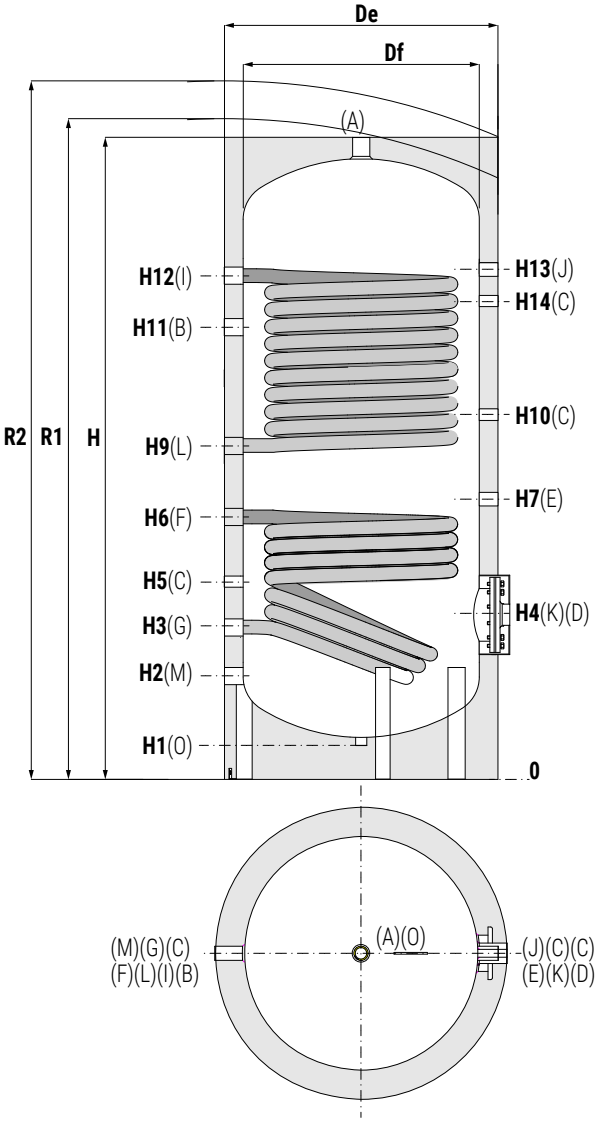
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 XL INOX**

STAINLESS STEEL 316L DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED OVERSIZE STAINLESS STEEL HEAT EXCHANGERS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C





A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F	Lower heat exchanger inlet 1" G F
G	Lower heat exchanger outlet 1" G F
J	Connection for 2nd magnesium anode 1"1/4 G F (only for models standard > 800)
K	Flange for inspection and counterflange (standard) with provision for electric immersion heater 1"1/2
M	Domestic cold water circuit inlet
L	Upper heat exchanger outlet 1"1/4 G F
I	Upper heat exchanger inlet 1"1/4 G F
O	Drain

BOLLY® 2 XL INOX - 2 XL INOX CLASS A (HARD FOAM INSULATION -XB)

Model	Volume	Weight	Df	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H9	H10	H11	H12	H14
	[lt]	[kg]	[mm]															
200	192	43	450	550	1440	1510	65	210	320	320	430	539	660	705	886	1094	1190	1200
300	293	69	550	650	1495	1630	70	240	345	380	459	559	590	669	896	1109	1219	1230
500	503	99	650	750	1796	1950	65	260	480	400	480	666	690	795	1099	1355	1479	1490

Model	A	B	C	D	E	F	G	M	O	L	I	K
	Connections F											[mm]
200	1"	3/4"	1/2"	1"1/2	1"1/4	1"	1"	3/4"	1/2"	1"	1"	Øi120/Øe180
300	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	1"	1/2"	1"	1"	Øi120/Øe180
500	1"	1"	1/2"	1"1/2	1"1/4	1"	1"	1"	1/2"	1"	1"	Øi120/Øe180

BOLLY® 2 XL INOX - DISMOUNTABLE SOFT FLEECE INSULATION (XC)

Model	Volume	Weight	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H9	H10	H11	H12	H13	H14
	[lt]	[kg]	[mm]																	
800	759	156	790	990	1943	2180	2195	114	323	443	473	553	718	763	825	1163	1163	1573	//	1573
1000	902	193	790	990	2193	2410	2425	114	323	443	473	553	802	862	918	1162	1557	1792	1822	1712

Model	A	B	C	D	E	F	G	J	M	O	L	I	K
	Connections F												[mm]
800	1"1/4	1"	1/2"	1"1/2	1"1/4	1"1/4	1"1/4	//	1"	3/4"	1"1/4	1"1/4	Øi120/Øe180
1000	1"1/4	1"	1/2"	2"	1"1/4	1"1/4	1"1/4	1"1/4	1"	3/4"	1"1/4	1"1/4	Øi120/Øe180

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

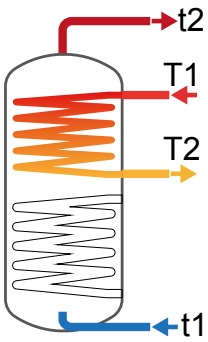
BOLLY® **2 XL INOX**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

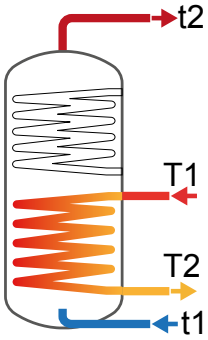
UPPER HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	3	29	31	21	14	13,3	16,8	21,5	30,0	284	287	369	518
	1,5	34	35	25	16	12,5	15,8	19,9	27,4	266	270	342	473
300	4	30	31	22	14	20,4	25,8	32,8	45,7	438	444	567	792
	2	35	36	26	17	18,8	23,9	29,9	40,9	403	410	517	709
500	5	35	36	26	17	32,7	41,2	52,3	72,5	704	714	908	1261
	2,5	41	43	31	20	30,2	38,3	47,8	64,9	651	663	830	1128
800	6	41	42	30	20	46,7	59,0	74,7	103,1	1010	1025	1300	1796
	3	49	51	37	24	43,4	54,9	68,4	92,1	936	954	1189	1604
1000	6	42	44	31	21	48,5	61,3	77,5	106,9	1049	1065	1349	1861
	3	50	53	38	25	45,0	57,0	70,8	95,3	972	990	1232	1660

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	3	194	195	209	233	374	377	442	562	992	97
	1,5	191	192	204	226	360	363	421	526	291	29
300	4	302	303	323	361	579	584	682	862	2517	247
	2	296	297	315	347	551	557	642	796	742	73
500	5	539	540	573	632	985	993	1148	1430	5813	570
	2,5	530	532	560	609	942	952	1085	1324	1719	169
800	6	867	869	915	998	1507	1519	1739	2135	11318	1110
	3	855	858	897	966	1447	1462	1650	1982	3351	329
1000	6	919	922	969	1054	1583	1596	1823	2233	11759	1153
	3	906	909	950	1021	1522	1536	1730	2072	3482	341

LOWER HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
200	3	127	134	90	57	5,8	7,3	9,4	13,3	120	121	158	225
	1,5	140	147	98	63	5,5	6,9	8,9	12,4	113	115	148	210
300	4	147	153	104	67	7,6	9,5	12,2	17,3	158	160	208	296
	2	163	171	116	75	7,1	8,9	11,4	15,9	147	150	192	272
500	5	138	143	100	65	13,5	17,1	21,9	30,8	288	292	376	532
	2,5	154	160	111	73	12,7	16,1	20,4	28,4	270	274	350	490
800	6	162	168	117	76	17,3	21,8	27,9	39,3	370	374	482	681
	3	179	187	131	85	16,3	20,6	26,2	36,4	349	354	452	630
1000	6	174	180	126	82	19,2	24,2	31,0	43,5	411	416	535	754
	3	194	201	141	93	18,1	22,9	29,0	40,2	387	393	500	696

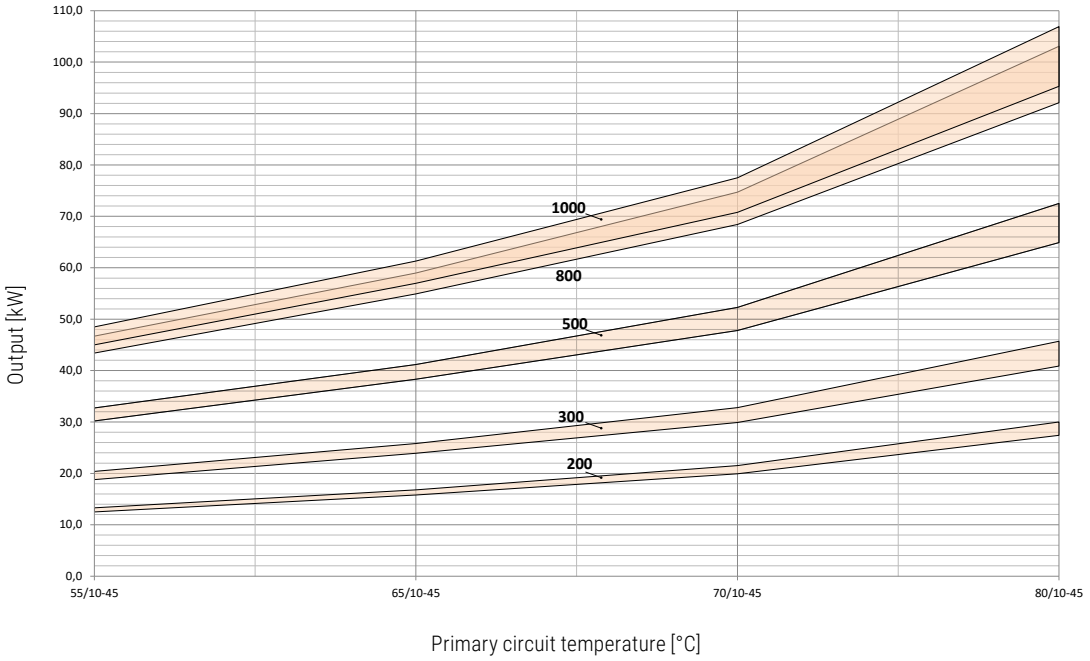
Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	3	293	293	299	310	369	370	399	453	467	46
	1,5	292	292	298	308	363	365	391	441	135	13
300	4	445	445	453	468	545	547	585	655	999	98
	2	443	444	451	464	536	539	572	636	291	28
500	5	767	767	781	807	949	952	1019	1144	2481	243
	2,5	764	764	777	800	935	938	999	1111	728	71
800	6	1146	1147	1165	1198	1380	1383	1470	1629	4264	418
	3	1142	1143	1160	1189	1363	1367	1446	1588	1253	123
1000	6	1357	1358	1378	1414	1617	1621	1717	1892	4705	461
	3	1353	1354	1372	1405	1598	1603	1689	1845	1385	136

BOLLY® **2 XL INOX**

UPPER HEAT EXCHANGERS TECHNICAL DATA

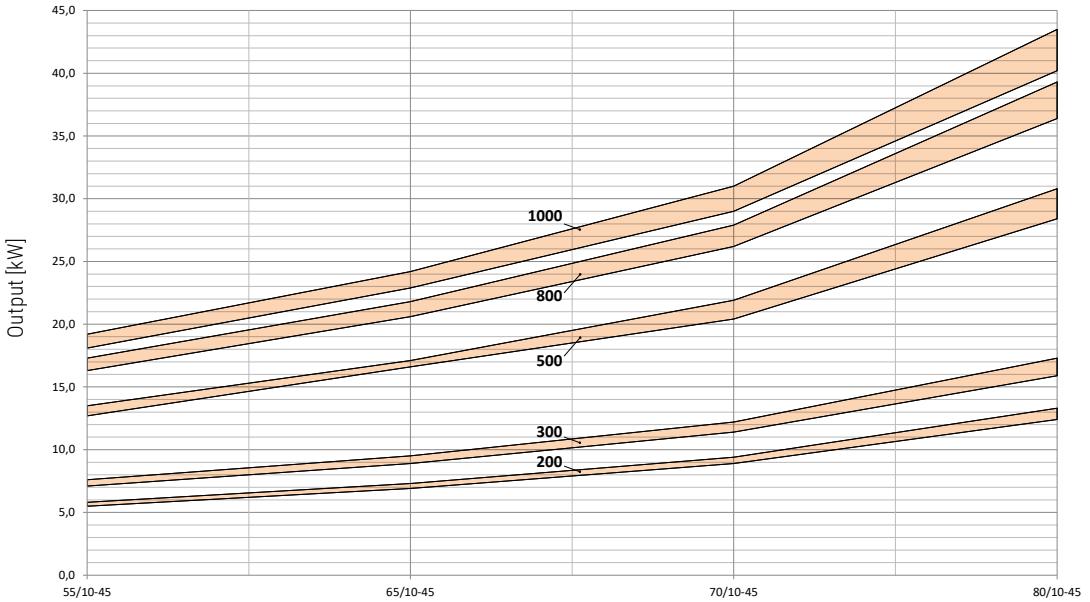


Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)



Model Bolly® 2 XL inox	**200**		**300**		**500**		**800**		**1000**	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2,5	1,25	3	1,5	3,5	1,75	6	3	6	3

LOWER HEAT EXCHANGERS TECHNICAL DATA

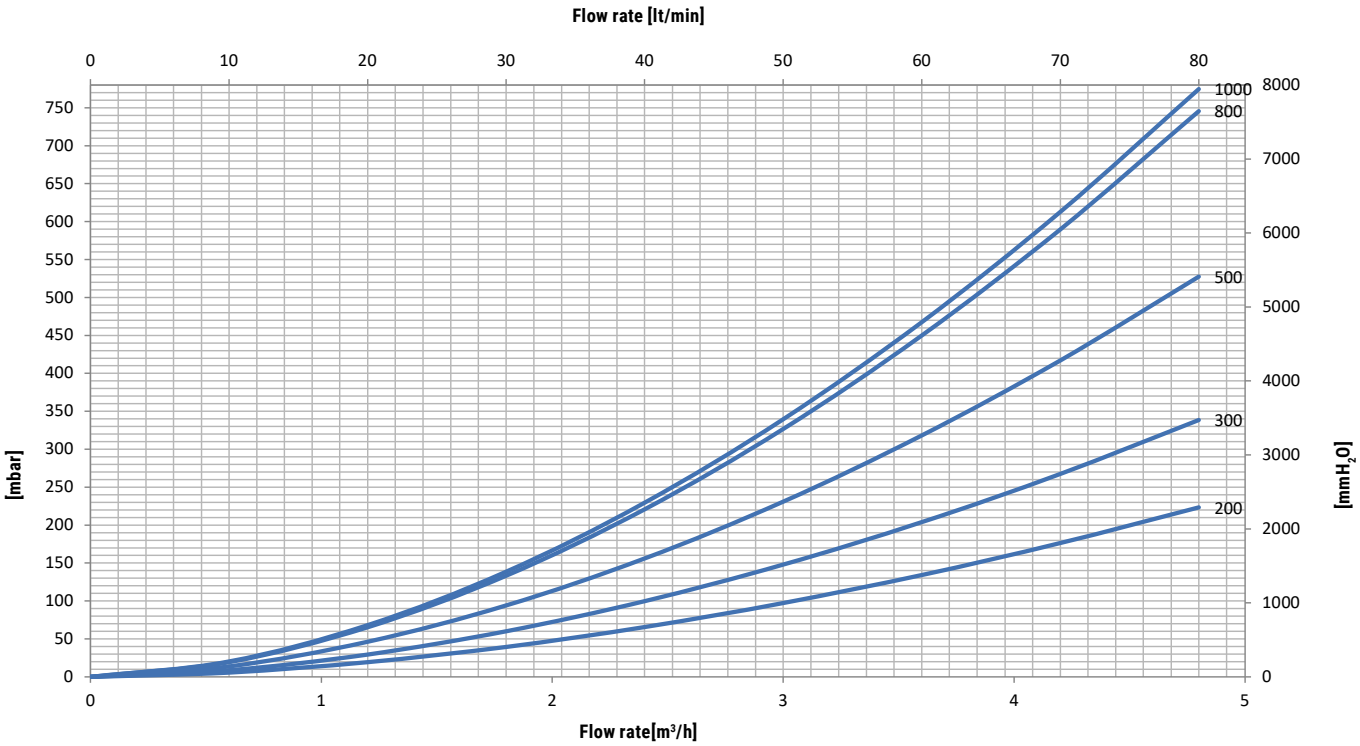


Model Bolly® 2 XL inox	**200**		**300**		**500**		**800**		**1000**	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2,5	1,25	3	1,5	3,5	1,75	6	3	6	3

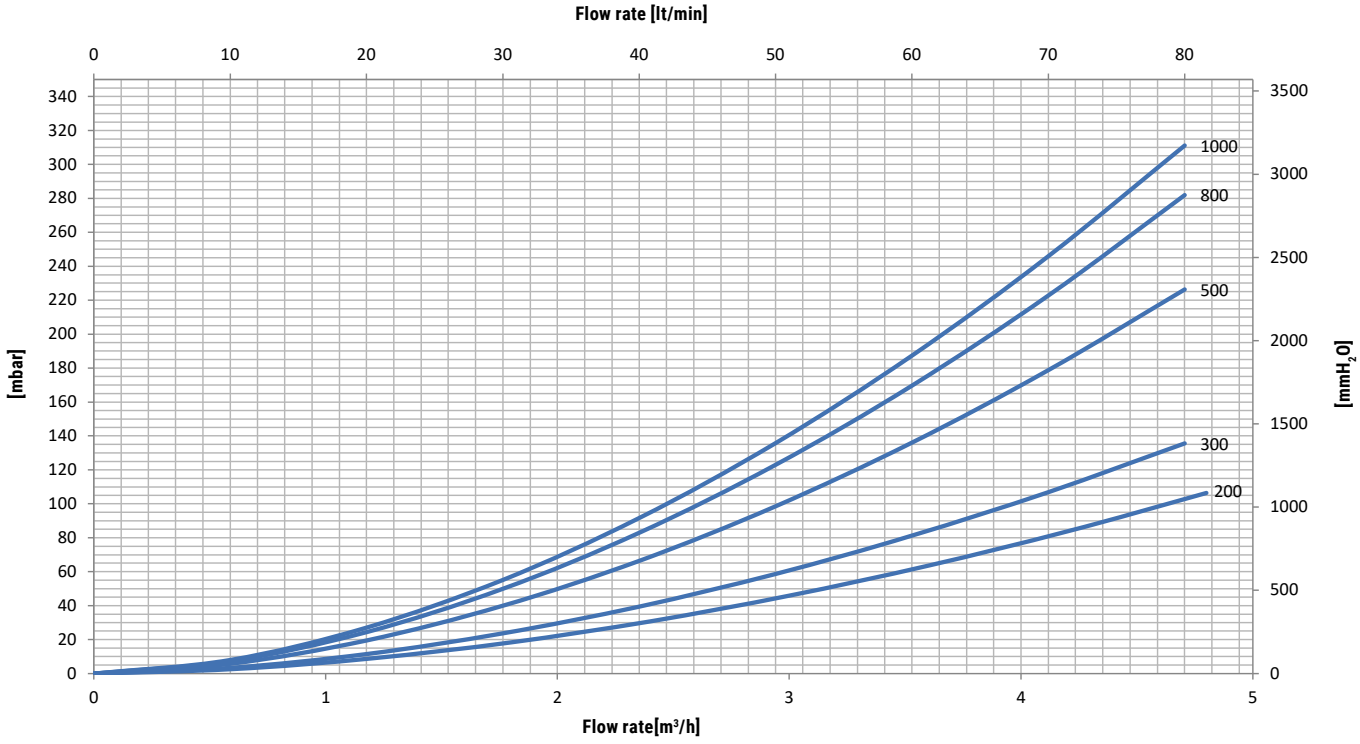
BOLLY® **2 XL INOX**

UPPER HEAT EXCHANGERS PRESSURE DROP



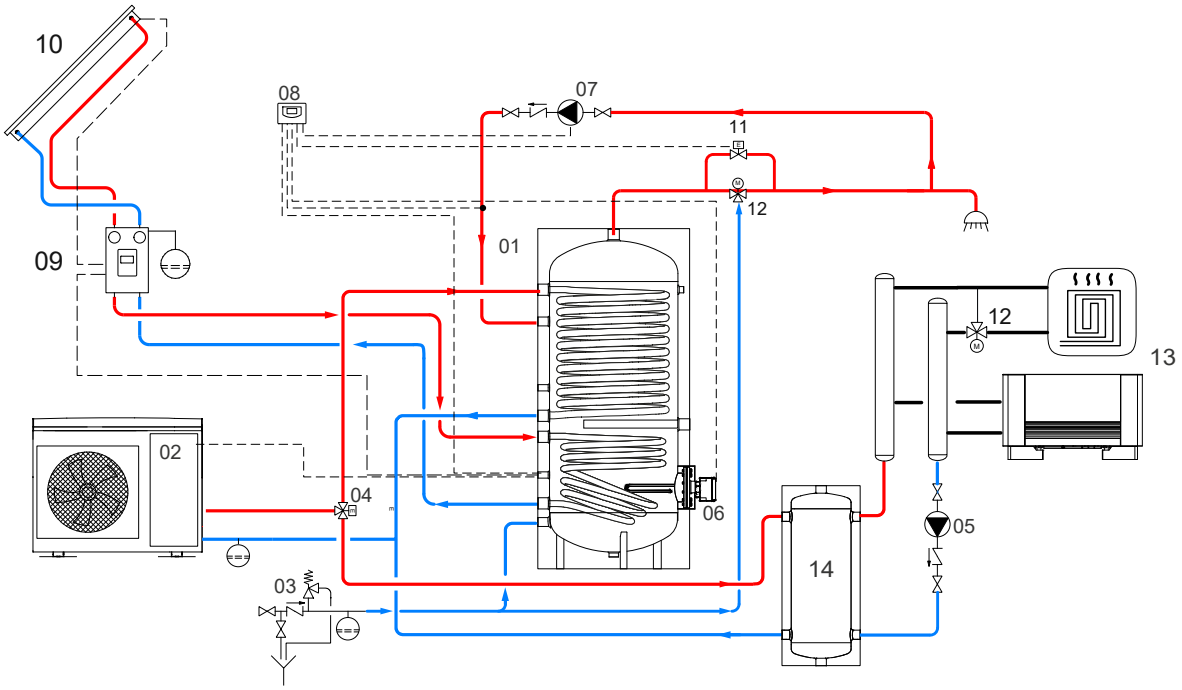


LOWER HEAT EXCHANGERS PRESSURE DROP





EXAMPLE OF INSTALLATION WITH **BOLLY® 2 XL INOX**



1	BOLLY® 2 XL INOX	5	Circulation group for heating/cooling system	9	Solar system circulation group	13	Heating units
2	Generator (Heat pump)	6	Electric immersion heater	10	Solar panels	14	Buffer tank
3	Hydraulic safety group	7	D.H.W. recirculation group	11	By-pass solenoid valve		
4	Motorized 3-way valve	8	Electronic Control/thermostat	12	Mixing valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

BOLLY® **1 HY XL INOX**

STAINLESS STEEL 316L CALORIFIER FOR DHW PRODUCTION WITH 1 HEAT EXCHANGER AND INTEGRATED BUFFER SPECIFIC FOR HEAT PUMPS



316L STAINLESS STEEL DHW STORAGE

316L STAINLESS STEEL HEAT EXCHANGER

APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.

MATERIAL
- *D.H.W. STORAGE:* Stainless Steel 316 L suitable for domestic hot water
- *BUFFER TANK:* mild steel

HEAT EXCHANGER:
Nr. 1 Fixed oversize stainless steel heat exchanger with double spiral coil

INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.
Grey PVC external lining.

CATHODE PROTECTION (DHW STORAGE)
Magnesium anode.

GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Flange for inspection and counterflange (standard) with provision for electric immersion heater.

WARRANTY
5 years (See general sales conditions and warranty)

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



BOLLY® 1 HY XL INOX

Model	HARD FOAM INSULATION Art. Nr.	Power of combinable heat pump [kWt]	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
300	3104052010500	9-14	2,7	**C**
500	3104052010501	14-20	4,0	**C**

BOLLY® 1 HY XL INOX CLASS A

Model	HARD FOAM INSULATION Art. Nr.	Power of combinable heat pump [kWt]	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
300	3104052010505	9-14	2,7	**A**
500	3104052010506	14-20	4,0	**A**

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]	
300	237	425	319	213	159	//
500	417	746	560	373	280	224

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Thermometer

Art. Nr.
5032240000107
5 units box

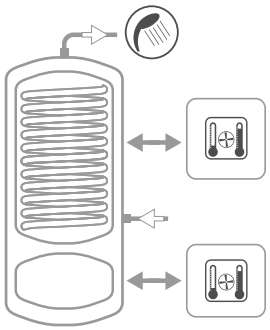


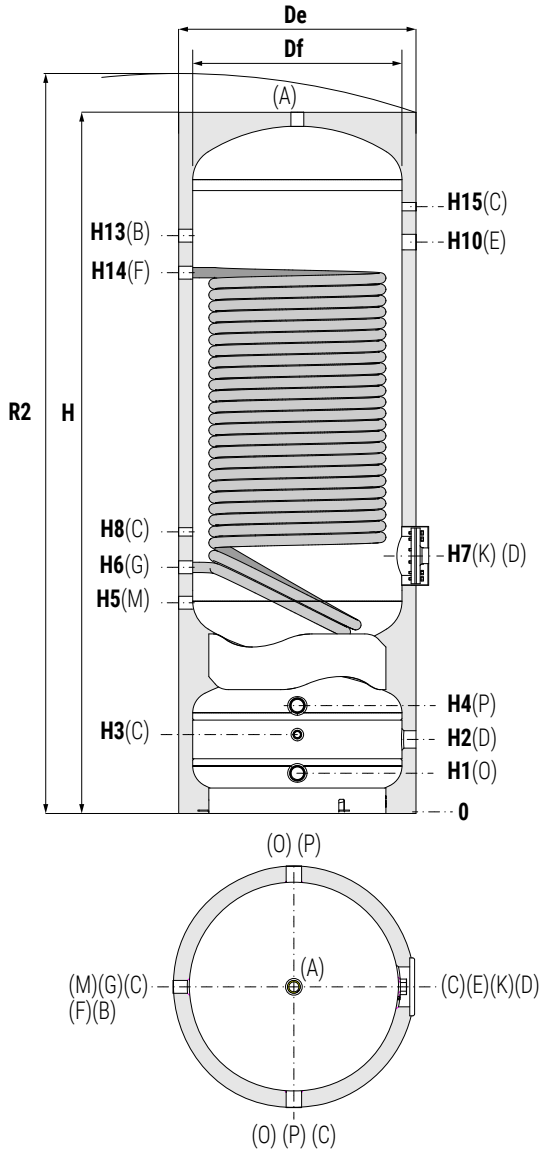
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **1 HY XL INOX**

STAINLESS STEEL 316L CALORIFIER FOR DHW PRODUCTION WITH 1 HEAT EXCHANGER AND INTEGRATED BUFFER SPECIFIC FOR HEAT PUMPS

STORAGE		HEAT EXCHANGER		BUFFER TANK	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C	4 bar	-10/+95 °C





A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation
D	Connection for for electric immersion heater
E	Connection for magnesium anode
F	Primary circuit inlet
G	Primary circuit outlet
K	Flange for inspection and counterflange (standard) with provision for electric immersion heater 1"1/2
M	Domestic cold water circuit inlet
O	Heating return/to generator
P	Heating delivery/from generator

Model	DHW storage volume	Buffer tank volume	Weight	Df	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H10	H13	H14	H15
	[lt]		[kg]	[mm]															
300	293	85	95	550	650	1895	1990	110	232	264	354	640	750	780	860	1510	1570	1459	1620
500	503	115	144	650	750	2185	2310	125	230	245	335	665	765	800	875	1775	1795	1680	1885

Model	A	B	C	D	E	F	G	M	O	P	K
	Connections F										[mm]
300	1"	1"	1"1/2	1"1/2	1"1/4	1"	1"	1"	1"1/4	1"1/4	Øi120/Øe180
500	1"	1"	1"1/2	1"1/2	1"1/4	1"	1"	1"	1"1/4	1"1/4	Øi120/Øe180

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

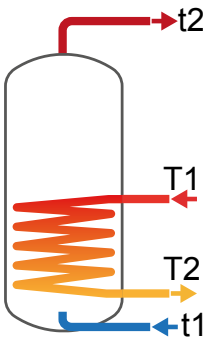
BOLLY® **1 HY XL INOX**

HEAT EXCHANGERS TECHNICAL DATA



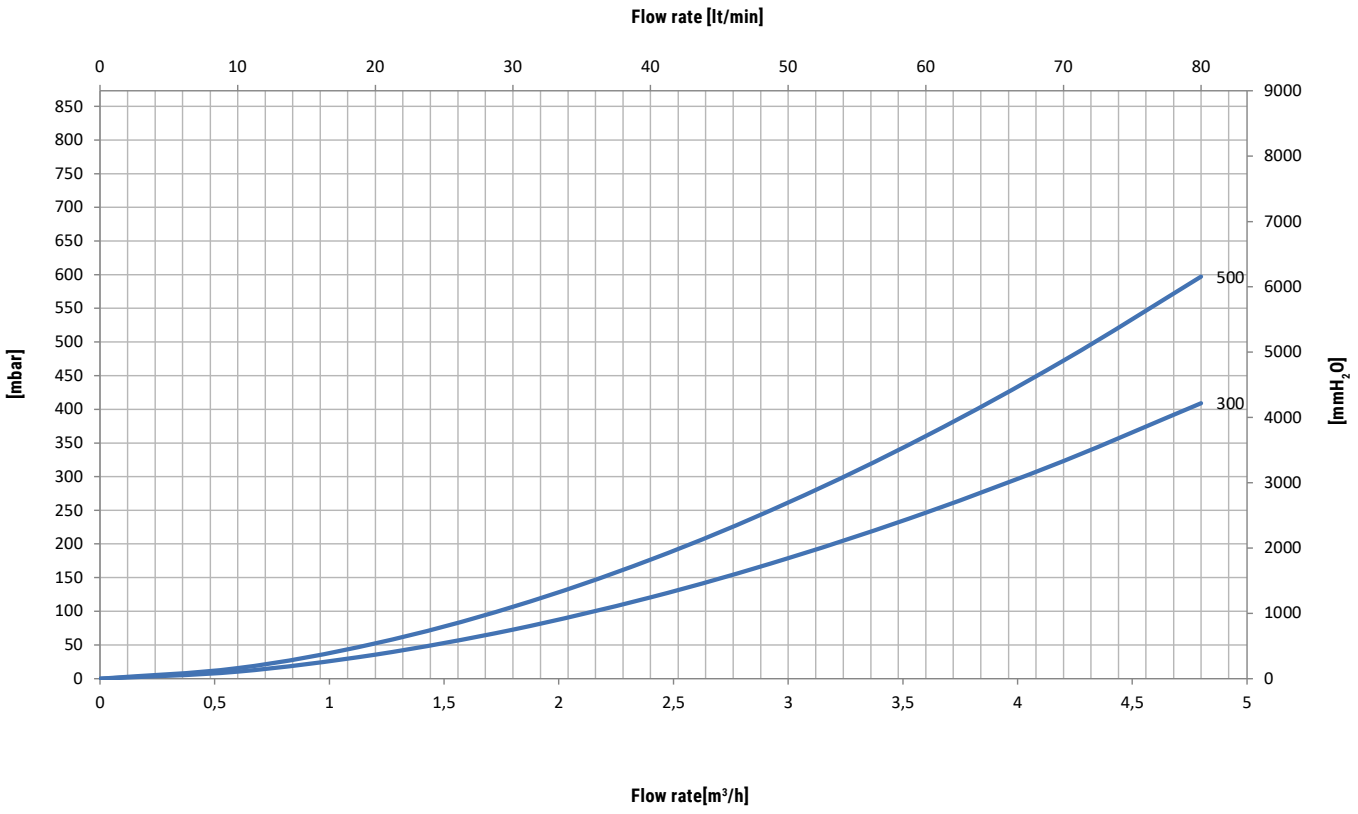
Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
300	4	44	46	32	21	25,7	32,4	41,3	57,2	553	561	715	994
	2	51	54	38	25	24,0	30,6	38,3	52,0	519	528	663	902
500	5	52	54	38	25	38,1	48,1	61,0	84,3	823	835	1060	1468
	2,5	61	64	45	30	35,8	45,4	56,6	76,4	773	787	983	1329



Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
300	4	427	512	538	584	777	867	991	1214	3059	299
	2	421	507	529	569	750	841	949	1140	903	88
500	5	712	858	895	963	1233	1387	1567	1893	6614	648
	2,5	704	850	882	940	1193	1348	1505	1782	1957	192

HEAT EXCHANGERS PRESSURE DROP

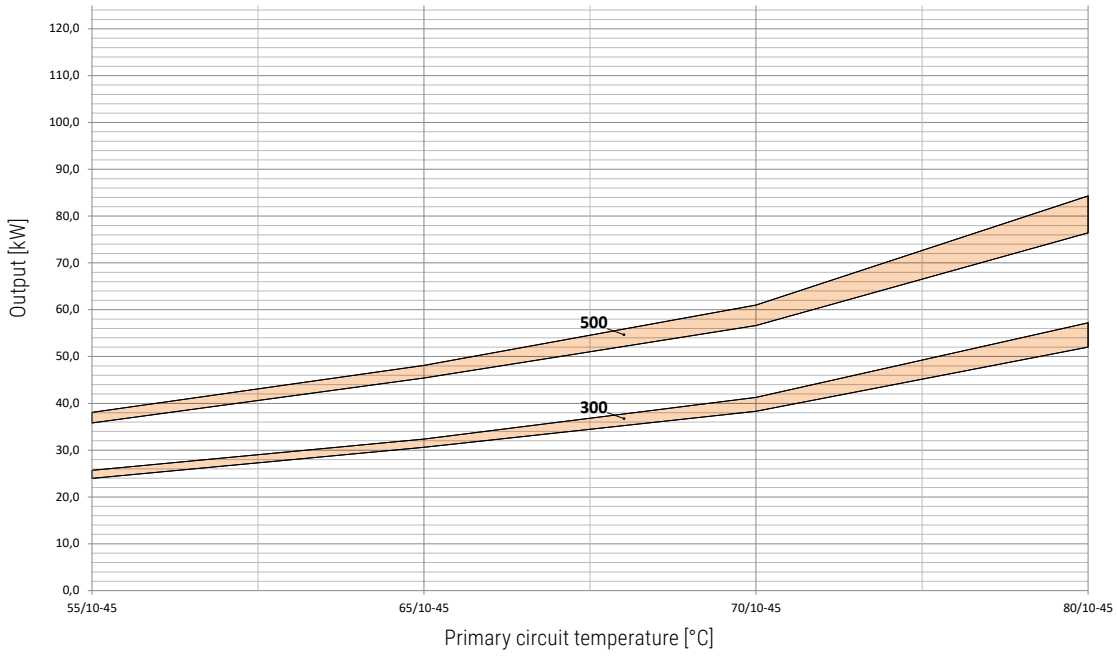


BOLLY® **1 HY XL INOX**

HEAT EXCHANGERS TECHNICAL DATA

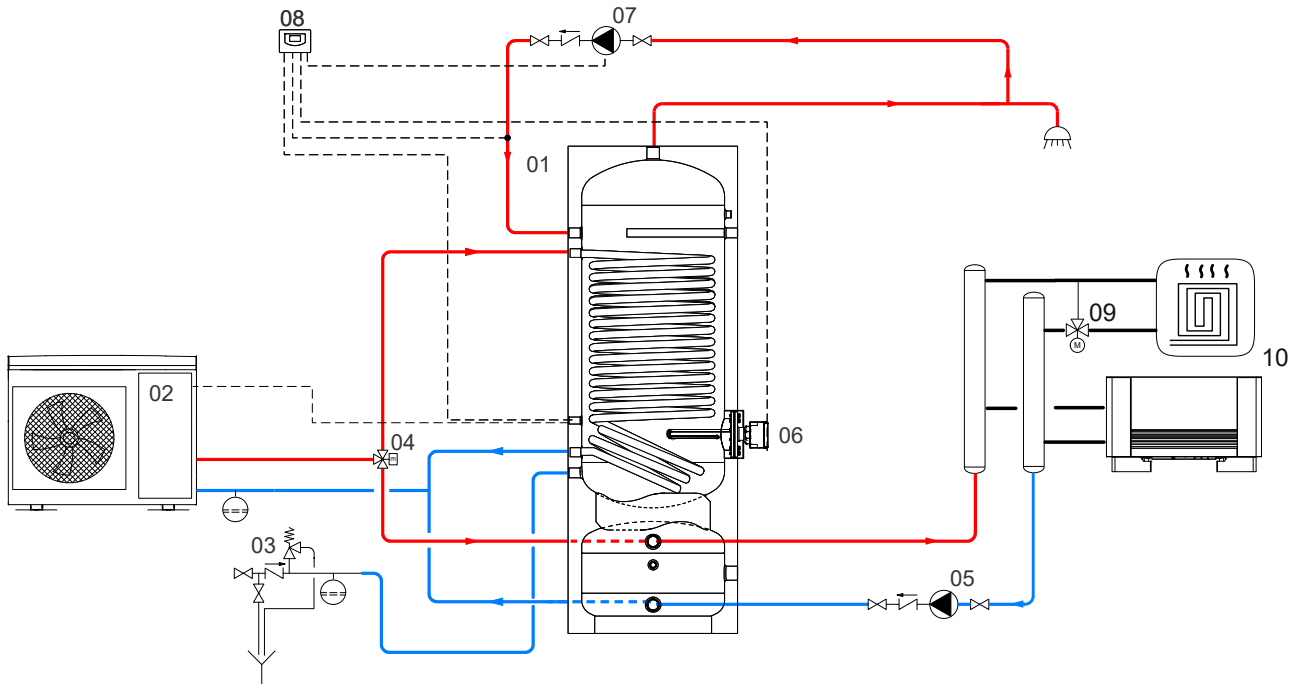


Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)



Model Bolly® 1 XL inox	300		500	
Flow rate [m³/h]	MAX	MIN	MAX	MIN
	3	1,5	3,5	1,75

EXAMPLE OF INSTALLATION WITH **BOLLY® 1 HY XL INOX**



01	BOLLY® 1 HY XL	04	Motorized 3-way valve	07	D.H.W. recirculation group	10	Heating units
02	Generator (Heat pump)	05	Circulation group for heating/cooling system	08	Electronic Control/thermostat		
03	Hydraulic safety group	06	Electric immersion heater	09	Thermostatic mixing valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

BOLLY® **2 HY XL INOX**

STAINLESS STEEL 316L CALORIFIER FOR DHW PRODUCTION WITH 2 FIXED EXCHANGERS AND INTEGRATED BUFFER SPECIFIC FOR HEAT PUMPS



316L STAINLESS STEEL DHW STORAGE

316L STAINLESS STEEL HEAT EXCHANGER

APPLICATION
Production and storage of domestic hot water (DHW). Heating/cooling buffer tank for heat pumps.

MATERIAL
- *D.H.W. STORAGE:* Stainless Steel 316 L suitable for domestic hot water
- *BUFFER TANK:* mild steel

HEAT EXCHANGER:
Nr. 2 fixed oversize stainless steel heat exchangers with double spiral coil

INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.

Grey PVC external lining.

CATHODE PROTECTION (DHW STORAGE)
Magnesium anode.

GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Flange for inspection and counterflange (standard) with provision for electric immersion heater.

WARRANTY
5 years (See general sales conditions and warranty)

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



BOLLY® 2 HY XL INOX

Model	HARD FOAM INSULATION	Power of combinable heat pump	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE		ENERGY EFFICIENCY CLASS
			Upper	Lower	
	Art. Nr.	[kWt]	[m²]		
300	3134052010100	9-14	2,7	0,8	**C**
500	3134052010101	14-20	4,0	1,4	**C**

BOLLY® 2 HY XL INOX CLASS A

Model	HARD FOAM INSULATION	Power of combinable heat pump	316L STAINLESS STEEL HEAT EXCHANGERS SURFACE		ENERGY EFFICIENCY CLASS
			Upper	Lower	
	Art. Nr.	[kWt]	[m²]		
300	3134052010105	9-14	2,7	0,8	**A**
500	3134052010106	14-20	4,0	1,4	**A**

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE			THREEPHASE				
		1,5 kW	**2** kW	**3** kW	**4** kW	**5** kW	**6** kW	**9** kW	**12** kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
300	237	425	319	213	159	//	//	//	//
500	417	746	560	373	280	224	//	//	//

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Thermometer

Art. Nr.
5032240000107
5 units box

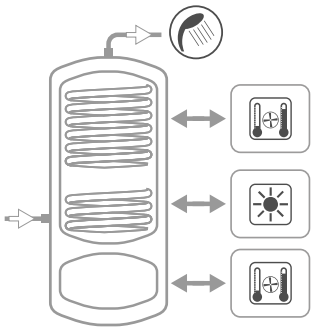


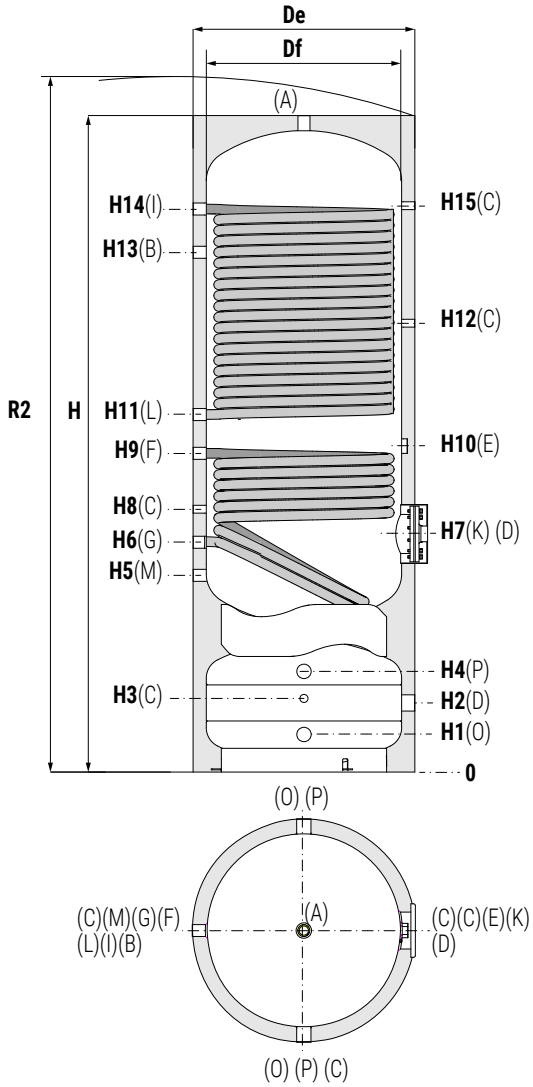
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 HY XL INOX**

STAINLESS STEEL 316L CALORIFIER FOR DHW PRODUCTION WITH 2 FIXED EXCHANGERS AND INTEGRATED BUFFER SPECIFIC FOR HEAT PUMPS

STORAGE		HEAT EXCHANGER		BUFFER TANK	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
6 bar	95 °C	12 bar	110 °C	4 bar	-10/+95 °C





A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation
D	Connection for for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F	Lower heat exchanger inlet
G	Lower heat exchanger outlet
K	Flange for inspection and counterflange (standard) with provision for electric immersion heater 1"1/2
M	Domestic cold water circuit inlet
O	Heating return/to generator
P	Heating delivery/from generator
L	Upper heat exchanger outlet
I	Upper heat exchanger inlet

Model	DHW Volume	Buffer tank volume	Weight	Df	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	H15
	[lt]		[kg]	[mm]																		
300	293	85	101	550	650	1895	2000	110	232	264	354	640	746	780	860	960	990	1070	1296	1510	1620	1630
500	503	115	152	650	750	2185	2310	125	230	245	335	655	765	795	875	1061	1085	1190	1494	1730	1874	1885

Model	A	B	C	D	E	F	G	M	O	P	L	I	K
	Connections F												[mm]
300	1"	1"	1"1/2	1"1/2	1"1/4	1"	1"	1"	1"1/4	1"1/4	1"	1"	Øi120/Øe180
500	1"	1"	1"1/2	1"1/2	1"1/4	1"	1"	1"	1"1/4	1"1/4	1"	1"	Øi120/Øe180

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 HY XL INOX**

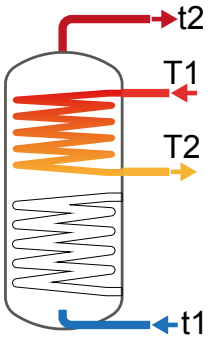
HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

UPPER HEAT EXCHANGER

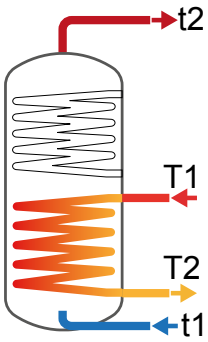
Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
300	4	30	31	22	14	20,4	25,8	32,8	45,7	438	444	567	792
	2	35	36	26	17	18,8	23,9	29,9	40,9	403	410	517	709
500	5	35	36	26	17	32,7	41,2	52,3	72,5	704	714	908	1261
	2,5	41	43	31	20	30,2	38,3	47,8	64,9	651	663	830	1128



Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
300	4	302	303	323	361	579	584	682	862	2517	247
	2	296	297	315	347	551	557	642	796	742	73
500	5	539	540	573	632	985	993	1148	1430	5813	570
	2,5	530	532	560	609	942	952	1085	1324	1719	169

LOWER HEAT EXCHANGER

Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
300	4	147	153	104	67	7,6	9,5	12,2	17,3	158	160	208	296
	2	163	171	116	75	7,1	8,9	11,4	15,9	147	150	192	272
500	5	138	143	100	65	13,5	17,1	21,9	30,8	288	292	376	532
	2,5	154	160	111	73	12,7	16,1	20,4	28,4	270	274	350	490



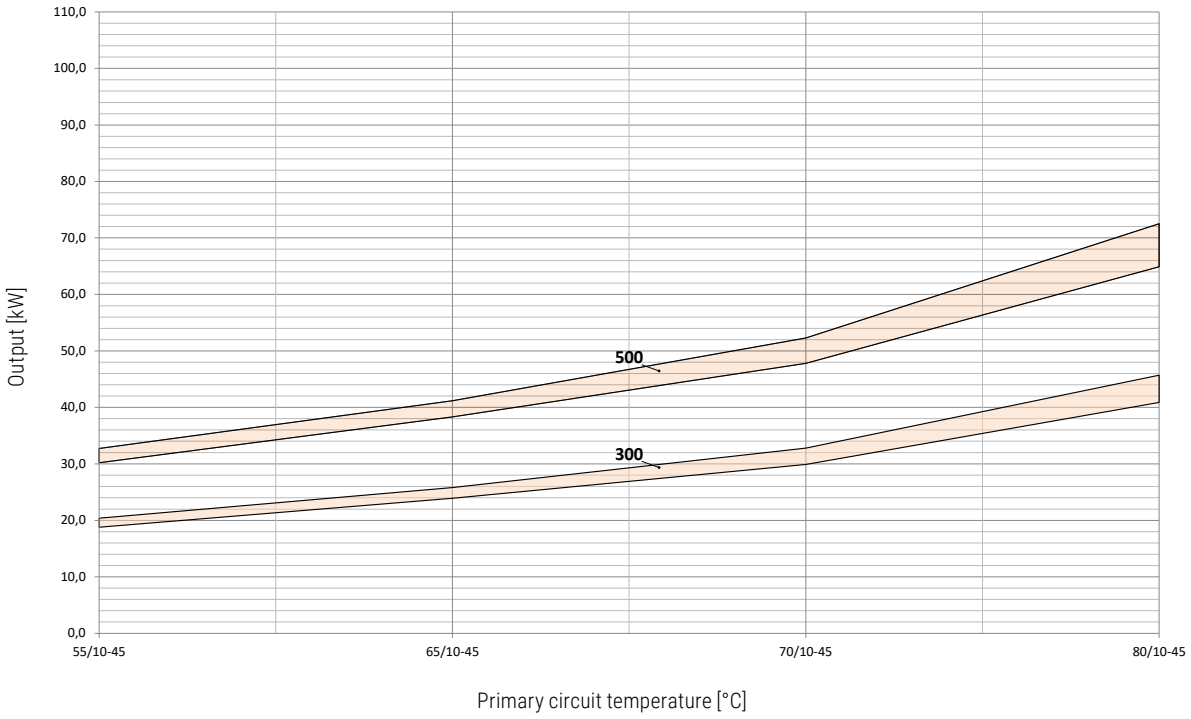
Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
300	4	445	445	453	468	545	547	585	655	999	98
	2	443	444	451	464	536	539	572	636	291	28
500	5	767	767	781	807	949	952	1019	1144	2481	243
	2,5	764	764	777	800	935	938	999	1111	728	71

BOLLY® **2 HY XL INOX**



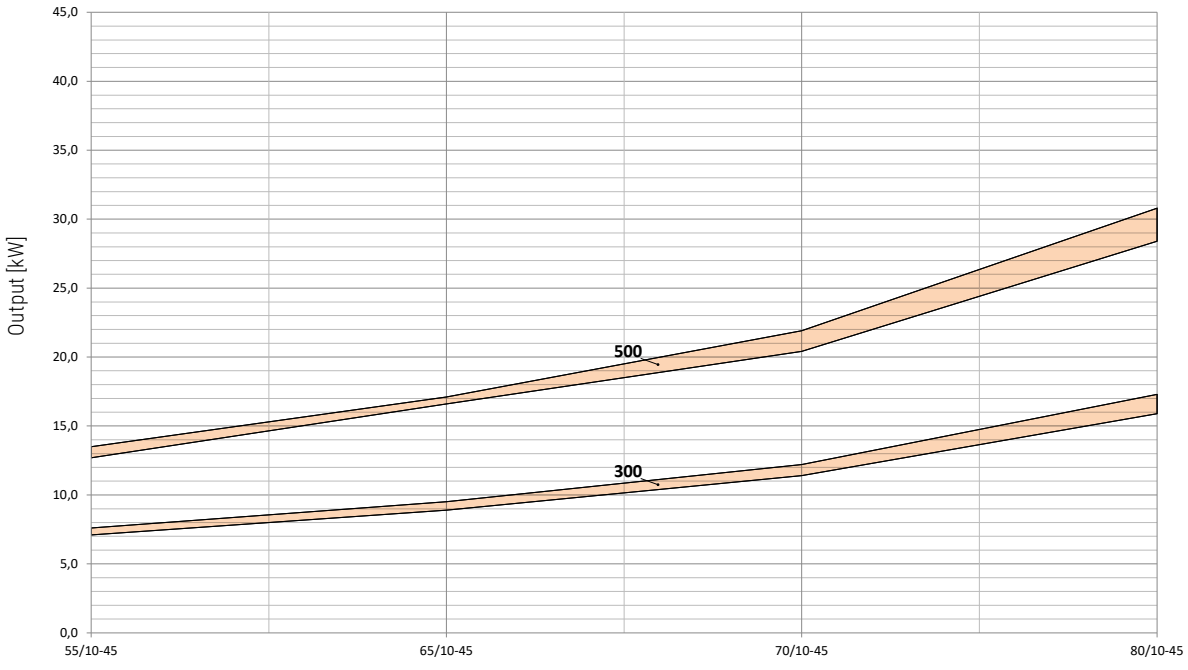
UPPER HEAT EXCHANGERS TECHNICAL DATA

Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)



Model Bolly® 2 HY XL INOX	**300**		**500**	
Flow rate [m³/h]	MAX	MIN	MAX	MIN
	3	1,5	3,5	1,75

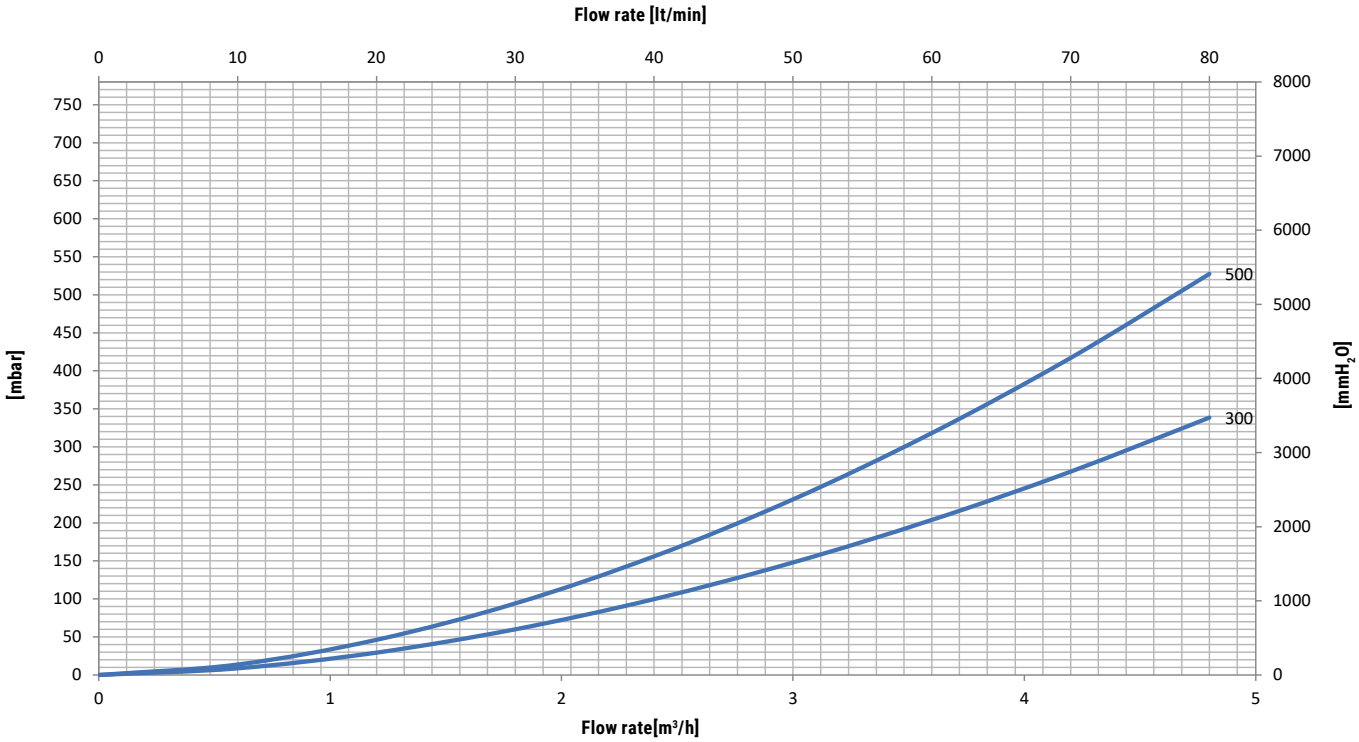
LOWER HEAT EXCHANGERS TECHNICAL DATA



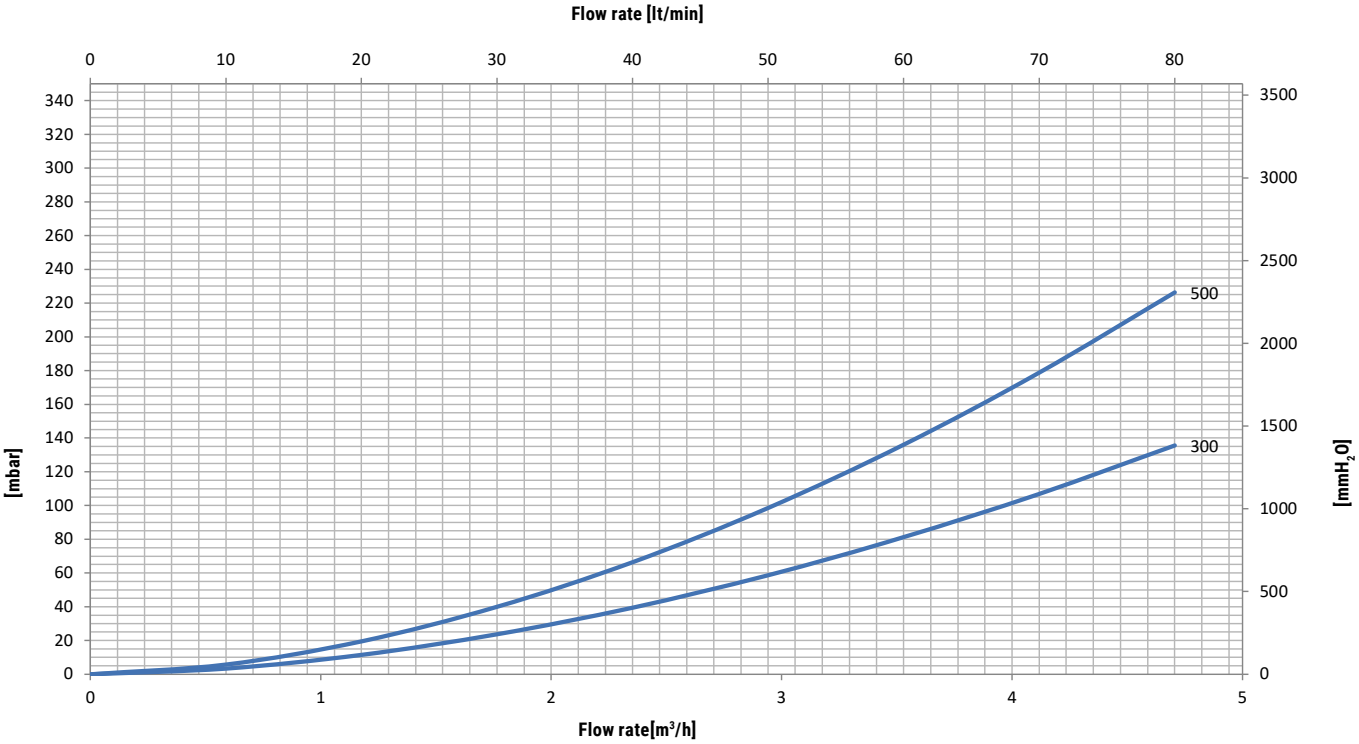
Model Bolly® 2 HY XL INOX	**300**		**500**	
Flow rate [m³/h]	MAX	MIN	MAX	MIN
	3	1,5	3,5	1,75

UPPER HEAT EXCHANGERS TECHNICAL DATA



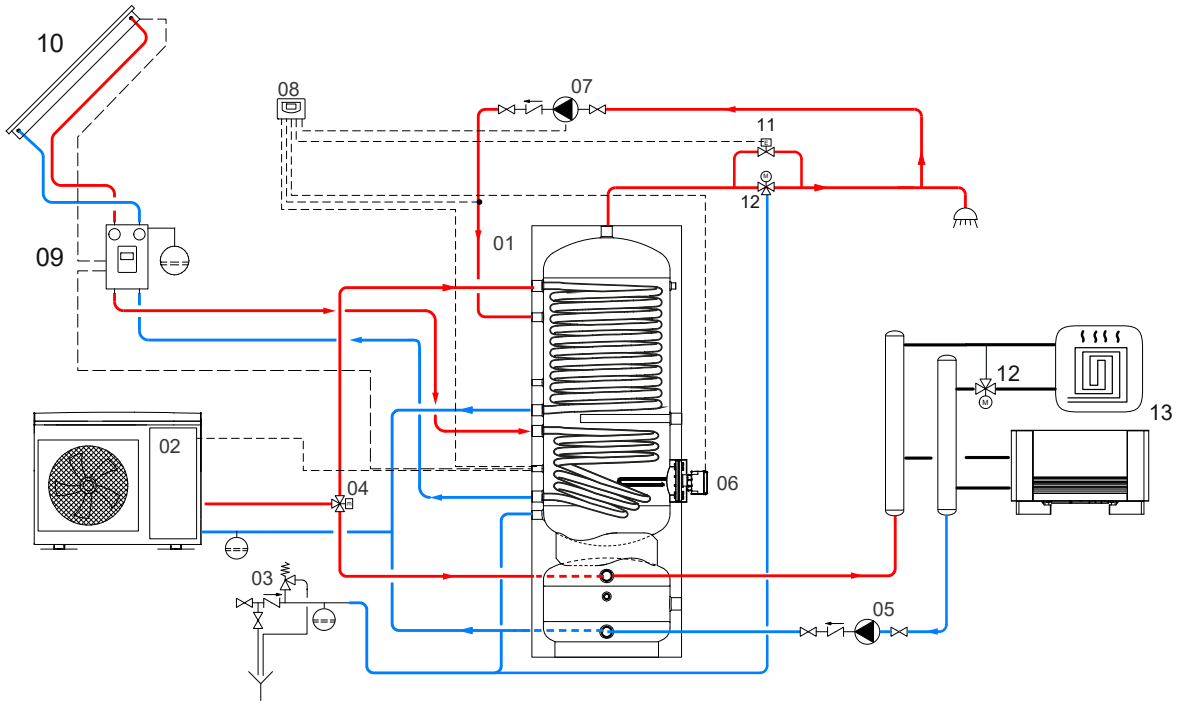


LOWER HEAT EXCHANGERS TECHNICAL DATA





EXAMPLE OF INSTALLATION WITH **BOLLY® 2 HY XL INOX**



1	Bolly 2 HY XL	5	Circulation group for heating/cooling system	9	Solar system circulation group	13	Heating units
2	Generator (Heat pump)	6	Electric immersion heater	10	Solar panels		
3	Hydraulic safety group	7	D.H.W. recirculation group	11	By-pass solenoid valve		
4	Motorized 3-way valve	8	Electronic Control/thermostat	12	Thermostatic mixing valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

COMBI **1 INOX**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L TANK IN TANK CALORIFIER



APPLICATION
Heating hot water storage and D.H.W. production.
MATERIAL
Buffer tank: Mild steel, painted externally and untreated internally.
D.H.W. storage: Stainless steel 316L suitable for D.H.W.
INSULATION
High thermal insulation with ecological polyurethane hard foam.
Grey PVC external lining.
TECHNICAL DESCRIPTION
Multi-Heat Energy tanks COMBI 1 are used in units with a typically discontinuous energy source for double use: heating systems and domestic hot water systems.

CATHODE PROTECTION
Chain magnesium anode
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L
STAINLESS STEEL
DHW STORAGE



COMBI 1 XB

Model	HARD FOAM **INSULATION**	STAINLESS STEEL 316L DHW STORAGE Volume	Surface	ENERGY EFFICIENCY CLASS
	Art. Nr.	[lt]	[m²]	
500	3270162314051	99	1,1	**C**
600	3270162314052	146	1,3	**C**

COMBI 1 XB

Model	**DISMOUNTABLE HARD FOAM** INSULATION	Volume	Surface	
	Art. Nr.	[lt]	[m²]	
800	3270162314053	191	1,6	**C**
1000	3270162314054	226	1,8	**C**

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Chain magnesium anode (Connection 3/4")

Art. Nr.	For models
5200000041007	800,1000
5200000041016	500,600
N° 2 chain anodes + insulated cap + gasket	



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

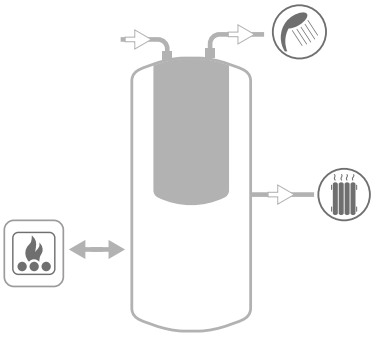


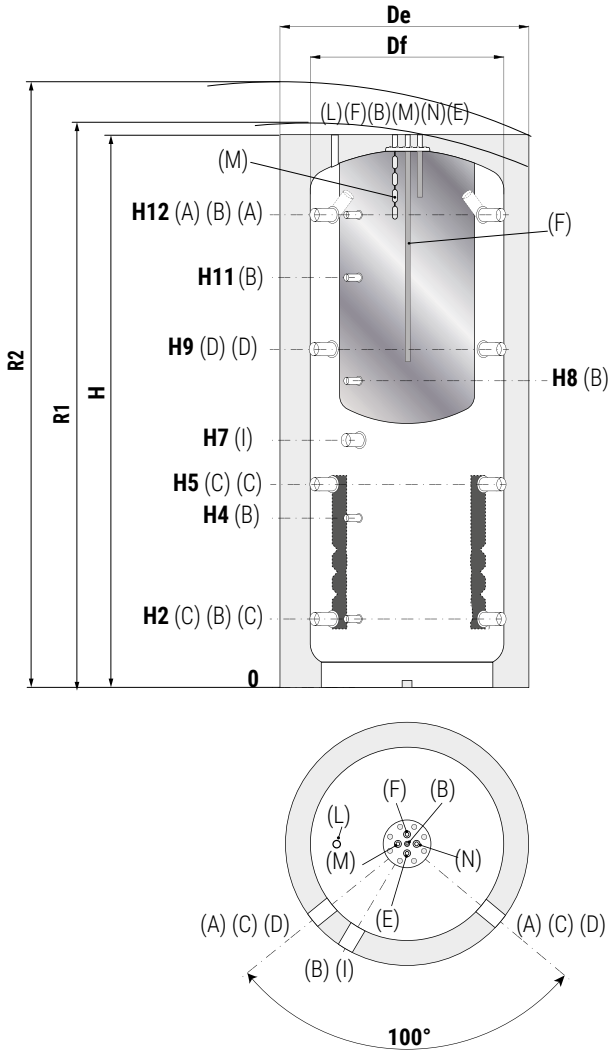
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

COMBI **1 INOX**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L TANK IN TANK CALORIFIER

TECHNICAL STORAGE		D.H.W. STORAGE	
Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	6 bar	95 °C





A	Heating delivery/From generator 1"1/2 G F
B	Connection for instrumentation 1/2" G F
C	Heating return/to generator 1"1/2 G F
D	Heating delivery 1"1/2 G F
E	Domestic hot water outlet 3/4" G F
F	Domestic cold water circuit inlet 3/4" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Air purge 1/2" G F
M	Connection for magnesium anode 3/4" G F
N	Recirculation 3/4" G F



Model	Volume	Weight	Df	De	H	R1	R2	H2	H4	H5	H7	H8	H9	H11	H12
	[lt]	[kg]	[mm]												
500	478	98	//	750	1650	//	1820	247	533	629	841	940	1011	1231	1343
600	560	101	//	750	1900	//	2050	247	582	695	915	1060	1144	1382	1593
800	805	116	790	950	1855	2030	2090	265	584	690	823	988	1115	1332	1541
1000	946	159	790	950	2160	2310	2370	265	656	787	998	1188	1309	1588	1831

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

COMBI **1 INOX**

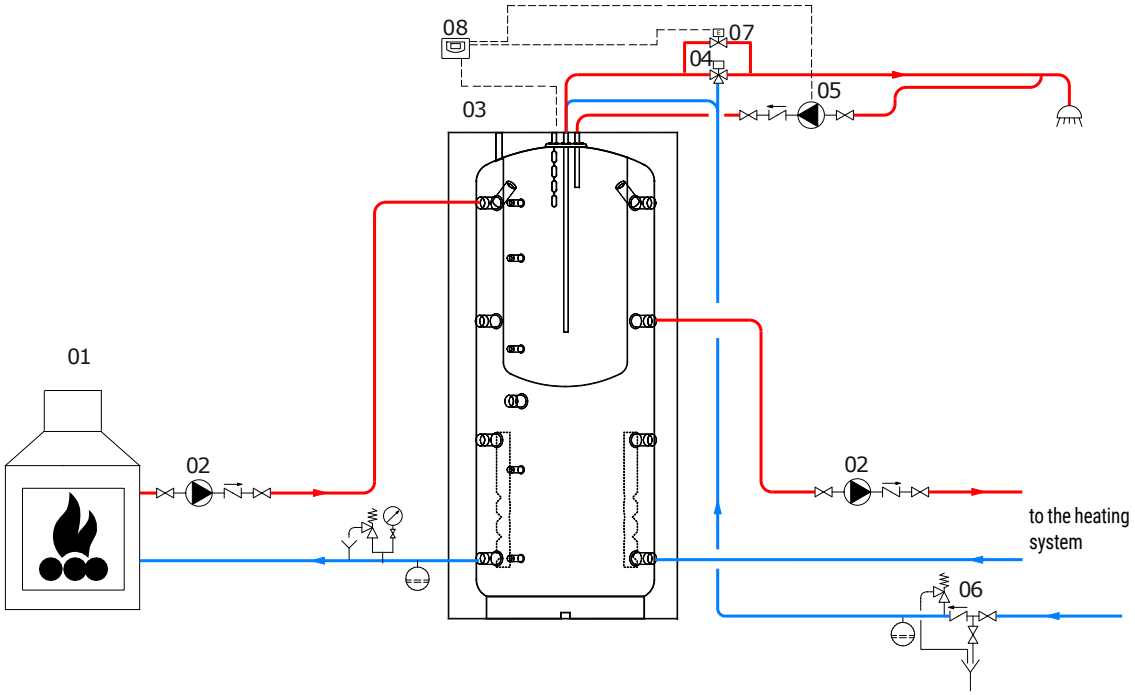
D.H.W. STORAGE PERFORMANCES



Model	DHW Volume	DHW exchanger surface	COMPLETE HEATED STORAGE VOLUME		UPPER PART HEATED STORAGE VOLUME	
			Max flowrate of sanitary water sustained from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off	Max flowrate of sanitary water sustained from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off
	[lt]	[m²]	[lt/min]	[lt]	[lt/min]	[lt]
500	99	1,1	2,5	10 lt/min: 198 lt 25 lt/min: 176 lt	1,57	10 lt/min: 148 lt 25 lt/min: 132 lt
600	146	1,3	3,0	10 lt/min: 239 lt 25 lt/min: 213 lt	1,86	10 lt/min: 179 lt 25 lt/min: 160 lt
800	191	1,6	3,5	10 lt/min: 320 lt 25 lt/min: 280 lt	2,17	10 lt/min: 240 lt 25 lt/min: 210 lt
1000	226	1,8	4,1	10 lt/min: 389 lt 25 lt/min: 330 lt	2,26	10 lt/min: 291 lt 25 lt/min: 250 lt



EXAMPLE OF INSTALLATION WITH **COMBI 1 INOX**



01	Generator	03	COMBI 1	05	D.H.W. recirculation group	07	By-pass solenoid valve
02	Heating system circulation group	04	Thermostatic mixing valve	06	Hydraulic safety group	08	Electronic Control/thermostat

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

COMBI **2 INOX**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L TANK IN TANK CALORIFIER AND 1 FIXED HEAT EXCHANGER



APPLICATION
Heating hot water storage and D.H.W. production.
MATERIAL
Buffer tank: Mild steel, painted externally and untreated internally.
D.H.W. storage: Stainless steel 316L suitable for D.H.W.
HEAT EXCHANGER:
Nr. 1 fixed heat exchanger.
TECHNICAL DESCRIPTION
Multi-Heat Energy tanks Combi 2 are used in units with a typically discontinuous energy source for double use: heating systems and domestic hot water systems.

INSULATION
High thermal insulation with ecological polyurethane hard foam. Grey PVC external lining.
CATHODE PROTECTION
Chain magnesium anode
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L
STAINLESS STEEL
DHW STORAGE



COMBI 2 XB

Model	HARD FOAM **INSULATION**	STAINLESS STEEL 316L DHW STORAGE Volume	STAINLESS STEEL 316L DHW STORAGE Surface	FIXED HEAT EXCHANGER Volume	FIXED HEAT EXCHANGER Surface	ENERGY EFFICIENCY CLASS
	Art. Nr.	[lt]	[m²]	[lt]	[m²]	ErP
500	3270162314151	99	1,1	11,5	1,9	**C**
600	3270162314152	146	1,3	18	2,8	**C**

Model	**DISMOUNTABLE HARD FOAM** INSULATION	Volume	Surface	Volume	Surface	ErP
	Art. Nr.	[lt]	[m²]	[lt]	[m²]	
800	3270162314153	191	1,6	20	3,1	**C**
1000	3270162314154	226	1,8	24	3,7	**C**

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Chain magnesium anode (Connection 3/4")

Art. Nr.	For models
5200000041007	800,1000
5200000041016	500,600
N° 2 chain anodes + insulated cap + gasket	



Buffer tanks connecting kit

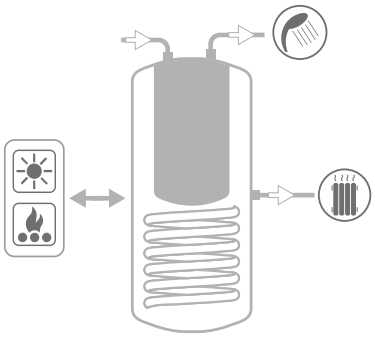
Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

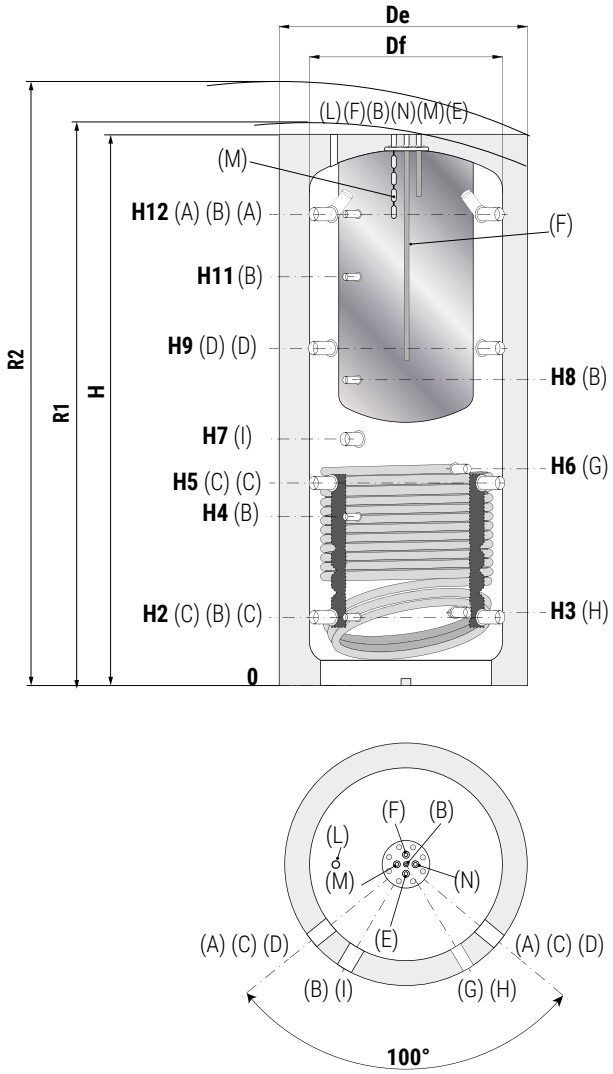


COMBI **2 INOX**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L TANK IN TANK CALORIFIER AND 1 FIXED HEAT EXCHANGER

TECHNICAL STORAGE		D.H.W. STORAGE		FIXED HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	6 bar	95 °C	12 bar	110 °C





A	Heating delivery/From generator 1"1/2 G F
B	Connection for instrumentation 1/2" G F
C	Heating return/to generator 1"1/2 G F
D	Heating delivery 1"1/2 G F
E	Domestic hot water outlet 3/4" G F
F	Domestic cold water circuit inlet 3/4" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Air purge 1/2" G F
M	Connection for magnesium anode 3/4" G F
N	Recirculation 3/4" G F



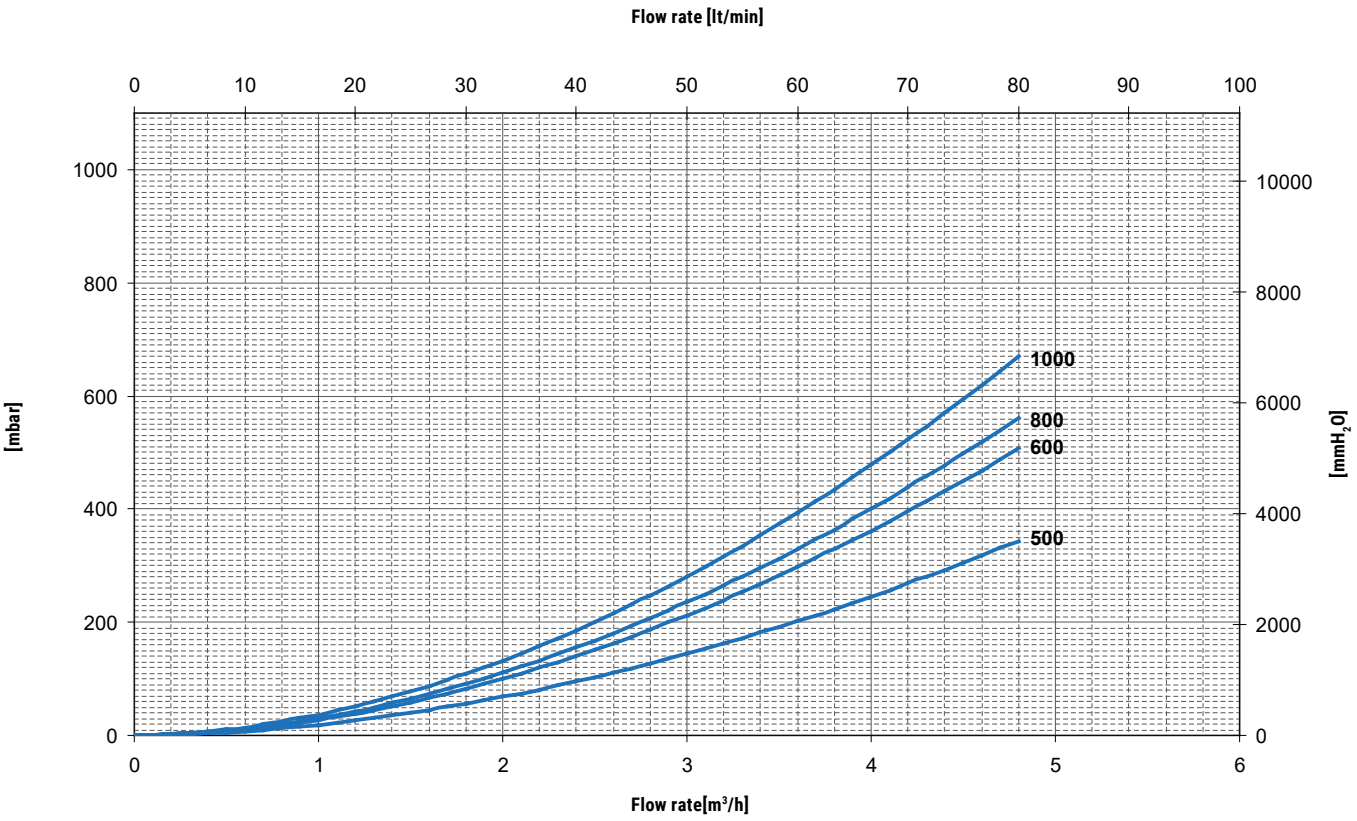
Model	Volume	Weight	Df	De	H	R1	R2	H2	H3	H4	H5	H6	H7	H8	H9	H11	H12
	[lt]	[kg]	[mm]														
500	478	105	//	750	1650	//	1820	247	260	533	629	744	841	940	1011	1231	1343
600	560	122	//	750	1900	//	2050	247	260	582	695	855	915	1060	1144	1382	1593
800	805	140	790	950	1855	2030	2090	265	278	584	690	762	823	988	1115	1332	1541
1000	946	201	790	950	2160	2310	2370	265	284	656	787	953	998	1188	1309	1588	1831

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Model	DHW Volume	DHW exchanger surface	COMPLETE HEATED STORAGE VOLUME		UPPER PART HEATED STORAGE VOLUME	
			Max flowrate of sanitary water sustained from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off	Max flowrate of sanitary water sustained from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off
	[lt]	[m²]	[lt/min]	[lt]	[lt/min]	[lt]
500	99	1,1	2,5	10 lt/min: 198 lt 25 lt/min: 176 lt	1,57	10 lt/min: 148 lt 25 lt/min: 132 lt
600	146	1,3	3,0	10 lt/min: 239 lt 25 lt/min: 213 lt	1,86	10 lt/min: 179 lt 25 lt/min: 160 lt
800	191	1,6	3,5	10 lt/min: 320 lt 25 lt/min: 280 lt	2,17	10 lt/min: 240 lt 25 lt/min: 210 lt
1000	226	1,8	4,1	10 lt/min: 389 lt 25 lt/min: 330 lt	2,26	10 lt/min: 291 lt 25 lt/min: 250 lt

LOWER HEAT EXCHANGERS PRESSURE DROP

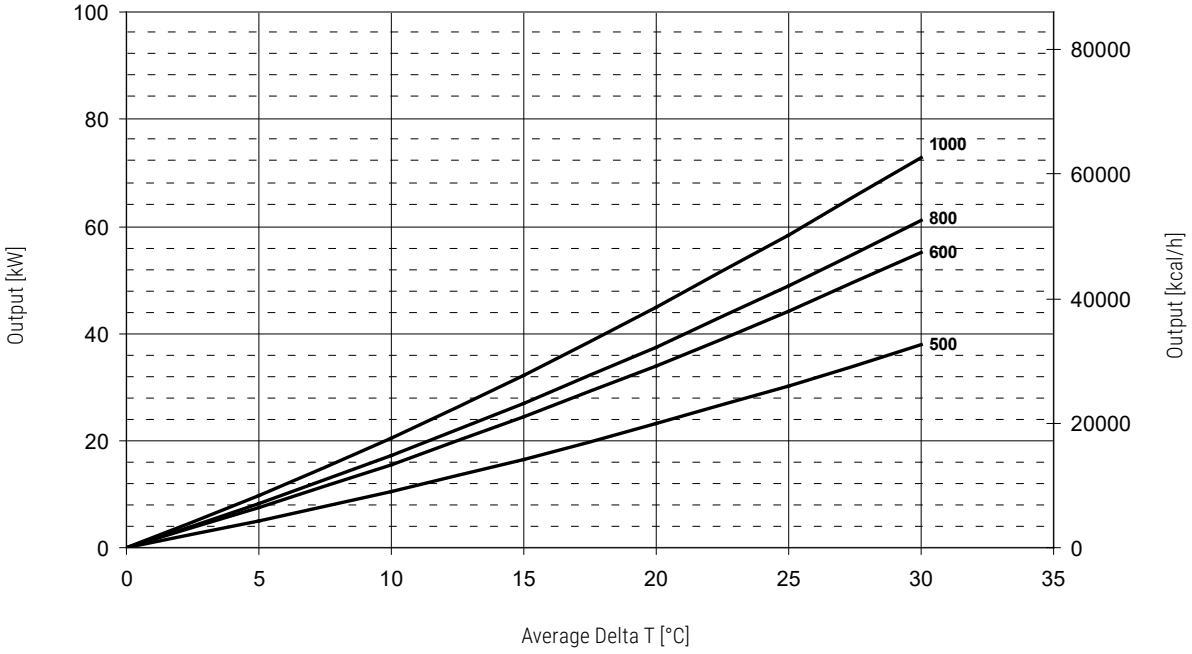


COMBI **2 INOX**

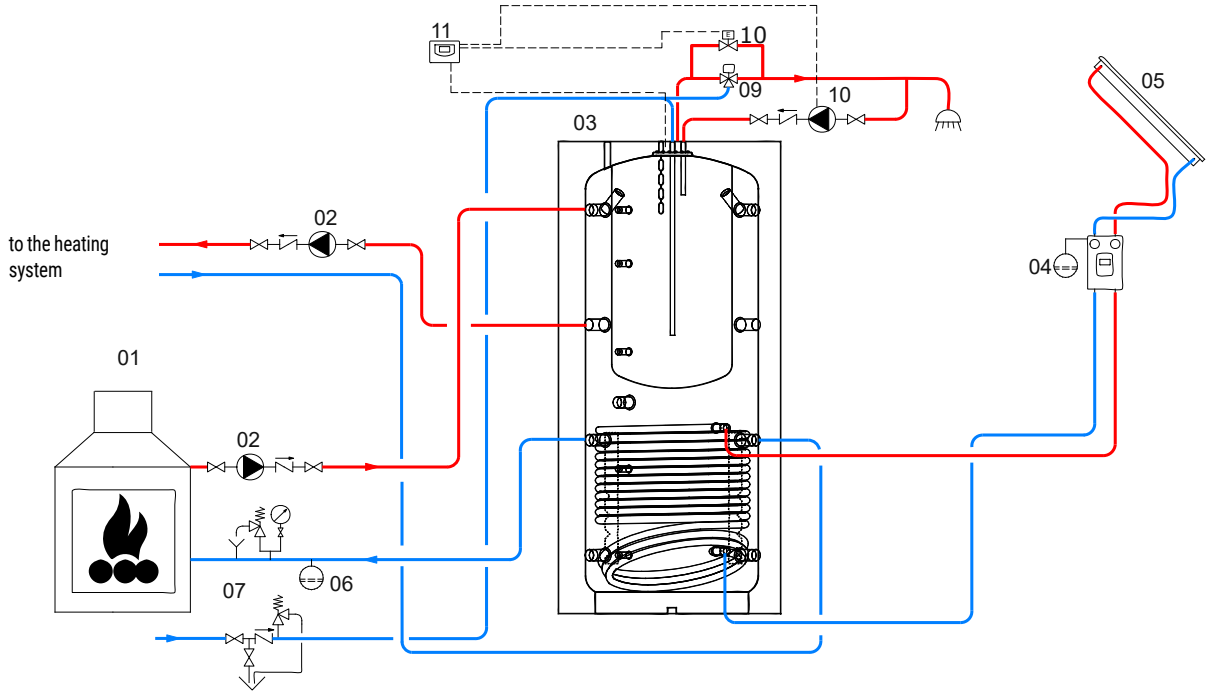
LOWER HEAT EXCHANGERS TECHNICAL DATA



Output of the Combi 2 lower heat exchangers depending on the average DeltaT between primary and accumulation considering flow rate 3 m³/h.
Thermal output is given in both kW or kcal/h in terms of average temperature difference between primary and secondary circuit, all for a range of primary 3 m³/h. For example, a 1000 liters COMBI 2 with a water flow of 3 m³/h at 80 °C inlet and outlet at 70 °C, has on the storage of water an average temperature of 60 °C, the main difference of temperature will be: (80 +70) / 20-60 = 15 °C and therefore you can exchange up to approximately 32 kW.



EXAMPLE OF INSTALLATION WITH **COMBI 2 INOX**



01	Generator	04	Solar system circulation group	07	Hydraulic safety group	10	By-pass solenoid valve
02	Heating system circulation group	05	Solar panels	08	D.H.W. recirculation group	11	Electronic Control/thermostat
03	COMBI 2	06	Expansion vessel	09	Thermostatic mixing valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

COMBI **3 INOX**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L TANK IN TANK CALORIFIER AND 2 FIXED HEAT EXCHANGERS



APPLICATION
Heating hot water storage and D.H.W. production.
MATERIAL
Buffer tank: Mild steel, painted externally and untreated internally.
D.H.W. storage: Stainless steel 316L suitable for D.H.W.
HEAT EXCHANGERS:
Nr. 2 fixed heat exchangers.
TECHNICAL DESCRIPTION
Multi-Heat Energy tanks Combi 3 are used in units with a typically discontinuous energy source for double use: heating systems and domestic hot water systems.

INSULATION
High thermal insulation with ecological polyurethane hard foam. Grey PVC external lining.
CATHODE PROTECTION
Chain magnesium anode
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L
STAINLESS STEEL
DHW STORAGE



COMBI 3 XB

Model	HARD FOAM **INSULATION**	STAINLESS STEEL 316L DHW STORAGE Volume	STAINLESS STEEL 316L DHW STORAGE Surface	UPPER HEAT EXCHANGER Volume	UPPER HEAT EXCHANGER Surface	LOWER HEAT EXCHANGER Volume	LOWER HEAT EXCHANGER Surface	ENERGY EFFICIENCY CLASS
	Art. Nr.	[lt]	[m²]	[lt]	[m²]	[lt]	[m²]	ErP
500	3270162314251	99	1,1	8	1,3	11,5	1,9	**C**
600	3270162314252	146	1,3	12	1,9	18	2,8	**C**

Model	**DISMOUNTABLE HARD FOAM** INSULATION	Volume	Surface	Volume	Surface	Volume	Surface	ErP
	Art. Nr.	[lt]	[m²]	[lt]	[m²]	[lt]	[m²]	
800	3270162314253	191	1,6	16	2,4	20	3,1	**C**
1000	3270162314254	226	1,8	20	3,1	24	3,7	**C**

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Chain magnesium anode (Connection 3/4")

Art. Nr.	For models
5200000041007	800,1000
5200000041016	500,600
N° 2 chain anodes + insulated cap + gasket	



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

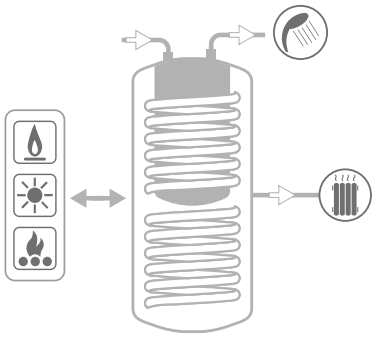


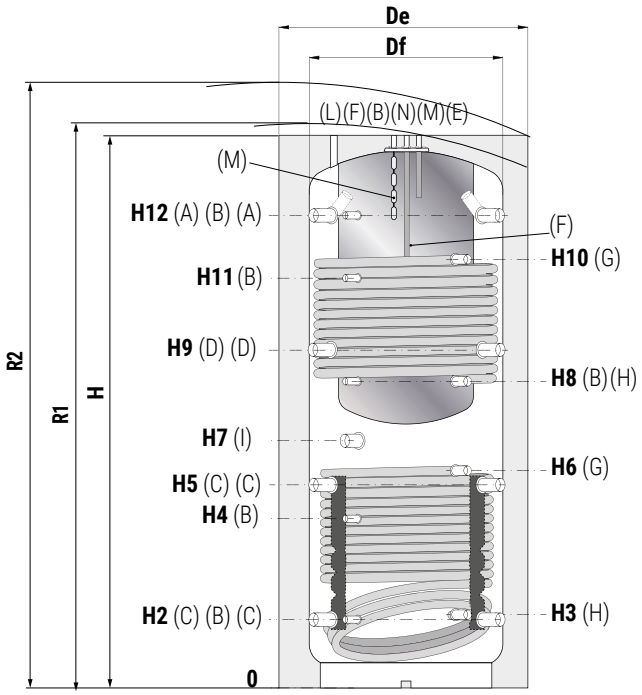
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

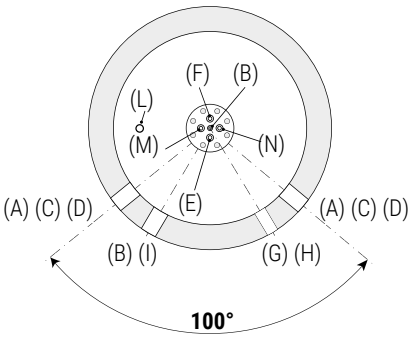
COMBI **3 INOX**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L TANK IN TANK CALORIFIER AND 2 FIXED HEAT EXCHANGERS

TECHNICAL STORAGE		D.H.W. STORAGE		FIXED HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	6 bar	95 °C	12 bar	110 °C







A	Heating delivery/From generator 1"1/2 G F
B	Connection for instrumentation 1/2" G F
C	Heating return/to generator 1"1/2 G F
D	Heating delivery 1"1/2 G F
E	Domestic hot water outlet 3/4" G F
F	Domestic cold water circuit inlet 3/4" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Air purge 1/2" G F
M	Connection for magnesium anode 3/4" G F
N	Recirculation 3/4" G F



Model	Volume	Weight	Df	De	H	R1	R2	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
	[lt]	[kg]	[mm]															
500	478	120	//	750	1650	//	1820	247	260	533	629	744	841	940	1011	1231	1231	1343
600	560	150	//	750	1900	//	2050	247	260	582	695	855	915	1060	1144	1500	1382	1593
800	805	198	790	950	1855	2030	2090	265	278	584	690	762	823	988	1115	1428	1332	1541
1000	946	240	790	950	2160	2310	2370	265	284	656	787	953	998	1188	1309	1748	1588	1831

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

COMBI **3 INOX**

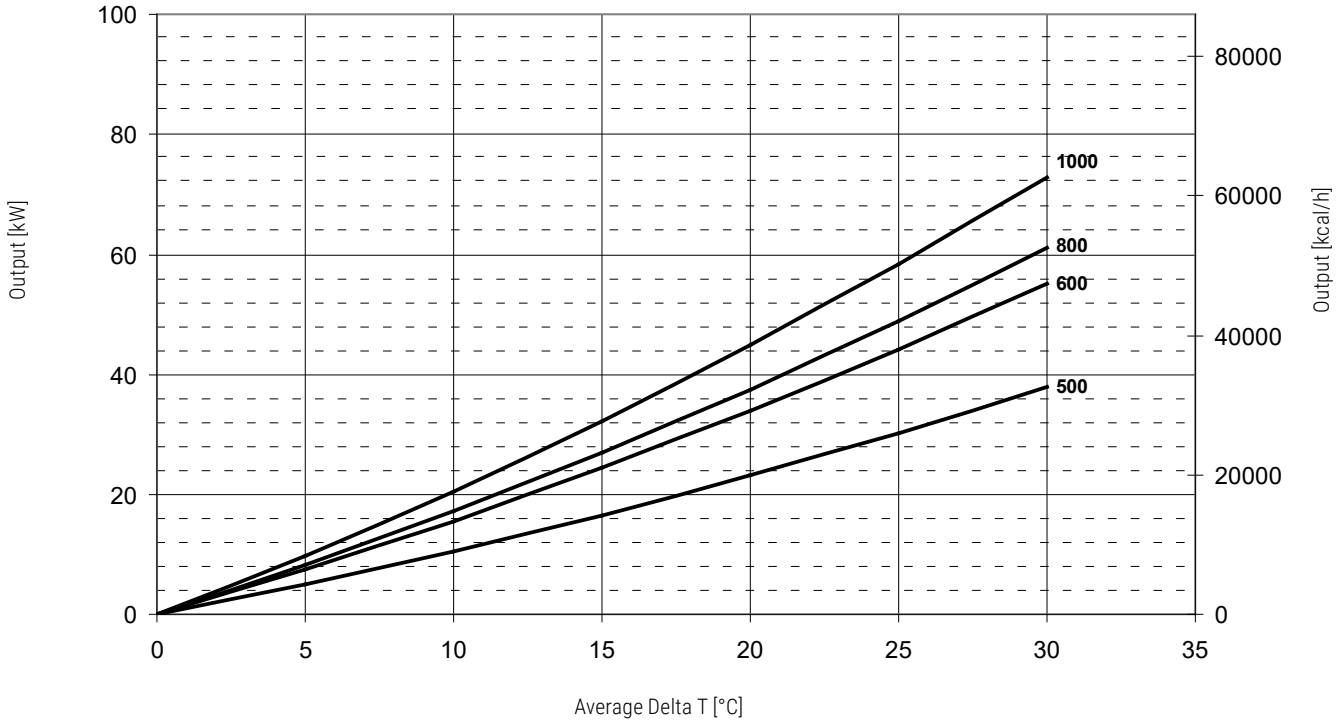
D.H.W. STORAGE PERFORMANCES



Model	DHW Volume	DHW exchanger surface	COMPLETE HEATED STORAGE VOLUME		UPPER PART HEATED STORAGE VOLUME	
			Max flowrate of sanitary water sustained from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off	Max flowrate of sanitary water sustained from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off
	[lt]	[m²]	[lt/min]	[lt]	[lt/min]	[lt]
500	99	1,1	2,5	10 lt/min: 198 lt 25 lt/min: 176 lt	1,57	10 lt/min: 148 lt 25 lt/min: 132 lt
600	146	1,3	3,0	10 lt/min: 239 lt 25 lt/min: 213 lt	1,86	10 lt/min: 179 lt 25 lt/min: 160 lt
800	191	1,6	3,5	10 lt/min: 320 lt 25 lt/min: 280 lt	2,17	10 lt/min: 240 lt 25 lt/min: 210 lt
1000	226	1,8	4,1	10 lt/min: 389 lt 25 lt/min: 330 lt	2,26	10 lt/min: 291 lt 25 lt/min: 250 lt

UPPER HEAT EXCHANGERS TECHNICAL DATA

Output of the Combi 3 upper heat exchangers depending on the average DeltaT between primary and accumulation considering flow rate 3 m³/h)

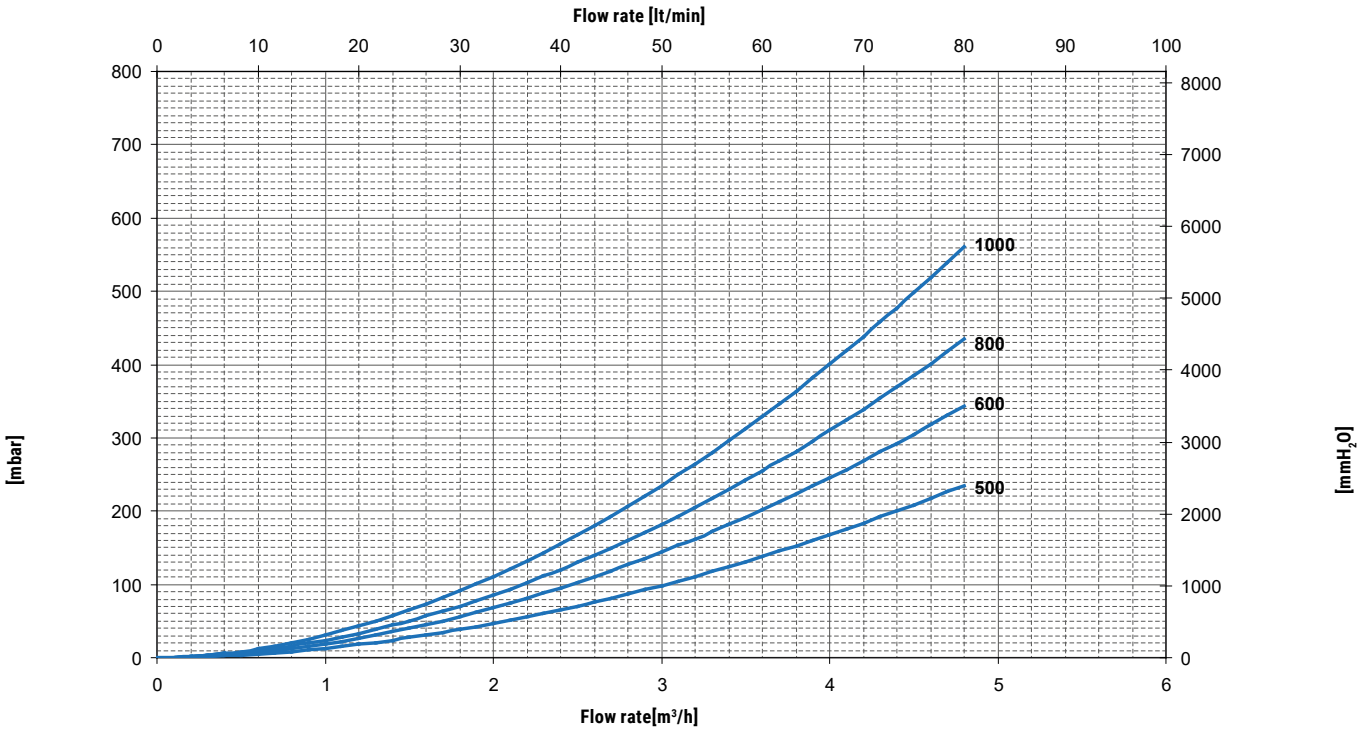


Please note: for LOWER heat exchangers see technical data of model Combi 2 INOX

COMBI **3 INOX**

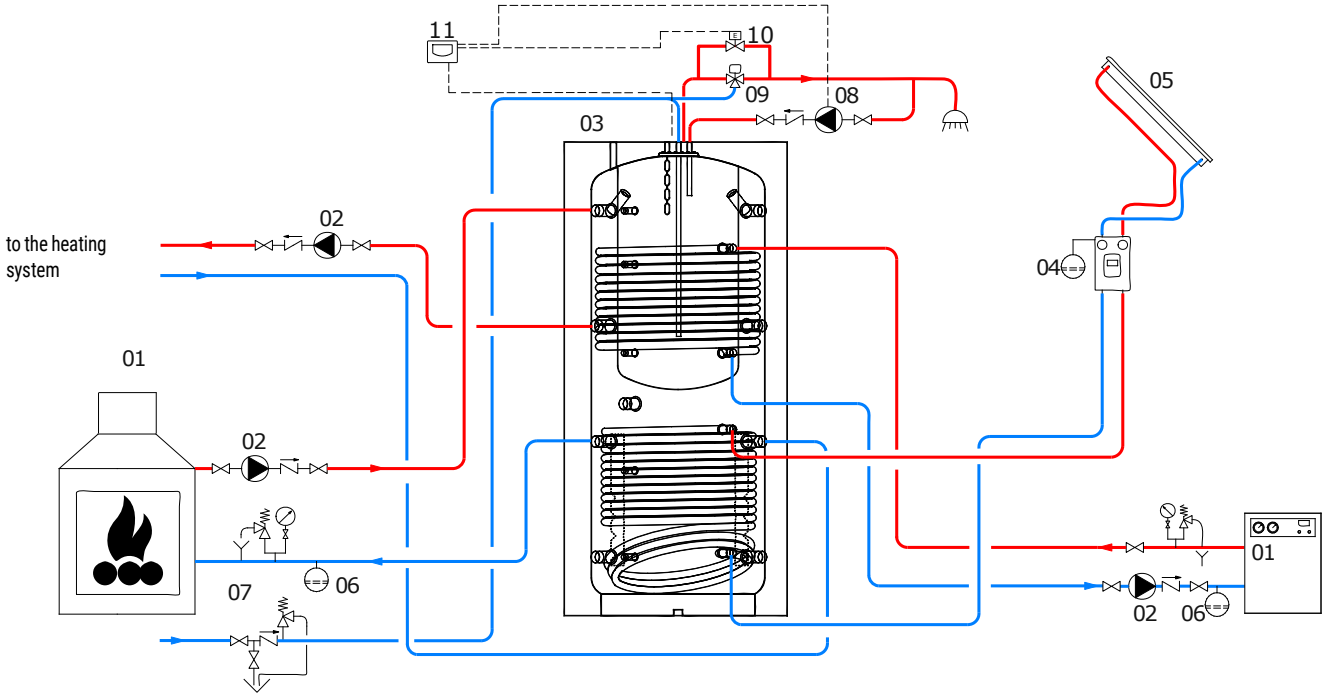
UPPER HEAT EXCHANGERS PRESSURE DROP





Please note: for LOWER heat exchangers see pressure drop of model Combi 2 INOX

EXAMPLE OF INSTALLATION WITH **COMBI 3 INOX**

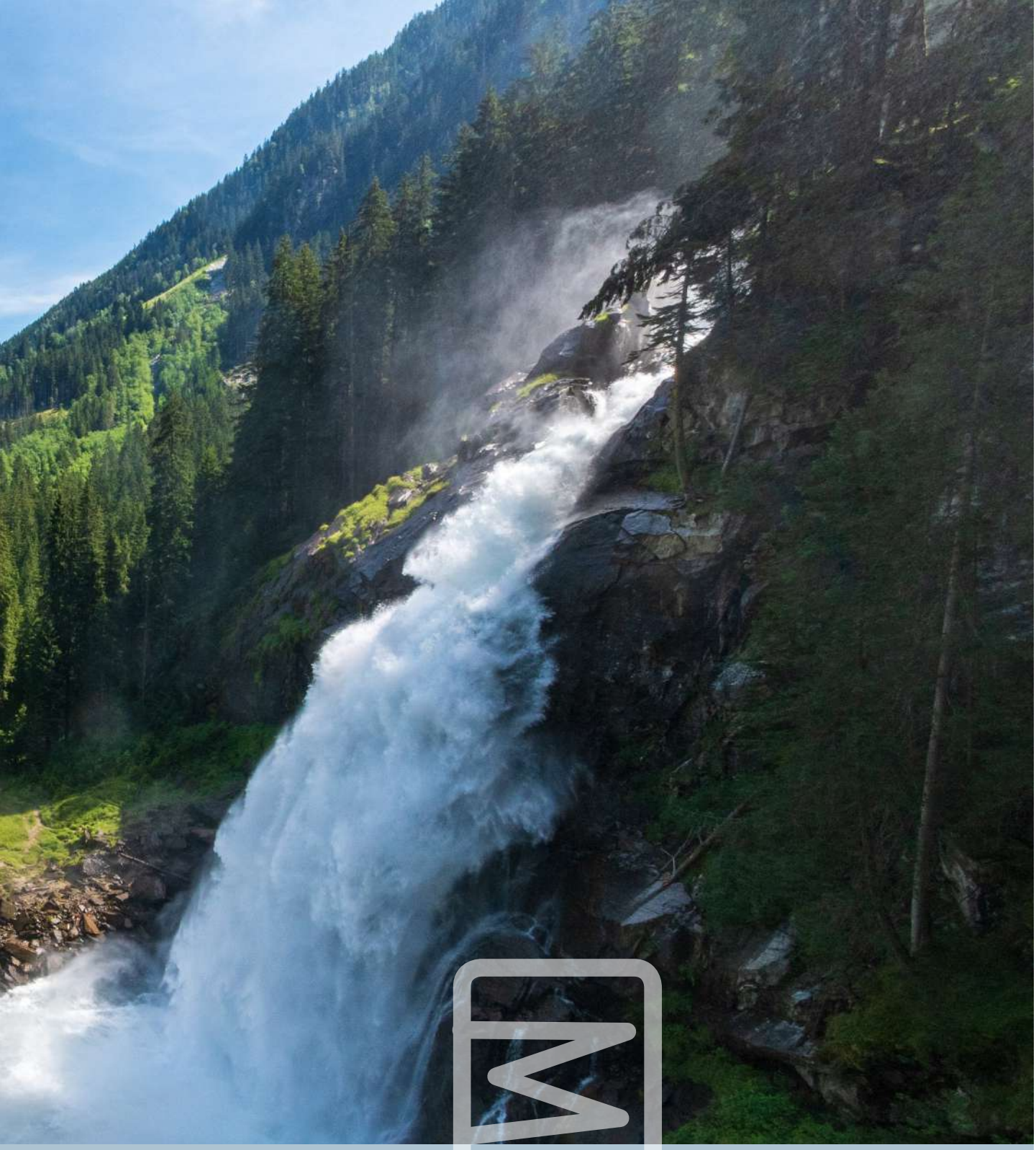


01	Generator	04	Solar system circulation group	07	Hydraulic safety group	10	By-pass solenoid valve
02	Heating system circulation group	05	Solar panels	08	D.H.W. recirculation group	11	Electronic Control/thermostat
03	COMBI 3	06	Expansion vessel	09	Thermostatic mixing valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.



CALORIFIERS FOR HEAT PUMPS



CALORIFIERS FOR HEAT PUMP
RANGE

DHW production







	BOLLY® PDC	BOLLY® XL (Polywarm®)	BOLLY® HY (Polywarm®)
Heat exchanger model	- Patented heat-exchange module -Additional ixed coil heat exchan-ger	Fixed coil heat exchanger	- Fixed coil heat exchanger - Integrated energy buffer hot-cold
Number of heat exchangers			
Energy source			
Energy efficiency class	**A-B-C**	**B-C**	**B-C**
Insulation	- Polyurethane hard foam	- Polyurethane hard foam - Dismountable polyester fleece	- Polyurethane hard foam
Available range	300 ÷ 1000	200 ÷ 1500	200 ÷ 500
Installation	floor standing	floor standing	floor standing
Suggested Application	Heat pump and other energy source installations (traditional, solar)	Heat pump and other energy source installations (solar)	Heat pump and other energy source installations (solar)

			
ACQUAMAS®	PUFFERMAS® DOMUS	ECO-COMBI PDC	ECO-COMBI PDC HY
- MACS® module for DHW production	- DHW production hydronic module	- Corrugated Stainless steel 316L coil for D.H.W. production - Additional fixed coil heat exchangers	- Fixed coil heat exchanger - Corrugated Stainless steel 316L coil for D.H.W. production - Integrated buffer tank
			
			
C	**B**	**C**	**C**
Polyurethane hard foam	Polyurethane hard foam	Polyurethane hard foam	Polyurethane hard foam
500, 600	200÷ 400	300 ÷ 800	200,300
floor standing	floor standing	floor standing	floor standing
Heat pump and other energy source installations (traditional, solar)	Heat pump and other energy source installations (biomass, solar)	Heat pump and other energy source installations (biomass, solar)	Heat pump and other energy source installations (solar)

BOLLY® **1 PDC**

POLYWARM® COATED TANK FOR DHW ACCUMULATION SPECIFIC FOR COMBINATION WITH HEAT PUMP



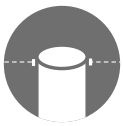
APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
EXCHANGE MODULE
Counter-flow heat exchanger system with heat load from the top.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Inspection flange with connection for electric heater.
WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.


POLYWARM® COATED DHW STORAGE



BIM MODEL AVAILABLE


ALIGNED

BOLLY® 1 PDC WB

Model	HARD FOAM INSULATION Art. Nr.	Heat pump max output [kW]	ENERGY EFFICIENCY CLASS
300	3104162330022	15	**B**
500	3104162330023	22	**C**



BOLLY® 1 PDC WB CLASS A

Model	HARD FOAM INSULATION Art. Nr.	Heat pump max output [kW]	ENERGY EFFICIENCY CLASS
300	3104162330025	15	**A**
500	3104162330026	22	**A**

NEW

BOLLY® 1 PDC DOUBLE CYCLE WB

Model	HARD FOAM INSULATION Art. Nr.	Heat pump max output [kW]	ENERGY EFFICIENCY CLASS
500	3104162330057	30	**C**
800	3104162330058	40	**B**
1000	3104162330059	40	**C**

ACCESSORIES

Titanium anode

Art. Nr.	**Model**
5200000000008	300
5200000000011	500÷1000



Electric immersion heater

Art. Nr.	Output [kW]
5240000000052	2



HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Thermometer

Art. Nr.
5032240000107
5 units box

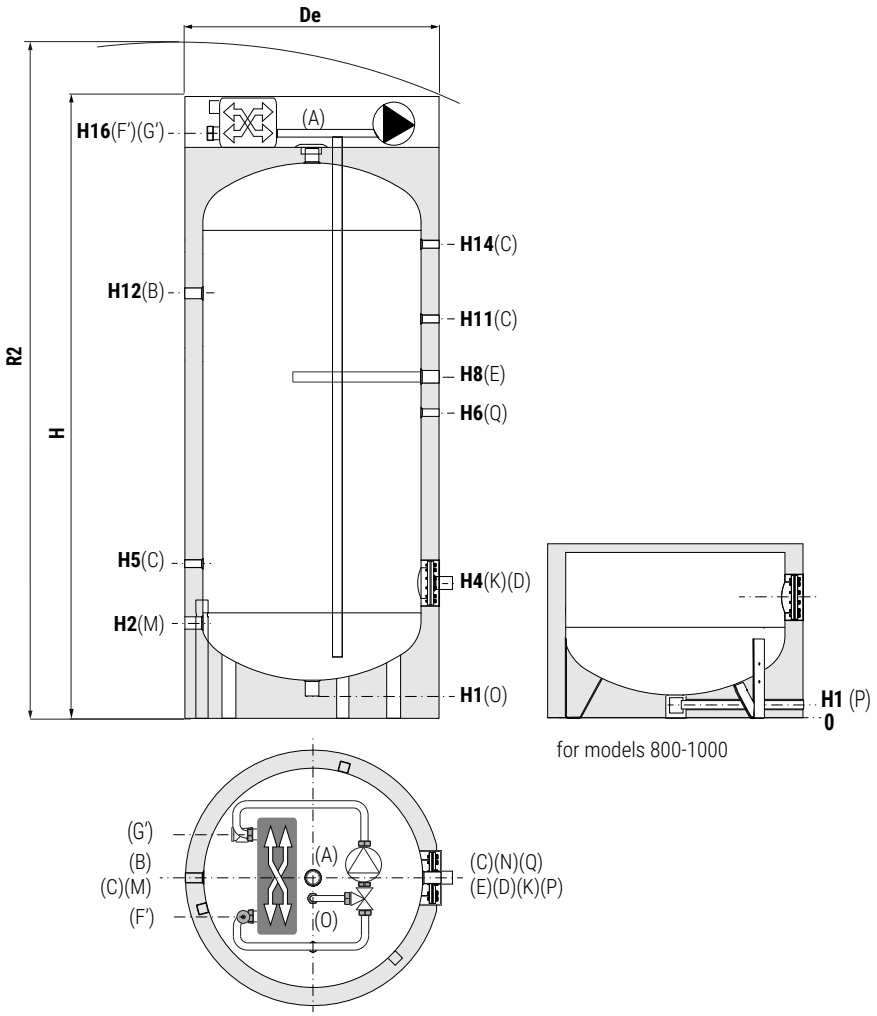


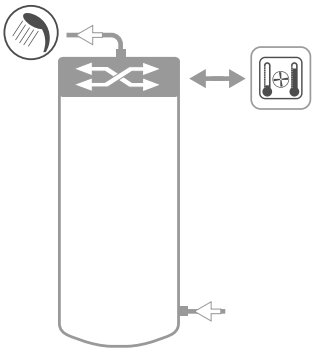
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **1 PDC**

POLYWARM® COATED TANK FOR DHW ACCUMULATION SPECIFIC FOR COMBINATION WITH HEAT PUMP

STORAGE		EXCHANGE MODULE	
Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	10 bar	110 °C





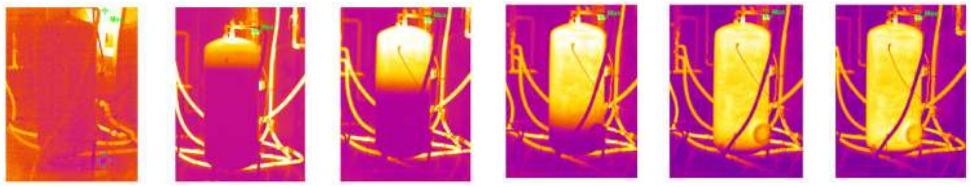
See TECHNICAL SUPPORT chapter for example of installation

A	Domestic hot water outlet 1"1/4 G F
B	Recirculation. 1" G F
C	Connection for instrumentation. 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F'	Primary circuit inlet.
G'	Primary circuit outlet
K	Flange for inspection
M	Domestic water inlet. 1" G F
O	Drain
P	Drain > 500 lt
Q	Connection for thermometer 1/2" G F (Only BOLLY PDC DOUBLE CYCLE)

Model	Volume	De	H	R2	H1	H2	H4	H5	H6	H8
	[lt]	[mm]								
300	291	650	1680	1810	71	241	381	431	//	871
500	497	750	2030	2170	71	271	411	466	956	1076
800	789	900	2430	2600	101	338	483	548	1123	1243
1000	1038	1000	2475	2675	89	359	499	559	1190	1310

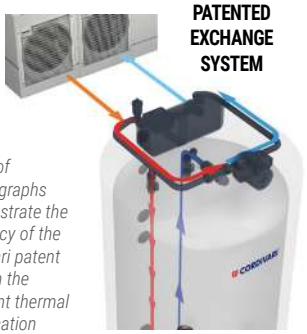
Model	H11	H12	H14	H16	A	O-P	K	D	F'-G'
	[mm]				Connections F				
300	991	1101	1221	1522	1"1/4	1"1/4	Øi120Øe180	1"1/2	1"
500	1196	1331	1476	1812	1"1/4	1"1/4	Øi120Øe180	1"1/2	1"
800	1378	1598	1708	2196	1"1/4	3/4"	Øi170Øe240	2"	1"
1000	1444	1584	1729	2260	1"1/2	3/4"	Øi170Øe240	2"	1"

- ***-30% reduction of the D.H.W. production time for major comfort***
- ***70lt of DHW (45 °C) in only 15 min, with the possibility of heating only the necessary volume of water***
- ***More time for the heat pump to be dedicated to heating or cooling***
- ***Energy focused where needed: all the energy produced with the heat pump concentrated in the upper part of the tank.***



Series of thermographs that illustrate the efficiency of the Cordivari patent through the excellent thermal stratification

PATENTED EXCHANGE SYSTEM



P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 PDC**

POLYWARM® COATED TANK FOR DHW ACCUMULATION SPECIFIC FOR COMBINATION WITH HEAT PUMP



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
EXCHANGE MODULE
Counter-flow heat exchanger system with heat load from the top.
INTEGRATIVE HEAT EXCHANGER
Nr.1 Mild steel Polywarm® coated heat exchanger.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Inspection flange with connection for electric heater.
WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

BIM MODEL AVAILABLE

ALIGNED

PROMPT AVAILABILITY

BOLLY® 2 PDC WB

Model	HARD FOAM **INSULATION** Art. Nr.	Heat pump max output [kW]	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
300	3134162320016	15	1,2	**B**
500	3134162320017	22	1,8	**C**



BOLLY® 2 PDC WB CLASS A

Model	HARD FOAM **INSULATION** Art. Nr.	Heat pump max output [kW]	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
300	3134162320021	15	1,2	**A**
500	3134162320022	22	1,8	**A**

NEW

BOLLY® 2 PDC DOUBLE CYCLE WB

Model	**HARD FOAM** INSULATION Art. Nr.	Heat pump max output [kW]	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
500	3134162320031	30	1,8	**C**
800	3134162320032	40	2,7	**B**
1000	3134162320033	40	3,5	**C**

ACCESSORIES

Titanium anode

Art. Nr.	**Model**
5200000000008	300
5200000000011	500÷1000



Electric immersion heater

Art. Nr.	Output [kW]
5240000000052	2



HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Thermometer

Art. Nr.
5032240000107
5 units box

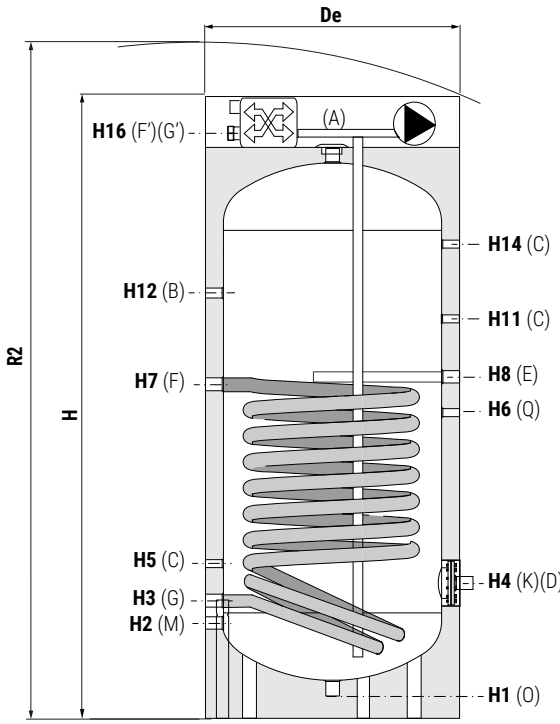


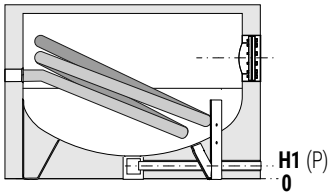
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 PDC**

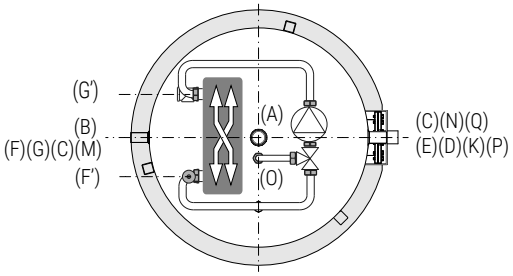
POLYWARM® COATED TANK FOR DHW ACCUMULATION SPECIFIC FOR COMBINATION WITH HEAT PUMP

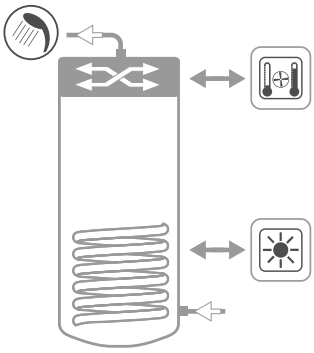
STORAGE		EXCHANGE MODULE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	10 bar	110 °C	12 bar	110 °C





For models 800-1000



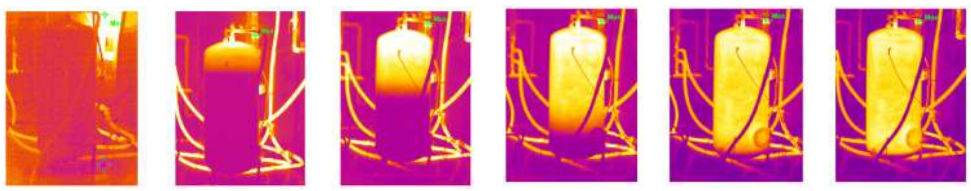


A	Domestic hot water outlet 1"1/4 G F
B	Recirculation. 1" G F
C	Connection for instrumentation. 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F-F'	Primary circuit inlet.
G-G'	Primary circuit outlet
K	Flange for inspection
M	Domestic water inlet. 1" G F
O	Drain
P	Drain > 500 lt
Q	Connection for thermometer 1/2" G F (Only BOLLY PDC DOUBLE CYCLE)

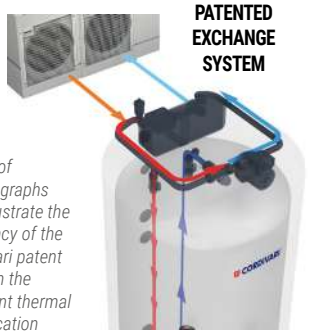
Model	Volume	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8
	[lt]	[mm]										
300	291	650	1680	1810	71	241	311	381	431	//	832	871
500	497	750	2030	2170	71	271	346	411	466	956	1036	1076
800	789	900	2430	2600	101	338	428	483	548	1123	1181	1243
1000	1038	1000	2475	2675	89	359	439	499	559	1190	1279	1310

Model	H11	H12	H14	H16	A	O-P	K	D	F-G	F'-G'
	[mm]				Connections F					
300	991	1101	1221	1522	1"1/4	1"1/4	Øi120Øe180	1"1/2	1"1/4	1"
500	1196	1331	1476	1812	1"1/4	1"1/4	Øi120Øe180	1"1/2	1"1/4	1"
800	1378	1598	1708	2196	1"1/4	3/4"	Øi170Øe240	2"	1"1/4	1"
1000	1444	1584	1729	2260	1"1/2	3/4"	Øi170Øe240	2"	1"1/4	1"

- ***-30% reduction of the D.H.W. production time for major comfort***
- ***70lt of DHW (45 °C) in only 15 min, with the possibility of heating only the necessary volume of water***
- ***More time for the heat pump to be dedicated to heating or cooling***
- ***Energy focused where needed: all the energy produced with the heat pump concentrated in the upper part of the tank.***



Series of thermographs that illustrate the efficiency of the Cordivari patent through the excellent thermal stratification



P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **3 PDC**

POLYWARM® COATED TANK FOR DHW ACCUMULATION SPECIFIC FOR COMBINATION WITH HEAT PUMP AND WITH 2 FIXED HEAT EXCHANGERS FOR INTEGRATION WITH 2 SOURCES



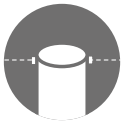
APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
EXCHANGE MODULE
Counter-flow heat exchanger system with heat load from the top.
INTEGRATIVE HEAT EXCHANGER
N° 2 Mild steel Polywarm® coated heat exchangers.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); Inspection flange with connection for electric heater.
WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.


POLYWARM® COATED DHW STORAGE



BIM MODEL AVAILABLE


ALIGNED

BOLLY® 3 PDC WB

Model	**HARD FOAM** INSULATION	Heat pump max output	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[kW]	[m²]		
300	3134162320019	15	0,7	1,2	**B**
500	3134162320020	22	1,2	1,8	**C**



BOLLY® 3 PDC WB CLASS A

Model	**HARD FOAM** INSULATION	Heat pump max output	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[kW]	[m²]		
300	3134162320023	15	0,7	1,2	**A**
500	3134162320024	22	1,2	1,8	**A**

NEW

BOLLY® 3 PDC DOUBLE CYCLE WB

Model	**HARD FOAM** INSULATION	Heat pump max output	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[kW]	[m²]		
500	3134162320034	30	1,2	1,8	**C**
800	3134162320035	40	1,6	2,7	**B**
1000	3134162320036	40	1,8	3,5	**C**

ACCESSORIES

Titanium anode

Art. Nr.	**Model**
5200000000008	300
5200000000011	500÷1000



Electric immersion heater

Art. Nr.	Output [kW]
5240000000052	2



HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Thermometer

Art. Nr.
5032240000107
5 units box

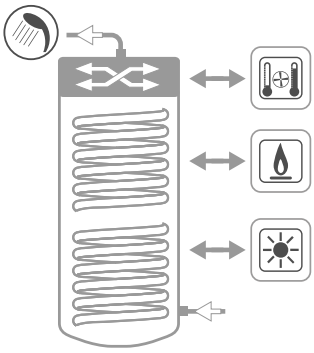


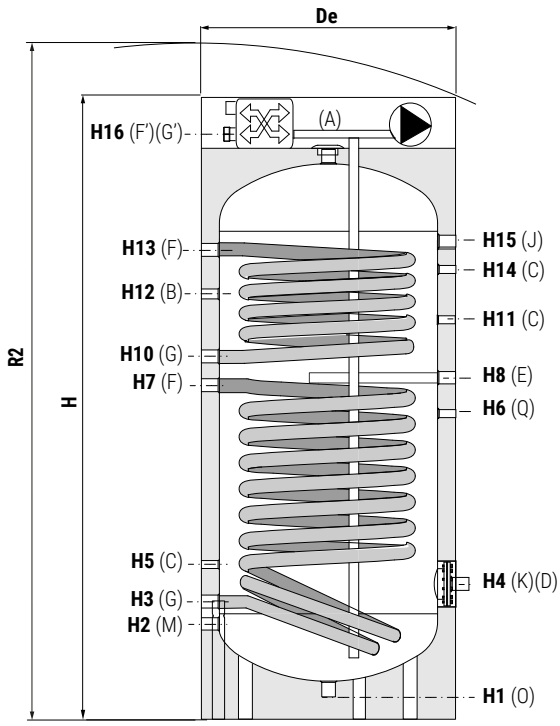
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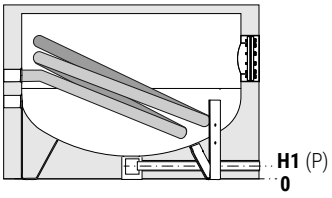
BOLLY® **3 PDC**

POLYWARM® COATED TANK FOR DHW ACCUMULATION SPECIFIC FOR COMBINATION WITH HEAT PUMP AND WITH 2 FIXED HEAT EXCHANGERS FOR INTEGRATION WITH 2 SOURCES

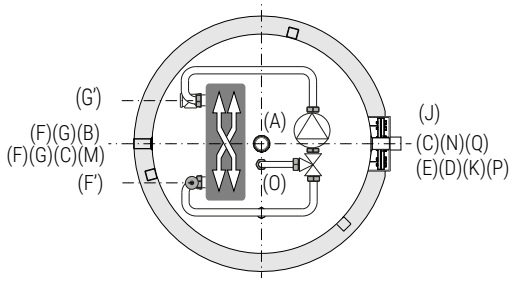
STORAGE		EXCHANGE MODULE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	10 bar	110 °C	12 bar	110 °C







For models 800 -1000



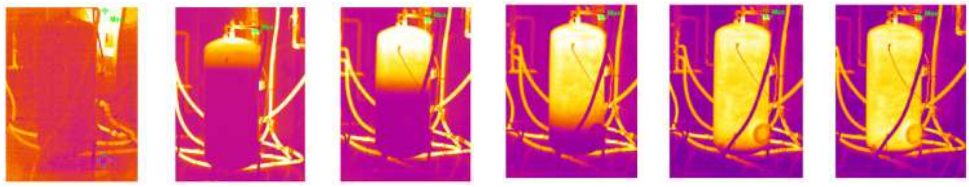
See TECHNICAL SUPPORT chapter for example of installation

A	Domestic hot water outlet
B	Recirculation. 1" G F
C	Connection for instrumentation. 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F-F'	Primary circuit inlet
G-G'	Primary circuit outlet
K	Flange for inspection
M	Domestic water inlet. 1" G F
J	Connection for magnesium anode 1"1/4 G F > only for models 500
O	Drain
P	Drain > 500 lt
Q	Connection for thermometer 1/2" G F (Only BOLLY PDC DOUBLE CYCLE)

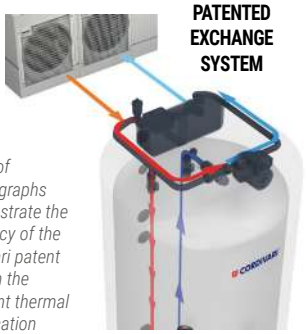
Model	Volume	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H10
	[lt]	[mm]											
300	291	650	1680	1810	71	241	311	381	431	//	832	871	//
500	497	750	2030	2170	71	271	346	411	466	956	1036	1076	1186
800	789	900	2430	2600	101	338	428	483	548	1123	1181	1243	1400
1000	1038	1000	2475	2675	89	359	439	499	559	1190	1279	1310	1550

Model	H11	H12	H13	H14	H15	H16	A	O-P	K	D	F-G	F'-G'
	[mm]						Connections F					
300	991	1101	//	1221	//	1522	1"1/4	1"1/4	Øi120Øe180	1"1/2	1"1/4	1"
500	1196	1331	1476	1476	//	1812	1"1/4	1"1/4	Øi120Øe180	1"1/2	1"1/4	1"
800	1378	1598	1819	1708	1818	2196	1"1/4	3/4"	Øi170Øe240	2"	1"1/4	1"
1000	1444	1584	2045	1729	1839	2260	1"1/2	3/4"	Øi170Øe240	2"	1"1/4	1"

- ***-30% reduction of the D.H.W. production time for major comfort***
- ***70lt of DHW (45 °C) in only 15 min, with the possibility of heating only the necessary volume of water***
- ***More time for the heat pump to be dedicated to heating or cooling***
- ***Energy focused where needed: all the energy produced with the heat pump concentrated in the upper part of the tank.***

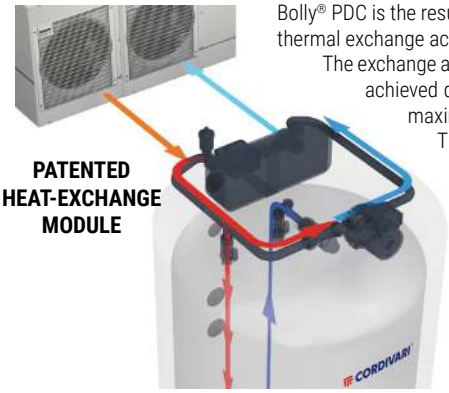


Series of thermographs that illustrate the efficiency of the Cordivari patent through the excellent thermal stratification



P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **PDC**
TECHNICAL DATA AND EXAMPLE OF INSTALLATION



PATENTED HEAT-EXCHANGE MODULE

Bolly® PDC is the result of a continuous research aimed to develop a unique calorifier in its field. It is in fact the only patented system of thermal exchange actually on the market, specifically conceived for installation with heat pumps.

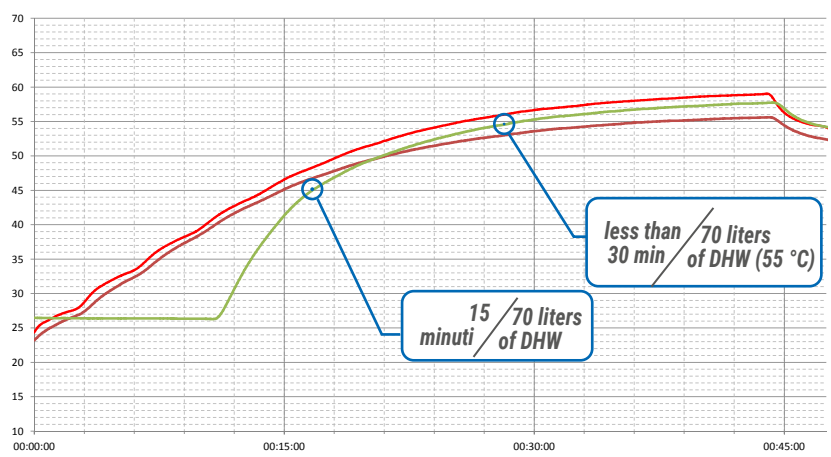
The exchange and stratification system is conceived to self-balance: only part of the heated water, proportionate to the temperature achieved during the thermal exchange, is pushed in the tank from the top. This way the water added in the upper part is at maximum desired temperature while fresh water coming from the lower part of the tank goes to the exchanger.

This leads to many advantages such as the increased efficiency of the heat pump C.o.p, the achievement of a perfect thermal stratification, that allows to profit immediately of the hot water. This also allows to heat only part of the tank reducing energy waste.

The innovative Bolly® PDC, combined with a heat pump, thanks to the new patented exchange group is able to guarantee 30 % higher performances compared to a generic, traditional calorifier in terms of ignition time and thermal exchange efficiency.

Laboratory tests and researches conducted on the stratification process confirm that the use of Bolly® PDC in a heat pump installation means an increased comfort and about a 15% reduction of electric consumption while extending the generator lifecycle, reducing its on/off.

Bolly® PDC (model 500), connected to 12kW heat pump

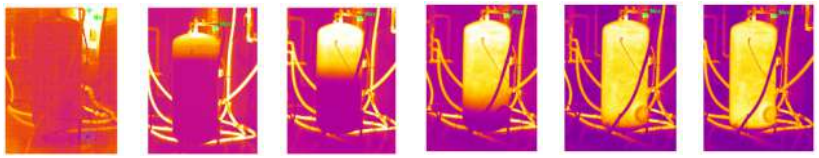


-30% ignition time and consequent better efficiency of HP in heating/cooling phase.

70 L. of DHW at 55 °C in just 30 minutes, with possibility to heat only the necessary required water volume.

Optimizing the time necessary for the HP for heating and cooling the room.

The energy produced by Heat pump is concentrated in the Domestic hot water in the upper part of the storage volume



BOLLY® PDC
Upper loading and improved thermal stratification thanks to the patented heat exchanger group.

TECHNICAL DATA AND EXAMPLE OF INSTALLATION

The peculiarity of the Bolly® PDC heat exchange module consists in the possibility of loading the thermal power in the DHW storage from above, in order to prepare hot water for the user at the right temperature after few minutes of operation. Obviously, the quantity of DHW available will depend on the actual time of operation, the initial temperature of the sanitary cold water, and the thermal output of the generator.

The typical operating condition of an hydronic heat pump generator is to provides 55 °C at the primary inlet with 5 °C deltaT on the return side. The presence of a thermostatic mixer on the domestic circuit allows the appliance to adjust the performance and the efficiency in the heating phase. With the mixer at minimum (in practice with the mixer excluded) the maximum performance is obtained in terms of exchangeable output at the beginning of the heating process (values shown in the catalog). But under these conditions, as the temperature rises on the secondary side the exchanged output will go down.

Much more interesting is to examine the behavior of the exchange module with the mixer in position "2" which corresponds to primary at 55 °C and production of DHW at 50 °C, with the peculiarity that this value of 50 °C is independent from the temperature of the cold water.

Under these conditions the exchanged output remains constant for all the time necessary to heat the storage volume and, independently of the initial storage temperature.

Summing up:

- **PRIMARY INLET= 55 °C**
- **MIXER POSITION = 2**
- **DHW INLET TEMPERATURE INTO THE STORAGE FROM EXCHANGE MODULE = 50 °C**
- **BOLLY® PDC 300 EXCHANGEABLE OUTPUT = 15 KW**
- **BOLLY® PDC 500 EXCHANGEABLE OUTPUT = 22 KW**
- **BOLLY® PDC 800 EXCHANGEABLE OUTPUT = 26 KW**
- **DELTAT AT PRIMARY = 5 °C (RETURN TO GENERATOR 50 °C)**

Under these conditions the producibility of DHW (and therefore the storage heating time) will depend on the initial storage temperature corresponding to the water inlet temperature.

Model Bolly® PDC	Primary circuit inlet temperature T1 [°C]	Mixer position	Output [kW]	Initial storage temperature 10°C		Initial storage temperature 20°C		Initial storage temperature 25°C	
				DHW production at 50°C [lt/min]	Storage heating time [min]	DHW production at 50°C [lt/min]	Storage heating time [min]	DHW production at 50°C [lt/min]	Storage heating time [min]
300	55	2	15	5,1	57	6,8	43	8,2	36
500			22	6,8	73	9,1	55	10,9	46
800			26	8,8	89	11,8	67	14,2	56

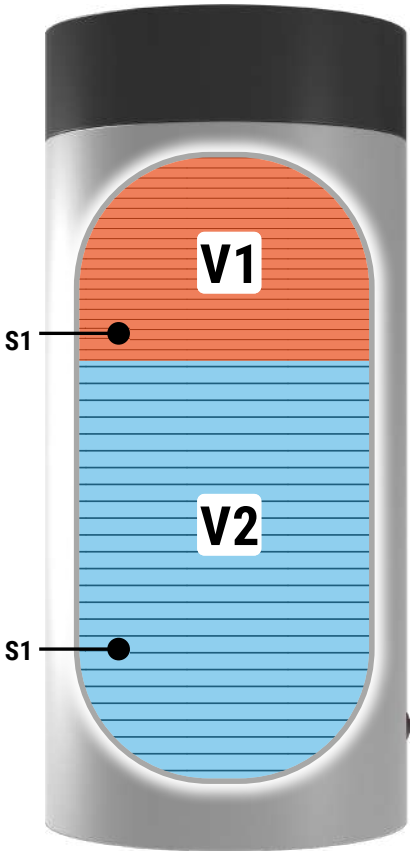
BOLLY® **PDC DOUBLE CYCLE**

NEW BOLLY PDC DOUBLE CYCLE

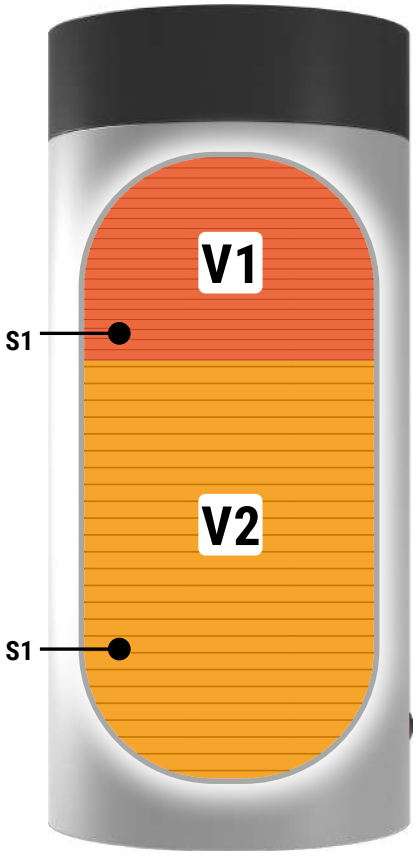
Cordivari patented Bolly PDC is a range of tanks specifically optimized for heat pumps.

These tanks can integrate up to 3 different energy sources and guarantee approx. +30% performance compared to tank- in-tank or traditional ones and savings of 15% on electricity consumption of the heat pumps, thanks to the patented stratified exchange system.
This unique range is now extended with the DOUBLE CYCLE patented solutions, aimed to optimize the performance also for medium and large sized systems:
Heat exchange takes place in two separate phases:
CYCLE ONE heats only the upper part of the tank to allow an initial and very rapid availability of DHW at comfort temperature;
CYCLE TWO which, after cycle one has ended, heats separately the lower part of the tank avoiding any turbulence in the upper part. This completes the heating of the entire cylinder, achieving the best balance between thermal comfort of the building and DHW, improving savings and energy efficiency.

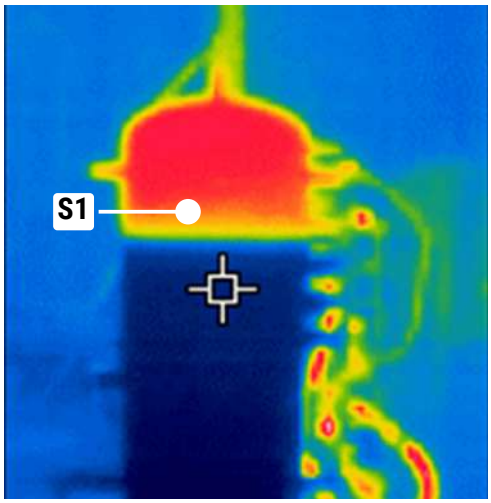
CYCLE ONE:
Only heating of the higher part of the cylinder (V1). No heat exchange in the bottom part (V2).

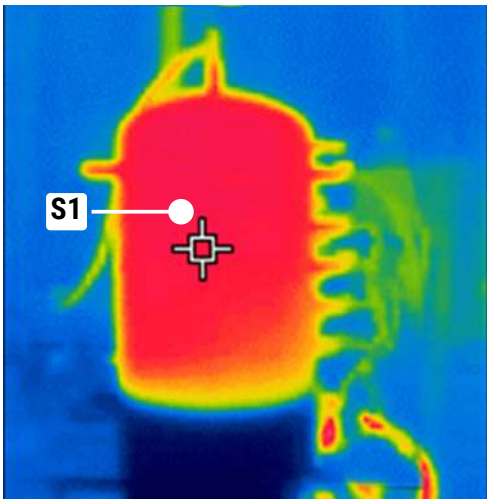


CYCLE TWO
Perfect thermal stratification: heating of the bottom part of the cylinder (V2). No mixing in the higher part (V1).



THERMOGRAPHY
The below thermography show the perfect stratification in the two phases of the heat exchange.





BOLLY® **1 XL**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED HEAT EXCHANGER

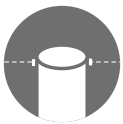


APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
Mild steel Polywarm® coated heat exchanger.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); max temperature up to 200°C. Mild steel inspection flange plate with Polywarm® and connection for electric heater.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.


POLYWARM® COATED DHW STORAGE


POLYWARM® COATED HEAT EXCHANGER


ALIGNED

PROMPT AVAILABILITY



BOLLY® 1 XL WB

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS ErP
200	3104162330011	2	**B**
300	3104162330012	3,4	**B**
400	3104162330013	4,4	**C**
500	3104162330014	5,4	**C**
800	3104162330015	6,0	**B**
1000	3104162330016	6,5	**B**
NEW **1500**	3104162330060	7,7	**C**

BOLLY® 1 XL WC

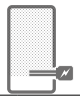
Model	DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS ErP
800	3104162320007	6,0	**C**
1000	3104162320008	6,5	**C**
NEW **1500**	3103162321160	7,7	**C**

BOLLY® 1 XL WB CLASS A

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS ErP
200	3104162330051	2	**A**
300	3104162330052	3,4	**A**
500	3104162330053	5,4	**A**

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	2 kW	3 kW	THREEPHASE 4 kW	5 kW	6 kW	9 kW	12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	159	285	214	142	//	//	//	//	//
300	235	421	316	210	158	//	//	//	//
400	353	632	474	316	237	//	//	//	//
500	413	741	555	370	278	222	//	//	//
800	668	1197	898	598	449	359	299	199	//
1000	874	1565	1174	783	587	470	391	261	196
1500	1000	1791	1343	895	671	537	448	298	224

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Titanium anode

See Accessories section



Flange plate for electric immersion heater

For connection sizes see Accessories section

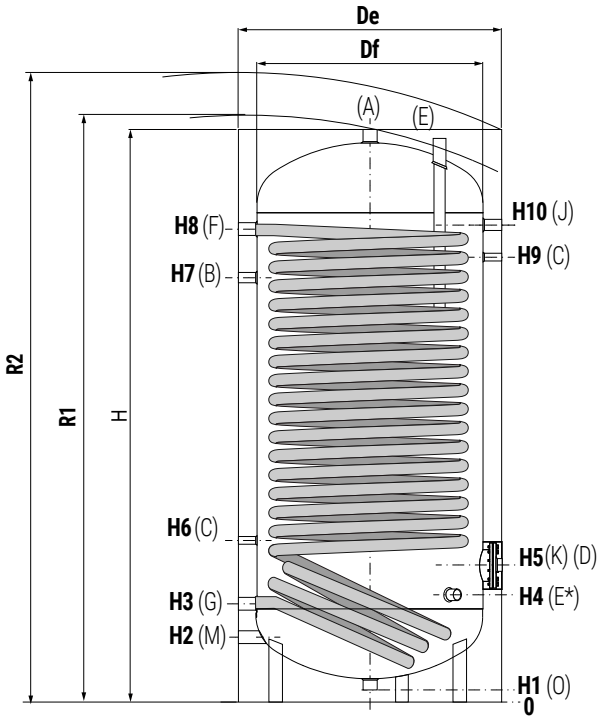


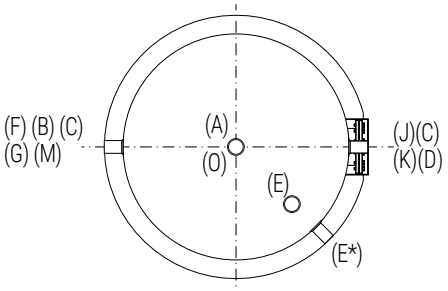
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

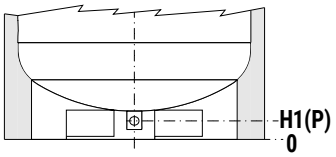
BOLLY® **1 XL**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED HEAT EXCHANGER

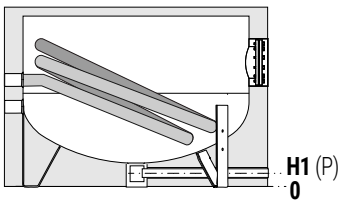
	STORAGE		HEAT EXCHANGER	
Model	Pmax	Tmax	Pmax	Tmax
200 ÷ 800	10 bar	90 °C	12 bar	110 °C
1000,1500	8 bar			



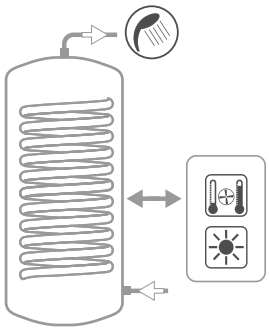




Models 1500 are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.



Only for models 800-1000



A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F (for models ≤ lt.1000)
E*	Connection for magnesium anode 1"1/4 G F (only for model 1500)
F	Primary circuit inlet 1"1/4 G F
G	Primary circuit outlet 1"1/4 G F
J	Connection for 2nd magnesium anode 1"1/4 G F (for models lt.1500)
K	Flange for inspection
M	Domestic cold water circuit inlet
O	Drain 1"1/4 G F
P	Drain for models >500

BOLLY® 1 XL WB + XL WB CLASS A(HARD FOAM INSULATION)

Model	Volume	Weight	Df	H	De	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	K	M	B	A	D	P
	[lt]	[Kg]	[mm]																Connections F				
200	189	96	//	1440	550	//	1560	71	215	285	//	325	405	1055	1190	1190	//	Øi120/Øe180	3/4"	3/4"	1"1/4	1"1/2	//
300	291	130	//	1500	650	//	1650	71	241	321	//	381	431	1091	1211	1211	//	Øi120/Øe180	1"	1"	1"1/4	1"1/2	//
400	422	154	//	1780	700	//	1930	71	256	336	//	396	446	1316	1471	1471	//	Øi120/Øe180	1"	1"	1"1/4	1"1/2	//
500	497	174	//	1800	750	//	1960	71	266	346	//	411	466	1326	1486	1486	//	Øi120/Øe180	1"	1"	1"1/4	1"1/2	//
800	789	264	//	2170	900	//	2360	101	338	418	//	483	538	1548	1808	1808	//	Øi170/Øe240	1"	1"	1"1/4	2"	3/4"
1000	1038	303	//	2230	1000	//	2460	89	359	439	//	499	559	1584	1829	1829	//	Øi170/Øe240	1"1/4	1"	1"1/2	2"	3/4"
1500	1438	368	//	2420	1100	//	2670	109	335	425	495	575	545	1825	2015	1940	2065	Øi300/Øe380	1"1/2	1	2	2	1"

BOLLY® 1 XL WC (DISMOUNTABLE SOFT FLEECE INSULATION)

Model	Volume	Weight	Df	H	De	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	K	M	B	A	D	P
	[lt]	[Kg]	[mm]																Connections F				
800	789	226	750	2190	950	2330	2400	101	338	418	//	483	538	1548	1808	1808	//	Øi170/Øe240	1"	1"	1"1/4	2"	3/4"
1000	1038	255	850	2250	1050	2420	2500	89	359	439	//	499	559	1584	1829	1829	//	Øi170/Øe240	1"1/4	1"	1"1/2	2"	3/4"
1500	1438	358	950	2440	1150	2630	2710	109	335	425	495	575	545	1825	2015	1940	2065	Øi300/Øe380	1"1/2	1	2	2	1"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

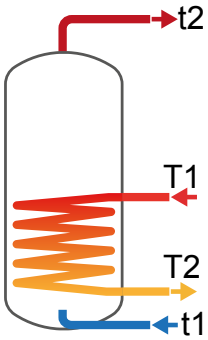
BOLLY® **1 XL**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

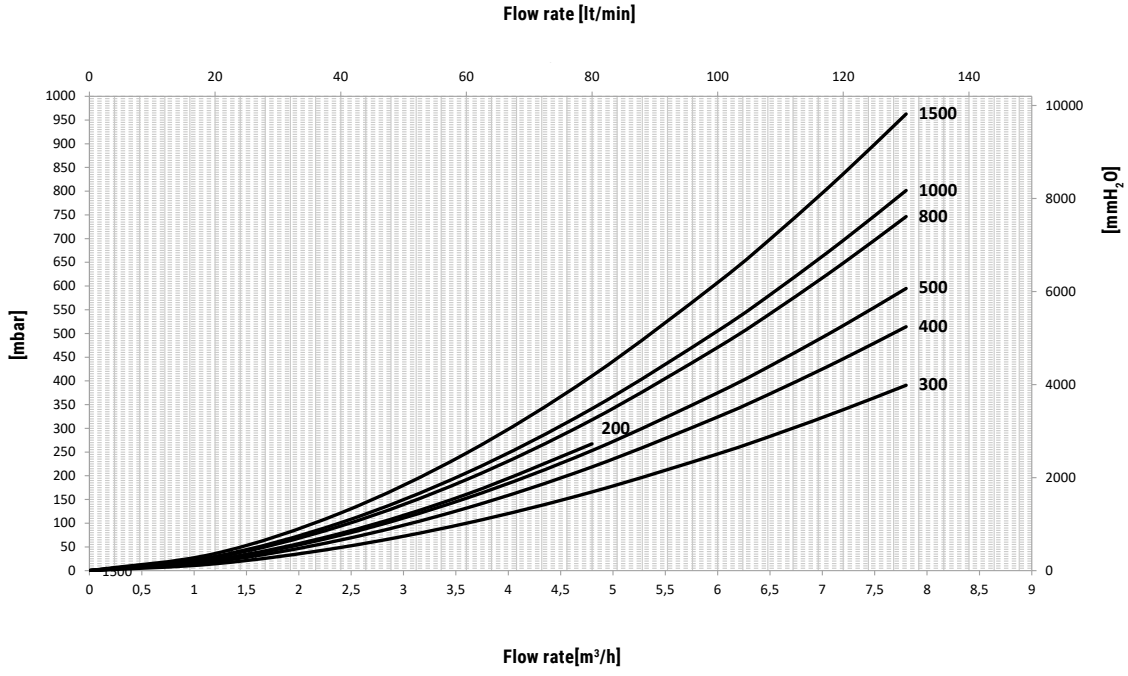
Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary from 10°C to t2 constant use of DHW production					DHW continuous production lt/h from 10°C to t2 and primary at T1				
	[m³/h]	T1/t2				T1/t2					T1/t2				
		55/50	65/60	70/60	80/60	55/45	65/45	70/45	80/45	80/60	55/45	65/45	70/45	80/45	80/60
200	2,5	40	42	30	20	21	31	36	47	34	522	773	899	1153	589
	1,25	49	52	36	24	19	28	32	40	30	468	677	780	990	522
300	3	44	46	32	22	30	45	52	66	58	751	1104	1281	1640	1016
	1,5	55	57	41	27	27	39	44	56	51	664	951	1093	1377	893
400	3,5	47	49	35	23	42	61	71	90	78	1033	1510	1747	2229	1355
	1,75	59	62	44	30	37	53	60	75	68	915	1298	1486	1863	1190
500	3,5	49	51	36	24	48	70	81	103	78	1198	1740	2009	2551	1355
	1,75	62	65	47	31	43	60	68	85	68	1060	1487	1696	2114	1190
800	5	59	61	43	29	64	93	107	136	116	1571	2291	2650	3372	2022
	2,5	72	76	55	37	57	80	92	115	103	1412	1993	2277	2845	1790
1000	8	65	68	48	32	72	106	124	158	131	1780	2632	3058	3925	2290
	4	76	80	57	38	66	95	110	139	119	1642	2364	2720	3436	2085
1500	8	79	82	59	39	83	122	141	180	156	2057	3017	3497	4465	2728
	4	94	99	71	48	76	109	124	156	141	1887	2691	3086	3878	2462



Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	2,5	303	399	420	462	634	888	989	1193	871	85
	1,25	294	383	400	165	590	811	894	792	260	25
300	3	458	600	629	689	934	1299	1441	1728	759	74
	1,5	443	574	598	230	864	1176	1290	1102	235	23
400	3,5	655	855	894	974	1309	1811	2001	2386	1287	126
	1,75	635	819	850	311	1214	1641	1791	1490	407	40
500	3,5	769	1001	1046	1137	1528	2103	2319	2752	1491	146
	1,75	746	959	994	352	1417	1901	2068	1691	472	46
800	5	1165	1510	1570	1691	2160	2962	3249	3826	3502	343
	2,5	1138	1461	1508	474	2032	2723	2950	2276	1043	102
1000	8	1482	1920	1991	2136	2609	3587	3928	4621	8530	837
	4	1459	1875	1935	573	2499	3372	3657	2749	2561	251
1500	8	1986	2557	2637	2798	3289	4468	4852	5626	10247	1005
	4	1958	2503	2569	646	3153	4207	4523	3102	3079	302

HEAT EXCHANGERS PRESSURE DROP

Heat exchangers surface [m²]	
200	2
300	3,4
400	4,4
500	5,4
800	6
1000	6,5
1500	7,7

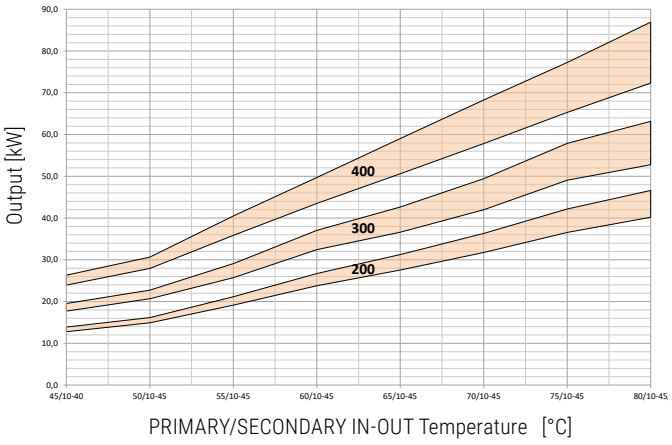


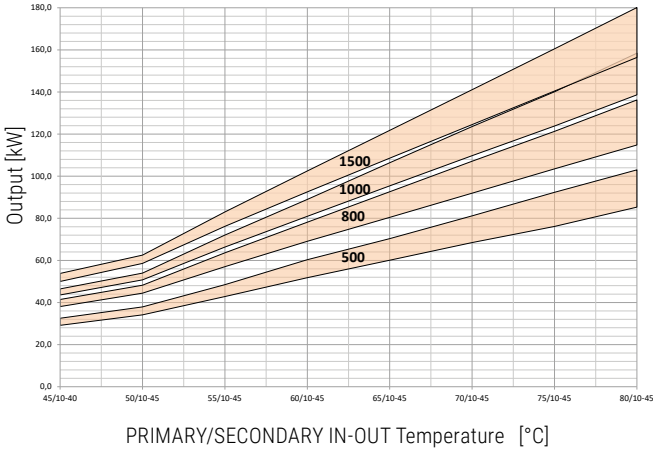
BOLLY® **1 XL**

HEAT EXCHANGERS TECHNICAL DATA



Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)

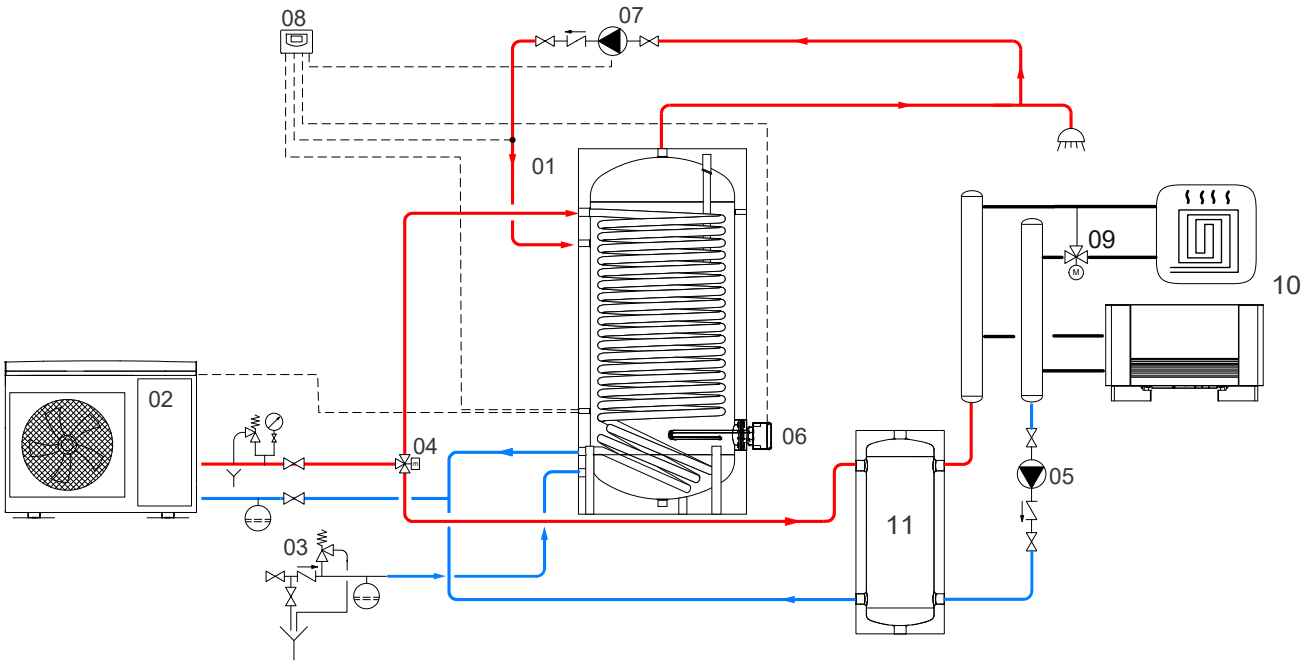




Model	200		300		400	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	2,5	1,25	3	1,5	3,5	1,75

Model	500		800		1000		1500	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	3,5	1,75	5	2,5	8	4	8	4

EXAMPLE OF INSTALLATION WITH **BOLLY® 1 XL**



1	Bolly 1 XL	4	Motorized 3-way valve	7	D.H.W. recirculation group	10	Heating units
2	Generator (Heat pump)	5	Circulation group for heating/cooling system	8	Electronic Control/thermostat	11	Buffer tank
3	Hydraulic safety group	6	Electric immersion heater	9	Thermostatic mixing valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

BOLLY® **2 XL**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS



APPLICATION
Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
N° 2 Mild steel Polywarm® coated heat exchangers.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.
Grey PVC external lining.

CATHODE PROTECTION
Magnesium anode.
DRAIN
External confluence through drain connection.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated and connection for electric immersion heater
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.





BOLLY® 2 XL WB

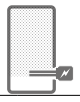
Model	HARD FOAM INSULATION	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
200	3134162320001	1,4	0,4	**B**
300	3134162320002	1,9	0,9	**B**
500	3134162320003	3,1	1,4	**C**

BOLLY® 2 XL WB CLASS A

Model	HARD FOAM INSULATION	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
200	3134162330021	1,4	0,4	**A**
300	3134162330022	1,9	0,9	**A**
500	3134162330023	3,1	1,4	**A**

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE **1,5** kW	**2** kW	**3** kW	THREEPHASE **4** kW	**5** kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]	
200	159	259	194	129	//	//
300	235	383	287	191	144	//
500	413	673	505	337	252	202

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Titanium anode

See Accessories section

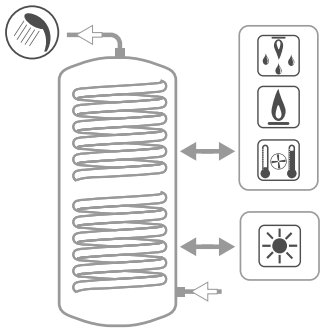


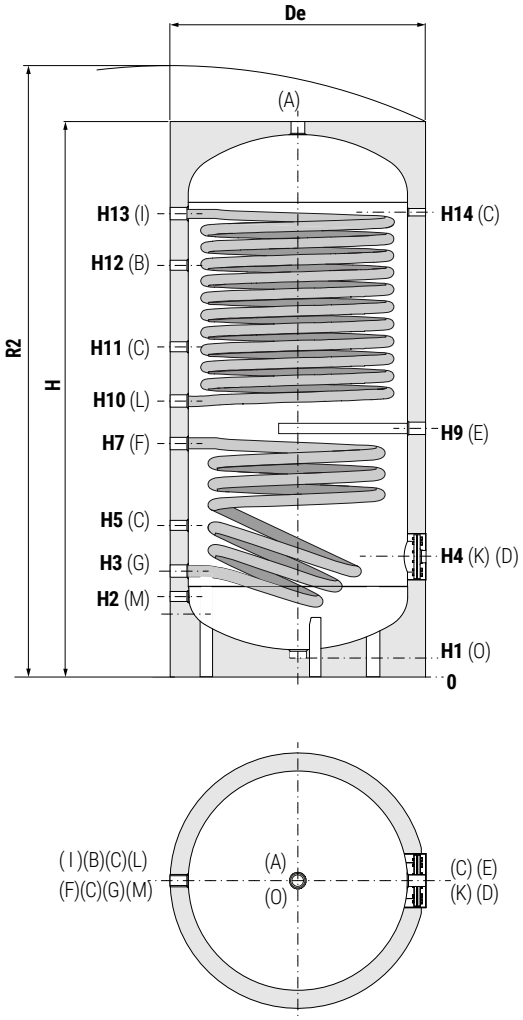
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 XL**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	12 bar	110 °C





A	Domestic hot water outlet 1"1/4
B	Recirculation
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 1"1/2 G F
E	Connection for magnesium anode 1"1/4 G F
F	Lower heat exchanger inlet 1"1/4 G F
G	Lower heat exchanger outlet 1"1/4 G F
I	Upper heat exchanger inlet 1"1/4 G F
K	Flange for inspection
L	Upper heat exchanger outlet 1"1/4 G F
M	Domestic cold water circuit inlet
O	"Drain 1""1/4 F

BOLLY® 2 XL WB + XL WB CLASS A (HARD FOAM INSULATION)

Model	Volume	Weight	De	H	R2	H1	H2	H3	H4	H5	H7
	[lt]	[Kg]	[mm]								
200	189	65	550	1434	1540	65	215	285	325	405	475
300	291	83	650	1486	1620	65	241	311	381	431	596
500	498	134	750	1786	1940	65	266	346	411	466	671

Model	H9	H10	H11	H12	H13	H14	K	M	B
	[mm]							Connections F	
200	520	570	690	1089	1200	1200	Øi120/Øe180	3/4"	3/4"
300	641	686	806	1090	1226	1226	Øi120/Øe180	1"	1"
500	716	761	881	1091	1476	1476	Øi120/Øe180	1"	1"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 XL**

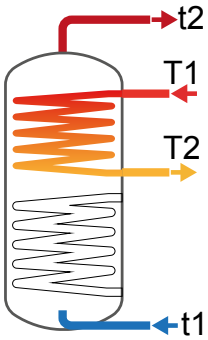
HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary from 10°C to t2 constant use of DHW production					DHW continuous production lt/h from 10°C to t2 and primary at T1				
	[m^3/h]	T1/t2				T1/t2					T1/t2				
		55/50	**65/60**	**70/60**	**80/60**	**55/45**	**65/45**	**70/45**	**80/45**	**80/60**	**55/45**	**65/45**	**70/45**	**80/45**	**80/60**
200	2,5	37	38	27	18	15	23	27	34	29	377	564	659	851	495
	1,25	42	44	31	21	14	21	24	30	25	346	507	586	749	442
300	3	43	45	31	20	20	30	35	46	38	501	747	871	1123	653
	1,5	50	52	37	24	18	27	31	39	34	454	661	765	975	585
500	3,5	46	48	34	22	33	49	56	72	61	812	1198	1392	1786	1064
	1,75	47	49	35	23	30	42	49	62	54	732	1050	1208	1525	945

UPPER
HEAT EXCHANGER



Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m^3/h]	T1/t2				T1/t2				[mmH_2O]	[mbar]
		55/50	**65/60**	**70/60**	**80/60**	**55/50**	**65/60**	**70/60**	**80/60**		
200	2,5	201	267	283	315	440	624	700	854	163,5	16,0
	1,25	196	257	271	298	415	578	642	772	45,6	4,5
300	3	270	357	378	420	587	830	929	1131	88,4	8,7
	1,5	262	343	360	395	550	762	845	1013	24,5	2,4
500	3,5	478	628	661	726	993	1387	1542	1857	70,2	6,9
	1,75	465	604	630	683	928	1269	1395	1649	20,9	2,0

BOLLY® **2 XL**

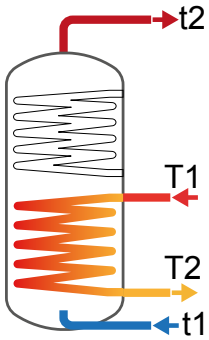
HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary from 10°C to t2 constant use of DHW production					DHW continuous production lt/h from 10°C to t2 and primary at T1				
	[m³/h]	T1/t2				T1					T1				
		55/50	65/60	70/60	80/60	55/45	65/45	70/45	80/45	80/60	55/45	65/45	70/45	80/45	80/60
200	2,5	182	189	130	84	4,8	6,9	8,1	10,5	6,3	110	168	198	259	108
	1,25	225	241	151	95	4,4	6,4	7,5	9,7	5,8	99	152	179	235	100
300	3	127	132	92	60	9,9	15,0	17,5	22,8	18,8	243	368	431	561	326
	1,5	150	157	107	69	9,1	13,6	15,8	20,4	17,2	220	330	385	499	298
500	3,5	141	146	102	67	15,5	23,2	27,1	35,1	27,5	380	572	669	868	478
	1,75	139	145	101	66	14,2	21,0	24,4	31,3	25,3	346	514	598	771	298

LOWER
HEAT EXCHANGER



Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	2,5	217	298	303	313	222	405	428	477	92,7	9,1
	1,25	217	295	300	309	221	392	413	458	24,5	2,4
300	3	335	477	488	509	345	710	761	865	61,5	6,0
	1,5	335	471	480	499	343	679	724	815	16,5	1,6
500	3,5	486	698	714	748	501	1060	1138	1297	100,1	9,8
	1,75	486	688	703	731	499	1014	1082	1219	27,4	2,7

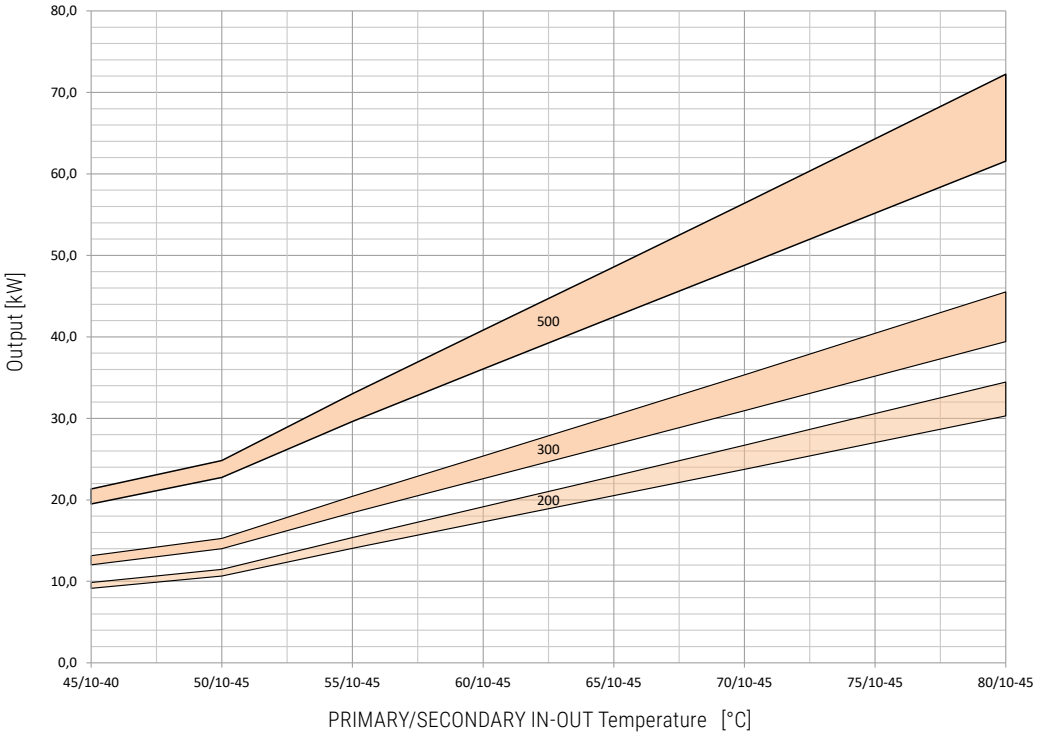
BOLLY® **2 XL**

UPPER HEAT EXCHANGERS TECHNICAL DATA



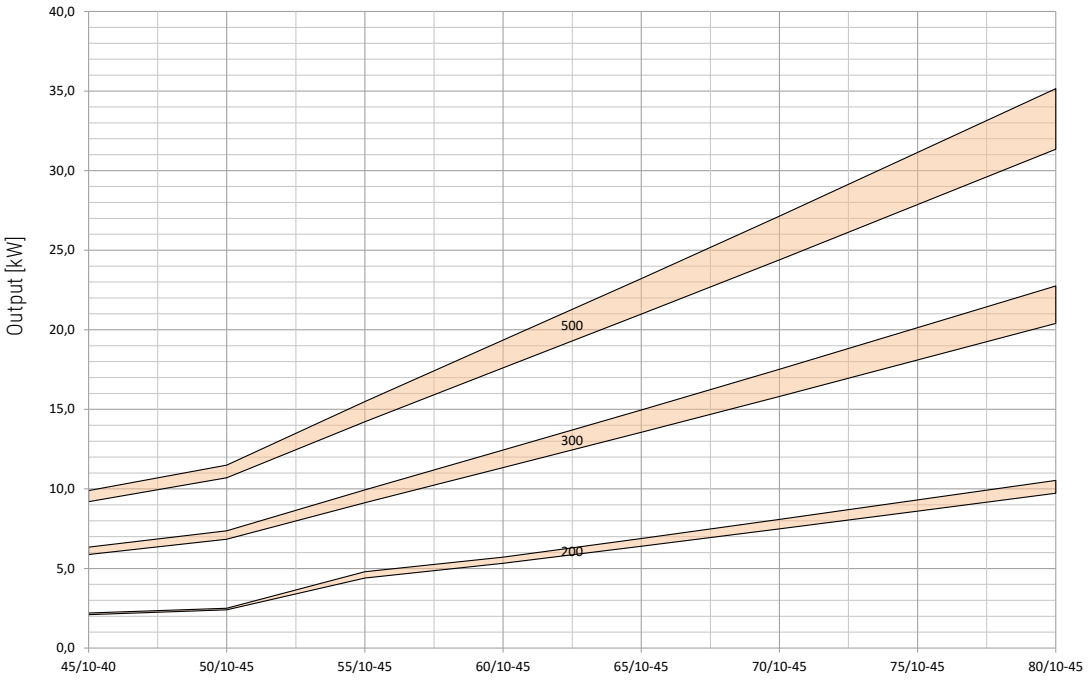
Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)

UPPER
HEAT EXCHANGERS



Model	200		300		500	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	2,5	1,25	3	1,5	3,5	1,75

LOWER
HEAT EXCHANGERS

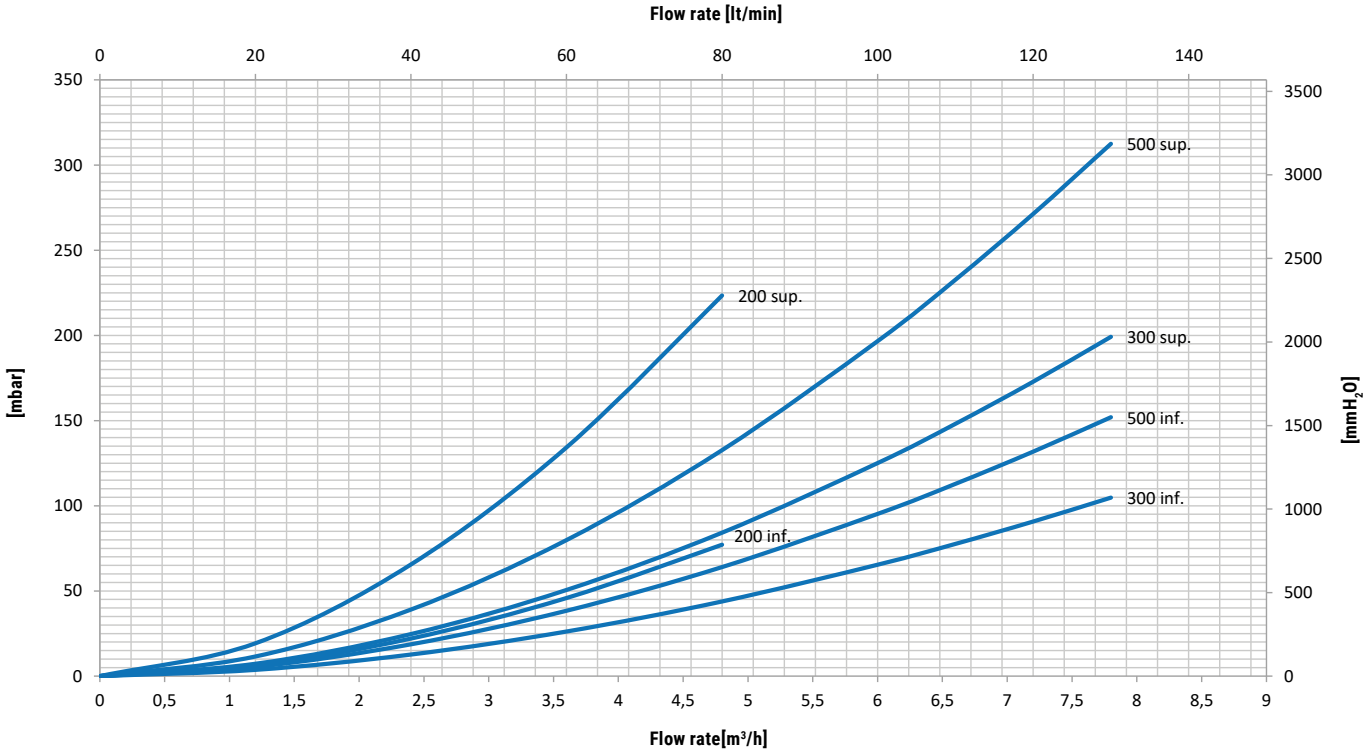


Model	200		300		500	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	2,5	1,25	3	1,5	3,5	1,75

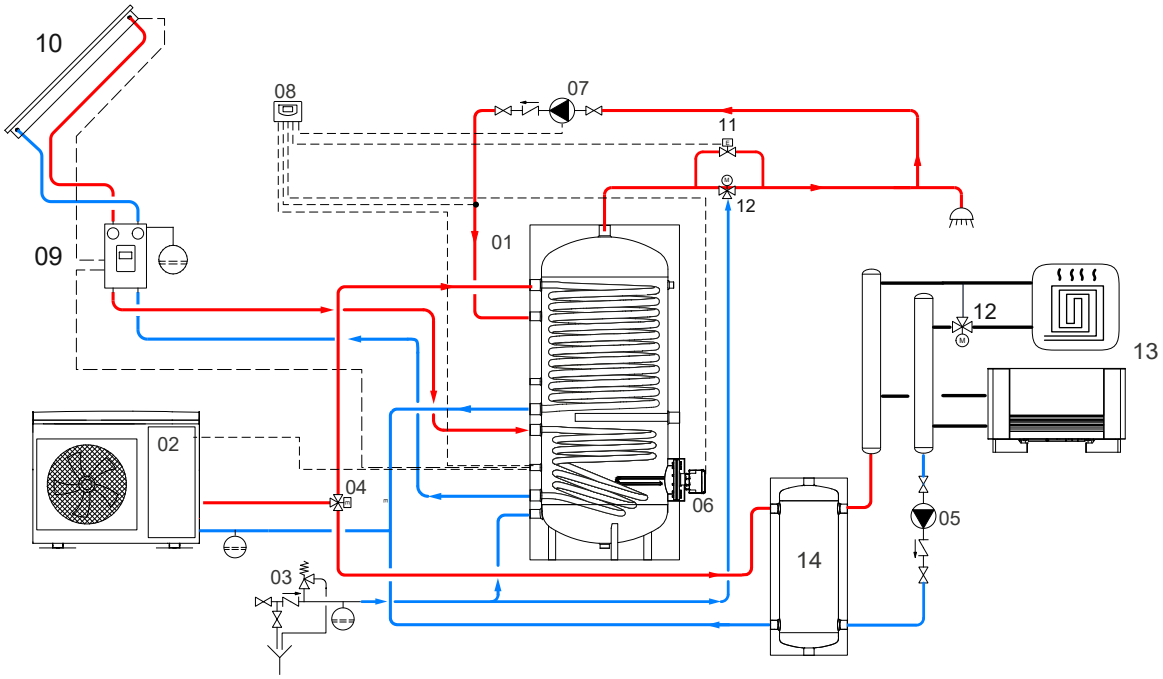
BOLLY® **2 XL**

HEAT EXCHANGERS PRESSURE DROP





EXAMPLE OF INSTALLATION WITH **BOLLY® 2 XL**



1	Bolly 2 XL	5	Circulation group for heating/cooling system	9	Solar system circulation group	13	Heating units
2	Generator (Heat pump)	6	Electric immersion heater	10	Solar panels	14	Buffer tank
3	Hydraulic safety group	7	D.H.W. recirculation group	11	By-pass solenoid valve		
4	Motorized 3-way valve	8	Electronic Control/thermostat	12	Mixing valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

BOLLY® **1 HY XL**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED HEAT EXCHANGER AND INTEGRATED BUFFER TANK SPECIFIC FOR HEAT PUMPS



POLYWARM® COATED DHW STORAGE

POLYWARM® COATED HEAT EXCHANGER

APPLICATION
Production and storage of domestic hot water (DHW). Heating/cooling buffer tank for heat pumps.

MATERIAL
- *DHW STORAGE:* Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
- *ENERGY BUFFER hot-cold:* Mild steel.

HEAT EXCHANGER:
N° 1 mild steel Polywarm® coated heat exchanger.

INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.
Grey PVC external lining.

GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated and connection for electric immersion heater

CATHODE PROTECTION (DHW STORAGE)
Magnesium anode.

WARRANTY
5 years (See general sales conditions and warranty)

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



BOLLY® 1 HY XL WB

Model	HARD FOAM INSULATION Art. Nr.	Power of combinable heat pump [kWt]	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
250	3104162330019	9-14	2,1	C
300	3104162330017	9-14	3,4	C
500	3104162330018	14-20	5,4	C

BOLLY® 1 HY XL WB CLASS A

Model	HARD FOAM INSULATION Art. Nr.	Power of combinable heat pump [kWt]	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
300	3104162330020	9-14	3,4	A
500	3104162330021	14-20	5,4	A

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW	THREEPHASE 6 kW	THREEPHASE 9 kW	THREEPHASE 12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
250	179	320	240	160	120	//	//	//	//
300	235	421	316	210	158	//	//	//	//
500	413	741	555	370	278	222	//	//	//

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Titanium anode

See Accessories section



Flange plate for electric immersion heater

For connection sizes see Accessories section

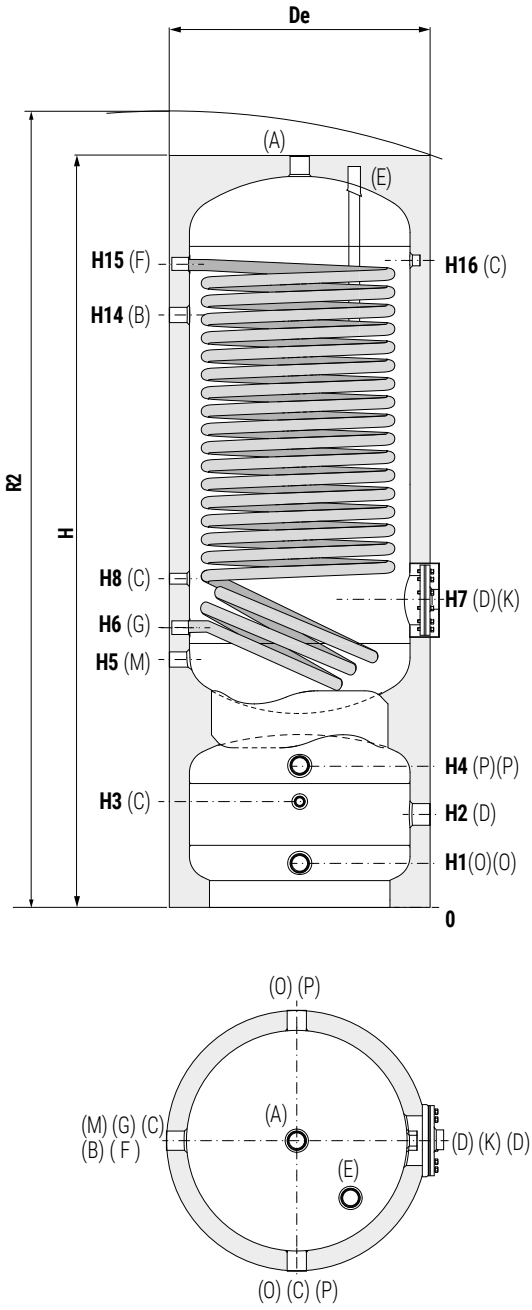


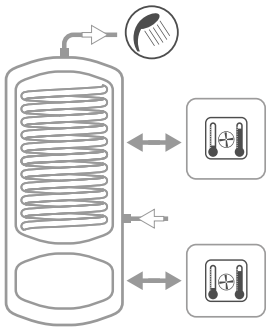
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BOLLY® **1 HY XL**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED HEAT EXCHANGER AND INTEGRATED BUFFER TANK SPECIFIC FOR HEAT PUMPS

STORAGE		HEAT EXCHANGER		BUFFER TANK	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	12 bar	110 °C	4 bar	-10/+95 °C





See TECHNICAL SUPPORT chapter for example of installation

A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F	Primary circuit inlet
G	Primary circuit outlet
K	Flange for inspection
M	Domestic cold water circuit inlet
O	Heating return/to generator
P	Heating delivery/from generator

Model	DHW storage volume	Buffer tank volume	De	H	R2	H1	H2	H3	H4	H5	H6
	[lt]		[mm]								
250	235	86	650	1635	1770	110	232	264	354	618	708
300	291	86	650	1875	1990	110	232	264	354	618	708
500	498	108	750	2225	2360	125	230	245	335	639	729

Model	H7	H8	H14	H15	H16	A-F-G	B-M	C	D	P-O
	[mm]					Connections F				
250	768	818	1233	1363	1368	1"1/4	1"	1/2"	1"1/2	1"1/4
300	768	818	1478	1598	1598	1"1/4	1"	1/2"	1"1/2	1"1/4
500	794	849	1709	1869	1869	1"1/4	1"	1/2"	1"1/2	1"1/4

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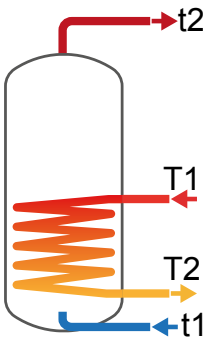
BOLLY® **1 HY XL**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

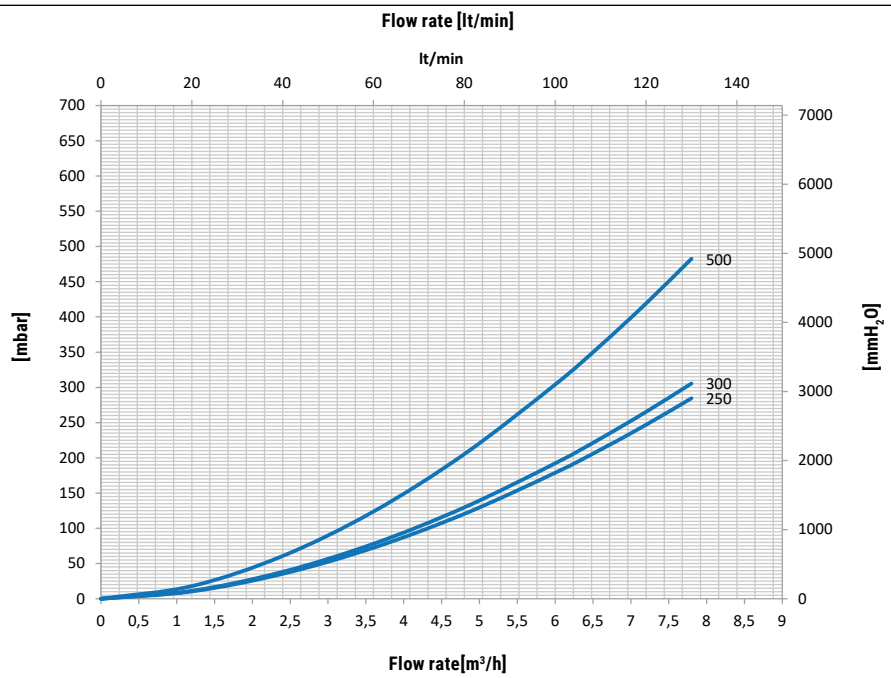
Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
300	3	44	46	32	22	30	45	52	66	751	1104	1281	1640
	1,5	55	57	41	27	27	39	44	56	664	951	1093	1377
250	3	47	49	34	23	22	33	39	50	554	821	956	1229
	1,5	55	58	41	27	20	29	34	43	501	725	837	1062
500	3,5	49	51	36	24	48	70	81	103	1198	1740	2009	2551
	1,75	62	65	47	31	43	60	68	85	1060	1487	1696	2114



Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
300	3	340	600	629	689	368	1299	1441	1728	830,2	81,4
	1,5	339	574	598	645	363	1176	1290	1517	243,2	23,8
250	3	360	471	494	539	711	991	1099	1317	525	53
	1,5	351	455	474	511	668	914	1004	1184	154	15
500	3,5	581	1001	1046	1137	625	2103	2319	2752	1263,9	123,9
	1,75	579	959	994	1064	617	1901	2068	2403	370,8	36,4

HEAT EXCHANGERS PRESSURE DROP

Heat exchangers surface [m²]	
250	2,1
300	3,4
500	5,4

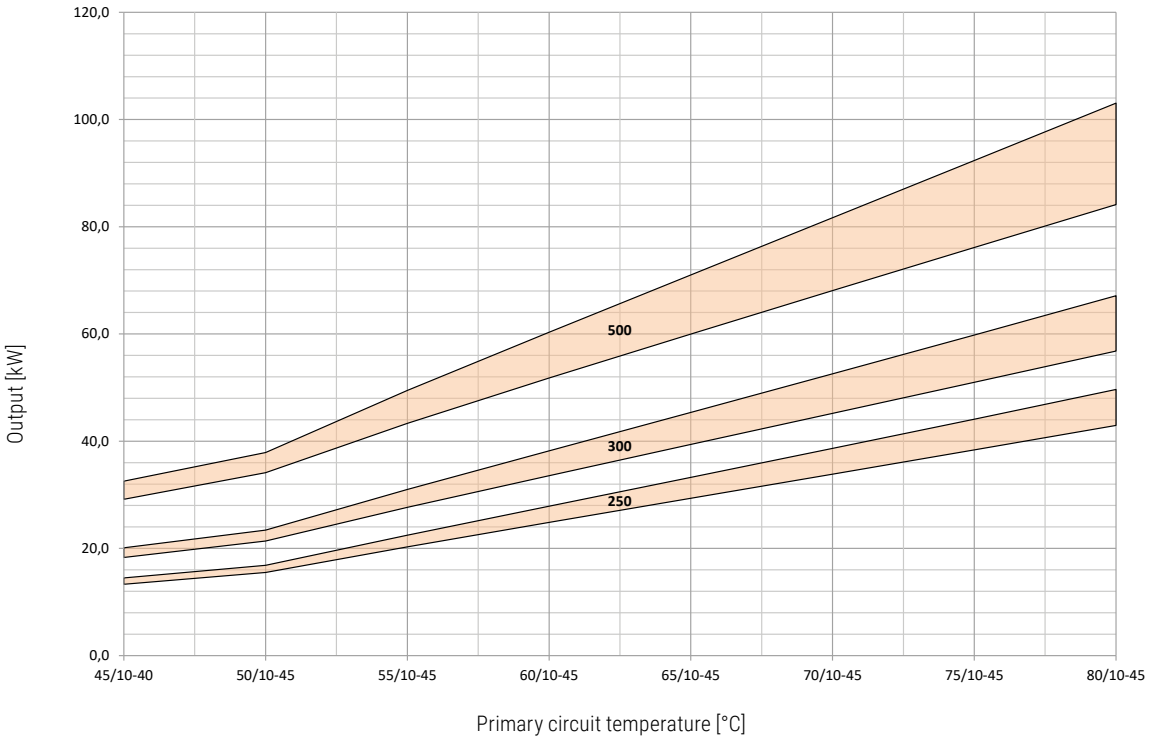


BOLLY® **1 HY XL**

HEAT EXCHANGERS TECHNICAL DATA

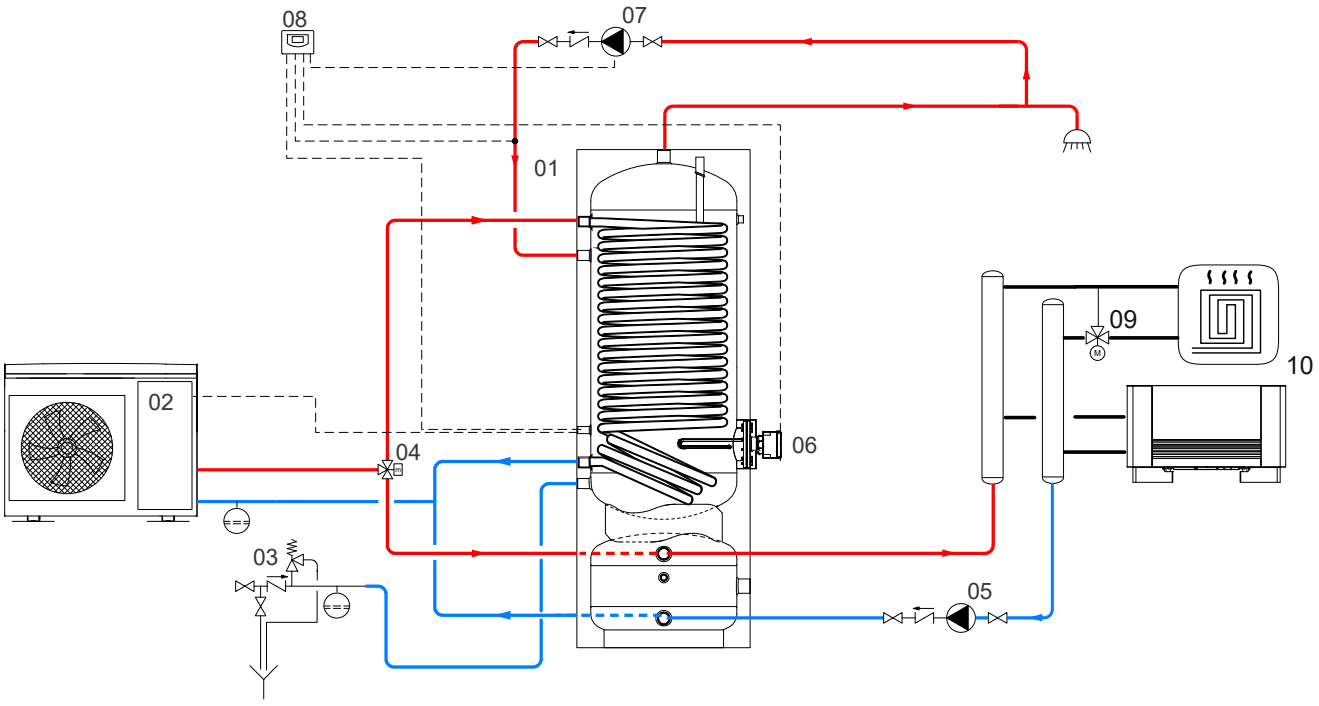


Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)



Model	250		300		500	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	3	1,5	3	1,5	3,5	1,75

EXAMPLE OF INSTALLATION WITH **BOLLY® 1 HY XL**



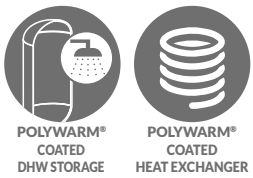
01	Bolly® 1 HY XL	04	Motorized 3-way valve	07	D.H.W. recirculation group	10	Heating units
02	Generator (Heat pump)	05	Circulation group for heating/cooling system	08	Electronic Control/thermostat		
03	Hydraulic safety group	06	Electric immersion heater	09	Thermostatic mixing valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

BOLLY® **2 HY XL**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS AND INTEGRATED BUFFER TANK SPECIFIC FOR HEAT PUMPS





APPLICATION
Production and storage of domestic hot water (DHW). Heating/cooling buffer tank for heat pumps.
MATERIAL
- *DHW STORAGE:* Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
- *ENERGY BUFFER hot-cold:* Mild steel.

HEAT EXCHANGER:
N° 2 mild steel Polywarm® coated heat exchangers.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.
Grey PVC external lining.

GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated and connection for electric immersion heater
CATHODE PROTECTION (DHW STORAGE)
Magnesium anode.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



BOLLY® 2 HY XL WB

Model	HARD FOAM INSULATION	Power of combinable heat pump	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[kWt]	[m²]		
300	3134162320004	9-14	1,9	0,9	**C**
500	3134162320005	14-20	3,1	1,4	**C**

BOLLY® 2 HY XL WB CLASS A

Model	HARD FOAM INSULATION	Power of combinable heat pump	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[kWt]	[m²]		
300	3134162320012	9-14	1,9	0,9	**A**
500	3134162320013	14-20	3,1	1,4	**A**

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]	
300	235	421	316	210	158	//
500	413	741	555	370	278	222

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Titanium anode

See Accessories section

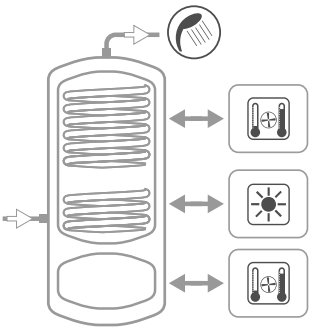


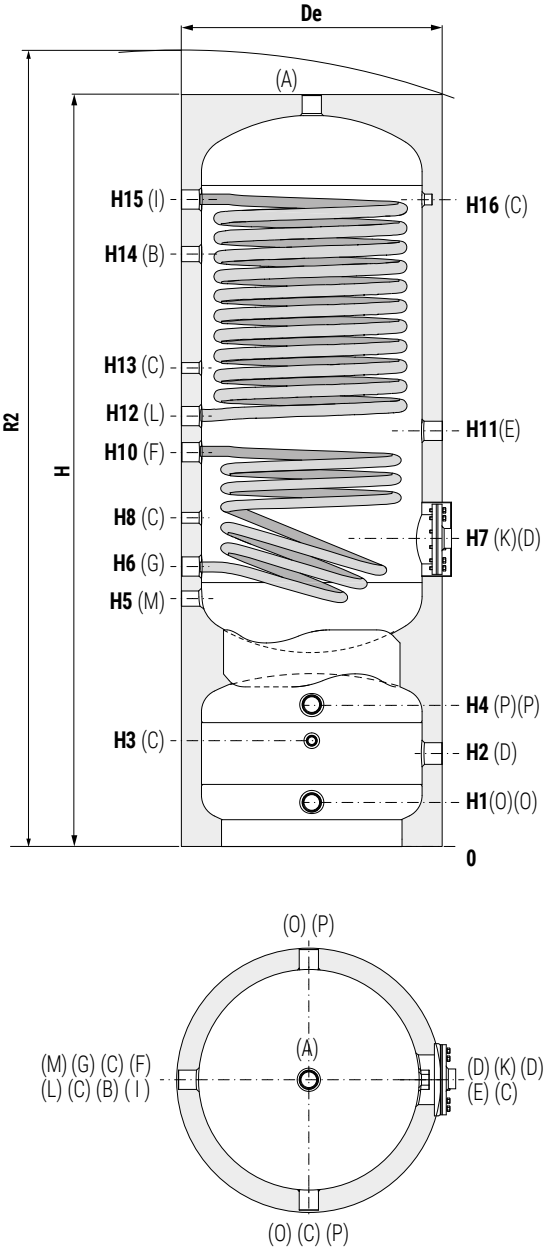
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 HY XL**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS AND INTEGRATED BUFFER TANK SPECIFIC FOR HEAT PUMPS

STORAGE		HEAT EXCHANGER		BUFFER TANK	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
10 bar	95 °C	12 bar	110 °C	4 bar	-10/+95 °C





A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation
D	Connection for electric immersion heater
E	Connection for magnesium anode 1"1/4 G F
F	Primary circuit inlet
G	Primary circuit outlet
I	Upper heat exchanger inlet
L	Upper heat exchanger outlet
K	Flange for inspection
M	Domestic cold water circuit inlet
O	Heating return/to generator
P	Heating delivery/from generator

Model	Volume ACS	Buffer tank volume	Weight	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8
	[lt]		[kg]	[mm]										
300	291	86	116	650	1875	1990	110	232	264	354	618	698	768	818
500	498	108	194	750	2225	2360	125	230	245	335	639	729	794	849

Model	H10	H11	H12	H13	H14	H15	H16	K	A-F-G-L-I	B-M	C	D	P-O
	[mm]								Connections F				
300	983	993	1073	1193	1477	1613	1613	Øi120/Øe180	1"	1"	1"1/2	1"1/2	1"1/4
500	1054	106	1144	1264	1474	1859	1859	Øi120/Øe180	1"	1"	1"1/2	1"1/2	1"1/4

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

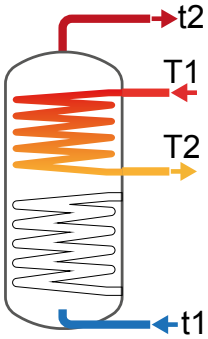
BOLLY® **2 HY XL**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

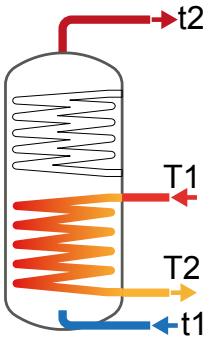
UPPER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
300	3	43	45	31	20	20	30	35	46	501	747	871	1123
	1,5	50	52	37	24	18	27	31	39	454	661	765	975
500	3,5	46	48	34	22	33	49	56	72	812	1198	1392	1786
	1,75	47	49	35	23	30	42	49	62	732	1050	1208	1525

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
300	3	226	400	421	463	245	873	972	1174	88,4	8,7
	1,5	225	386	403	438	242	805	888	1056	24,5	2,4
500	3,5	329	601	633	699	360	1360	1515	1830	70,2	6,9
	1,75	328	576	603	656	355	1242	1368	1621	20,9	2,0

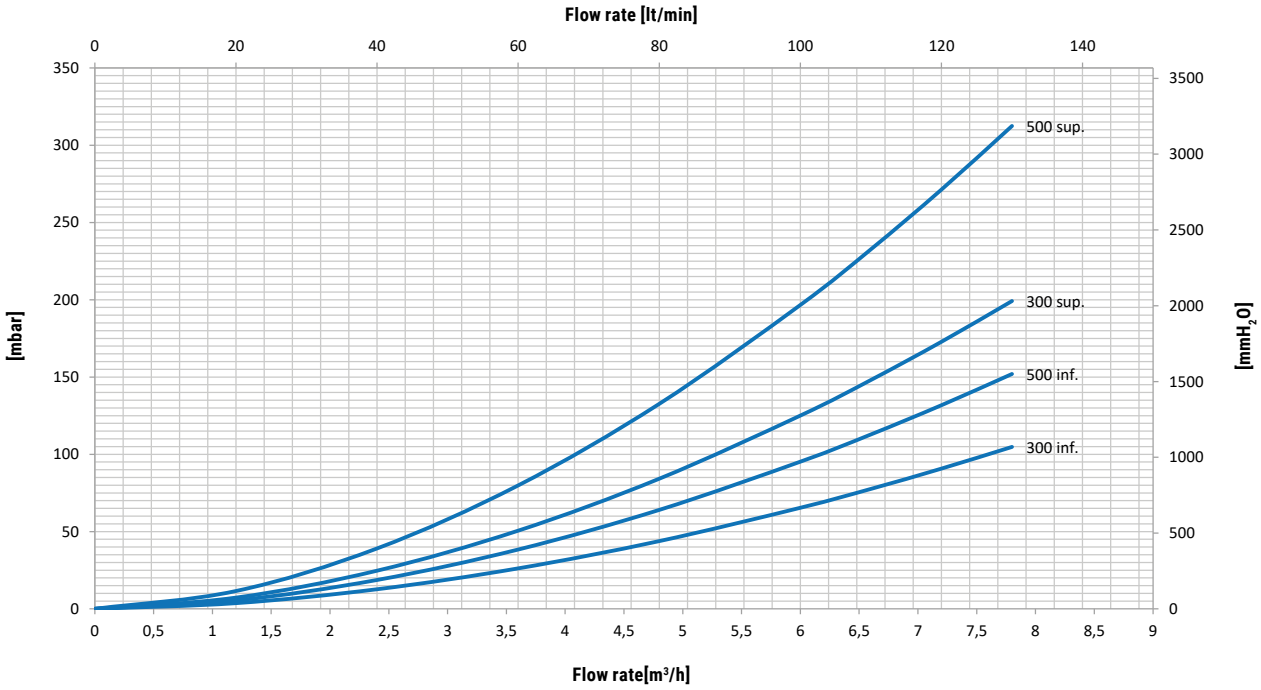
LOWER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
300	3	127	132	92	60	9,9	15,0	17,5	22,8	243	368	431	561
	1,5	150	157	107	69	9,1	13,6	15,8	20,4	220	330	385	499
500	3,5	141	146	102	67	15,5	23,2	27,1	35,1	380	572	669	868
	1,75	139	145	101	66	14,2	21,0	24,4	31,3	346	514	598	771

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
300	3	335	477	488	509	345	710	761	865	61,5	6,0
	1,5	335	471	480	499	343	679	724	815	16,5	1,6
500	3,5	486	698	714	748	501	1060	1138	1297	100,1	9,8
	1,75	486	688	703	731	499	1014	1082	1219	27,4	2,7

HEAT EXCHANGERS PRESSURE DROP

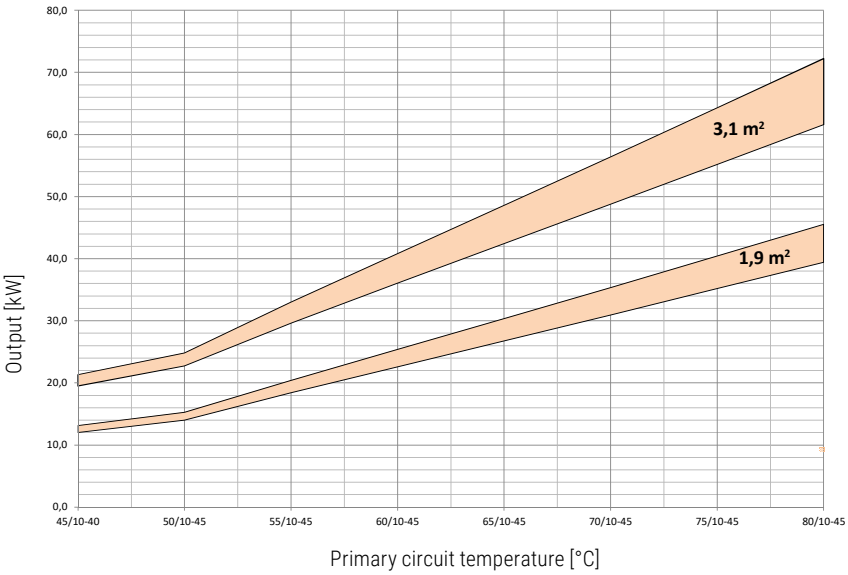


BOLLY® **2 HY XL**

HEAT EXCHANGERS TECHNICAL DATA

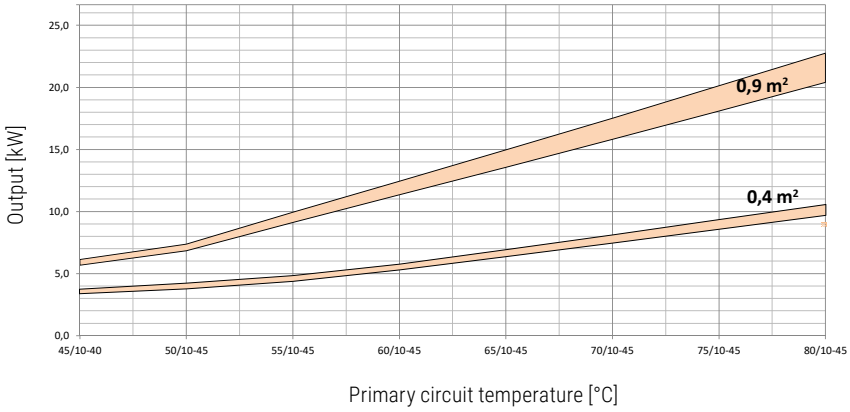


BOLLY® 2 HY XL heat exchanger output depending on the temperature and flow rate of the primary circuit and with secondary 10/45 ° C at the maximum withdrawal of DHW. The upper curve that delimits the operating area of each exchanger corresponds to the "MAX" flow rate of the primary indicated in the table; the lower curve corresponds to the "MIN" flow rate.

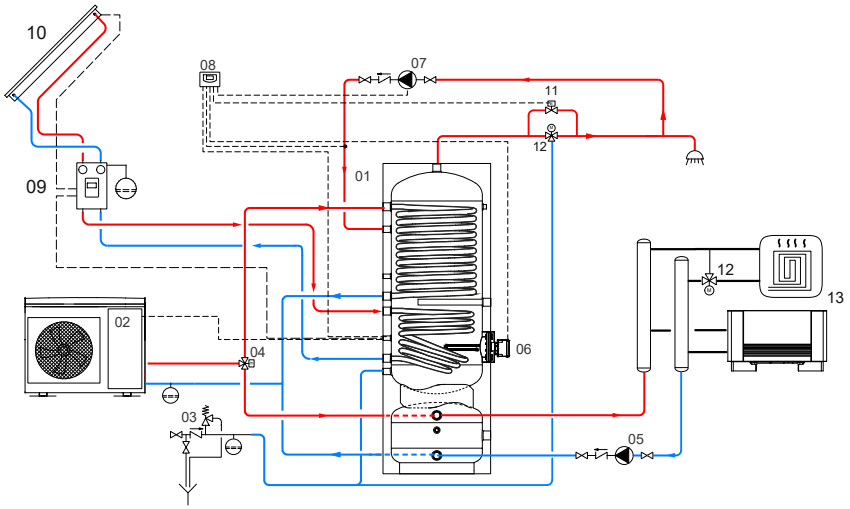


Upper heat exchangers	1,9 m²		3,1 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN
	3	1,5	3,5	1,75

Lower heat exchangers	0,4 m²		0,9 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN
	2,5	1,25	3	1,5



EXAMPLE OF INSTALLATION WITH **BOLLY® 2 HY XL**



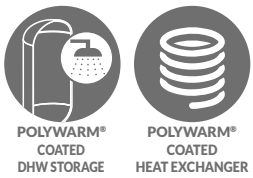
01	Bolly 2 HY XL	05	Circulation group for heating/cooling system	09	Solar system circulation group	13	Heating units
02	Generator (Heat pump)	06	Electric immersion heater	10	Solar panels		
03	Hydraulic safety group	07	D.H.W. recirculation group	11	By-pass solenoid valve		
04	Motorized 3-way valve	08	Electronic Control/thermostat	12	Thermostatic mixing valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

BOLLY® **2 HY AP**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS AND INTEGRATED BUFFER TANK SPECIFIC FOR HEAT PUMPS





APPLICATION
Production and storage of domestic hot water (DHW). Heating/cooling buffer tank for heat pumps.

MATERIAL
- *DHW STORAGE:* Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
- *ENERGY BUFFER hot-cold:* Mild steel.

HEAT EXCHANGER:
N° 2 mild steel Polywarm® coated heat exchangers.

INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- HARD FOAM (CLASS "A" MODELS): rigid polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.
Grey PVC external lining.

GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated and connection for electric immersion heater

CATHODE PROTECTION (DHW STORAGE)
Magnesium anode.

WARRANTY
5 years (See general sales conditions and warranty)

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



BOLLY® 2 HY AP WB

Model	HARD FOAM INSULATION	Power of combinable heat pump	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[kWt]	[m²]		
300	3134162320010	7-12	0,9	1,4	C
500	3134162320011	12-16	1,3	2,2	C

BOLLY® 2 HY AP WB CLASS A

Model	HARD FOAM INSULATION	Power of combinable heat pump	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[kWt]	[m²]		
300	3134162320014	7-12	0,9	1,4	A
500	3134162320015	12-16	1,3	2,2	A

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Position electric immersion heater	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	2 kW	3 kW	THREEPHASE 4 kW	5 kW	6 kW
			5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049
			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]		
300	1	235	421	316	210	158	//	//
	2	112	201	151	100	75	60	//
500	1	413	741	555	370	278	222	//
	2	185	331	248	165	124	99	83

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
5240000000074	1,5 kW
5240000000075	2 kW
5240000000076	3 kW



Titanium anode

See Accessories section

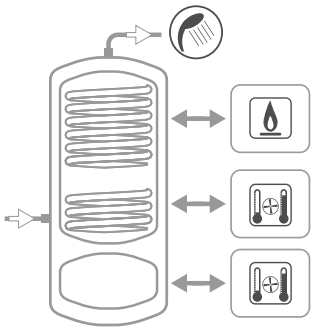


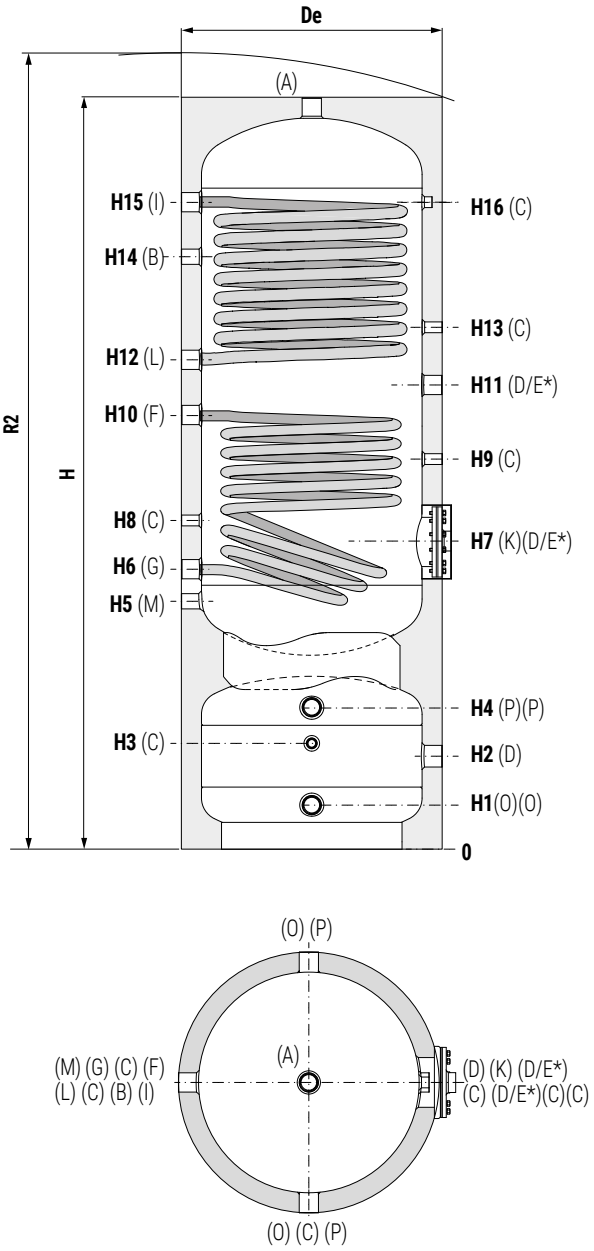
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

BOLLY® **2 HY AP**

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS AND INTEGRATED BUFFER TANK SPECIFIC FOR HEAT PUMPS

STORAGE		HEAT EXCHANGER		BUFFER TANK	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
10 bar	95 °C	12 bar	110 °C	4 bar	-10/+95 °C





A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation
D	Connection for electric immersion heater
E*	Connection for magnesium anode 1"1/4 G F- Use a reduction 1"1/2-1"1/4
F	Primary circuit inlet
G	Primary circuit outlet
I	Upper heat exchanger inlet
L	Upper heat exchanger outlet
K	Flange for inspection
M	Domestic cold water circuit inlet
O	Heating return/to generator
P	Heating delivery/from generator

Model	Volume ACS	Buffer tank volume	Weight	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8
	[lt]		[kg]	[mm]										
300	291	81	103	650	1875	1990	110	232	264	354	628	698	738	818
500	498	108	168	750	2225	2360	125	230	245	335	649	729	794	849

Model	H9	H10	H11	H12	H13	H14	H15	H16	K	A-F-G-L-I	B-M	C	D	P-O
	[mm]									Connections F				
300	948	1219	1318	1368	1463	1488	1608	1608	Øi120/Øe180	1"1/4	1"	1/2"	1"1/2	1"1/4
500	969	1419	1527	1569	1679	1714	1859	1859	Øi120/Øe180	1"1/4	1"	1/2"	1"1/2	1"1/4

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

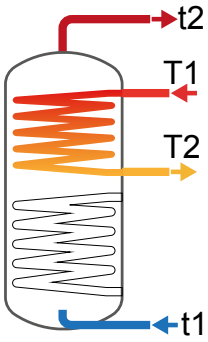
BOLLY® **2 HY AP**

HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:
1) Primary circuit at T1 and proper energy source;
2) Production of DHW in continuous from 10 °C to t2;
3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
4) Non-scaling sanitary water

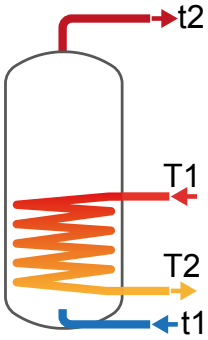
UPPER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
300	3	41	43	30	20	9,9	15	17,5	22,8	243	368	432	562
	1,5	47	48	34	22	9,1	13,6	15,8	20,4	223	333	389	503
500	3,5	49	51	35	23	14,4	22,5	25,9	32,8	353	532	623	809
	1,75	55	57	40	26	13,3	19,6	22,8	29,3	326	482	562	724

Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
300	3	149	197	208	229	303	430	481	585	194,65	19,09
	1,5	146	191	201	220	287	402	447	538	53,92	5,29
500	3,5	242	317	332	363	465	654	727	876	316,51	31,04
	1,75	237	309	322	349	444	614	678	808	87,68	8,60

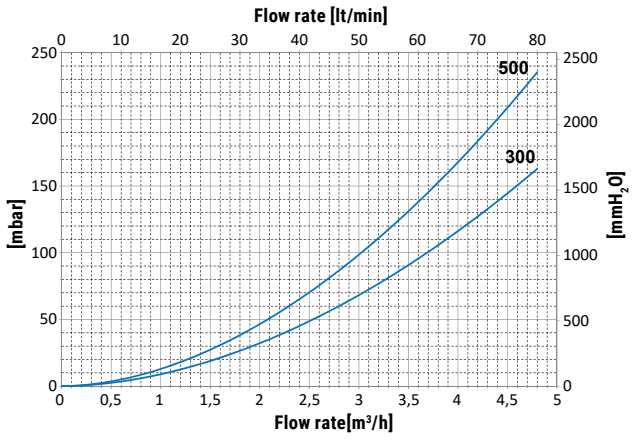
LOWER
HEAT EXCHANGER



Model	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1			
	[m³/h]	T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
300	3	82	85	60	39	15,6	23,4	27,3	36,3	384	576	673	871
	1,5	94	98	69	45	14,6	21,2	24,6	31,6	354	522	607	778
500	3,5	100	104	73	48	22,3	33,2	38,7	49,9	549	820	956	1234
	1,75	115	120	85	56	20,6	30	34,7	44,3	506	741	858	1095

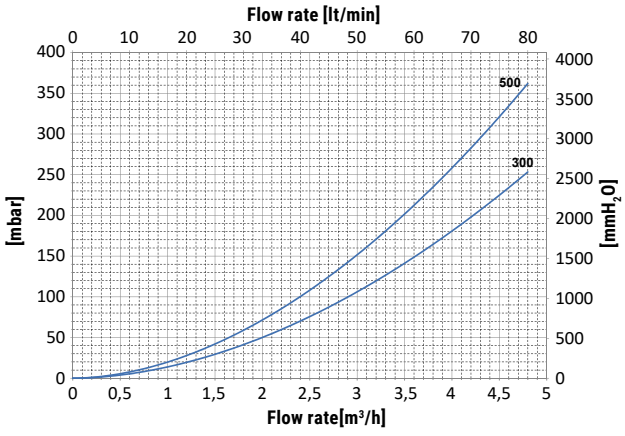
Model	Primary flow rate	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
	[m³/h]	T1/t2				T1/t2				[mmH$_2$O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
300	3	397	512	528	561	640	877	954	1113	1082,03	106,11
	1,5	392	503	517	545	616	833	901	1038	299,73	29,39
500	3,5	660	847	869	916	1007	1366	1475	1697	2056,48	201,67
	1,75	652	834	853	893	973	1303	1396	1586	569,66	55,86

HEAT EXCHANGERS PRESSURE DROP



UPPER

Heat exchangers surface [m²]	
300	0,9
500	1,3



LOWER

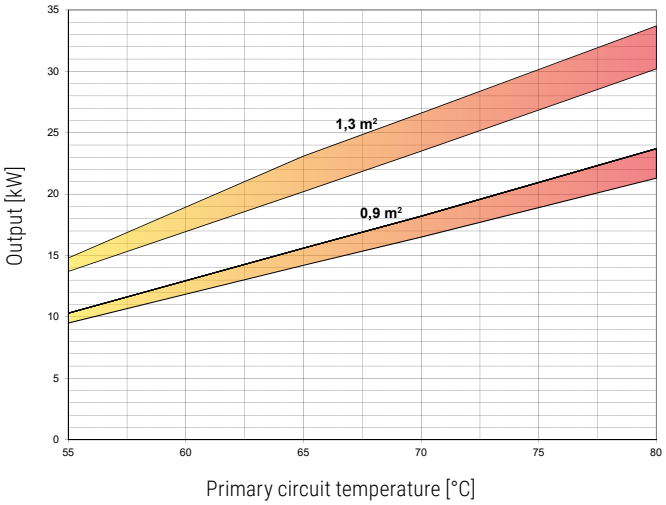
Heat exchangers surface [m²]	
300	1,4
500	2,2

BOLLY® **2 HY AP**

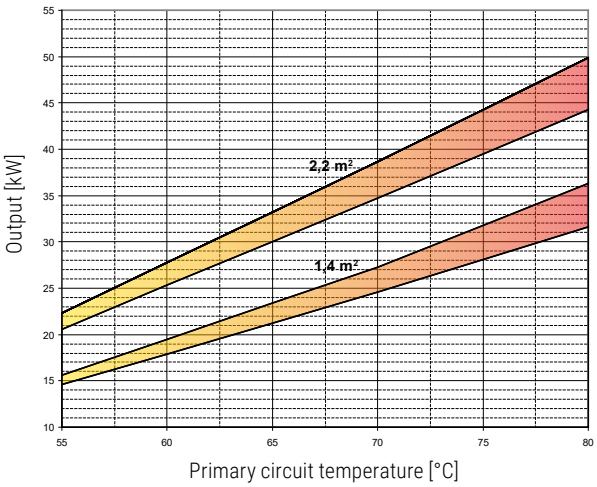
HEAT EXCHANGERS TECHNICAL DATA



Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)

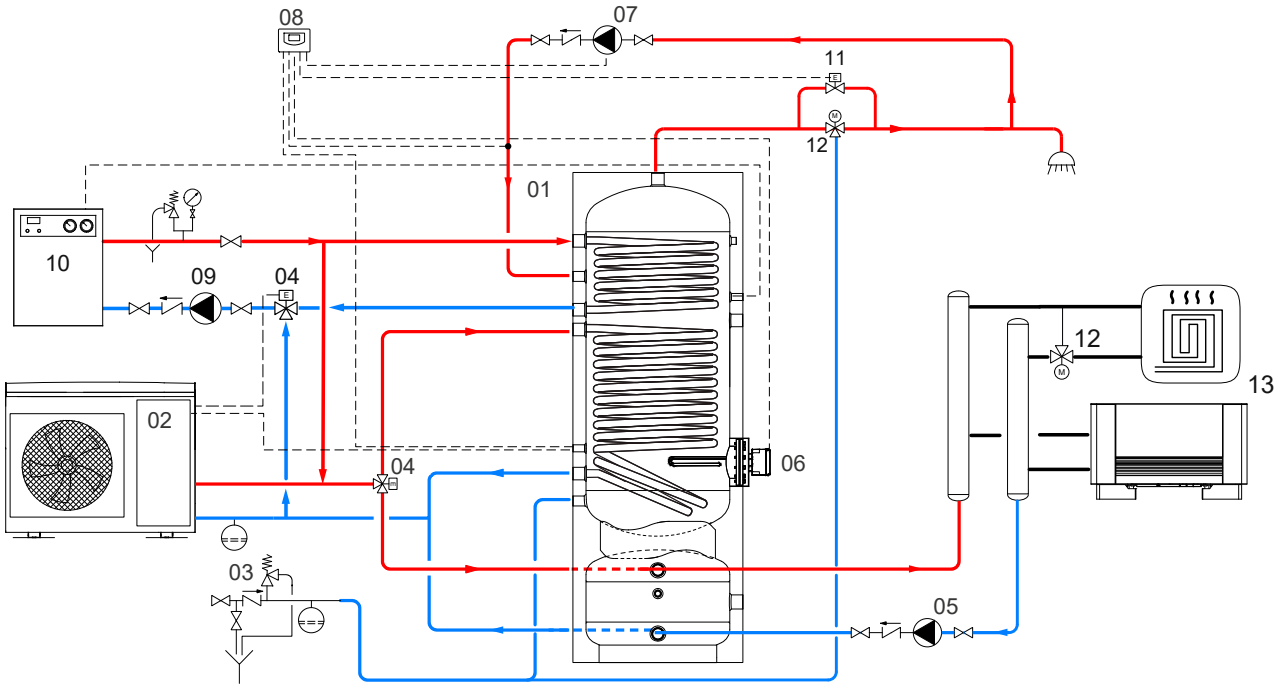


Heat exchanger surface	0,9 m²		1,3 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN
	3	1,5	3,5	1,75



Heat exchanger surface	1,4 m²		2,2 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN
	3	1,5	3,5	1,75

EXAMPLE OF INSTALLATION WITH **BOLLY® 2 HY AP**



01	Bolly® 2 HY AP	05	Circulation group for heating/cooling system	09	Circulation group (boiler)	13	Heating units
02	Generator (Heat pump)	06	Electric immersion heater	10	Auxiliary generator (Boiler)		
03	Hydraulic safety group	07	D.H.W. recirculation group	11	By-pass solenoid valve		
04	Motorized 3-way valve	08	Electronic Control/thermostat	12	Thermostatic mixing valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

ACQUAMAS® 1

THERMAL STORAGE WITH ACQUAMAS® MODULE
FOR INSTANTANEOUS PRODUCTION OF DHW SPECIFIC FOR HEAT PUMPS



APPLICATION
Stratified storage of technical water, for instantaneous production of domestic hot water (DHW) with high flow rates and efficiency in systems with low temperature generators such as heat pumps (HP).

MATERIAL
Mild steel, painted externally and untreated internally.
INSTANTANEOUS DHW PRODUCTION MODULE:
External ACQUAMAS® MODULE with 316L stainless steel plate heat exchanger for instantaneous production of domestic hot water (DHW), equipped with electronic control unit.

INSULATION
Thermal storage: High thermal insulation with ecological polyurethane hard foam.
ACQUAMAS® MODULE: contained within the EPP structure, with the function of housing and insulation.
Grey PVC external lining.

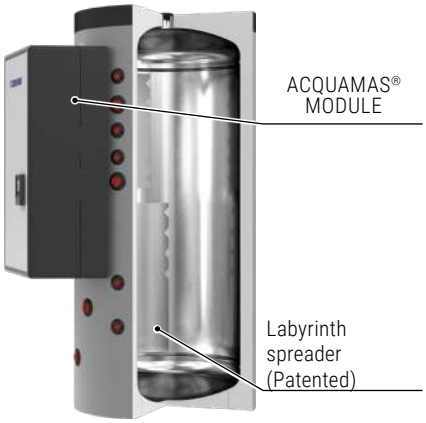
TECHNICAL DESCRIPTION
ACQUAMAS® thermal storage, specific for the accumulation of the heat produced by the thermal system and the instantaneous production of DHW, therefore without accumulation of domestic hot water, with the following advantages:
- ease of maintenance
- maximum hygiene in anti-legionella function.

WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts

IMMEDIATE DHW PRODUCTION

ACQUAMAS® 1

Model	ACQUAMAS® MODULE (with stainless steel brazed plates)	HARD FOAM INSULATION Art. Nr.	ENERGY EFFICIENCY CLASS
500	120	3251162314850	C
600		3251162314851	C



PATENTED

Model	DHW module	DHW production (10-45°C) with accumulation at 60°C [lt/min]	Maximum availability of DHW (10-45°C) with accumulation at 80°C [lt]
500	ACQUAMAS® MODULE	40	570
600		40	670

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

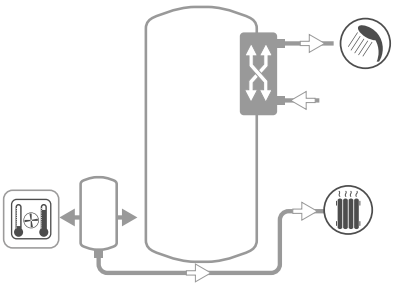


P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

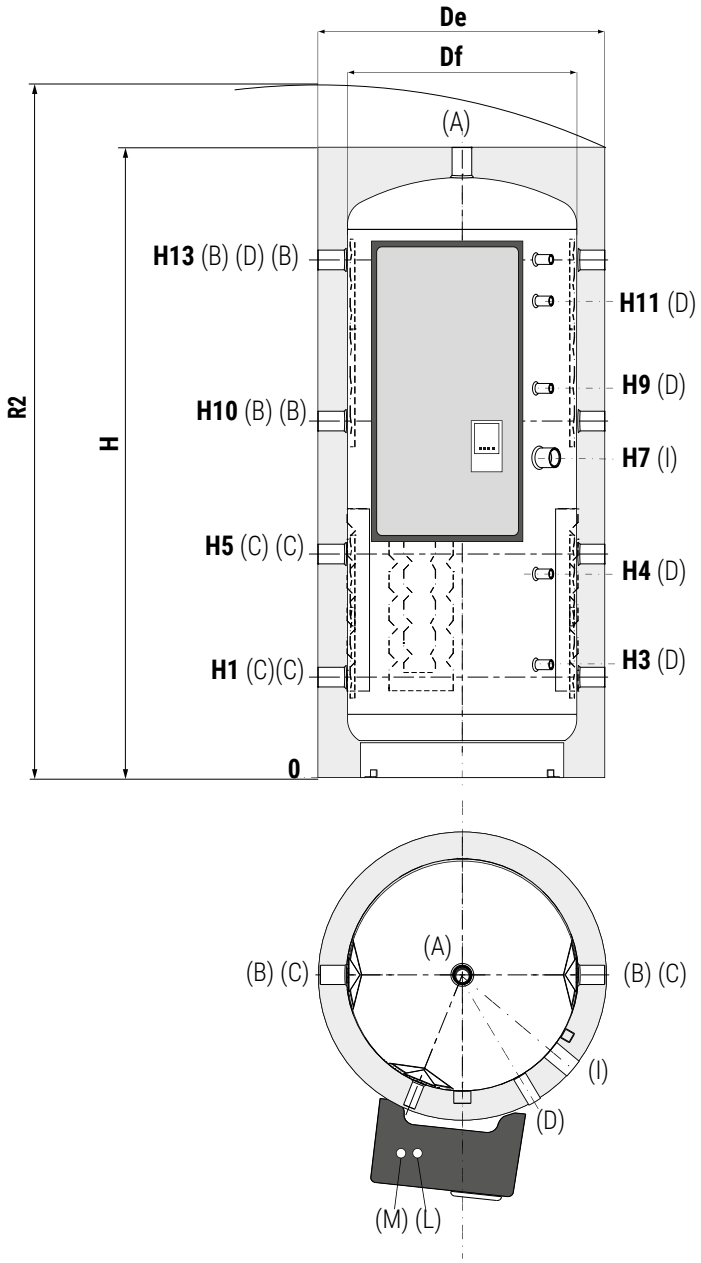
ACQUAMAS® 1

THERMAL STORAGE WITH ACQUAMAS® MODULE
FOR INSTANTANEOUS PRODUCTION OF DHW SPECIFIC FOR HEAT PUMPS

STORAGE		HEAT EXCHANGER STAINLESS STEEL PLATES (MACS®)		DHW HARDNESS
Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	8 bar	99 °C	30 °f



See TECHNICAL SUPPORT chapter for example of installation



A	From generator/Air purge 1"1/2 G F
B	From the generator 1"1/2 G F
C	To the generator 1"1/2 G F
D	Probe 1/2" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 1" G M
M	Domestic cold water circuit inlet 1" G M

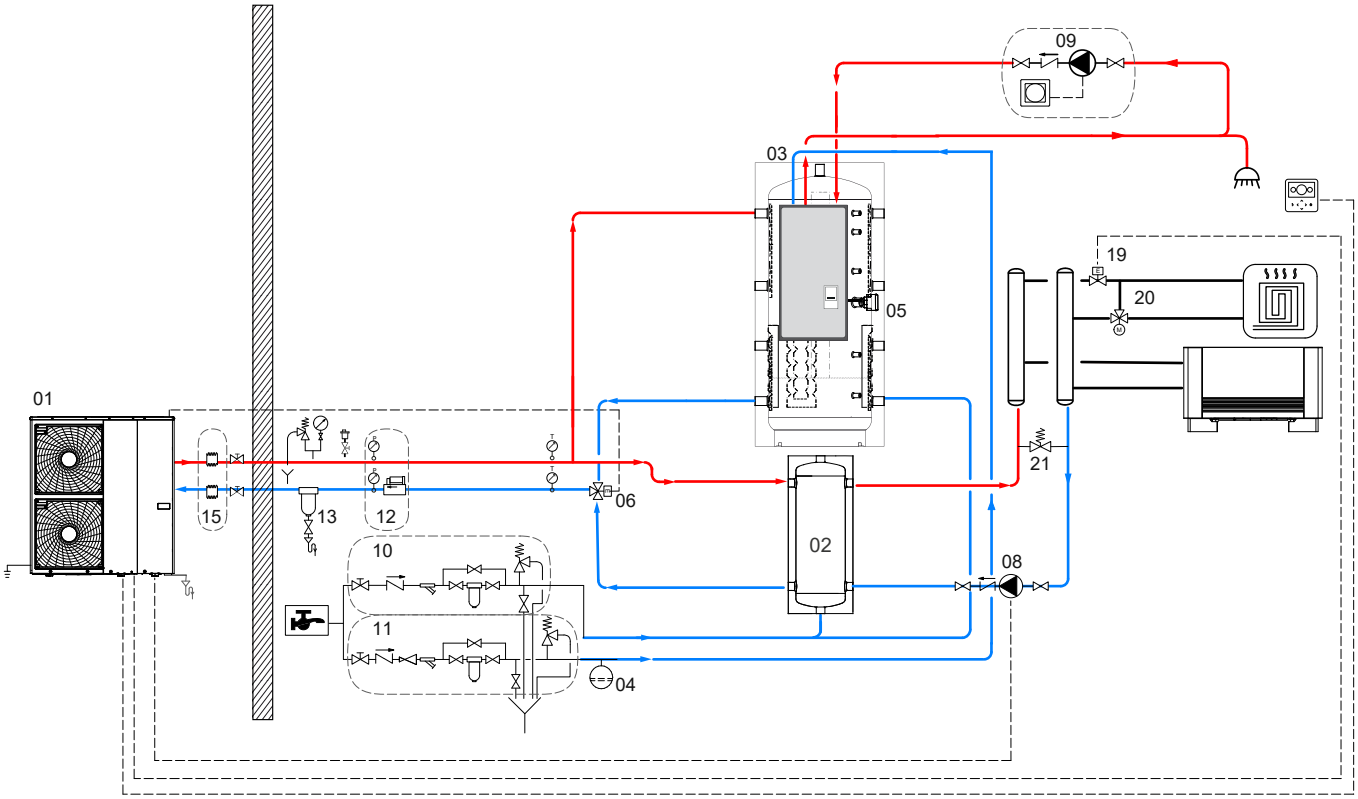
ACQUAMAS® 1

Model	Volume	De	Df	H	R2	H1	H3	H4	H5	H7	H9	H10	H11	H13
	[lt]	[mm]												
500	478	750	650	1619	1785	247	360	425	533	870	1025	1011	1130	1343
600	560	750	650	1870	2015	247	360	582	695	970	1200	1144	1485	1593

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE



EXAMPLE OF INSTALLATION WITH **ACQUAMAS® 1**



1	Heat Pump
2	Heating/cooling buffer tank Buffer tank PDC
3	Thermal storage ACQUAMAS® 1
4	Expansion Vessel
5	DHW Electric Resistance
6	3-way motorized valve
8	Circulation group
9	DHW Recirculation Kit
10	Compulsory components for the compliance of Sanitary Water with current regulations (Legislative Decree 31/2001, UNI 8065/2019, etc) and with the system requirements for the warranty conditions.
11	Compulsory components for the compliance of the System Water with the regulations in force (Legislative Decree 31/2001, UNI 8065/2019, etc) and with the system requirements for the warranty conditions.
12	Flow meter or pair of pressure gauges
13	Magnetic dirt separator
15	Anti-vibration joints
19	Zone valve
20	Low Temperature System Mixing
21	By-pass valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

ACQUAMAS® 1

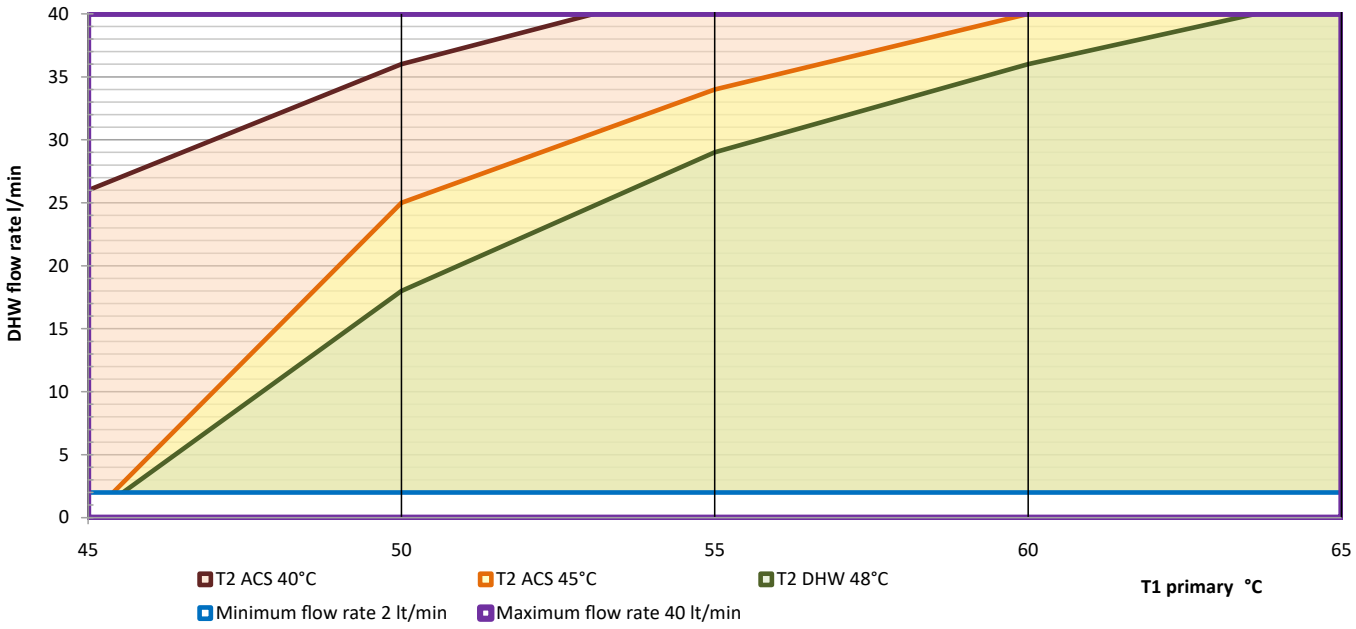
MAXIMUM DHW FLOW RATE THAT CAN BE PRODUCED WITH COLD SANITARY WATER AT 10 °C





ACQUAMAS® MODULE FOR INSTANT PRODUCTION OF DHW

- 2-40 LITERS/MINUTE
- BRAZED PLATES EXCHANGER IN STAINLESS 316L
- STAINLESS DHW FITTINGS
- ELECTRONIC MANAGEMENT UNIT



ACQUAMAS® 2

THERMAL STORAGE WITH ACQUAMAS® MODULE FOR INSTANTANEOUS PRODUCTION OF DHW AND 1 HEAT EXCHANGER FOR AN AUXILIARY GENERATOR



APPLICATION
Stratified storage of technical water, for instantaneous production of domestic hot water (DHW) with high flow rates and efficiency in systems with low temperature generators such as heat pumps (HP) and **with integration of an auxiliary heat source.**

MATERIAL
Mild steel, painted externally and untreated internally.

INSTANTANEOUS DHW PRODUCTION MODULE:
External ACQUAMAS® MODULE with 316L stainless steel plate heat exchanger for instantaneous production of domestic hot water (DHW), equipped with electronic control unit.

HEAT EXCHANGER (TECHNICAL WATER STORAGE):
The thermal storage is equipped with 1 fixed heat exchanger in mild steel to integrate an auxiliary generator.

INSULATION
Thermal storage: High thermal insulation with ecological polyurethane hard foam.
ACQUAMAS® MODULE: contained within the EPP structure, with the function of housing and insulation.
Grey PVC external lining.

TECHNICAL DESCRIPTION
ACQUAMAS® thermal storage, specific for the accumulation of the heat produced by the thermal system and the instantaneous production of DHW, therefore without accumulation of domestic hot water, with the following advantages:
- ease of maintenance
- maximum hygiene in anti-legionella function.

WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts

IMMEDIATE DHW PRODUCTION

ACQUAMAS® 2

Model	ACQUAMAS® MODULE (with stainless steel brazed plates)	HARD FOAM INSULATION	HEAT EXCHANGER SURFACE	ENERGY EFFICIENCY CLASS
		Art. Nr.	Upper [m²]	ErP
500	120	3251162314860	1,3	C
600		3251162314861	1,3	C



PATENTED

Model	DHW module	DHW production (10-45°C) with accumulation at 60°C	Maximum availability of DHW (10-45°C) with accumulation at 80°C
		[lt/min]	[lt]
500	ACQUAMAS® MODULE	40	570
600		40	670

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

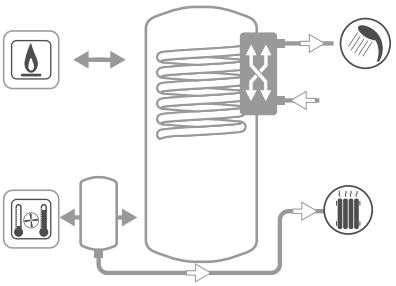


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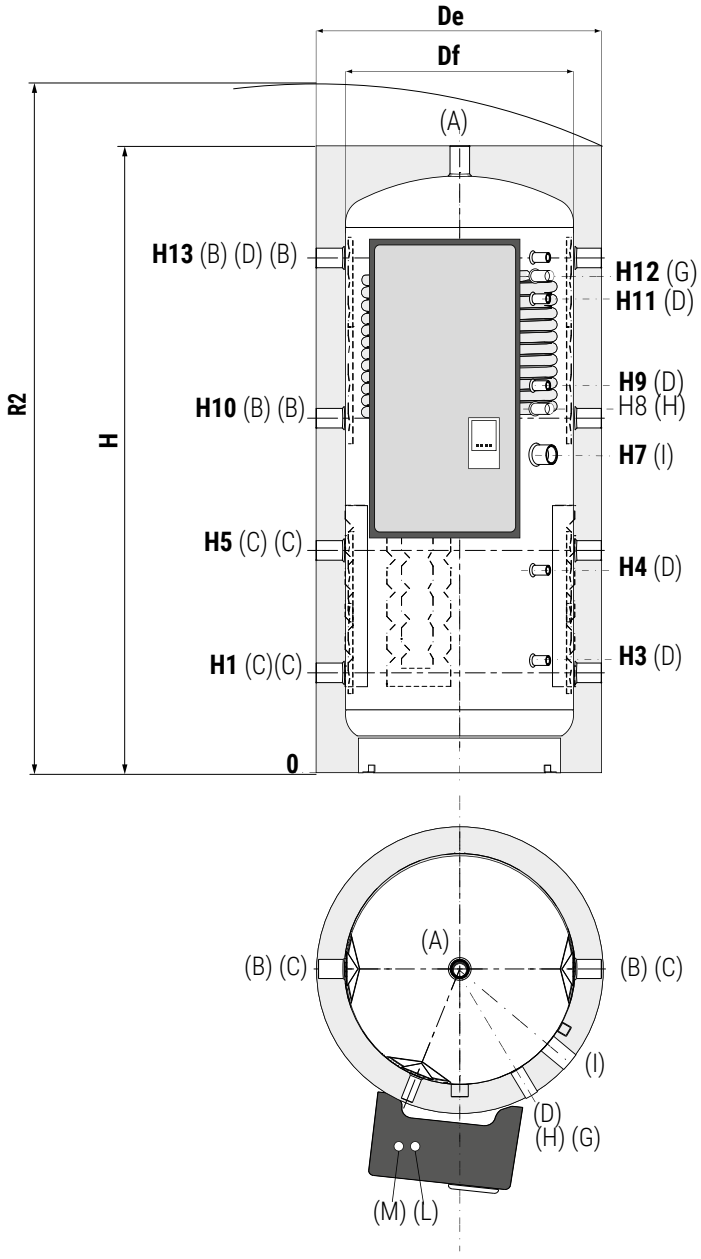
ACQUAMAS® 2

THERMAL STORAGE WITH ACQUAMAS® MODULE
FOR INSTANTANEOUS PRODUCTION OF DHW AND 1 HEAT EXCHANGER FOR AN AUXILIARY GENERATOR

STORAGE		FIXED HEAT EXCHANGER		HEAT EXCHANGER STAINLESS STEEL PLATES (MACS®)		DHW HARDNESS
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	12 bar	110 °C	8 bar	99 °C	30 °f



See TECHNICAL SUPPORT chapter for example of installation



A	From generator/Air purge 1"1/2 G F
B	From the generator 1"1/2 G F
C	To the generator 1"1/2 G F
D	Probe 1/2" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 1" G M
M	Domestic cold water circuit inlet 1" G M

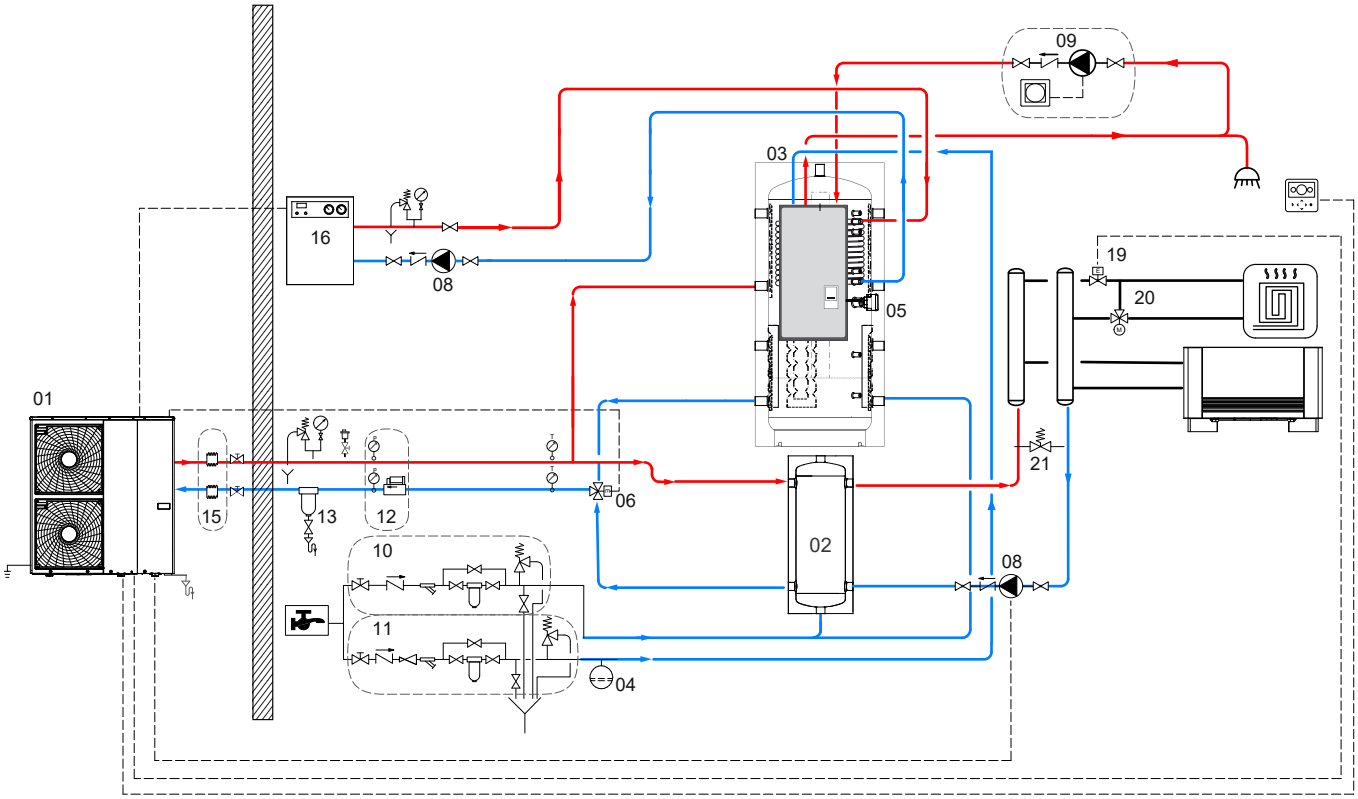
ACQUAMAS® 2

Model	Volume	De	Df	H	R2	H1	H3	H4	H5	H7	H8	H9	H10	H11	H12	H13
	[lt]	[mm]														
500	478	750	650	1619	1785	247	360	425	533	870	930	1025	1011	1130	1231	1343
600	560	750	650	1870	2015	247	360	582	695	970	1090	1200	1144	1485	1391	1593

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE



EXAMPLE OF INSTALLATION WITH **ACQUAMAS® 2**



1	Heat Pump
2	Heating/cooling buffer tank Buffer tank PDC
3	Thermal storage ACQUAMAS® 2
4	Expansion Vessel
5	DHW Electric Resistance
6	3-way motorized valve
8	Circulation group
9	DHW Recirculation Kit
10	Compulsory components for the compliance of Sanitary Water with current regulations (Legislative Decree 31/2001, UNI 8065/2019, etc) and with the system requirements for the warranty conditions.
11	Compulsory components for the compliance of the System Water with the regulations in force (Legislative Decree 31/2001, UNI 8065/2019, etc) and with the system requirements for the warranty conditions.
12	Flow meter or pair of pressure gauges
13	Magnetic dirt separator
15	Anti-vibration joints
16	Integrative generator
19	Zone valve
20	Low Temperature System Mixing
21	By-pass valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

ACQUAMAS® 2

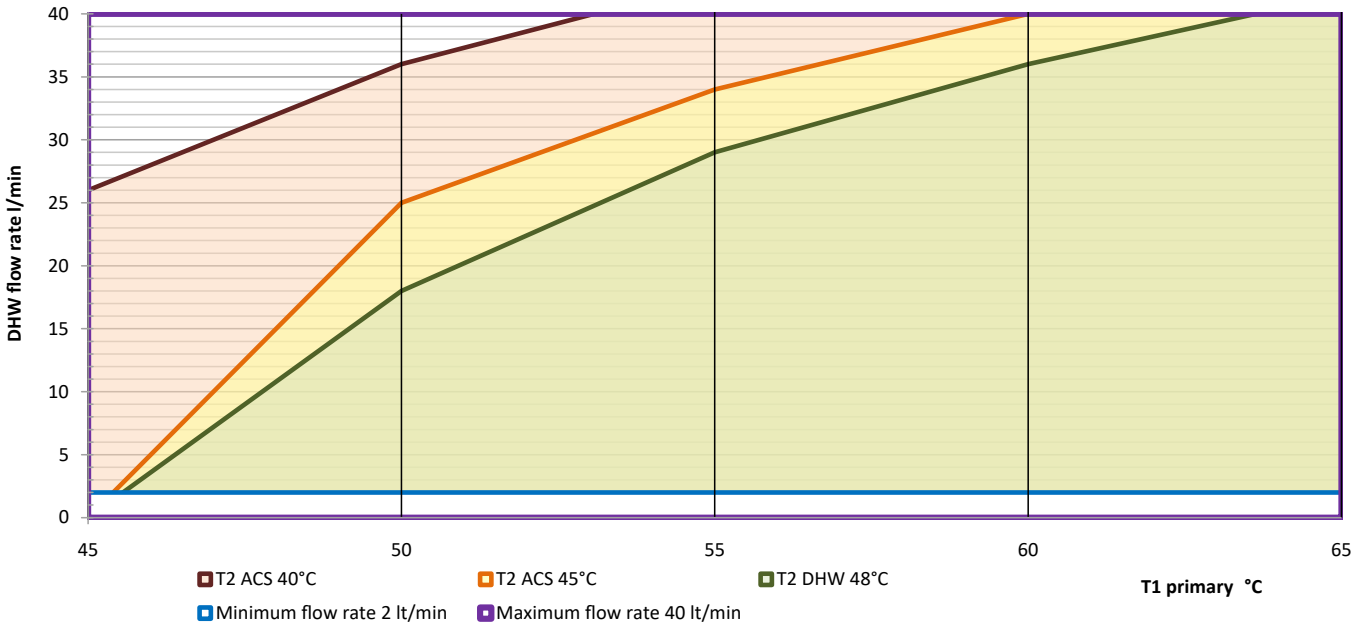
MAXIMUM DHW FLOW RATE THAT CAN BE PRODUCED WITH COLD SANITARY WATER AT 10 °C





ACQUAMAS® MODULE FOR INSTANT PRODUCTION OF DHW

- 2-40 LITERS/MINUTE
- BRAZED PLATES EXCHANGER IN STAINLESS 316L
- STAINLESS DHW FITTINGS
- ELECTRONIC MANAGEMENT UNIT



ACQUAMAS® **3 CTS®**

THERMAL STORAGE WITH ACQUAMAS® MODULE FOR INSTANTANEOUS PRODUCTION OF DHW AND 2 HEAT EXCHANGERS FOR TWO AUXILIARY GENERATORS



APPLICATION
Stratified storage of technical water, for instantaneous production of domestic hot water (DHW) with high flow rates and efficiency in systems with low temperature generators such as heat pumps (HP), **with integration of an auxiliary heat source plus a solar thermal system with thermal loading from above.**
MATERIAL
Mild steel, painted externally and untreated internally.
INSTANTANEOUS DHW PRODUCTION MODULE:
External ACQUAMAS® MODULE with 316L stainless steel plate heat exchanger for instantaneous production of domestic hot water (DHW), equipped with electronic control unit.
HEAT EXCHANGER (TECHNICAL WATER STORAGE):
The thermal storage is equipped with 2 fixed heat exchangers in mild steel: an upper one to integrate an auxiliary generator and a lower one, with a CTS® thermal loading system from above, which allows to make the most of solar energy.

INSULATION
Thermal storage: High thermal insulation with ecological polyurethane hard foam.
ACQUAMAS® MODULE: contained within the EPP structure, with the function of housing and insulation.
Grey PVC external lining.
TECHNICAL DESCRIPTION
ACQUAMAS® thermal storage, specific for the accumulation of the heat produced by the thermal system and the instantaneous production of DHW, therefore without accumulation of domestic hot water, with the following advantages:
- ease of maintenance
- maximum hygiene in anti-legionella function.

WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts

IMMEDIATE DHW PRODUCTION

ACQUAMAS® 3 CTS®

Model	ACQUAMAS® MODULE (with stainless steel brazed plates)	HARD FOAM INSULATION	HEAT EXCHANGER SURFACE		ENERGY EFFICIENCY CLASS
		Art. Nr.	Upper [m²]	Lower [m²]	ErP
500	120	3251162314870	1,9	2,1	C
600		3251162314871	1,9	2,1	C



PATENTED

Model	DHW module	DHW production (10-45°C) with accumulation at 60°C	Maximum availability of DHW (10-45°C) with accumulation at 80°C
		[lt/min]	[lt]
500	ACQUAMAS® MODULE	40	570
600		40	670

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

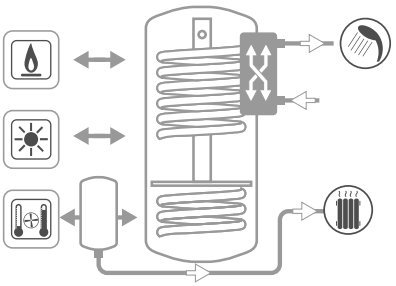
Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	



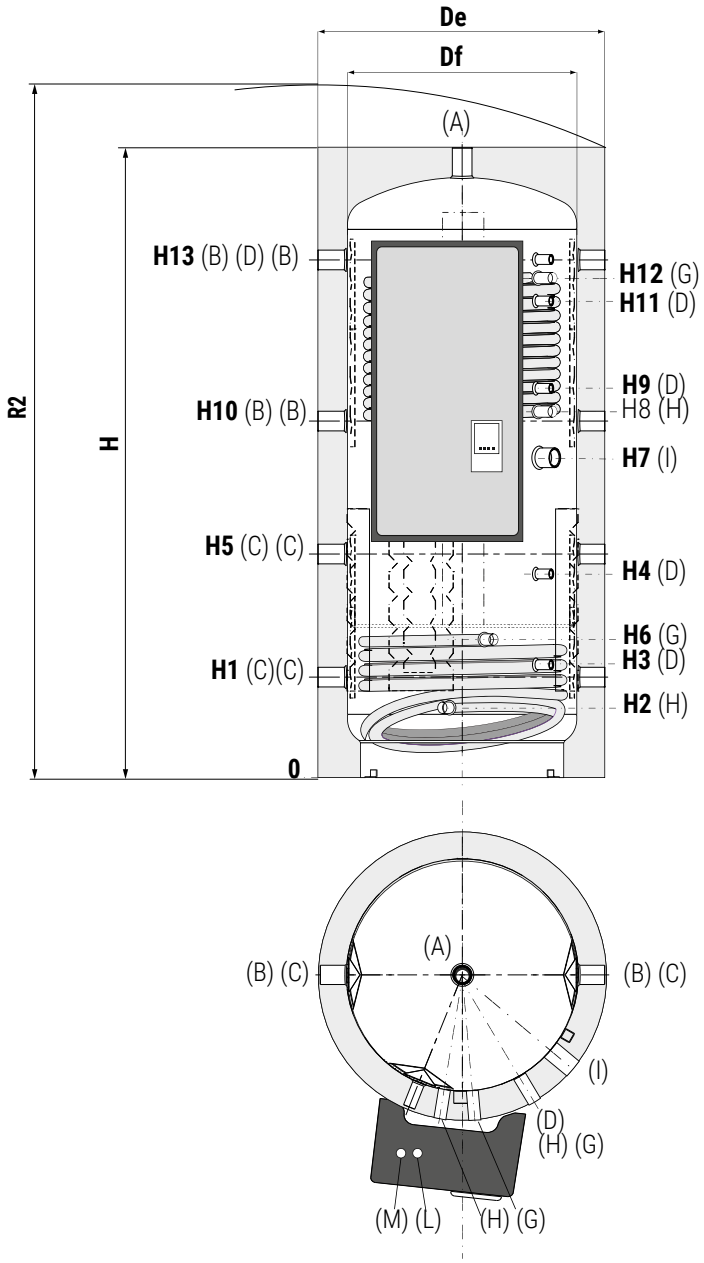
ACQUAMAS® **3 CTS®**

THERMAL STORAGE WITH ACQUAMAS® MODULE FOR INSTANTANEOUS PRODUCTION OF DHW AND 2 HEAT EXCHANGERS FOR TWO AUXILIARY GENERATORS

STORAGE		FIXED HEAT EXCHANGER		HEAT EXCHANGER STAINLESS STEEL PLATES (MACS®)		DHW HARDNESS
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	12 bar	110 °C	8 bar	99 °C	30 °f



See TECHNICAL SUPPORT chapter for example of installation



A	From generator/Air purge 1"1/2 G F
B	From the generator 1"1/2 G F
C	To the generator 1"1/2 G F
D	Probe 1/2" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 1" G M
M	Domestic cold water circuit inlet 1" G M

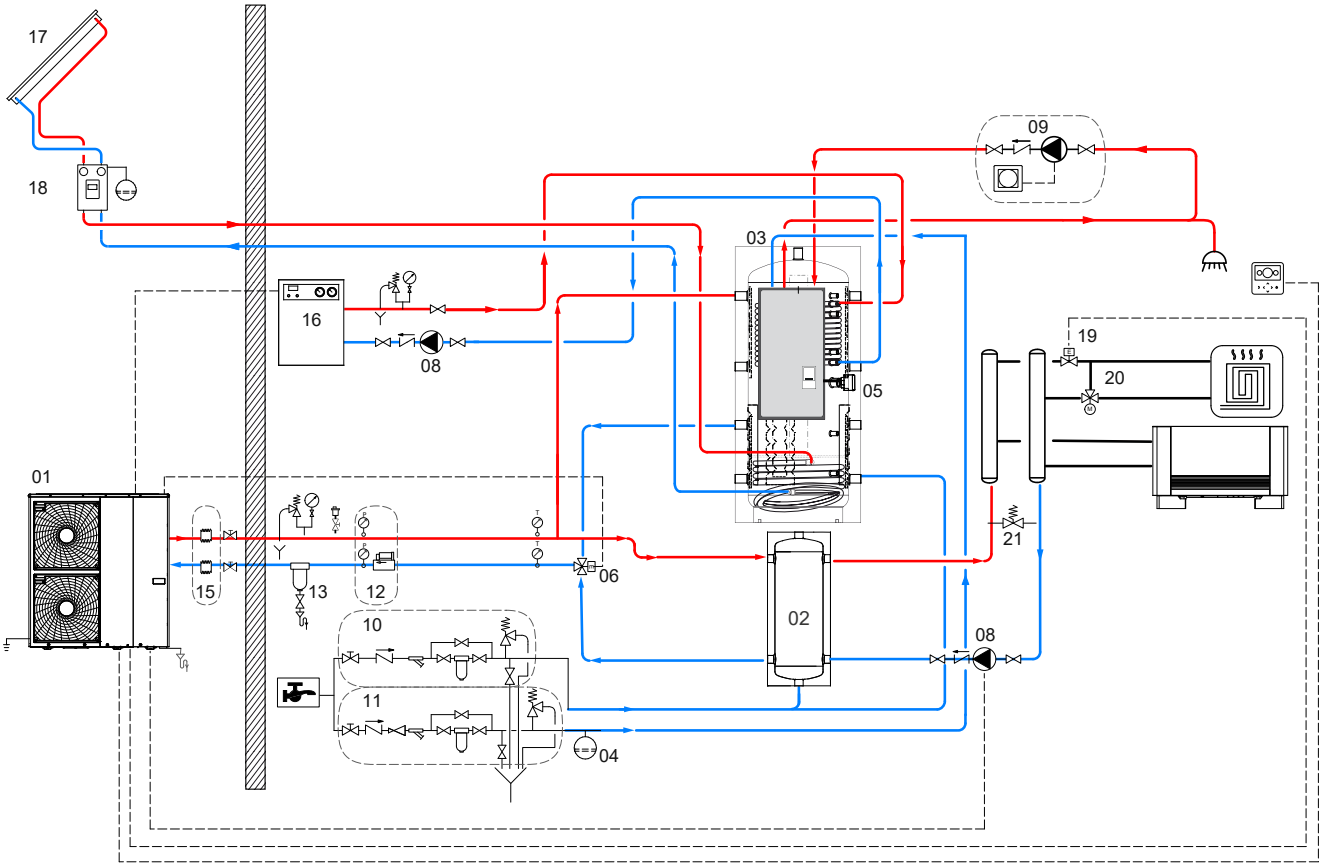
ACQUAMAS® 3 CTS®

Model	Volume	De	Df	H	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
	[lt]	[mm]															
500	478	750	650	1619	247	215	360	425	533	425	870	930	1025	1011	1130	1231	1343
600	560	750	650	1870	247	215	360	582	695	425	970	1090	1200	1144	1485	1391	1593

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE



EXAMPLE OF INSTALLATION WITH **ACQUAMAS® 3 CTS®**



1	Heat Pump
2	Heating/cooling buffer tank Buffer tank PDC
3	Thermal storage ACQUAMAS® 3 CTS®
4	Expansion Vessel
5	DHW Electric Resistance
6	3-way motorized valve
8	Circulation group
9	DHW Recirculation Kit
10	Compulsory components for the compliance of Sanitary Water with current regulations (Legislative Decree 31/2001, UNI 8065/2019, etc) and with the system requirements for the warranty conditions.
11	Compulsory components for the compliance of the System Water with the regulations in force (Legislative Decree 31/2001, UNI 8065/2019, etc) and with the system requirements for the warranty conditions.
12	Flow meter or pair of pressure gauges
13	Magnetic dirt separator
15	Anti-vibration joints
16	Integrative generator
17	Thermal solar collectors
18	Solar system circulation group
19	Zone valve
20	Low Temperature System Mixing
21	By-pass valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

ACQUAMAS® **3 CTS®**

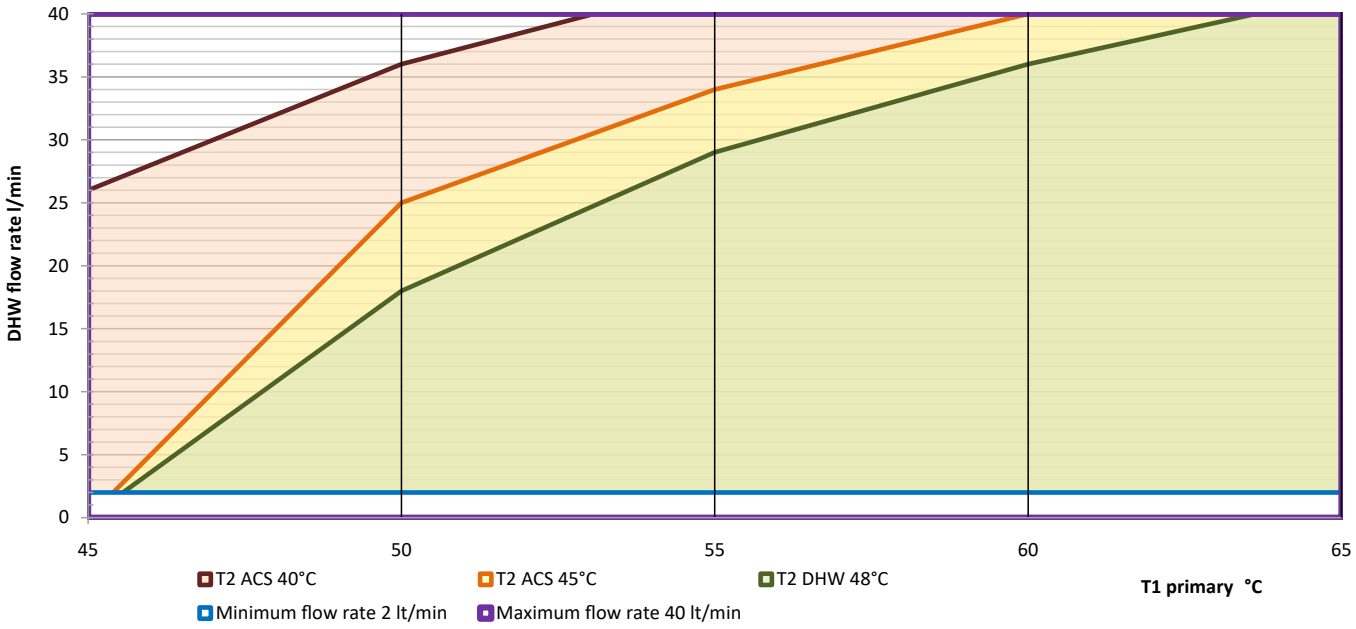
MAXIMUM DHW FLOW RATE THAT CAN BE PRODUCED WITH COLD SANITARY WATER AT 10 °C





ACQUAMAS® MODULE FOR INSTANT PRODUCTION OF DHW

- 2-40 LITERS/MINUTE
- BRAZED PLATES EXCHANGER IN STAINLESS 316L
- STAINLESS DHW FITTINGS
- ELECTRONIC MANAGEMENT UNIT



PUFFERMAS® **1 PDC**

BUFFER TANK FOR HEATING WATER WITH MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION



APPLICATION
Stratified storage of technical water and instantaneous production of domestic hot water (DHW) with high flow rates.

MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.

D.H.W. HEAT EXCHANGER
External MACS® MODULE with 316L stainless steel plate heat exchanger for instantaneous production of domestic hot water (DHW).

TECHNICAL DESCRIPTION
PUFFERMAS® 1 PDC, specifically designed for storaging heat produced by low temperature sources such as heat pumps (PDC), allows a rapid DHW production using a thermal storage tank, with the following advantages:
- to reduce dimensions of the water heater needed
- easy maintenance
- maximum hygiene for anti-legionellosis bacteria's
- to produce more DHW than the quantity obtained by boiler with similar capacity because hot water is stored at a higher temperature than DHW.

INSULATION
Buffer tank: High thermal insulation with ecological hard polyurethane foam. Models 800-1000 available with dismountable hard foam insulation
MACS® module 180 HP: insulating PPE cover.
Grey PVC external lining.

WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

IMMEDIATE DHW PRODUCTION

NEW



PATENTED

PUFFERMAS® 1 PDC VB

Model	MACS® module model	HARD FOAM INSULATION Art. Nr.	SLB heat exchanger model / plates nr.	ENERGY EFFICIENCY CLASS
800	180 HP	3251162314872	SLB40 / 60	B
1000		3251162314873		C
1500		3251162314874		C

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

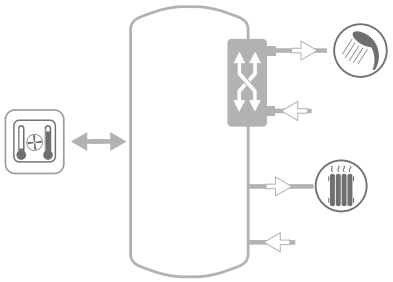


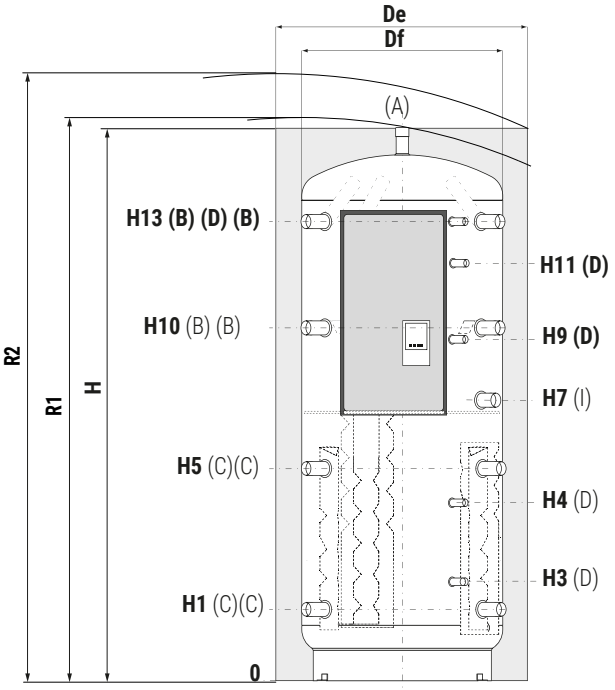
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® **1 PDC**

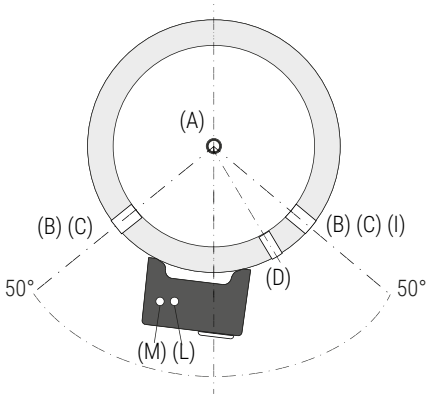
BUFFER TANK FOR HEATING WATER WITH MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION

STORAGE		STAINLESS STEEL 316L BRAZED PLATE EXCHANGER (MACS®)		D.H.W. HARDNESS
Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	8 bar	99 °C	30 °f





A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Heating delivery/From generator 1"1/2 G F
C	Heating return/to generator 1"1/2 G F
D	Probe 1/2" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 3/4" G M (1" G M for models 120)
M	Domestic cold water circuit inlet 3/4" G M (1" G M for models 120)

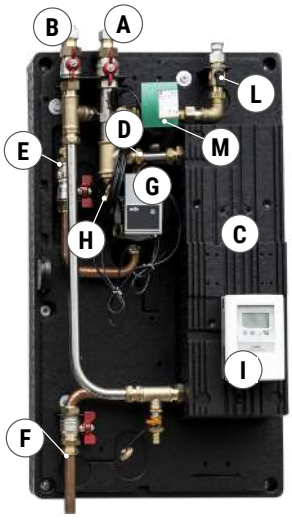




Dismountable insulation

Model	Volume	De	Df	H	R1	R2	H1	H3	H4	H5	H7	H9	H10	H11	H13
	[lt]	[mm]													
800	805	940	790	1840	1880	2067	265	378	584	690	918	1115	1115	1442	1541
1000	946	940	790	2130	2165	2329	265	384	656	787	1145	1388	1309	1588	1831
1500	1454	1100	950	2250	//	2505	313	432	736	845	1236	1396	1377	1783	1909

MACS® ELECTRONIC MODULE FOR IMMEDIATE D.H.W. PRODUCTION



A	Domestic hot water outlet (DHW)
B	Domestic Water inlet
C	Stainless steel 316L brazed plate exchanger
D	Flow rate/ temperature probe
E	Primary Inlet
F	Primary Outlet
G	"Energy Savings" Circulation Pump
H	Valves In/Out for DHW
I	Electronic control unit

D.H.W. recirculation kit (optional)	
L	Connection for D.H.W. recirculation (optional)
M	D.H.W. recirculation pump (optional)

The MACS® module is an external unit that immediately produces D.H.W., using the heat energy stored in the Buffer thanks to the stainless steel plate exchanger, granting safety and comfort with the possibility to regulate outlet temperature.
With the new electronic regulation system, the management of the temperature on the DHW side is guaranteed and maintained in an optimal manner and with immediate response times from the electronic control unit on the module.

FOR DHW FLOW RATE CHARTS REFER TO HYDRONIC SECTION - ELECTRONIC MACS® MODULE

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® **3 CTS PDC**

BUFFER TANKS FOR HEATING WATER WITH STRATIFICATION DEVICE, FIXED COILS AND MACS® MODULE FOR INSTANTANEOUS PRODUCTION OF DHW



APPLICATION
Stratified thermal storage of technical water with instantaneous production of domestic hot water (DHW) on high flow rates and efficiencies. Improvement of solar circuit efficiency, with low temperature primary source such as heat pump and auxiliary solar thermal source with the "Top to Bottom" CTS Stratification Device.

MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.

D.H.W. HEAT EXCHANGER
External MACS® MODULE with 316L stainless steel plate heat exchanger for instantaneous production of domestic hot water (DHW).

HEATING WATER HEAT EXCHANGER
IThe tank contains two fixed heat exchangers in mild steel: an upper one to integrate a further thermal source and a lower one, with CTS Stratification Device for the maximum exploitation of the solar thermal energy.

TECHNICAL DESCRIPTION
PUFFERMAS® 3 CTS PDC, specifically designed for the storage of heat produced by low temperature sources such as heat pumps, allows a rapid DHW production using a thermal storage tank, with the following advantages:
- to reduce dimensions of the water heater needed
- easy maintenance
- maximum hygiene for anti-legionellosis bacteria's
- to produce more DHW than the quantity obtained by boiler with similar capacity because hot water is stored at a higher temperature than DHW.

PUFFERMAS® 3 CTS PDC can integrate a third heat source in addition to Solar and Heat Pump.

INSULATION
Buffer tank: High thermal insulation with ecological hard polyurethane foam. Models 800-1000 available with dismountable hard foam insulation
MACS® module 180 HP: insulating PPE cover.
Grey PVC external lining.

WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

IMMEDIATE DHW PRODUCTION

NEW



PATENTED

PUFFERMAS® 3 CTS VB

Model	MACS® module model	HARD FOAM INSULATION Art. Nr.	SLB heat exchanger model / plates nr.	HEAT EXCHANGER SURFACE Upper [m²]	HEAT EXCHANGER SURFACE Lower [m²]	ENERGY EFFICIENCY CLASS
800	180 HP	3251162316572	SLB40 / 60	1,8	2,5	B
1000		3251162316573		2,5	3,1	C
1500		3251162316574		2,8	3,8	C

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

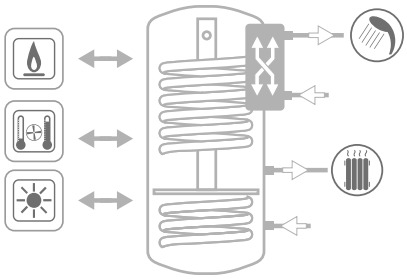


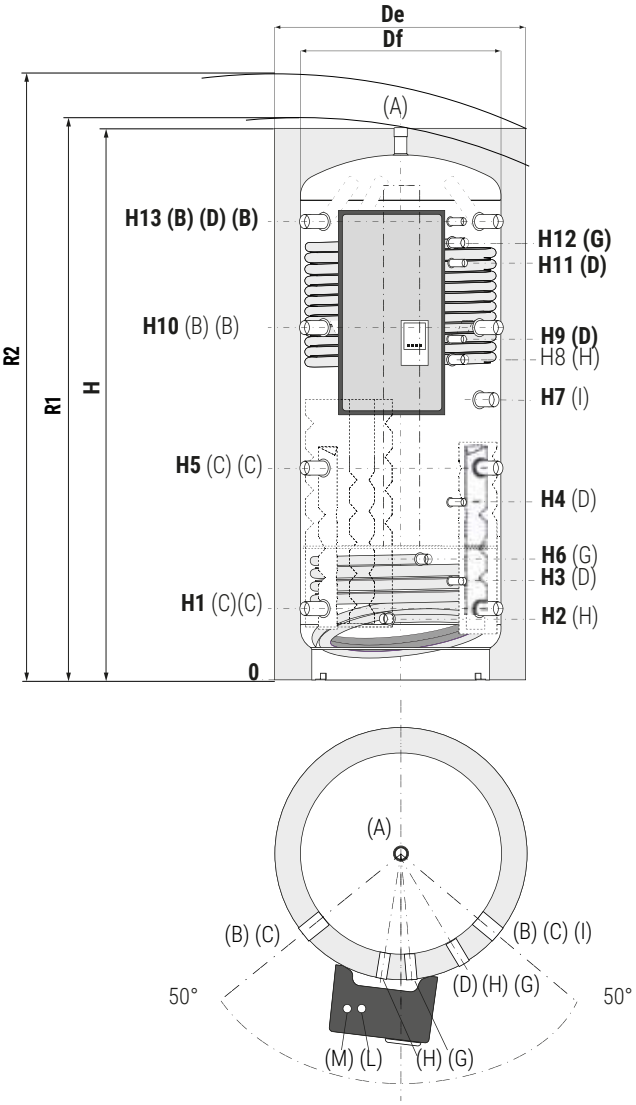
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® **3 CTS PDC**

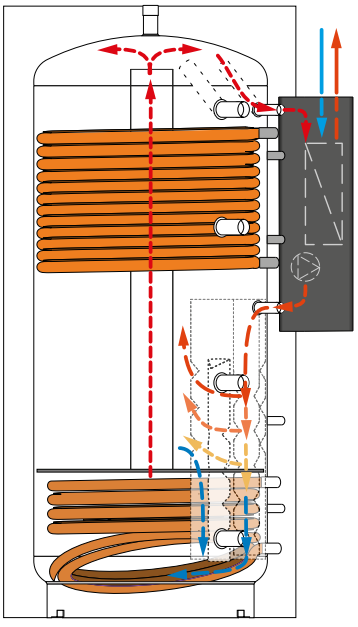
BUFFER TANKS FOR HEATING WATER WITH STRATIFICATION DEVICE, FIXED COILS AND MACS® MODULE FOR INSTANTANEOUS PRODUCTION OF DHW

STORAGE		FIXED HEAT EXCHANGER		HEAT EXCHANGER STAINLESS STEEL PLATES (MACS®)		DHW HARDNESS
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	12 bar	110 °C	8 bar	99 °C	30 °f





A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Heating delivery/From generator 1"1/2 G F
C	Heating return/to generator 1"1/2 G F
D	Probe 1/2" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 3/4" G M (1" G M for models 120)
M	Domestic cold water circuit inlet 3/4" G M (1" G M for models 120)



SUITABLE FOR SOLAR THERMAL SYSTEMS

THE ILLUSTRATION UNDERLINES THE STRATIFICATION PROCESS (FROM TOP TO BOTTOM) THAT ALLOWS TO HAVE ALL NEEDED ENERGY RAPIDLY AVAILABLE

Dismountable insulation

Model	Volume	De	Df	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
	[lt]	[mm]																	
800	805	940	790	1840	1880	2067	265	233	378	584	690	443	918	1003	1115	1115	1442	1347	1541
1000	946	940	790	2130	2165	2329	265	233	384	656	787	443	1145	1188	1388	1309	1588	1661	1831
1500	1454	1100	950	2250	//	2505	313	281	432	736	845	491	1236	1286	1396	1377	1783	1673	1909

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® **1 DOMUS**

BUFFER TANK FOR HEAT PUMP WITH COMPACT DHW INSTANT PREPARATION UNIT



APPLICATION
Storage by stratification of technical water and immediate production of domestic hot water (DHW) with high flow rates and performances.
MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
DHW HEAT EXCHANGER MODULE:
Integrated immediate DHW production module with Stainless steel 316L brazed plate heat exchanger.
TECHNICAL DESCRIPTION
Puffermas® 1 DOMUS combines the characteristic use of a buffer with those of a rapid DHW producer, without the accumulation of domestic hot water. The DHW heat exchanger module ensures excellent performances even at a low flow rate of domestic hot water.

INSULATION
Thermal storage: High thermal insulation with ecological polyurethane hard foam.
Dhw module: insulating PST cover.
Grey PVC external lining.
WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

IMMEDIATE DHW PRODUCTION

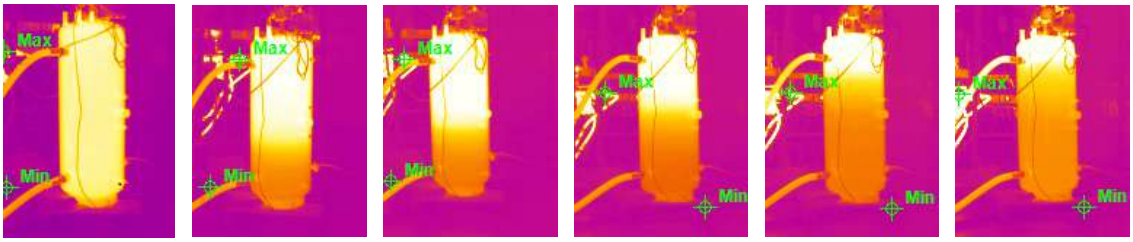


PUFFERMAS® 1 DOMUS VB

Model	HARD FOAM INSULATION Art. Nr.	DHW module max/min flow rate [l/min]	ENERGY EFFICIENCY CLASS
200	3251162314780	2/40	**B**
300	3251162314781	2/40	**B**

- ***Suitable for any type of heat generator; ideal for heat pumps***
- ***High exchange efficiency with high energy yield for dhw***
- ***Optimized internal storage stratification***
- ***Maximum comfort with constant dhw temperature at any flow rate***
- ***High sensiblity and high flow rates (from 2 up to 40 lt/min)***
- ***Maximum safety and economicity***





Series of thermographs that illustrate the perfect thermal stratification of the PUFFERMAS® DOMUS during the production of DHW through the integrated module

ACCESSORIES

Electric immersion heaters



Available kit:	
[Kw]	Tension [V]
from **1,5** to **3**	220 - MONOPHASE
See accessories	

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit for PUFFERMAS® DOMUS

Art. Nr.
5221000000102
DHW recirculation group

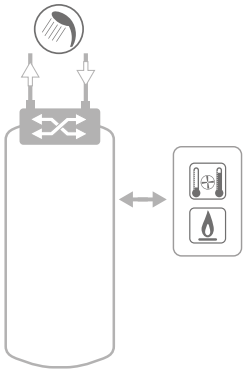


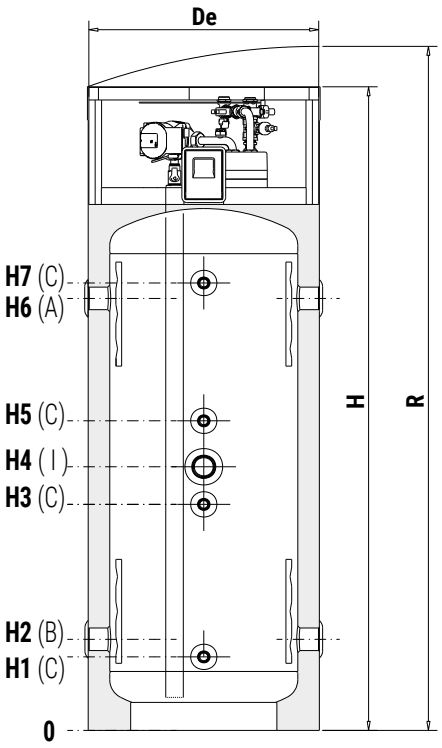
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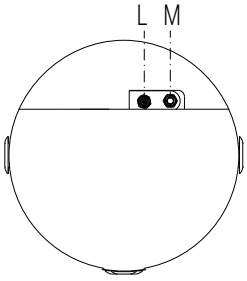
PUFFERMAS® **1 DOMUS**

BUFFER TANK FOR HEAT PUMP WITH COMPACT DHW INSTANT PREPARATION UNIT

STORAGE		EXCHANGE MODULE	
Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	8 bar	99 °C





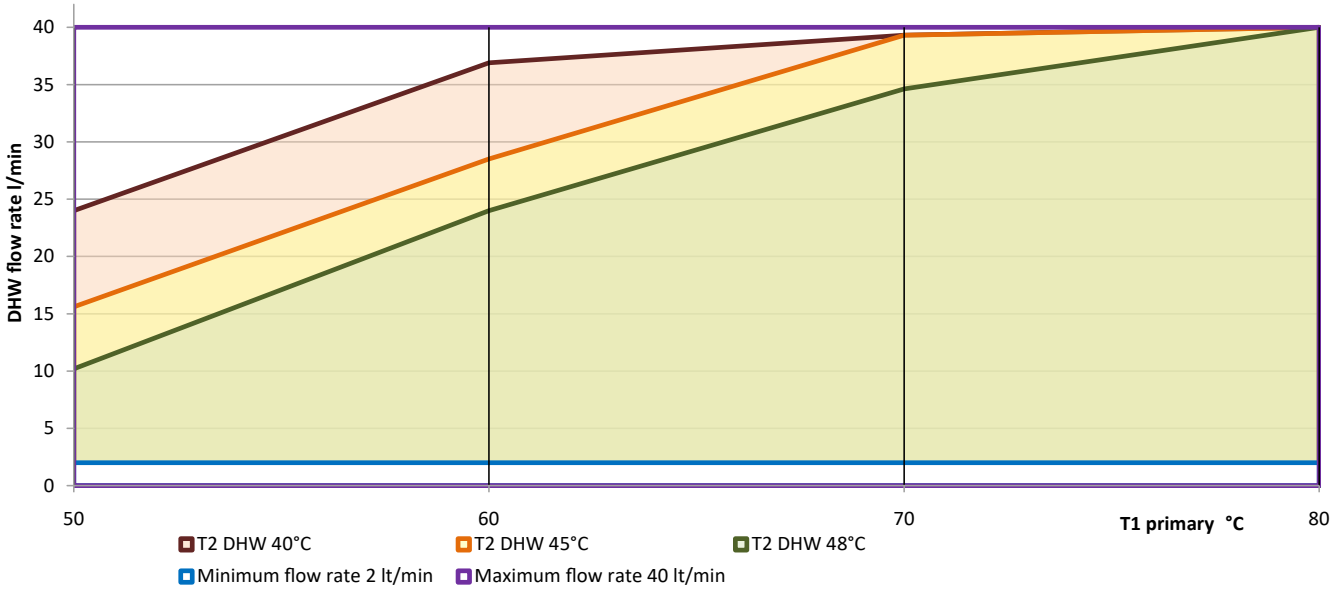


A	Heating delivery/From generator
B	Heating return/to generator
C	Probe
I	Connection for electric immersion heater
L	Domestic hot water outlet
M	Domestic cold water circuit inlet

Model	Volume	De	H	R	H1	H2	H3	H4	H5	H6	H7	A-B-I	C	D-H-L-M
	[lt]	[mm]										Connections F		
200	180	550	1539	1650	176	218	541	631	741	1034	1071	1"1/2	1/2"	3/4"
300	278	650	1580	1720	190	232	555	645	755	1048	1085	1"1/2	1/2"	3/4"

FLOW RATE PERFORMANCE OF DHW

The curves shown in these graphs allow to obtain the flow rate of domestic hot water (DHW) which can be produced by the integrated DHW production module, depending on the temperature of the storage tank / primary circuit (value on the horizontal axis).
The curves are parameterized based on the desired temperature of the DHW and indicate the maximum DHW flow rate that can be produced at that temperature (with inlet temperature at 10°C). The MACS Modules are able to produce all the DHW flow rates included in the area between the minimum activation flow rate and the maximum flow curve of each temperature.



P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® **2 DOMUS**

BUFFER TANK FOR HEAT PUMP WITH COMPACT DHW INSTANT PREPARATION UNIT AND 1 FIXED HEAT EXCHANGER



APPLICATION
Storage by stratification of technical water and immediate production of domestic hot water (DHW) with high flow rates and performances.
MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
DHW HEAT EXCHANGER MODULE
Integrated immediate DHW production module with Stainless steel 316L brazed plate heat exchanger.
HEATING WATER HEAT EXCHANGER
The tank is equipped with 1 fixed heat exchanger in Mild steel to allow the integration with a solar thermal system.
TECHNICAL DESCRIPTION
Puffermas® 2 DOMUS combines the characteristic use of a buffer with those of a rapid DHW producer, without the accumulation of domestic hot water. The DHW heat exchanger module ensures excellent performances even at a low flow rate of domestic hot water.

INSULATION
Thermal storage: High thermal insulation with ecological polyurethane hard foam.
Dhw module: insulating PST cover.
Grey PVC external lining.
WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

IMMEDIATE DHW PRODUCTION

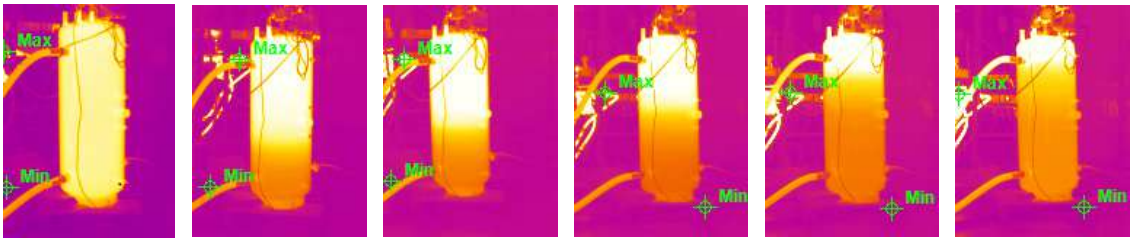


PUFFERMAS® 2 DOMUS VB

	Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	DHW module max/min flow rate [l/min]	ENERGY EFFICIENCY CLASS
	200	3251162314782	1,20	2/40	**B**
	300	3251162314783	1,40	2/40	**B**
NEW	**400**	3251162314784	1,50	2/40	**C**

- ***Suitable for any type of heat generator; ideal for heat pumps***
- ***High exchange efficiency with high energy yield for dhw***
- ***Optimized internal storage stratification***
- ***Maximum comfort with constant dhw temperature at any flow rate***
- ***High sensiblity and high flow rates (from 2 up to 40 lt/min)***
- ***Maximum safety and economicity***





Series of thermographs that illustrate the perfect thermal stratification of the PUFFERMAS® DOMUS during the production of DHW through the integrated module

ACCESSORIES

Electric immersion heaters



Available kit:	
[Kw]	Tension [V]
from **1,5** to **3**	220 - MONOPHASE
See accessories	

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit for PUFFERMAS® DOMUS

Art. Nr.
5221000000102
DHW recirculation group

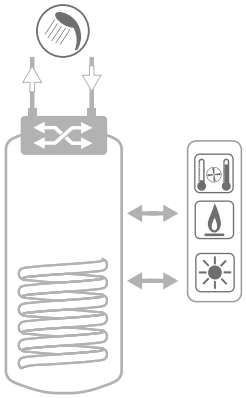


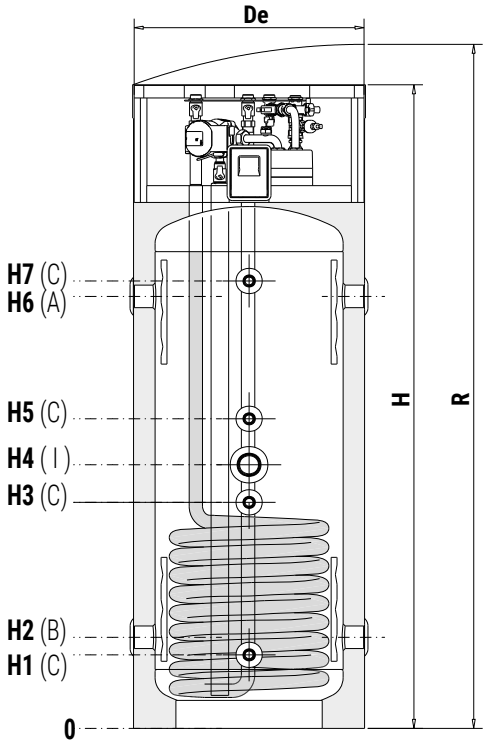
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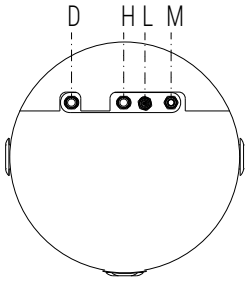
PUFFERMAS® **2 DOMUS**

BUFFER TANK FOR HEAT PUMP WITH COMPACT DHW INSTANT PREPARATION UNIT AND 1 FIXED HEAT EXCHANGER

STORAGE		EXCHANGE MODULE		FIXED HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	8 bar	99 °C	12 bar	110 °C





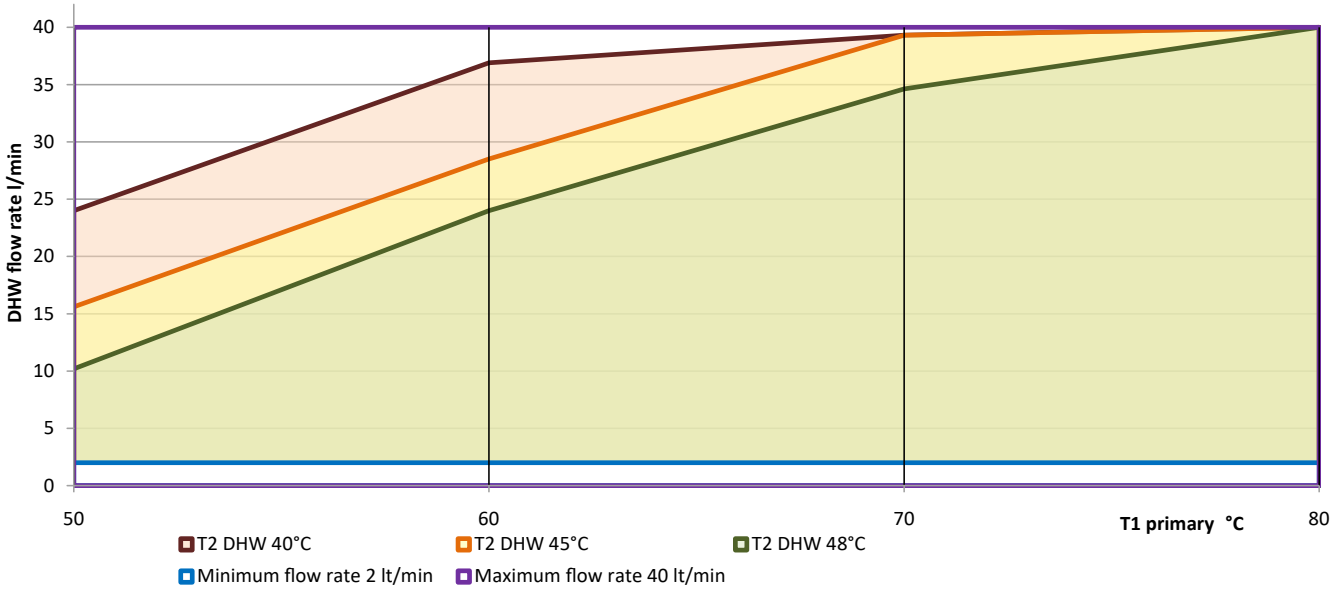


A	Heating delivery/From generator
B	Heating return/to generator
C	Probe
D	Fixed heat exchanger inlet
H	Fixed heat exchanger outlet
I	Connection for electric immersion heater
L	Domestic hot water outlet
M	Domestic cold water circuit inlet

Model	Volume	De	H	R	H1	H2	H3	H4	H5	H6	H7	A-B-I	C	D-H-L-M
	[lt]	[mm]										Connections F		
200	180	550	1539	1650	176	218	541	631	741	1034	1071	1"1/2	1/2"	3/4"
300	278	650	1580	1720	190	232	555	645	755	1048	1085	1"1/2	1/2"	3/4"
400	364	650	2000	2110	190	232	955	1045	1155	1468	1505	1"1/2	1/2"	3/4"

FLOW RATE PERFORMANCE OF DHW

The curves shown in these graphs allow to obtain the flow rate of domestic hot water (DHW) which can be produced by the integrated DHW production module, depending on the temperature of the storage tank / primary circuit (value on the horizontal axis).
The curves are parameterized based on the desired temperature of the DHW and indicate the maximum DHW flow rate that can be produced at that temperature (with inlet temperature at 10°C). The MACS Modules are able to produce all the DHW flow rates included in the area between the minimum activation flow rate and the maximum flow curve of each temperature.



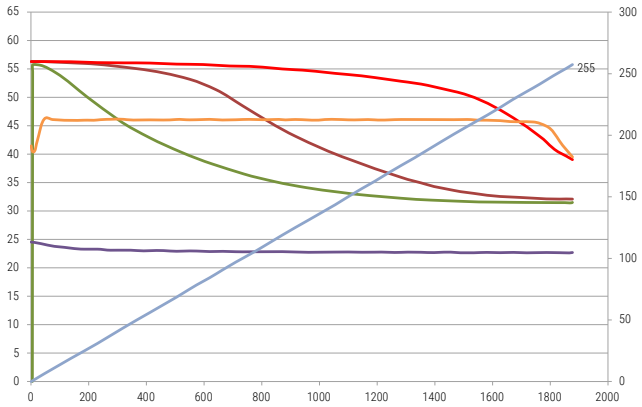
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PUFFERMAS® **2 DOMUS**

PERFORMANCE DURING DHW PRODUCTION PHASE



DHW WITHDRAWAL 255 lt T > 40 °C **61% of the accumulated energy**



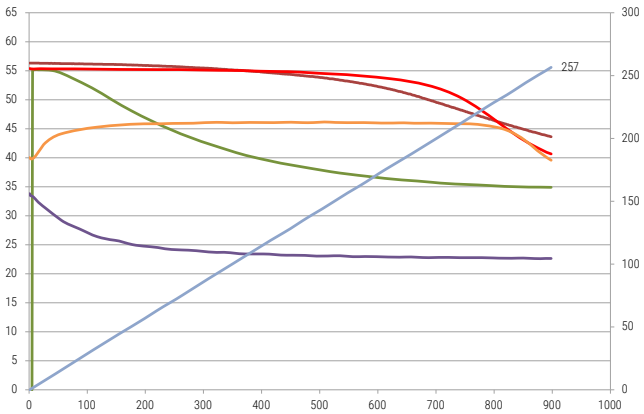
STORAGE: 55 °C
WITHDRAWAL: 45-39 °C
FLOW RATE: **8 l/min**

- TC1_Low accumulation
- TC2_Medium accumulation
- TC3_High accumulation
- TC4_sanitary water inlet
- TC5_DHW outlet
- total liters

PUFFERMAS® 2 DOMUS
Model 300



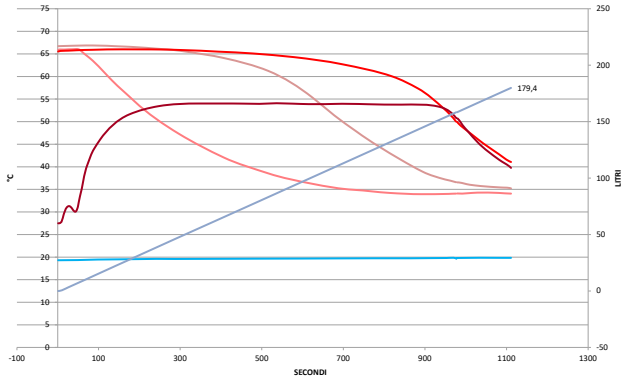
DHW WITHDRAWAL 255 lt T > 40 °C **58% of the accumulated energy**



STORAGE: 55 °C
WITHDRAWAL: 45-39 °C
FLOW RATE: **16 l/min**

- TC1_Low accumulation
- TC2_Medium accumulation
- TC3_High accumulation
- TC4_sanitary water inlet
- TC5_DHW outlet
- total liters

DHW WITHDRAWAL 179 lt T > 40 °C **60% of the accumulated energy**



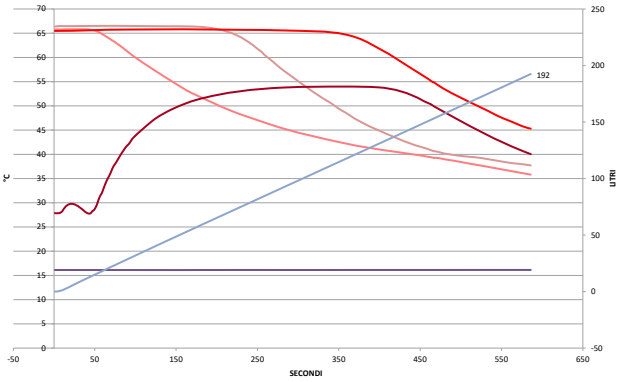
STORAGE: 65 °C
WITHDRAWAL: 55-40 °C
FLOW RATE: **10 l/min**

- TC1_Low accumulation
- TC2_Medium accumulation
- TC3_High accumulation
- TC4_sanitary water inlet
- TC5_DHW outlet
- total liters

PUFFERMAS® 2 DOMUS
MODEL 200



DHW WITHDRAWAL 192 lt T > 40 °C **58% of the accumulated energy**



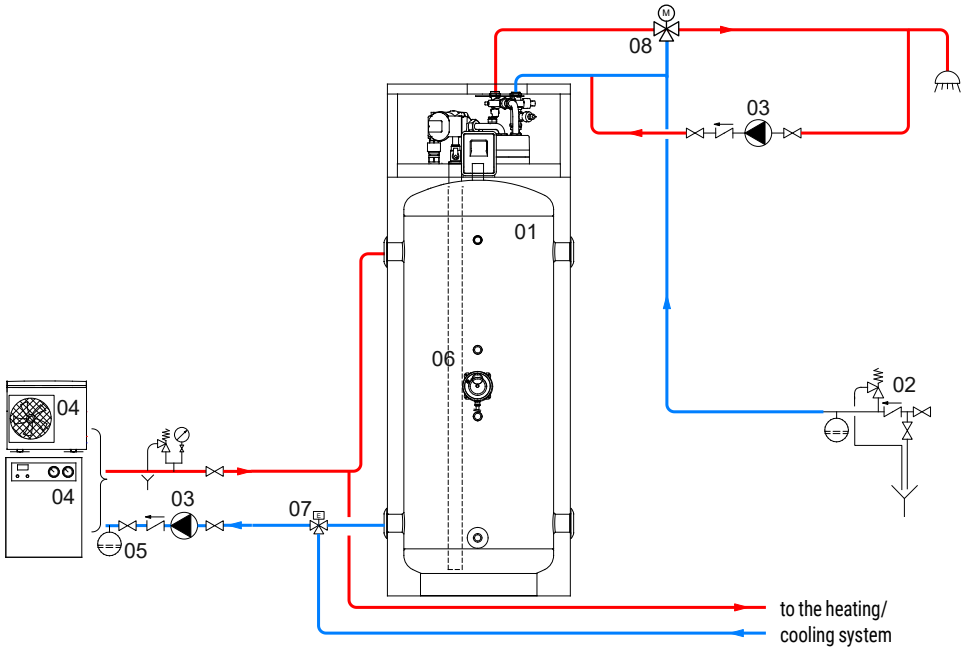
STORAGE: 65 °C
WITHDRAWAL: 55-40 °C
FLOW RATE: **20 l/min**

- TC1_Low accumulation
- TC2_Medium accumulation
- TC3_High accumulation
- TC4_sanitary water inlet
- TC5_DHW outlet
- total liters

PUFFERMAS® **DOMUS**

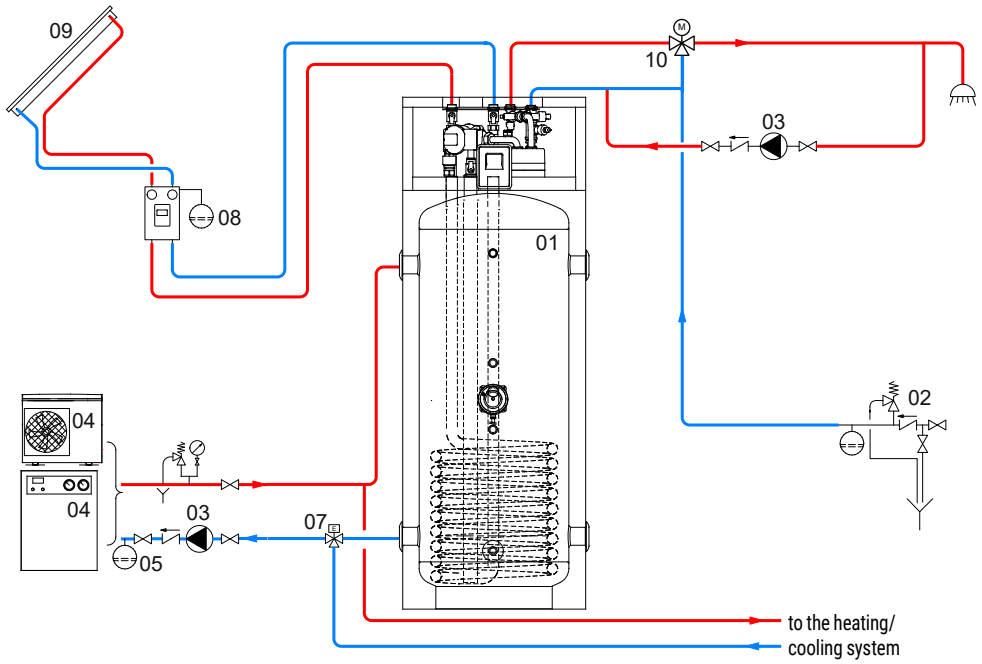


EXAMPLE OF INSTALLATION WITH **PUFFERMAS® 1 DOMUS**



1	PUFFERMAS® 1 DOMUS	4	Generator	7	3-way valve
2	Hydraulic safety group	5	Expansion vessel	8	Thermostatic mixing valve
3	Circulation group	6	Electric immersion heater (optional)		

EXAMPLE OF INSTALLATION WITH **PUFFERMAS® 2 DOMUS**



1	Serbatotio PUFFERMAS® 2 DOMUS	4	Generator	7	3-way valve	10	Thermostatic mixing valve
2	Hydraulic safety group	5	Expansion vessel	8	Solar system circulation group		
3	Circulation group	6	Electric immersion heater (optional)	9	Solar panels		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

ECO COMBI **1 PDC**

MULTI-HEAT ENERGY BUFFER FOR HEAT PUMP WITH STAINLESS STEEL 316L DHW CORRUGATED COIL



APPLICATION
Technical hot water storage and D.H.W. production.
MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
Stainless steel 316L corrugated coil, suitable for D.H.W.
TECHNICAL DESCRIPTION
Designed for systems powered by heat pump heat source. ECO COMBI 1 PDC, at the typical temperatures of heat pumps, guarantees excellent DHW production thanks to the specially designed and dimensioned corrugated stainless steel 316L heat exchanger.

INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam. Model 800 available with di Dismountable hard foam insulation.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.Grey PVC external lining.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



316L STAINLESS STEEL DH.W. CORRUGATED COIL



ECO COMBI 1 PDC VB

Model	HARD FOAM INSULATION	Heat pump max output	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		ENERGY EFFICIENCY CLASS
			Volume	Surface	
	Art. Nr.	[kW]	[lt]	[m²]	
300	3270162310002	26	26,6	4,5	**B**
500	3270162310003	26	31	5,3	**C**

Model	DISMOUNTABLE HARD FOAM INSULATION		Volume	Surface	
	Art. Nr.	[kW]	[lt]	[m²]	
800	3270162282267	35	45	7,7	**B**

ECO COMBI 1 PDC VC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	Heat pump max output	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		ENERGY EFFICIENCY CLASS
			Volume	Surface	
	Art. Nr.	[kW]	[lt]	[m²]	
800	3270162282268	35	45	7,7	**B**

ACCESSORIES

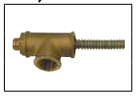
Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit (only for models ≥ 500)

Art. Nr.
5221000000019
Connection 3/4"

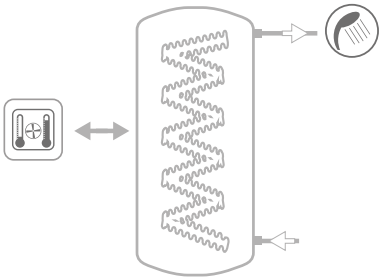


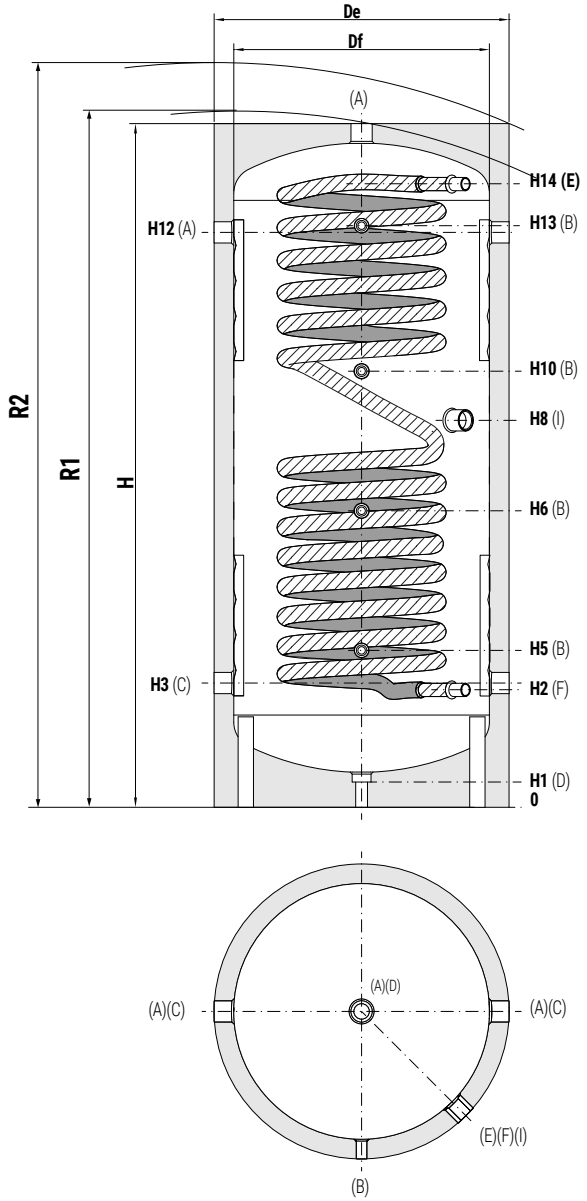
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ECO COMBI **1 PDC**

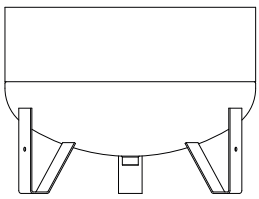
MULTI-HEAT ENERGY BUFFER FOR HEAT PUMP WITH STAINLESS STEEL 316L DHW CORRUGATED COIL

STORAGE		CORRUGATED DHW STAINLESS STEEL 316L COIL
Pmax	Tmax	Pmax
3 bar	99 °C	6 bar





A	From the generator - Heating delivery 1"1/2 G F
B	Probe 1/2" G F
C	Heating return/to generator 1"1/2 G F
D	Drain 1"1/4 G F
E	Domestic hot water circuit outlet
F	Domestic water inlet
I	Electric immersion heater 1"1/2 G F



Only for model 800



ECO COMBI 1 PDC VB - HARD FOAM INSULATION

Model	Volume	Df	De	H	R1	R2	H1	H2	H3	H5	H6	H8	H10	H12	H13	H14	E-F
	[lt]	[mm]															Connections
300	291	-	650	1585	-	1713	70	297	330	390	745	970	1100	1280	1315	1415	1/2" F
500	454	-	750	1745	-	1899	70	305	322	405	760	990	1115	1468	1485	1585	1" M
800	748	790	940	1940	2030	2156	70	325	342	425	780	935	1135	1618	1635	1735	1" M

ECO COMBI 1 PDC VC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	De	Df	H	R1	R2	H1	H2	H3	H5	H6	H8	H10	H12	H13	H14	E-F
	[lt]	[mm]															Connections
800	748	1010	790	1940	2030	2190	70	325	342	425	780	935	1135	1618	1635	1735	1" M

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ECO COMBI **3 PDC**

MULTI-HEAT ENERGY BUFFER FOR HEAT PUMP WITH STAINLESS STEEL 316L DHW CORRUGATED COIL AND 2 FIXED HEAT EXCHANGERS



APPLICATION
Technical hot water storage and D.H.W. production.
MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
Stainless steel 316L corrugated coil, suitable for D.H.W.
HEAT EXCHANGERS:
N° 2 mild steel fixed heat exchangers.
TECHNICAL DESCRIPTION
Designed for systems powered by heat pump heat source, with the possibility of integrating two additional heat generators (for example solar and boiler). ECO COMBI 3 PDC, at the typical temperatures of heat pumps, guarantees excellent DHW production thanks to the specially designed and dimensioned corrugated stainless steel 316L heat exchanger.

INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam. Model 800 available with di Dismountable hard foam insulation.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.Grey PVC external lining.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



316L STAINLESS STEEL DH.W. CORRUGATED COIL



ECO COMBI 3 PDC VB

Model	HARD FOAM INSULATION	Heat pump max output	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		UPPER HEAT EXCHANGER		LOWER HEAT EXCHANGER		ENERGY EFFICIENCY CLASS
			Volume	Surface	Volume	Surface	Volume	Surface	
	Art. Nr.	[kW]	[lt]	[m²]	[lt]	[m²]	[lt]	[m²]	
300	3270162310202	26	26,6	4,5	4,4	0,7	7,9	1,2	**B**
500	3270162310203	26	31	5,3	7,7	1,2	14,5	2,2	**C**

Model	DISMOUNTABLE HARD FOAM INSULATION		Volume	Surface	Volume	Surface	Volume	Surface	
	Art. Nr.	[kW]	[lt]	[m²]	[lt]	[m²]	[lt]	[m²]	
800	3270162282287	35	45	7,7	11,3	1,7	16,9	2,6	**B**

ECO COMBI 3 PDC VC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	Heat pump max output	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		UPPER HEAT EXCHANGER		LOWER HEAT EXCHANGER		ENERGY EFFICIENCY CLASS
			Volume	Surface	Volume	Surface	Volume	Surface	
	Art. Nr.	[kW]	[lt]	[m²]	[lt]	[m²]	[lt]	[m²]	
800	3270162282288	35	45	7,7	11,3	1,7	16,9	2,6	**B**

ACCESSORIES

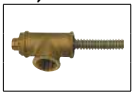
Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit (only for models ≥ 500)

Art. Nr.
5221000000019
Connection 3/4"

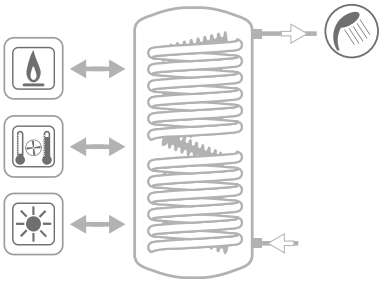


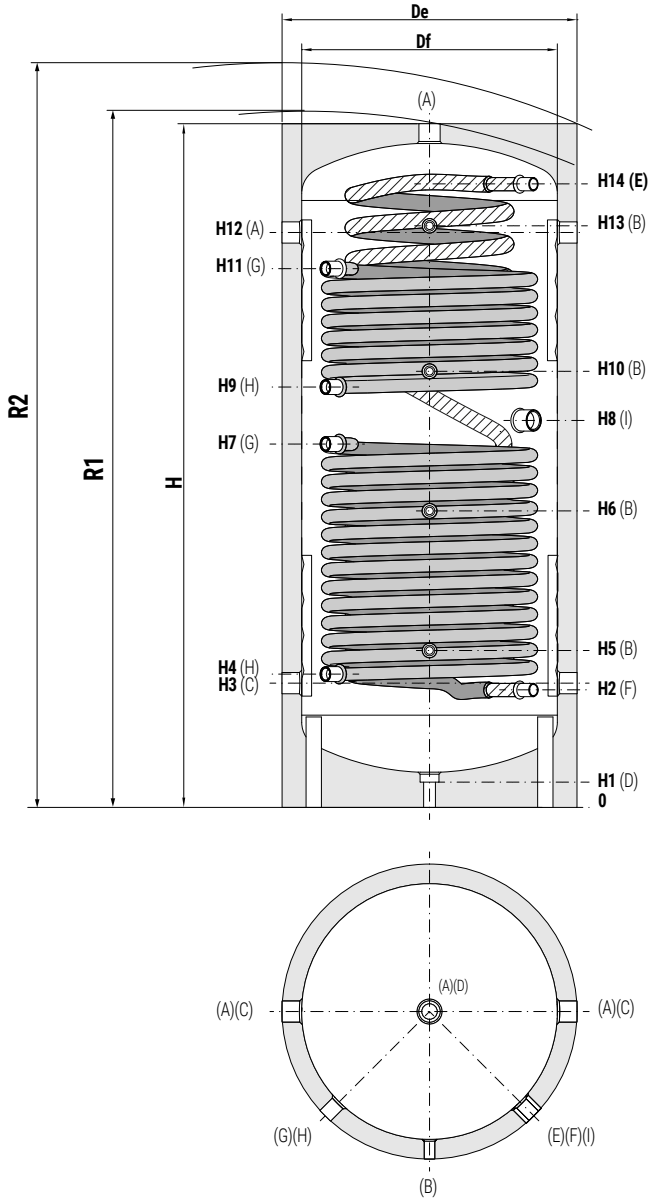
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ECO COMBI **3 PDC**

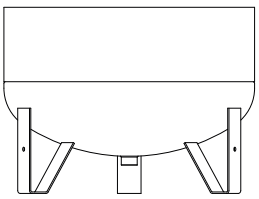
MULTI-HEAT ENERGY BUFFER FOR HEAT PUMP WITH STAINLESS STEEL 316L DHW CORRUGATED COIL AND 2 FIXED HEAT EXCHANGERS

STORAGE		CORRUGATED DHW STAINLESS STEEL 316L COIL	FIXED HEAT EXCHANGER	
Pmax	Tmax	Pmax	Pmax	Tmax
3 bar	99 °C	6 bar	12 bar	110 °C





A	From the generator - Heating delivery 1"1/2 G F
B	Probe 1/2" G F
C	Heating return/to generator 1"1/2 G F
D	Drain 1"1/4 G F
E	Domestic hot water circuit outlet
F	Domestic water inlet
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Electric immersion heater 1"1/2 G F



Only for model 800



Dismountable insulation

ECO COMBI 3 PDC VB - HARD FOAM INSULATION

Model	Volume	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	E-F
	[lt]	[mm]																			Connections
300	291	-	650	1585	-	1713	70	297	330	330	390	745	870	970	1040	1100	1280	1280	1315	1415	1/2" F
500	454	-	750	1745	-	1899	70	305	322	345	405	760	930	990	1075	1115	1376	1468	1485	1585	1" M
800	748	790	940	1940	2030	2156	70	325	342	365	425	780	905	935	1065	1135	1409	1618	1635	1735	1" M

ECO COMBI 3 PDC VC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	E-F
	[lt]	[mm]																			Connections
800	748	790	1010	1940	2030	2190	70	325	342	365	425	780	905	935	1065	1135	1409	1618	1635	1735	1" M

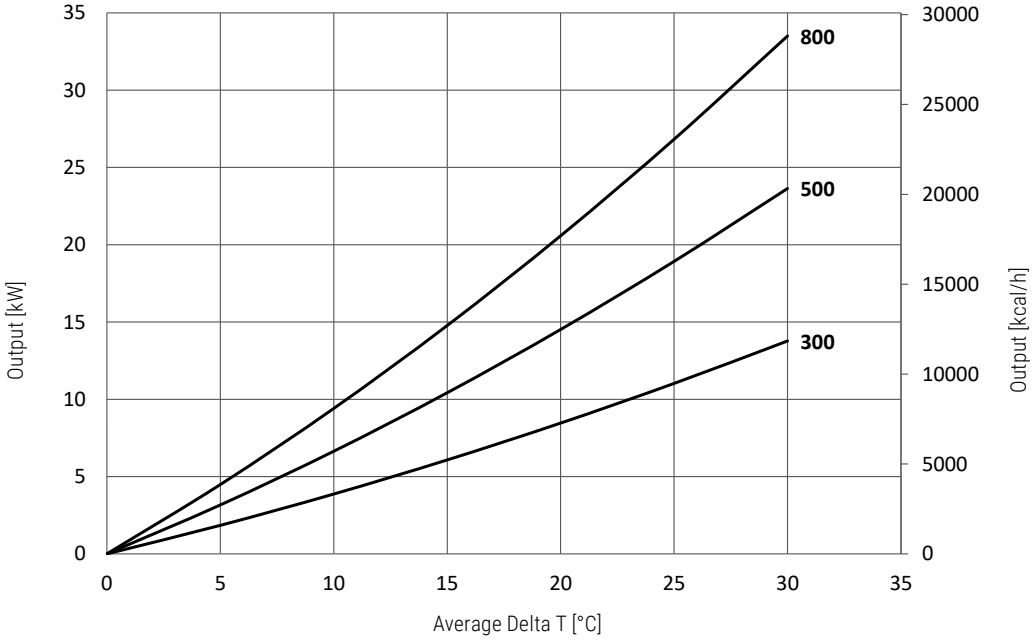
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE



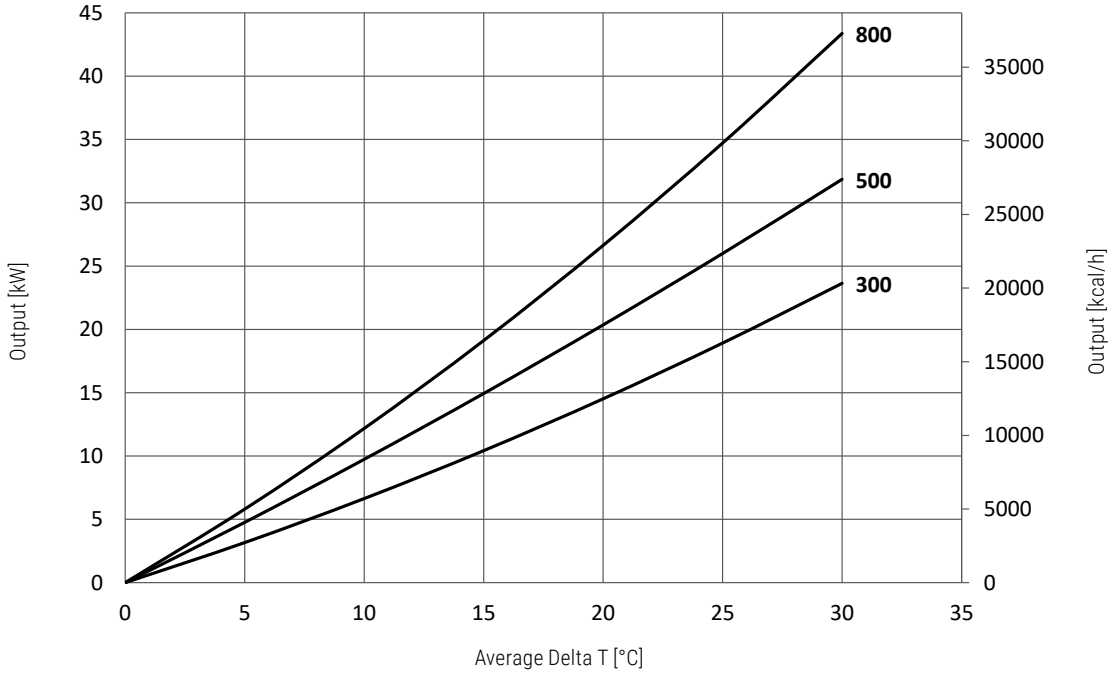
EcoCombi PDC exchanged power according to average Delta T between primary and storage (flow rate of 3 m³/h circulating in the exchanger)

Exchangeable thermal powers are expressed both in kW and Kcal/h according to the average temperature difference between primary and secondary, having a primary flow rate of 3 m³/h.

UPPER HEAT EXCHANGER



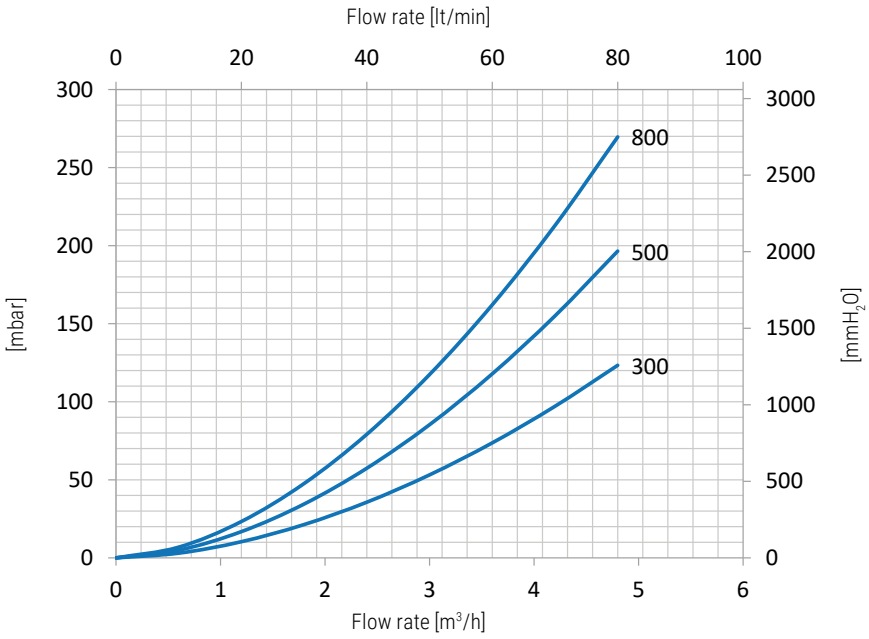
LOWER HEAT EXCHANGER





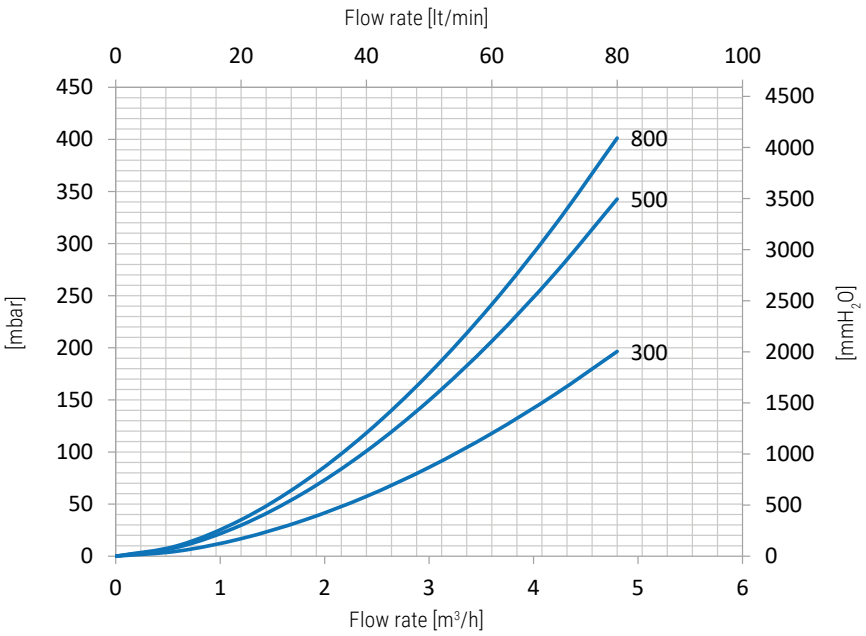
UPPER HEAT EXCHANGER

Upper heat exchangers surface [m²]	
300	0,7
500	1,2
800	1,7



LOWER HEAT EXCHANGER

Lower heat exchangers surface [m²]	
300	1,2
500	2,2
800	2,6



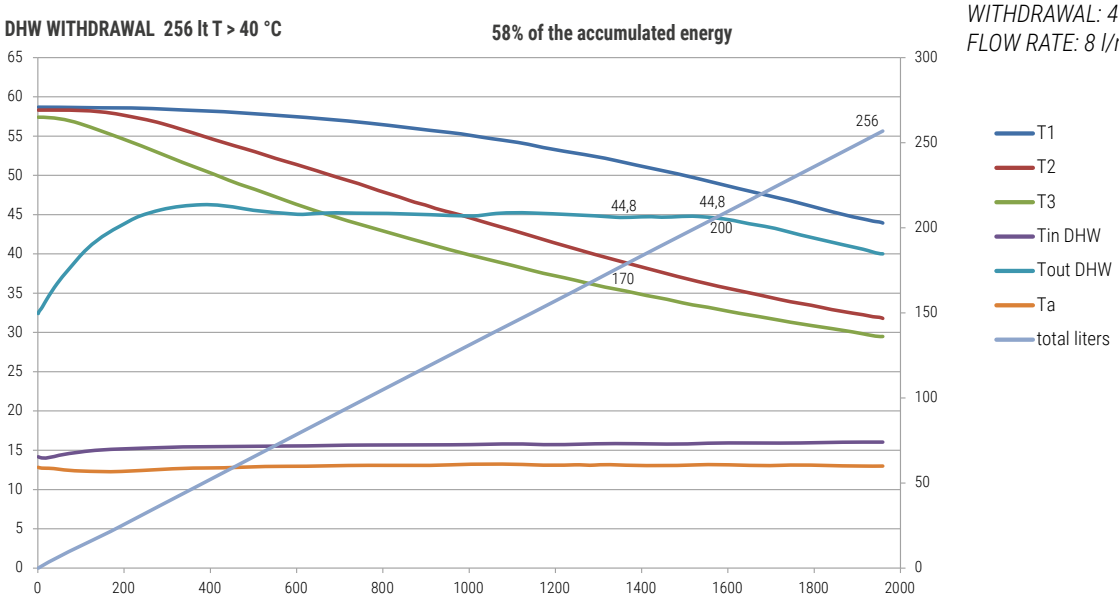


DHW IN LITERS, WHICH CAN BE WITHDRAWN STARTING FROM HOT ACCUMULATION AT THE TEMPERATURE AND FLOW RATES CONDITIONS INDICATED BELOW

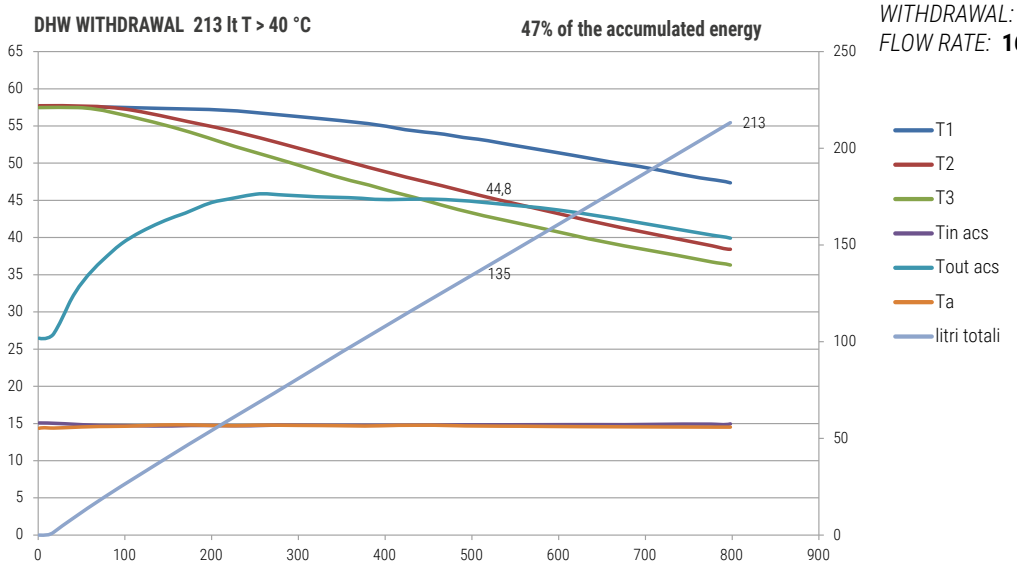
Model	Buffer storage 55 °C - DHW 10/45°C			Buffer storage 55 °C - Acs 15/42°C		
	DHW withdrawal flow rate [lt/min]			DHW withdrawal flow rate [lt/min]		
	8	16	24	8	16	24
300	125	77	//	193	131	//
500	216	151	128	331	246	217
800	357	249	212	546	405	358

BELOW charts refer to the model
ECO COMBI 1 PDC - 300

STORAGE: 58 °C
WITHDRAWAL: 45-40 °C
FLOW RATE: 8 l/min

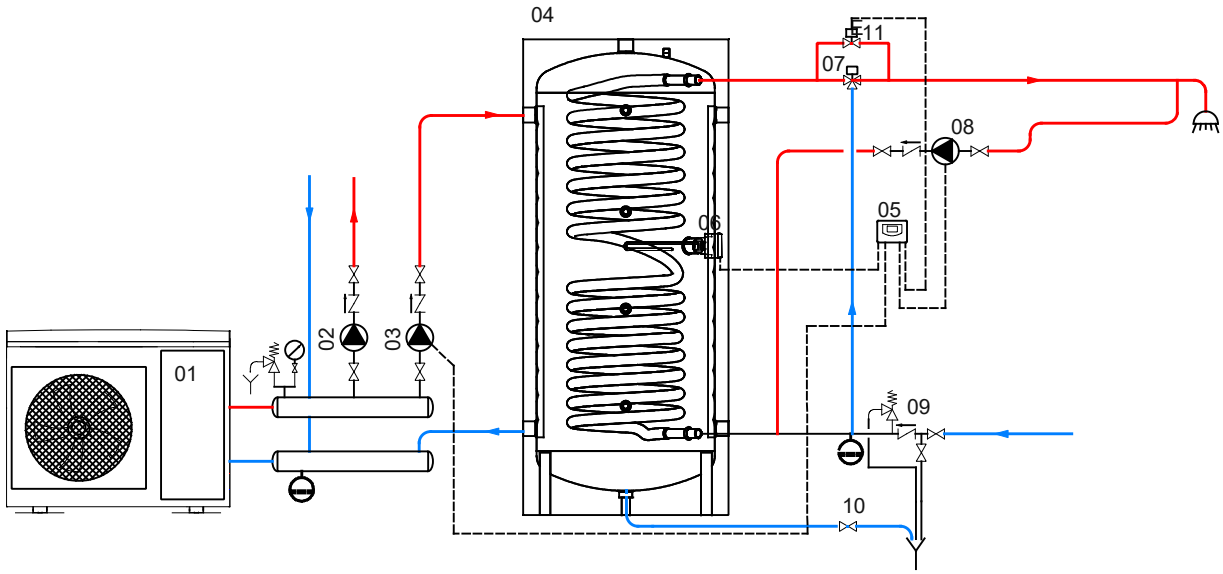


STORAGE: 57,5 °C
WITHDRAWAL: 45-40 °C
FLOW RATE: ***16 l/min***



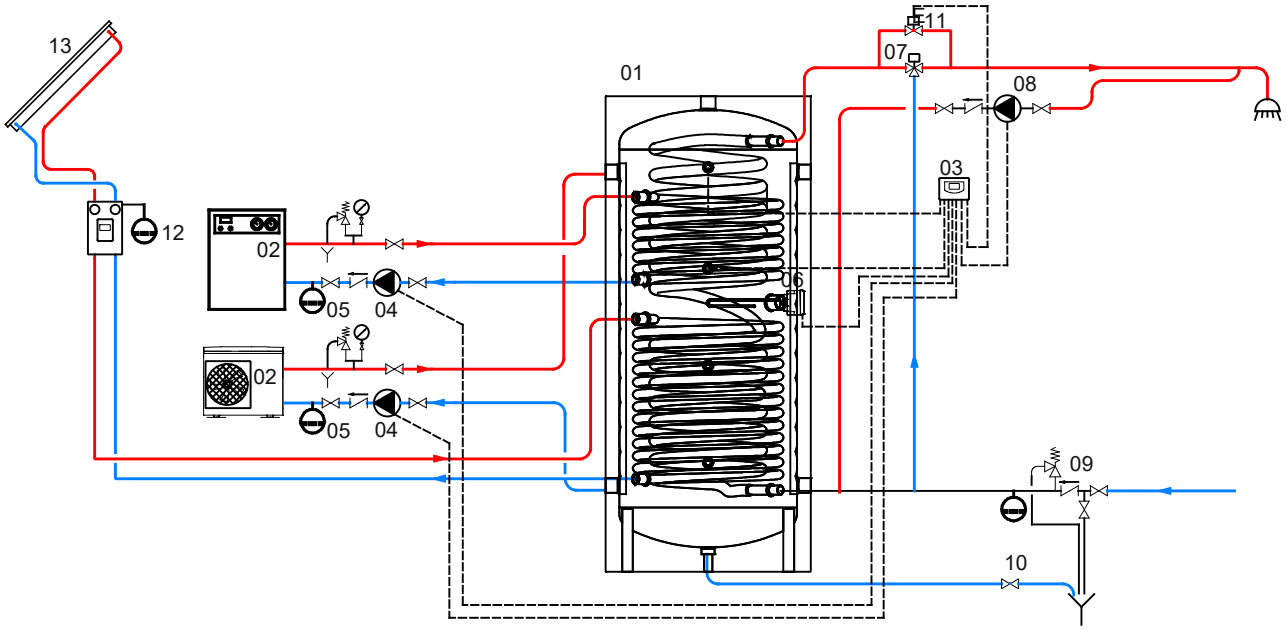


EXAMPLE OF INSTALLATION WITH **ECO-COMBI 1 PDC**



01	Generator (Heat pump)	04	Eco Combi 1 PDC	07	Thermostatic mixing valve	10	Blowdown valve
02	Heating system circulation group	05	Electronic Control/thermostat	08	D.H.W. recirculation group	11	By-pass solenoid valve
03	D.H.W. circulation group	06	Electric immersion heater (optional)	09	Hydraulic safety group		

EXAMPLE OF INSTALLATION WITH **ECO-COMBI 3 PDC**



01	Eco Combi 3 PDC	05	Expansion vessel	09	Hydraulic safety group	13	Solar panels
02	Generator	06	Electric immersion heater (optional)	10	Blowdown valve		
03	Electronic Control/thermostat	07	Thermostatic mixing valve	11	By-pass solenoid valve		
04	Circulation group	08	D.H.W. recirculation group	12	Solar system circulation group		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

ECO COMBI **1 PDC HY**

MULTI-HEAT ENERGY BUFFER FOR HEAT PUMP WITH STAINLESS STEEL 316L DHW CORRUGATED COIL AND INTEGRATED BUFFER TANK SPECIFIC FOR HEAT PUMPS



APPLICATION
Technical hot water storage and D.H.W. production. Heating/cooling buffer tank for heat pumps.

MATERIAL
- *BUFFER TANK:* Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
- *DHW STORAGE:* Stainless steel 316L corrugated coil, suitable for D.H.W.
- *ENERGY BUFFER hot-cold:* mild steel.

TECHNICAL DESCRIPTION
Designed for systems powered by heat pump heat source. ECO COMBI 1 PDC, at the typical temperatures of heat pumps, guarantees excellent DHW production thanks to the specially designed and dimensioned corrugated stainless steel 316L heat exchanger.

INSULATION
High thermal insulation with ecological polyurethane hard foam. Grey PVC external lining.

WARRANTY
5 years (See general sales conditions and warranty)

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L STAINLESS STEEL DH.W. CORRUGATED COIL

NEW



ECO COMBI 1 PDC HY VB

Model	**HARD FOAM** INSULATION	Heat pump max output	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		ENERGY EFFICIENCY CLASS
			Volume	Surface	
	Art. Nr.	[kW]	[lt]	[m²]	
300	3270162310006	26	26,6	4,5	C
500	3270162310007	26	31	5,3	C

ACCESSORIES

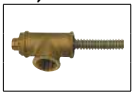
Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit (only for models ≥ 500)

Art. Nr.
5221000000019
Connection 3/4"

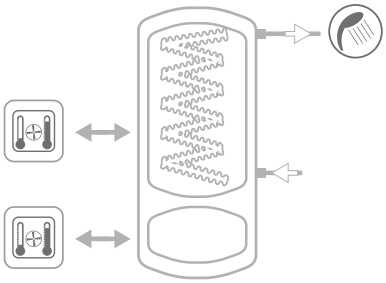


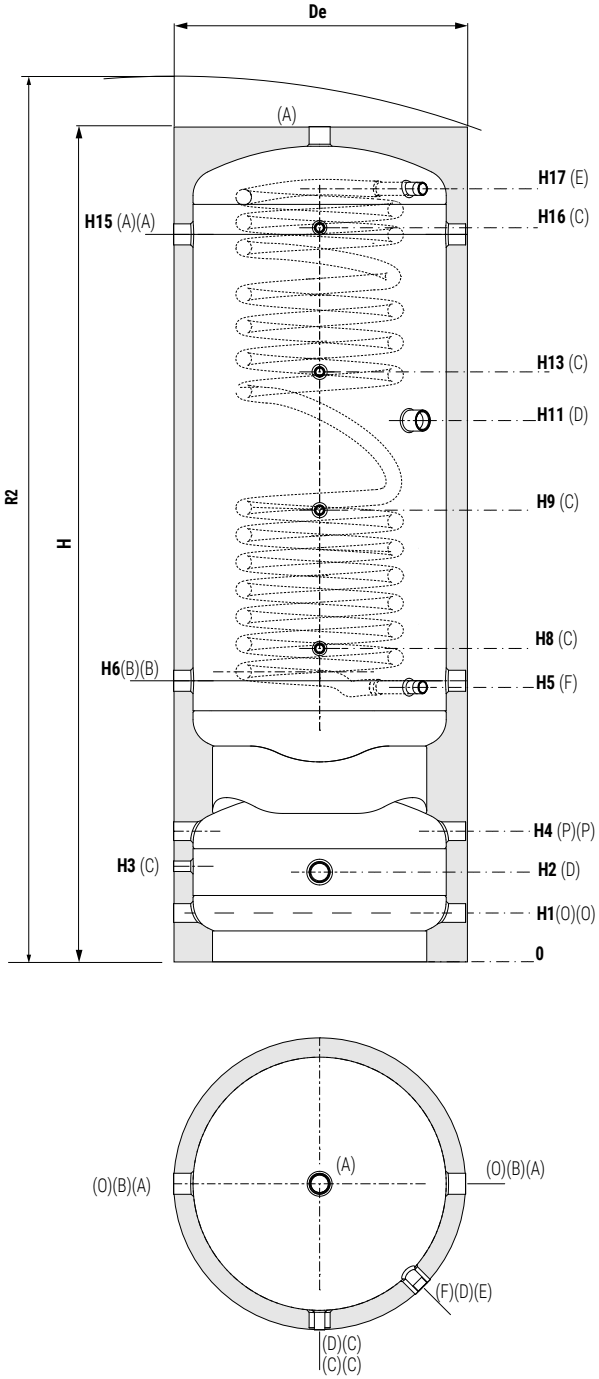
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ECO COMBI **1 PDC HY**

MULTI-HEAT ENERGY BUFFER FOR HEAT PUMP WITH STAINLESS STEEL 316L DHW CORRUGATED COIL AND INTEGRATED BUFFER TANK SPECIFIC FOR HEAT PUMPS

STORAGE		CORRUGATED DHW STAINLESS STEEL 316L COIL	BUFFER TANK	
Pmax	Tmax	Pmax	Pmax	Tmax
3 bar	99 °C	6 bar	4 bar	-10/+95 °C





A	From the generator - Heating delivery G 1"1/2 F
B	Heating return/to generator G 1"1/2 F
C	Probe G 1/2" F
D	Electric immersion heater G 1"1/2 F
E	Domestic hot water circuit outlet
F	Domestic water inlet
O	Heating return/to generator G 1"1/4 F
P	From the generator - Heating delivery G 1"1/4 F

Model	Volume	Buffer tank volume	De	H	R2	H1	H2	H3	H4	H5	H6
	[lt]		[mm]								
300	291	81	650	1965	2080	110	232	264	354	697	730
500	454	108	750	2145	2280	125	230	245	335	704	721

Model	H7	H8	H9	H10	H11	H12	H13	H14	H15	H16	H17	E-F
	[mm]											Connections F
300	//	790	1145	//	1370	//	1500	//	1680	1715	1815	1/2" M.
500	//	804	1159	//	1389	//	1514	//	1867	1884	1984	1" M

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ECO COMBI **3 PDC HY**

MULTI-HEAT ENERGY BUFFER FOR HEAT PUMP WITH STAINLESS STEEL 316L DHW CORRUGATED COIL, INTEGRATED BUFFER TANK SPECIFIC FOR HEAT PUMPS AND AND 2 FIXED HEAT EXCHANGERS



APPLICATION
Technical hot water storage and D.H.W. production. Heating/cooling buffer tank for heat pumps.
MATERIAL
- *BUFFER TANK:* Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
- *DHW STORAGE:* Stainless steel 316L corrugated coil, suitable for D.H.W.
- *ENERGY BUFFER hot-cold:* mild steel.

TECHNICAL DESCRIPTION
Designed for systems powered by heat pump heat source. ECO COMBI 3 PDC HY, at the typical temperatures of heat pumps, guarantees excellent DHW production thanks to the specially designed and dimensioned corrugated stainless steel 316L heat exchanger.
HEAT EXCHANGERS
N° 2 mild steel fixed heat exchangers.

INSULATION
High thermal insulation with ecological polyurethane hard foam. Grey PVC external lining.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L STAINLESS STEEL DH.W. CORRUGATED COIL

NEW



ECO COMBI 3 PDC HY VB

Model	HARD FOAM INSULATION	Heat pump max output	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		UPPER HEAT EXCHANGER		LOWER HEAT EXCHANGER		ENERGY EFFICIENCY CLASS
			Volume	Surface	Volume	Surface	Volume	Surface	
	Art. Nr.	[kW]	[lt]	[m²]	[lt]	[m²]	[lt]	[m²]	
300	3270162310206	26	26,6	4,5	4,4	0,7	7,9	1,2	**C**
500	3270162310207	26	31	5,3	7,7	1,2	14,5	2,2	**C**

ACCESSORIES

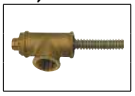
Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit (only for models ≥ 500)

Art. Nr.
5221000000019
Connection 3/4"

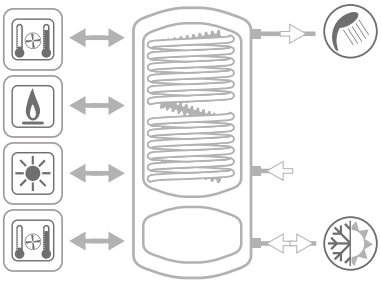


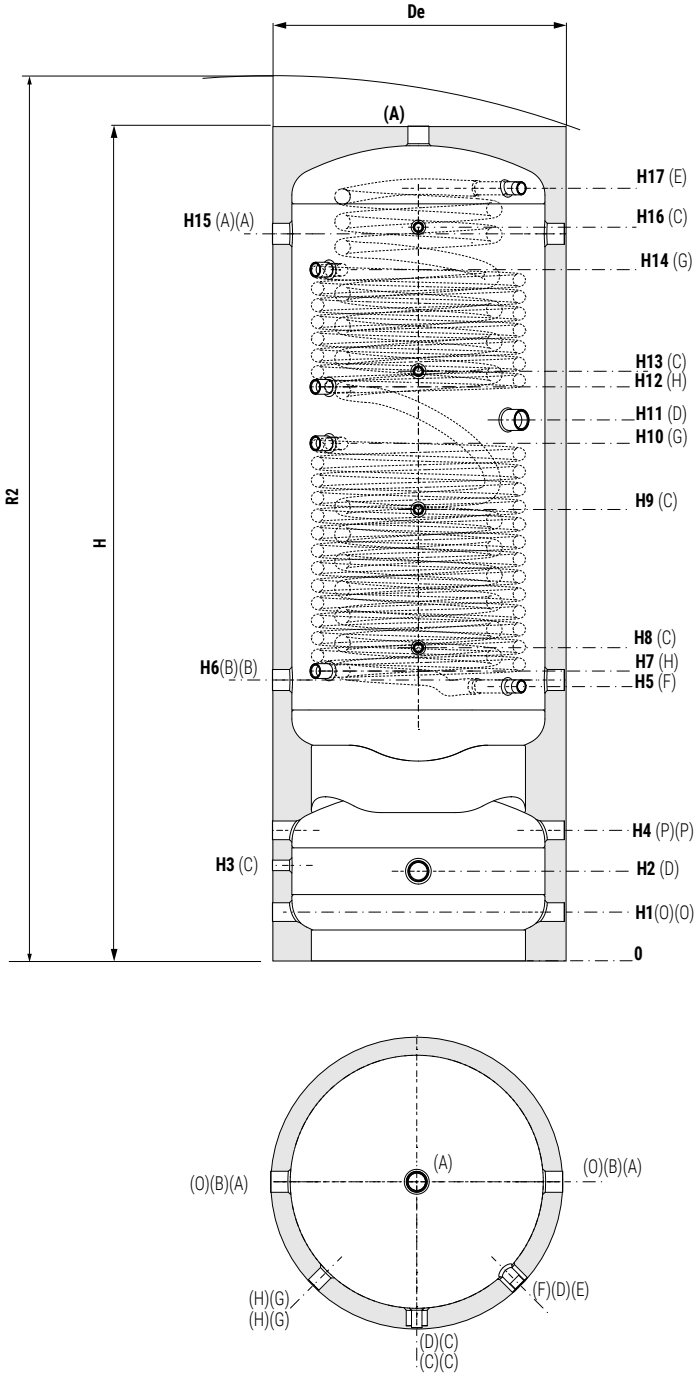
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ECO COMBI **3 PDC HY**

MULTI-HEAT ENERGY BUFFER FOR HEAT PUMP WITH STAINLESS STEEL 316L DHW CORRUGATED COIL, INTEGRATED BUFFER TANK SPECIFIC FOR HEAT PUMPS AND AND 2 FIXED HEAT EXCHANGERS

STORAGE		CORRUGATED DHW STAINLESS STEEL 316L COIL	FIXED HEAT EXCHANGER		BUFFER TANK	
Pmax	Tmax	Pmax	Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	6 bar	12 bar	110 °C	4 bar	-10/+95 °C





A	From the generator - Heating delivery G 1"1/2 F
B	Heating return/to generator G 1"1/2 F
C	Probe G 1/2" F
D	Electric immersion heater G 1"1/2 F
E	Domestic hot water circuit outlet
F	Domestic water inlet
G	Fixed heat exchanger inlet G 1" F
H	Fixed heat exchanger outlet G 1" F
O	Heating return/to generator G 1"1/4 F
P	From the generator - Heating delivery G 1"1/4 F

Model	Volume	Buffer tank volume	De	H	R2	H1	H2	H3	H4	H5	H6
	[lt]		[mm]								
300	291	81	650	1965	2080	110	232	264	354	697	730
500	454	108	750	2145	2280	125	230	245	335	704	721

Model	H7	H8	H9	H10	H11	H12	H13	H14	H15	H16	H17	E-F
	[mm]											Connections
300	730	790	1145	1270	1370	1440	1500	1680	1680	1715	1815	1/2" M.
500	744	804	1159	1329	1389	1474	1514	1775	1867	1884	1984	1" M

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HEATING / COOLING BUFFER TANKS



HEATING / COOLING BUFFER TANKS
RANGE

Heating / Cooling	 VOLANO TERMICO PDC - HANGING	 VOLANO TERMICO PDC	 VOLANO TERMICO GREZZO	 VOLANO TERMICO PDC REVERSO
Insulation	Polyurethane hard foam	Polyurethane hard foam	Polyethylene anti-condensation + Polyester fleece	Anti-condensation insulation + Polyester fleece + aluminium cover
Material	Stainless steel / Mild steel 	Mild steel 	Mild steel 	Mild steel 
Working temperature ***Working pressure***	-10 / +95 °C 4 bar	-10 / +95 °C 4 bar	-10 / +90 °C 6 bar	-10 / +90 °C 4 bar
Application	*Heating* *Cooling*	*Heating* *Cooling*	*Heating* *Cooling*	*Heating* *Cooling*
Energy efficiency class	**A-B-C**	**B-C**	**C**	**N.A.**
Installation	Indoor	Indoor	Indoor	Indoor/Outdoor
Available range	8 ÷ 100	100 ÷ 1000	500 ÷ 5000	2500 ÷ 4000
Installation	wall hanging	floor standing	floor standing	floor standing (flanged connections)
Suggested Application	Domestic Heat Pumps (heating/cooling)	Heat pumps (heating/cooling)	Large chiller installations VRV / VRF	Heat pumps (heating/cooling)

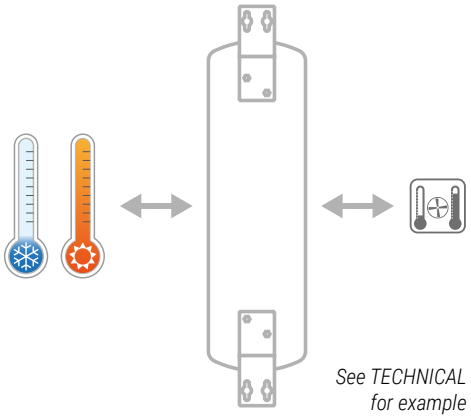
					
VOLANO TERMICO R/C GB	VOLANO TERMICO R/C - POLYWARM WB	CHILLED WATER GALVANIZED ZB	CHILLED WATER STAINLESS STEEL 304 XB	CHILLED WATER GC 20	CHILLED WATER GALVANIZED ZC 20
Polyurethane hard foam + painted metallic lining	Polyurethane hard foam + painted metallic lining	Polyurethane hard foam + painted metallic lining	Polyurethane hard foam + painted metallic lining	Polyethylene anti-condensation	Polyethylene anti-condensation
Mild steel	Polywarm® coated	Galvanized mild steel	Stainless steel	Mild steel	Galvanized mild steel
-10 / +90 °C 6 bar	-10 / +90 °C 6 bar	-10 / +60 °C 6 bar	-30 / +60 °C 6 bar	-10 / +90 °C 6 bar	-10 / +60 °C 6 bar
Heating Cooling	Heating Cooling	Cooling	Cooling	Cooling	Cooling
B-C	**C**	**N.A.**	**N.A.**	**N.A.**	**N.A.**
Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor	Indoor
100 ÷ 2000	100 ÷ 1000	100 ÷ 2000	100 ÷ 1000	100 ÷ 5000	100 ÷ 5000
floor standing	floor standing	floor standing	floor standing	floor standing	floor standing
Heat pumps (heating/cooling)	Heat pumps (heating/cooling)	Chiller	- Chiller - Heat pumps (heating/cooling) - Industrial installations	Chiller installations VRV / VRF	Chiller installations VRV / VRF

VOLANO TERMICO **PDC HANGING**

HANGING BUFFER TANK FOR HEAT PUMP



PRESSURE	TEMPERATURE
Pmax	Tmax
4 bar	-10 / +95 °C



See TECHNICAL SUPPORT chapter for example of installation

TECHNICAL DESCRIPTION

Buffers either for hot or cold water have two main functions: they work both as hydraulic separator and buffer tank.
The hydraulic separator makes the heat pump flow rates and terminals flow rates unconnected. The buffer function reduces the heat pump on/off switchings.
Hanging energy buffer tanks are designed for wall installation.

MATERIAL

Mild steel.

EXTERNAL LINING

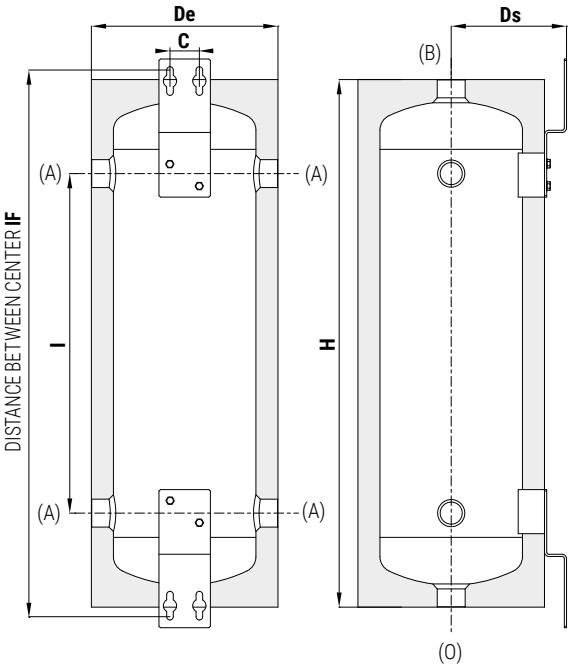
Grey PVC.

INSULATION

High thermal insulation with ecological polyurethane hard foam.

WARRANTY

2 years-See general sales conditions and warranty.



PROMPT AVAILABILITY

A	To the System
B	Safety Valve
O	Drain

VOLANO TERMICO PDC

ENERGY EFFICIENCY CLASS

Model	Mild steel Art. Nr.	
12	3070160920004	**B**
25	3070160920001	**B**
50	3070160920003	**B**
80	3070160920018	**C**
100	3070160920019	**C**

Model	Mild steel **12 unit box** Art. Nr.	
8	307016092000612	**B**
12	307016092000412	**B**

VOLANO TERMICO PDC INOX

ENERGY EFFICIENCY CLASS

Model	AISI 304 stainless steel Art. Nr.	
25	3001012310021	**B**
50	3001012310022	**B**

NEW

VOLANO TERMICO PDC CLASS A

ENERGY EFFICIENCY CLASS

Model	Mild steel and metallic cover with anti-corrosive treatment. Art. Nr.	
12	3070160920020	**A**
25	3070160920021	**A**
50	3070160920022	**A**
100	3070160920024	**A**

Model	Volume	Weight	De	Ds	H	I	IF	C	B-O	A
	[lt]	[Kg]	[mm]						Connections F	
8	8,3	6,5	255	153	382	126	368	40	1"	1"
12	12,4	7,5	255	153	526	270	512	40	1"	1"
25	25	11	290	166	790	450	776	40	1"	1"1/4
50	51	16	343	192	1000	600	996	40	1"	1"1/4
80	81	18	450	252	745	395	695	70	1"1/4	1"1/4
100	95	24	450	252	870	525	825	70	1"1/4	1"1/4
CLASS A										
12	12,4	13,5	344	197	566	270	552	40	1"	1"
25	25	19,0	340	194	830	450	816	40	1"	1"1/4
50	51	29,0	423	231	1040	600	1038	40	1"	1"1/4
100	95	40,0	550	302	930	525	885	70	1"1/4	1"1/4

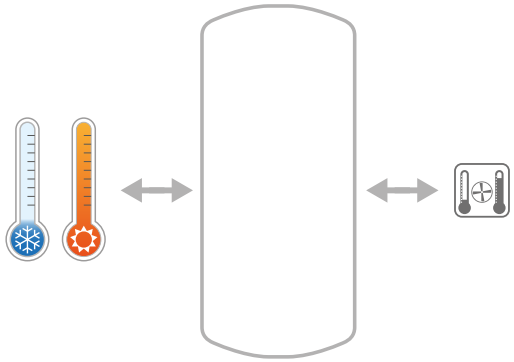
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VOLANO TERMICO **PDC**

BUFFER TANK FOR HEAT PUMP



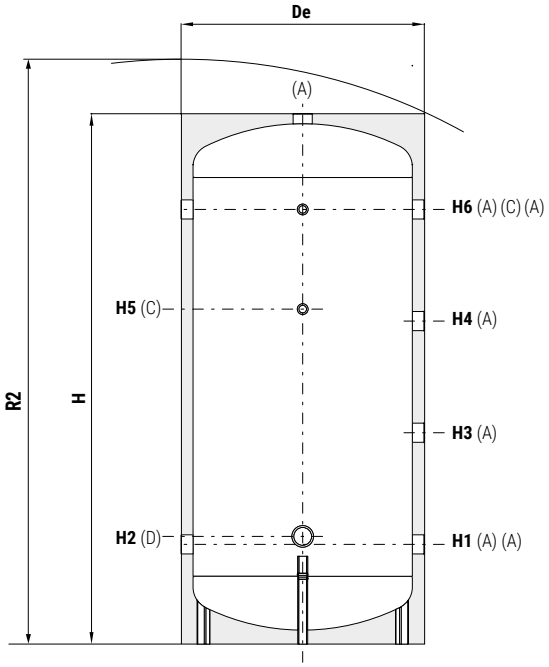
PRESSURE	TEMPERATURE
Pmax	Tmax
4 bar	-10 / +95 °C



See TECHNICAL SUPPORT chapter for example of installation

TECHNICAL DESCRIPTION
Buffer either for hot or cold water provided by heat pump, in order to limit the generator on/off switchings.
MATERIAL
Mild steel.
EXTERNAL LINING
Grey PVC.

INSULATION
High thermal insulation with ecological polyurethane hard foam.
WARRANTY
2 years-See general sales conditions and warranty.



A	To the System
C	Connection for instrumentation 1/2" F
D	Connection for electric immersion heater 1" 1/2 F

PROMPT AVAILABILITY

VOLANO TERMICO PDC

Model	Mild steel buffer tank (suitable for heat pump) Art. Nr.	ENERGY EFFICIENCY CLASS
100	3001162311001	**C**
200	3001162311002	**C**
300	3001162311003	**C**
500	3001162311004	**C**
800	3001162311005	**C**
1000	3001162311006	**C**

Model	12 unit box Art. Nr.	
100	300116231100712	**C**

VOLANO TERMICO PDC - CLASS B

Model	Mild steel buffer tank (suitable for heat pump) Art. Nr.	ENERGY EFFICIENCY CLASS
500	3001162311014	**B**

Model	Volume	Weight	De	H	R2	H1	H2	H3	H4	H5	H6	A
	[lt]	[Kg]				[mm]				Connections F		
100	95	23	461	990	1100	206	246	374	543	511	711	1"
200	180	41	517	1289	1395	206	246	489	793	836	1086	1"
300	280	51	624	1346	1490	256	276	536	816	846	1096	1"1/4
500	478	76	725	1641	1800	271	291	634	998	1091	1361	1"1/4
800	788	110	900	2040	2235	369	369	804	1234	1369	1669	1"1/2
1000	987	142	1000	1985	2230	341	341	776	1206	1341	1641	2"

Model	Volume	Weight	De	H	R2	H1	H2	H3	H4	H5	H6	A
	[lt]	[Kg]				[mm]				Connections F		
500 (B)	478	76	750	1641	1810	271	291	634	998	1091	1361	1"1/4

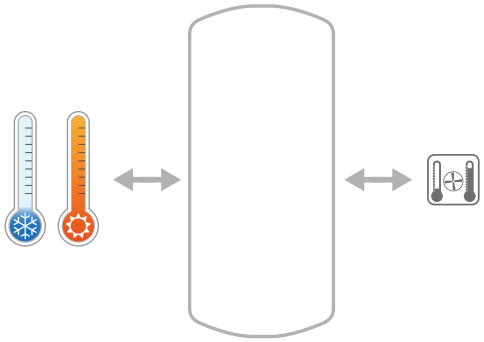
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VOLANO TERMICO **GREZZO GC VT**

BUFFER TANK FOR HEATING AND COOLING SYSTEMS WITH INCREASED INSULATION



PRESSURE	TEMPERATURE
Pmax	Tmax
6 bar	-10 / +90 °C



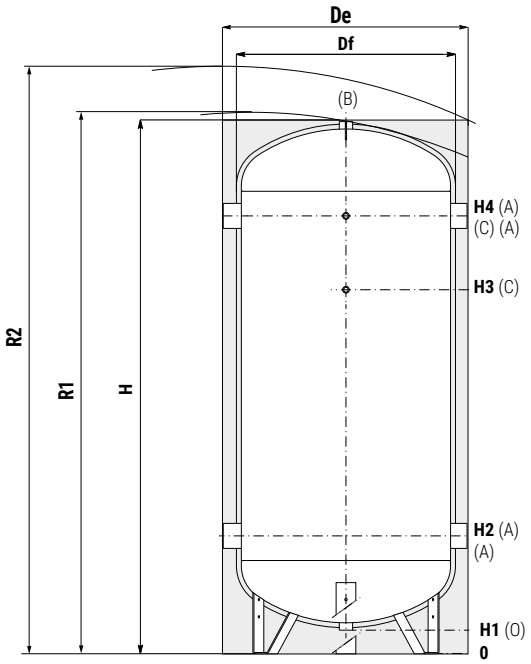
APPLICATION AND TECHNICAL DESCRIPTION
The buffer tanks VOLANO TERMICO GREZZO GC VT with increased insulation for reversible heating/cooling systems are intended for systems that work for the whole year, in which in summer there is the need to accumulate chilled water and in winter hot heating water.
These accumulators improve the efficiency of the system by limiting the number of hourly ignitions of the generator (whether chiller, heat pump or conventional generator) and, increasing the thermal inertia of the circuit, allowing to obtain more stable operating temperatures.

MATERIAL
Mild steel painted on the outside.

EXTERNAL LINING
Grey PVC external lining with plastic black caps for connections.

INSULATION
Increased insulation: Internal insulation layer with closed cell polyethylene of 20 mm not self-extinguishing fixed to the tank body (not removable) coupled with an external layer of insulation of polyester fiber, thickness with high thermal insulation, material with fire resistance class B s2d0 in accordance with EN13501

WARRANTY
2 years-See general sales conditions and warranty.





VOLANO TERMICO GREZZO GC VT

Model	INSULATION 20 mm not self-extinguishing + Polyester fleece	ENERGY EFFICIENCY CLASS
	Art. Nr.	
500	3001162150004	C
800	3001162150005	C
1000	3001162150006	C
1500	3001162150007	C
2000	3001162150008	C
2500	3001162150009	
3000	3001162310510	
4000	3001162310511	
5000	3001162310512	

A	To the System
B	Safety Valve
C	Connection for instrumentation 1/2" G F
O	Drain

Model	Weight	Volume	Df	De	H	R1	R2	H1	H2	H3	H4	B-O	A
	[Kg]	[lt]					[mm]					Connections F	
500	101	501	690	910	1810	1821	2030	121	441	1241	1491	1"1/4	3"
800	147	788	790	1010	2108	2119	2340	108	458	1458	1758	1"1/4	3"
1000	170	1034	890	1110	2162	2178	2440	96	479	1479	1779	1"1/2	3"
1500	183	1432	990	1250	2351	2386	2670	121	490	1700	2000	2"	3"
2000	219	1970	1140	1400	2421	2437	2800	105	509	1719	2019	2"	3"
2500	274	2300	1290	1390	2289	2304	2680	149	619	1519	1819	2"	4"
3000	321	2908	1290	1390	2804	2826	3130	149	619	1919	2319	2"	4"
4000	442	3749	1440	1540	2878	2904	3270	133	648	1948	2348	2"	4"
5000	565	4964	1640	1740	2916	2948	3400	111	656	1956	2356	2"	4"

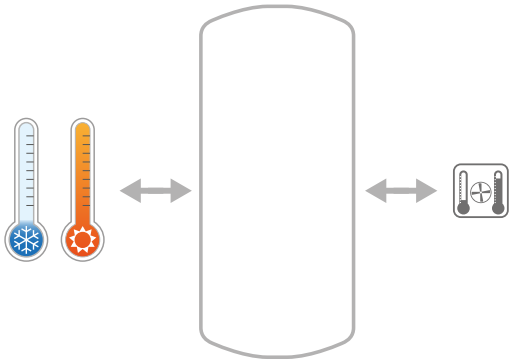
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VOLANO TERMICO **PDC REVERSO**

BUFFER TANK FOR HEATING AND COOLING INSTALLATIONS



PRESSURE	TEMPERATURE
Pmax	Tmax
4 bar	-10 / +90 °C

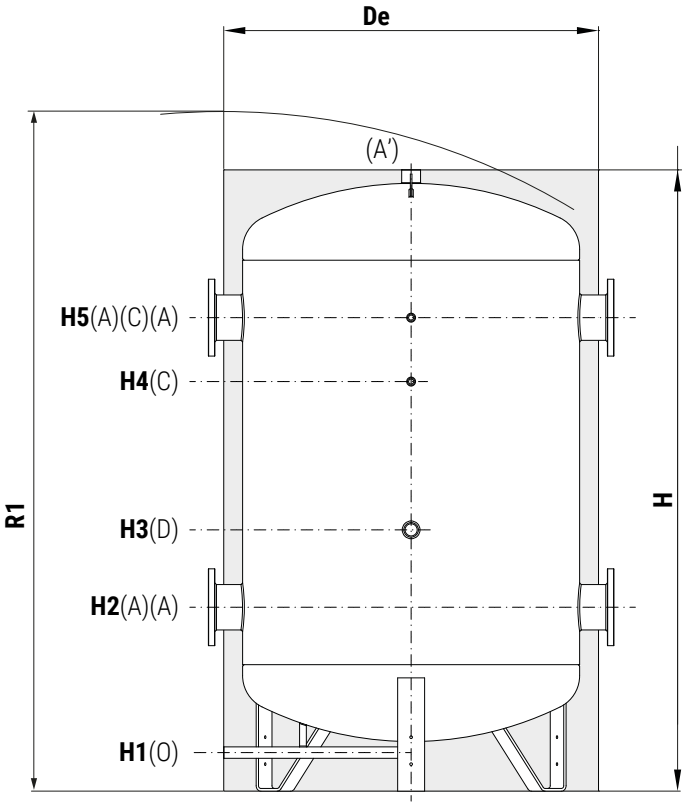


TECHNICAL DESCRIPTION
VOLANO TERMICO PDC REVERSO is used in cooling systems to store cold water and also in heating systems to store hot water at high flow rate.
MATERIAL
Mild steel.
APPLICATION
Buffer either for hot or cold water.
ANTI-CORROSION TREATMENT
The anti-corrosion treatment is not necessary being installed in closed systems.

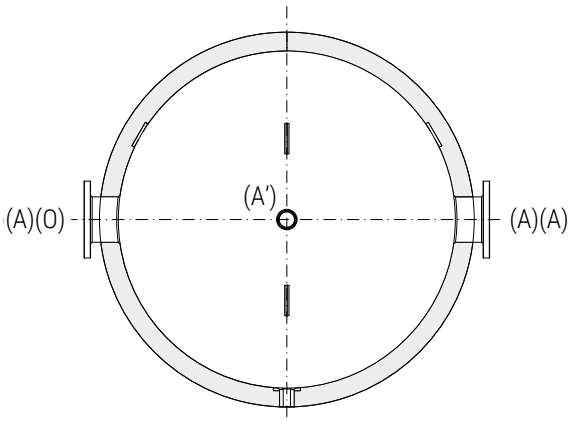
INSULATION
One layer of anti-condensation insulation plus a second layer of polyester fiber, all covered by an aluminium external cover (which can be dissembled to facilitate passage)
EXTERNAL LINING
Aluminium external cover.
CONNECTION FOR ELECTRIC IMMERSION HEATERS
1"1/2 conncetion for low temperature electric immersion heater (thermostat from 0 to +50 °C) - see the connection table below.
WARRANTY
2 years-See general sales conditions and warranty.

VOLANO TERMICO PDC REVERSO

Model	**HARD FOAM** INSULATION
	Art. Nr.
2500	3001162310559
3000	3001162310560
4000	3001162310561
5000	3001162310562



A	To the System
A'	To the System
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater 1"½ G F
O	Drain



Model	Weight	Volume	De	H	R1	H1	H2	H3	H4	H5	A'	A	D
	[Kg]	[lt]	[mm]								Connections F		
2500	397	2294	1390	2304	2630	143	682	969	1519	1756	1"	DN150 PN16	1" 1/2
3000	432	2988	1540	2378	2770	127	711	998	1448	1785	1"	DN150 PN16	1" 1/2
4000	494	3914	1740	2386	2880	105	719	996	1426	1763	1"	DN150 PN16	1" 1/2
5000	714	4970	1740	2950	3360	105	719	1166	1991	2293	1"	DN150 PN16	1" 1/2

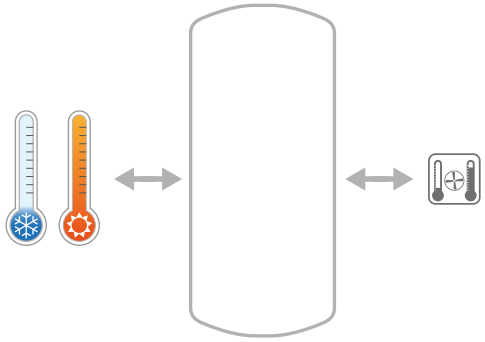
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VOLANO TERMICO **CALDO-FREDDO R/C GB VT**

VERTICAL INERTIAL HOT/COLD WATER TANK



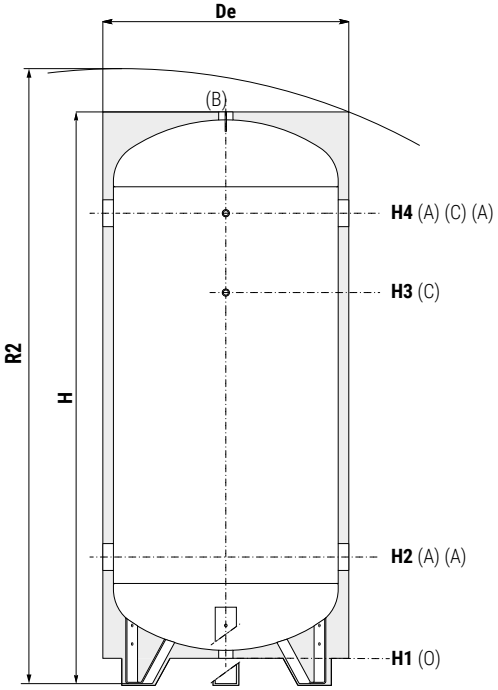
PRESSURE	TEMPERATURE
Pmax	Tmax
6 bar	-10 / +90 °C



Suitable for outdoor installation

APPLICATION AND TECHNICAL DESCRIPTION
Storage of chilled or hot water for inverter installations.
These buffers have an high thermal insulation and external lining with galvanized and painted metallic cover. The anti-corrosion treatment is not necessary being installed in closed systems. They are suited for installations that works with cold water during summer and hot water during winter.
They also allow to limit the number of switch on/off of the generator (either heat pump, chilled system or standard generator) increasing the thermic inertia of the system and to have more stable temperatures.

MATERIAL
Mild steel
EXTERNAL LINING
Galvanized and painted metallic cover.
INSULATION
High thermal insulation with ecological polyurethane hard foam.
WARRANTY
2 years-See general sales conditions and warranty.



A	To the System
B	Safety Valve
C	Connection for instrumentation 1/2" G F
O	Drain

PROMPT AVAILABILITY

VOLANO TERMICO CALDO-FREDDO

Model	Art. Nr.	ENERGY EFFICIENCY CLASS
100	3001162310501	**C**
200	3001162310502	**C**
300	3001162310503	**C**
500	3001162310524	**C**
800	3001162310529	**C**
1000	3001162310530	**C**
1500	3001162310527	**C**
2000	3001162310528	**C**

VOLANO TERMICO CALDO-FREDDO

Model	Art. Nr.	ENERGY EFFICIENCY CLASS
800	3001162310525	**B**
1000	3001162310526	**B**

Model	Weight	Volume	De	H	R2	H1	H2	H3	H4	B-O	A	C
	[Kg]	[lt]				[mm]				Connections F		
100	32	101	460	1006	1115	73	287	592	792	1"1/4	1"1/2	1/2"
200	53	190	510	1407	1505	68	297	927	1177	1"1/4	1"1/2	1/2"
300	67	292	610	1518	1640	129	404	994	1244	1"1/4	2"	1/2"
500	101	501	750	1790	1945	80	400	1200	1450	1"1/4	3"	1/2"
800	147	788	850	2100	2270	80	430	1437	1730	1"1/4	3"	1/2"
1000	170	1034	950	2166	2370	80	463	1463	1763	1"1/2	3"	1/2"
1500	183	1432	1100	2366	2615	100	471	1681	1981	2"	3"	1/2"
2000	219	1970	1300	2436	2770	100	506	1716	2016	2"	3"	1/2"
800 (B)	147	788	900	2100	2290	80	430	1437	1730	1"1/4	3"	1/2"
1000 (B)	170	1034	1000	2166	2390	80	463	1463	1763	1"1/2	3"	1/2"

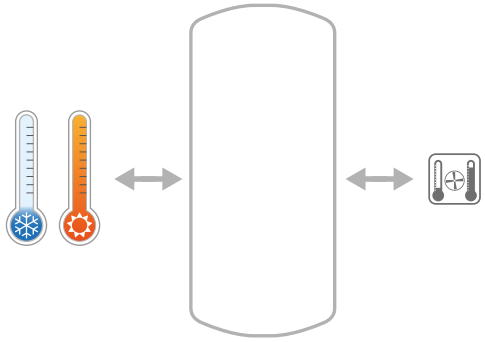
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VOLANO TERMICO **CALDO-FREDDO R/C WB VT**

POLYWARM® COATED VERTICAL INERTIAL HOT/COLD WATER TANK



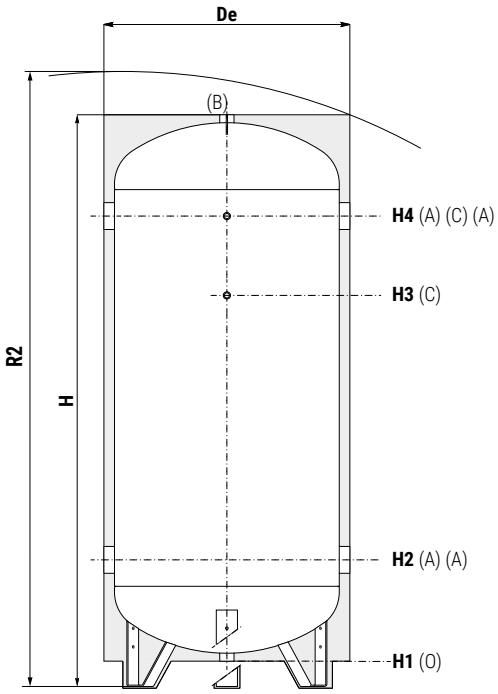
PRESSURE	TEMPERATURE
Pmax	Tmax
6 bar	-10 / +90 °C



Suitable for outdoor installation

APPLICATION AND TECHNICAL DESCRIPTION
Storage of chilled or hot water for inverter installations.
These buffers have an high thermal insulation and external lining with galvanized and painted metallic cover. Internal Polywarm® coated for clean systems installation. They are suited for installations that work with cold water during summer and hot water during winter. They also allow to limit the number of switch on/off of the generator (either heat pump, chilled system or standard generator) increasing the thermic inertia of the system and to have more stable temperatures.

MATERIAL
Mild steel outside - Polywarm® coated inside
EXTERNAL LINING
Galvanized and painted metallic cover.
INSULATION
High thermal insulation with ecological polyurethane hard foam.
WARRANTY
2 years-See general sales conditions and warranty.



A	To the System
B	Safety Valve
C	Connection for instrumentation 1/2" G F
O	Drain

POLYWARM® COATED INSIDE

VOLANO TERMICO CALDO-FREDDO WB

Model	Art. Nr.	ENERGY EFFICIENCY CLASS (ErP)
100	3001162330001	C
200	3001162330002	C
300	3001162330003	C
500	3001162330004	C
800	3001162330005	C
1000	3001162330006	C

Model	Weight	Volume	De	H	R2	H1	H2	H3	H4	B-O	A	C
	[Kg]	[lt]				[mm]				Connections F		
100	32	99	450	1010	1110	78	292	597	792	1"1/4	1"1/2	1/2"
200	53	187	510	1410	1505	73	302	932	1177	1"1/4	1"1/2	1/2"
300	67	288	620	1520	1650	134	409	999	1244	1"1/4	2"	1/2"
500	101	496	830	1795	1985	85	404	1204	1454	1"1/4	3"	1/2"
800	147	788	930	2100	2305	85	371	1371	1671	1"1/4	3"	1/2"
1000	170	1034	1050	2190	2435	105	483	1483	1783	1"1/2	3"	1/2"

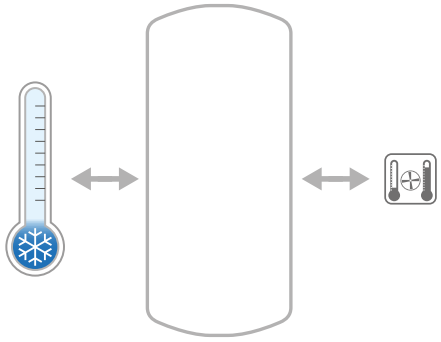
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

CHILLED WATER STORAGE TANK - **GALVANIZED ZB**

VERTICAL GALVANIZED CHILLED WATER TANK



PRESSURE	TEMPERATURE
Pmax	Tmax
6 bar	-10 / +60 °C



Suitable for outdoor installation

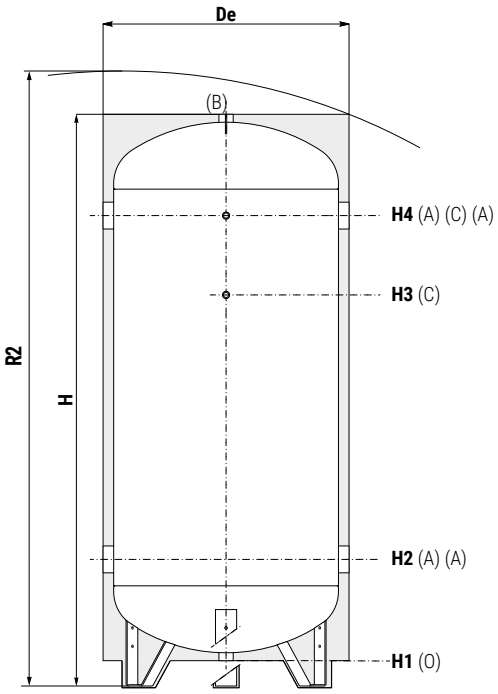
APPLICATION AND TECHNICAL DESCRIPTION
Storage of chilled water for cooling systems.
These buffers have rigid insulation and external galvanized and painted metallic cover.
They are used to increase the thermal inertia and, for those installations with low water-capacity, avoiding that the chilling generator is continuously working.

EXTERNAL LINING
Galvanized and painted metallic cover.

MATERIAL
Galvanized mild steel

INSULATION
High thermal insulation with ecological polyurethane hard foam.

WARRANTY
2 years-See general sales conditions and warranty.



PROMPT AVAILABILITY

Model	ACQ. REF. ZB VT
	Art. Nr.
100	3001162310001
200	3001162310002
300	3001162310003
500	3001162310004
800	3001162310005
1000	3001162310006
1500	3001162310007
2000	3001162310008

SUITABLE FOR OUTDOOR INSTALLATION

A	To the System
B	Safety Valve
C	Connection for instrumentation 1/2" G F
O	Drain

Model	Weight	Volume	De	H	R2	H1	H2	H3	H4	B-O	A	C
	[Kg]	[lt]	[mm]							Connections F		
100	32	99	450	1010	1110	73	287	592	792	1"1/4	1"1/2	1/2"
200	53	187	510	1410	1505	68	297	927	1177	1"1/4	1"1/2	1/2"
300	67	288	620	1520	1650	129	404	994	1244	1"1/4	2"	1/2"
500	101	496	730	1810	1960	121	441	1241	1491	1"1/4	3"	1/2"
800	147	788	830	2105	2270	113	458	1458	1758	1"1/4	3"	1/2"
1000	170	1034	940	2165	2365	96	479	1479	1779	1"1/2	3"	1/2"
1500	183	1432	1130	2355	2620	102	471	1681	1981	2"	3"	1/2"
2000	219	1970	1280	2425	2750	102	506	1716	2016	2"	3"	1/2"

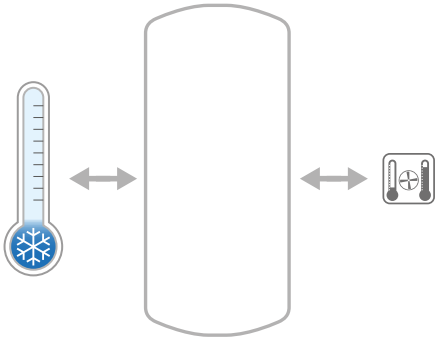
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

CHILLED WATER STORAGE TANK - **STAINLESS STEEL 304 XB**

VERTICAL STAINLESS STEEL 304 CHILLED WATER TANK



PRESSURE	TEMPERATURE
Pmax	Tmax
6 bar	-30 / +60 °C



Suitable for outdoor installation

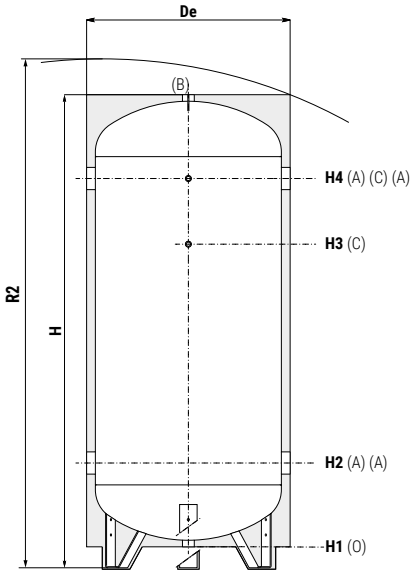
TECHNICAL DESCRIPTION
The chilled water accumulation tanks are designed to be installed in air conditioning systems to increase inertia and in those with low water content, to minimize the number of hourly starts of the refrigeration unit to safe its duration

MATERIAL
Stainless steel 304

EXTERNAL LINING
Galvanized and painted metallic cover.

INSULATION
High thermal insulation with ecological polyurethane hard foam.

WARRANTY
2 years-See general sales conditions and warranty.

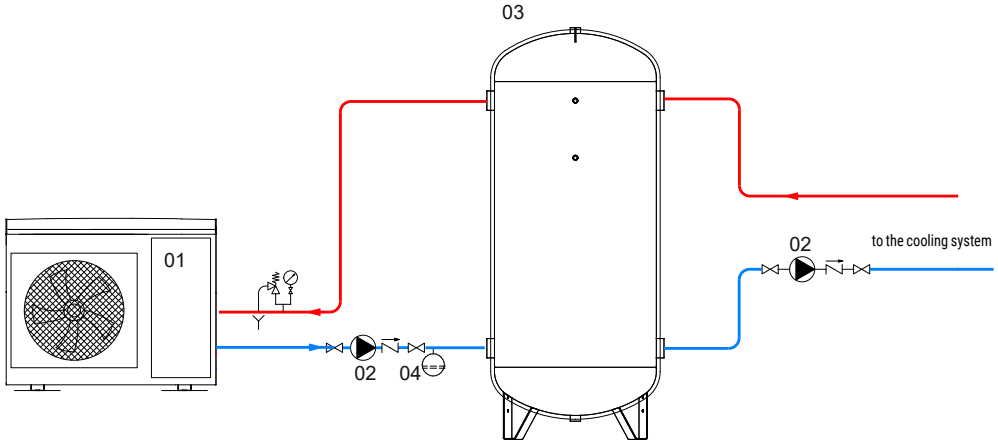


304 STAINLESS STEEL STORAGE

Model	ACQ. REF. XB 20 VT
	Art. Nr.
100	3001012310001
200	3001012310002
300	3001012310003
500	3001012310004
800	3001012310005
1000	3001012310006

A	To the System
B	Safety Valve
C	Connection for instrumentation 1/2" G F
O	Drain

Model	Weight	Volume	De	H	R2	H1	H2	H3	H4	B-O	A	C
	[Kg]	[lt]	[mm]							Connections F		
100	32	99	450	1006	1110	77	286	591	796	1"1/4	1"1/2	1/2"
200	53	187	500	1410	1505	72	301	931	1176	1"1/4	1"1/2	1/2"
300	67	288	610	1515	1640	124	398	988	1238	1"1/4	2"	1/2"
500	101	496	730	1805	1955	114	433	1233	1483	1"1/4	3"	1/2"
800	147	788	830	2100	2265	116	458	1458	1758	1"1/4	3"	1/2"
1000	170	1034	930	2160	2360	102	480	1480	1780	1"1/2	3"	1/2"



01	Generator
02	Air conditioning system circulation group
03	Chilled water tank
04	Expansion vessel

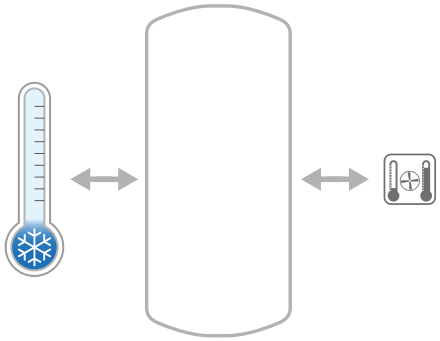
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CHILLED WATER STORAGE TANK **GC 20 VT**

VERTICAL NOT TREATED CHILLED WATER TANK

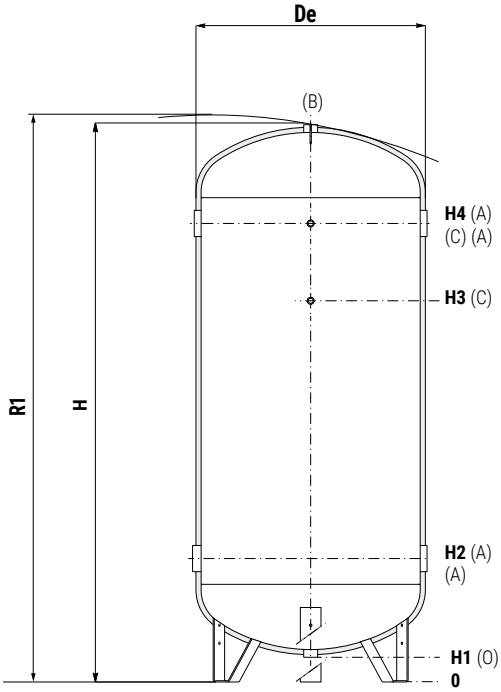


PRESSURE	TEMPERATURE
Pmax	Tmax
6 bar	-10 / +90 °C



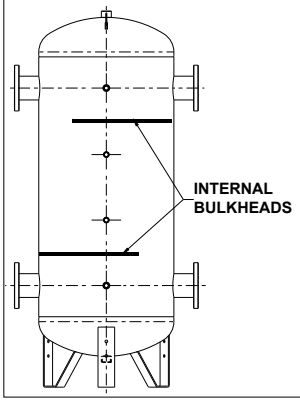
APPLICATION AND TECHNICAL DESCRIPTION
Storage of chilled water for cooling systems.
Vertical inertial water tanks are used to increase the thermal inertia and, for those installations with a low water-capacity, to avoid that the chiller is continuously working.
MATERIAL
Mild steel outside painted
EXTERNAL LINING
Blue PVC with plastic black caps for connections.

INSULATION
20 mm fixed polyethylene anti-condensation. Not self-estinguishing version. Not removable from the tank.
WARRANTY
2 years-See general sales conditions and warranty.



A	To the System
B	Safety Valve
C	Connection for instrumentation 1/2" G F
O	Drain

INTERNAL BULKHEADS VERSION AVAILABLE ON REQUEST



PROMPT AVAILABILITY

Model	**ACQ. REF. GC 20 VT** (INSULATION 20 mm Not self-estinguishing)
	Art. Nr.
100	3001162131101
200	3001162131102
300	3001162131103
500	3001162131104
800	3001162131105
1000	3001162131106
1500	3001162131107
2000	3001162131108
2500	3001162131113
3000	3001162131109
4000	3001162131110
5000	3001162131112

Model	Weight	Volume	DE	H	R1	H1	H2	H3	H4	B-O	A	C
	[Kg]	[lt]	[mm]							Connections F		
100	32	101	440	1006	1017	73	287	592	792	1"1/4	1"1/2	1/2"
200	53	190	490	1407	1415	68	297	927	1177	1"1/4	1"1/2	1/2"
300	67	292	590	1518	1529	129	404	994	1244	1"1/4	2"	1/2"
500	101	501	690	1810	1821	121	441	1241	1491	1"1/4	3"	1/2"
800	147	788	790	2108	2119	108	458	1458	1758	1"1/4	3"	1/2"
1000	170	1034	890	2162	2178	96	479	1479	1779	1"1/2	3"	1/2"
1500	183	1432	990	2351	2386	121	490	1700	2000	2"	3"	1/2"
2000	219	1970	1140	2421	2437	105	509	1719	2019	2"	3"	1/2"
2500	274	2300	1290	2289	2304	149	619	1519	1819	2"	4"	1/2"
3000	321	2908	1290	2804	2826	149	619	1919	2319	2"	4"	1/2"
4000	442	3749	1440	2878	2904	133	648	1948	2348	2"	4"	1/2"
5000	565	4964	1640	2916	2948	111	656	1956	2356	2"	4"	1/2"

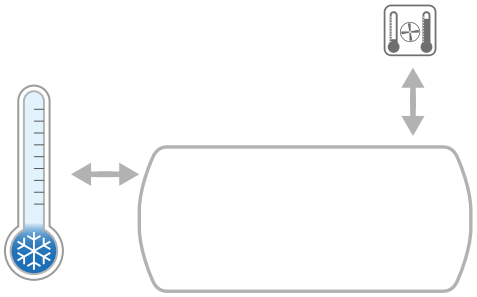
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

CHILLED WATER STORAGE TANK **GC 20 HORIZONTAL**

HORIZONTAL NOT TREATED CHILLED WATER TANK



PRESSURE	TEMPERATURE
Pmax	Tmax
6 bar	-10 / +90 °C

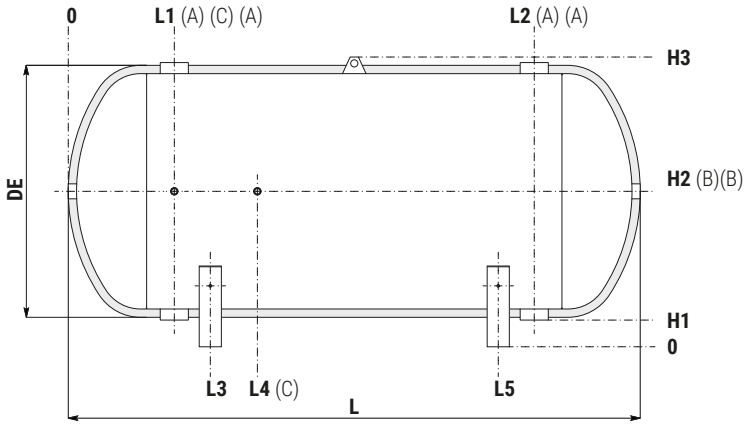


APPLICATION AND TECHNICAL DESCRIPTION
Storage of chilled water for cooling systems.
Horizontal inertial water tanks are used to increase the thermal inertia and, for those installations with a low water-capacity, to avoid that the chiller is continuously working.
MATERIAL
Mild steel outside painted
EXTERNAL LINING
Blue PVC with plastic black caps for connections.

INSULATION
20 mm fixed polyethylene anti-condensation. Not self-estinguishing version. Not removable from the tank.
WARRANTY
2 years-See general sales conditions and warranty.

Model	**ACQ. REF. GC 20 OR** (INSULATION 20 mm Not self-estinguishing)
	Art. Nr.
100	3001161031001
200	3001161031002
300	3001161031003
500	3001161031004
800	3001161031005
1000	3001161031006
1500	3001161031007
2000	3001161031008
2500	3001161031013
3000	3001161031009
4000	3001161031010
5000	3001161031012

A	To the System
B	Safety Valve/Additional connection
C	Connection for instrumentation 1/2" G F



Model	Weight	Volume	DE	L	L1	L2	L3	L4	L5	H1	H2	H3	B	A	C
	[Kg]	[lt]	[mm]										Connections F		
100	32	99	440	934	215	720	290	415	645	63	293	523	1"1/4	1"1/2	1/2"
200	53	187	490	1339	230	1110	335	480	1005	61	316	571	1"1/4	1"1/2	1/2"
300	68	288	590	1389	275	1115	365	525	1025	115	425	760	1"1/4	2"	1/2"
500	102	496	690	1689	320	1370	415	570	1275	107	472	857	1"1/4	3"	1/2"
800	148	788	790	2000	350	1650	480	650	1520	101	516	951	1"1/4	3"	1/2"
1000	170	1034	890	2066	383	1683	513	683	1553	96	561	1046	1"1/2	3"	1/2"
1500	184	1432	990	2250	370	1880	505	670	1745	82	597	1142	2"	3"	1/2"
2000	220	1970	1140	2320	405	1915	525	705	1795	73	663	1283	2"	3"	1/2"
2500	284	2300	1290	2140	470	1670	620	770	1520	154	829	1524	2"	4"	1/2"
3000	330	2908	1290	2640	470	2170	620	870	2020	154	829	1524	2"	4"	1/2"
4000	452	3749	1440	2730	515	2215	665	915	2065	142	892	1662	2"	4"	1/2"
5000	574	4964	1640	2790	545	2245	695	945	2095	125	975	1845	2"	4"	1/2"

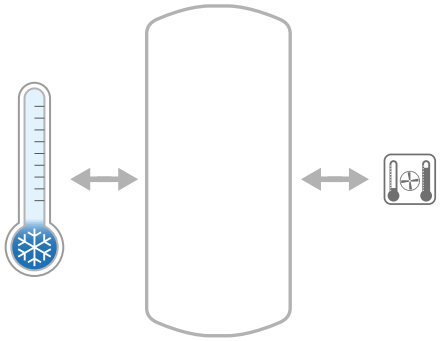
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CHILLED WATER STORAGE TANK **GALVANIZED ZC 20 VT**

VERTICAL GALVANIZED CHILLED WATER TANK



PRESSURE	TEMPERATURE
Pmax	Tmax
6 bar	-10 / +60 °C



APPLICATION AND TECHNICAL DESCRIPTION
Storage of chilled water for cooling systems.
Vertical inertial water tanks are used to increase the thermal inertia and, for those installations with a low water-capacity, to avoid that the chiller is continuously working.
These tanks are made in galvanized mild steel.

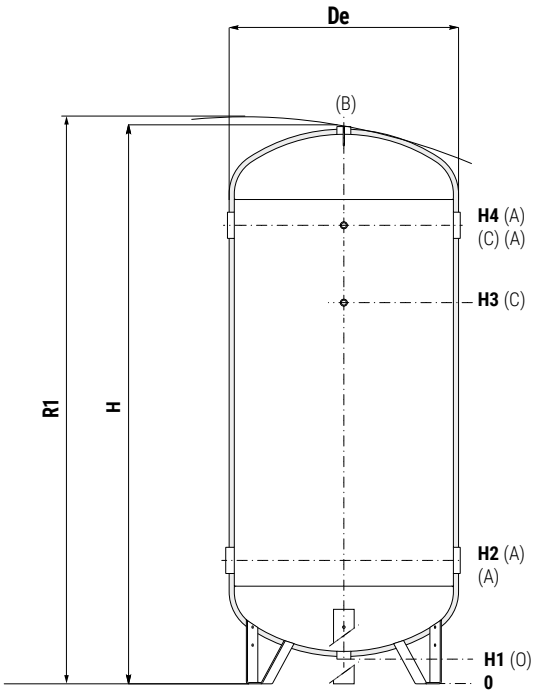
EXTERNAL LINING
Blue PVC with plastic black caps for connections.

MATERIAL
These tanks are galvanized inside and outside, with immersion in a pool of fused zinc with pureness not below 99,99% (Uni EN 1179).

INSULATION
20 mm fixed polyethylene anti-condensation. Not self-estinguishing version. Not removable from the tank.

WARRANTY
2 years-See general sales conditions and warranty.

PROMPT AVAILABILITY



ACQ. REF. ZC 20 VT
(INSULATION 20 mm Not self-estinguishing)

Model	Art. Nr.
100	3001162130001
200	3001162130002
300	3001162130003
500	3001162130004
800	3001162130005
1000	3001162130006
1500	3001162130107
2000	3001162130108
2500	3001162130113
3000	3001162130109
4000	3001162130110
5000	3001162130112

A	To the System
B	Safety Valve
C	Connection for instrumentation 1/2" G F
O	Drain

Model	Weight	Volume	DE	H	R1	H1	H2	H3	H4	B-O	A	C
	[Kg]	[lt]				[mm]				Connections F		
100	32	101	440	1006	1017	73	287	592	792	1"1/4	1"1/2	1/2"
200	53	190	490	1407	1415	68	297	927	1177	1"1/4	1"1/2	1/2"
300	67	292	590	1518	1529	129	404	994	1244	1"1/4	2"	1/2"
500	101	501	690	1810	1821	121	441	1241	1491	1"1/4	3"	1/2"
800	147	788	790	2108	2119	108	458	1458	1758	1"1/4	3"	1/2"
1000	170	1034	890	2162	2178	96	479	1479	1779	1"1/2	3"	1/2"
1500	183	1432	990	2351	2386	121	490	1700	2000	2"	3"	1/2"
2000	219	1970	1140	2421	2437	105	509	1719	2019	2"	3"	1/2"
2500	274	2300	1290	2289	2304	149	619	1519	1819	2"	4"	1/2"
3000	321	2908	1290	2804	2826	149	619	1919	2319	2"	4"	1/2"
4000	442	3749	1440	2878	2904	133	648	1948	2348	2"	4"	1/2"
5000	565	4964	1640	2916	2948	111	656	1956	2356	2"	4"	1/2"

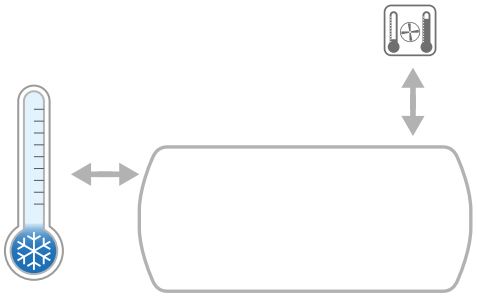
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CHILLED WATER STORAGE TANK **GALVANIZED ZC 20 HORIZONTAL**

HORIZONTAL GALVANIZED CHILLED WATER TANK



PRESSURE	TEMPERATURE
Pmax	Tmax
6 bar	-10 / +60 °C



APPLICATION AND TECHNICAL DESCRIPTION
Storage of chilled water for cooling systems.
Horizontal inertial water tanks are used to increase the thermal inertia and, for those installations with a low water-capacity, to avoid that the chiller is continuously working. These tanks are made in galvanized mild steel.

EXTERNAL LINING
Blue PVC with plastic black caps for connections.

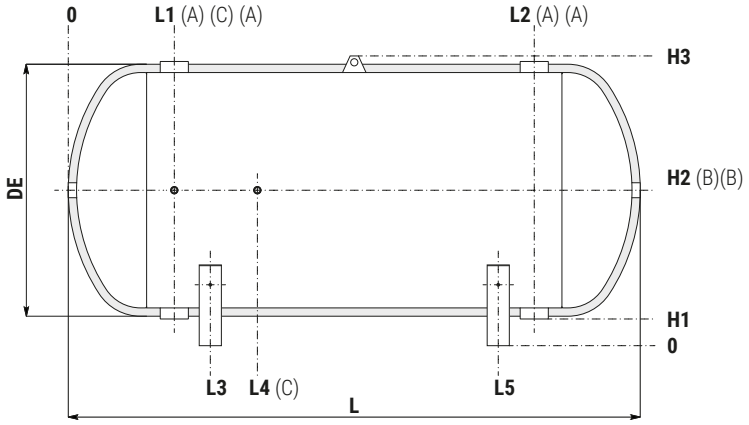
MATERIAL
Galvanized mild steel

INSULATION
20 mm fixed polyethylene anti-condensation. Not self-estinguishing version. Not removable from the tank.

WARRANTY
2 years-See general sales conditions and warranty.

Model	**ACQ. REF. ZC 20 OR** (INSULATION 20 mm Not self-estinguishing)
	Art. Nr.
100	3001161030001
200	3001161030002
300	3001161030003
500	3001161030004
800	3001161030005
1000	3001161030006
1500	3001161030107
2000	3001161030108
2500	3001161030113
3000	3001161030109
4000	3001161030110
5000	3001161030112

A	To the System
B	Safety Valve/Additional connection
C	Connection for instrumentation 1/2" G F



Model	Weight	Volume	DE	L	L1	L2	L3	L4	L5	H1	H2	H3	B	A	C
	[Kg]	[lt]	[mm]										Connections F		
100	32	99	440	934	215	720	290	415	645	63	293	523	1"1/4	1"1/2	1/2"
200	53	187	490	1339	230	1110	335	480	1005	61	316	571	1"1/4	1"1/2	1/2"
300	68	288	590	1389	275	1115	365	525	1025	115	425	760	1"1/4	2"	1/2"
500	102	496	690	1689	320	1370	415	570	1275	107	472	857	1"1/4	3"	1/2"
800	148	788	790	2000	350	1650	480	650	1520	101	516	951	1"1/4	3"	1/2"
1000	170	1034	890	2066	383	1683	513	683	1553	96	561	1046	1"1/2	3"	1/2"
1500	184	1432	990	2250	370	1880	505	670	1745	82	597	1142	2"	3"	1/2"
2000	220	1970	1140	2320	405	1915	525	705	1795	73	663	1283	2"	3"	1/2"
2500	284	2300	1290	2140	470	1670	620	770	1520	154	829	1524	2"	4"	1/2"
3000	330	2908	1290	2640	470	2170	620	870	2020	154	829	1524	2"	4"	1/2"
4000	452	3749	1440	2730	515	2215	665	915	2065	142	892	1662	2"	4"	1/2"
5000	574	4964	1640	2790	545	2245	695	945	2095	125	975	1845	2"	4"	1/2"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

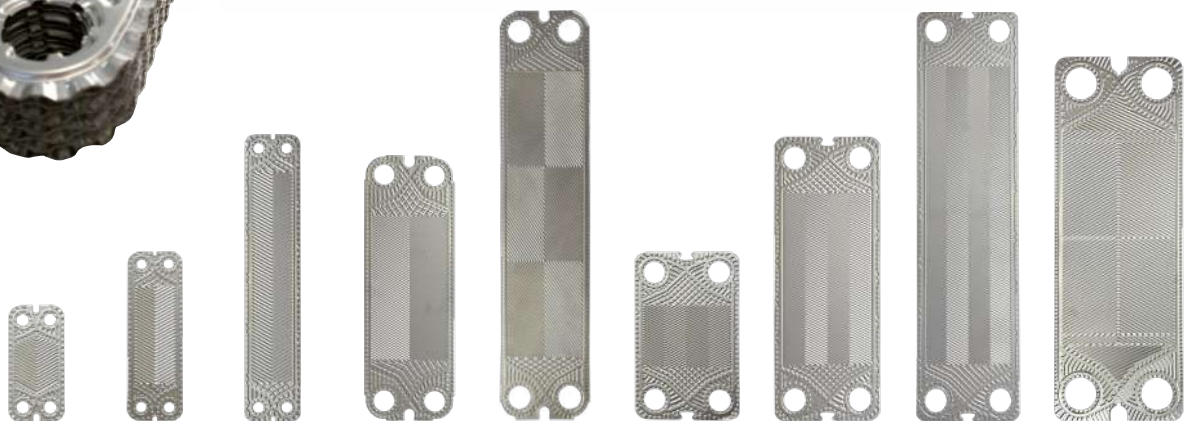


HYDRONIC AND FRESH WATER STATION



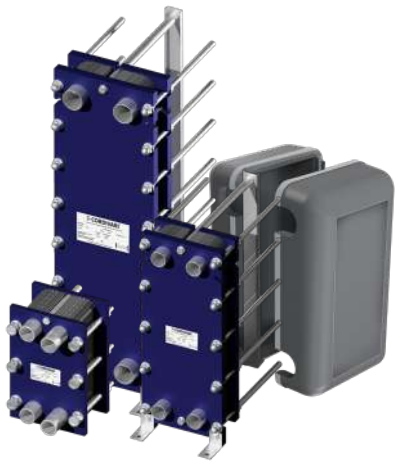
PLATE HEAT EXCHANGERS





PRODUCT RANGE									
MODELS	PHC 2030	PHC 2045	PHC 2075	PHC 3080	PHC 30120	PHC 4060	PHC 4090	PHC 40125	PHC 45120
N° OF PLATES	9-67	9-67	9-67	13-205	13-205	13-205	13-205	13-205	13-213
CONNECTIONS	threaded sleeve (1" 1/4)	threaded sleeve (1" 1/4)	threaded sleeve (1" 1/4)	threaded sleeve (2")	threaded sleeve (2")	threaded sleeve (2" 1/2)	threaded sleeve (2" 1/2)	threaded sleeve (2" 1/2)	Flanged connection (ISO DN-100)

PHC INSPECTABLE PLATE HEAT EXCHANGERS



PHC heat exchangers are used in all istallations, domestic, residential and commercial, where you need a thermic heat exchange between fluids. They are suitable for domestic hot water production either instantaneously or with storage, heating of swimming pools using different energy sources (traditional or biomass boiler, solar thermal system, heat pump, etc.). PHC plate heat exchangers can also be used in district heating systems, in heat recovery systems, for hydraulic separation of installations. The new range of Cordivari PHC plate heat exchangers consists of 9 models, combined with the variability of plates number, type of gaskets and maximum operating pressure, which allows to cover a very wide range of applications, offer every potentiality and satisfaying all typical thermohydraulic application conditions. Thanks to the possibility of opening the exchanger for cleaning or changing the configuration, the PHC heat exchangers are particularly suitable in installations with high-performances, wherever there is a need for a flexible, high-performance exchanger that allows maintenance operations. PHC heat exchangers are designed for the field of appliction and within the operating limits according to Art. 4.3 of the PED directive 2014/68/EU

WORKING CONDITIONS		
Gaskets model	Max pressure	Temperature [max/min]
EPDM	10/16 bar	-10/+140 °C (*)
NBR	10/16 bar	-4/+110 °C (*)

(*) Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).

Cordivari plate heat exchangers, are offering now a complete range of solutions for domestic, residential and commercial applications. A wide and flexible proposal, both for brazed exchangers of small dimensions, or plate-to-plate exchangers for larger application. New range of exchangers, thanks to various dimensions and types, connections from DN32 to DN100, different and with extended working pressure limits, allows to meet any plant requirements or plumbing needs.

From small single-family house sourced by boiler or pellet stove, to big plants, every installation finds today the most suitable Cordivari solution thanks to the new on-line professional dimensioning tool, where you can always find the best performing and the most economical solution.






PRODUCT RANGE																				
MODELS	SLB 15				SLB 20							SLB 30					SLB 40			
N° OF PLATES	10	20	30	40	12	16	20	24	30	34	40	14	20	30	40	50	30	40	50	60
CONNECTIONS	3/4" M				3/4" M							1" M					1" M			
MAXIMUM FLOW RATE [m³/h]	3,6				3,6							8,1					12,7			
WEIGHT [Kg]	0,62	1,02	1,42	1,82	1,10	1,13	1,16	1,19	1,24	1,27	1,32	2,98	3,70	4,90	6,10	7,30	8,3	10,2	12,1	14

SLB BRAZED PLATE HEAT EXCHANGERS



Cordivari SLB brazed plate heat exchangers represents the most compact and economic solution for all applications where heat exchange is required in domestic, residential and commercial environments. The construction technology is based on brazed welding coupling with 99,99% pure copper, of several plates in stainless steel 316L. The new range of SLB heat exchangers consists of 4 models avaible in bare or insulated version and is designed to efficiently meet the widest range of heat exchange needs. SLB plate heat exchangers are designed for the field of application and within the operating limits according to Art. 4.3 of the PED directive 2014/68/EU and are designed for the production of domestic or heating hot water, air-conditioning, separation of thermal systems, refrigeration, evaporation and industrial processes.

ADVANTAGES
- High efficiency
- Long service life
- Cost and space-saving
- High reliability
- Countless variations in the ratio of storage volume to exchanger capacity

WORKING CONDITIONS		
Max. Pressure	Max. Temperature	(*) Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).
10 bar	190 °C (*)	

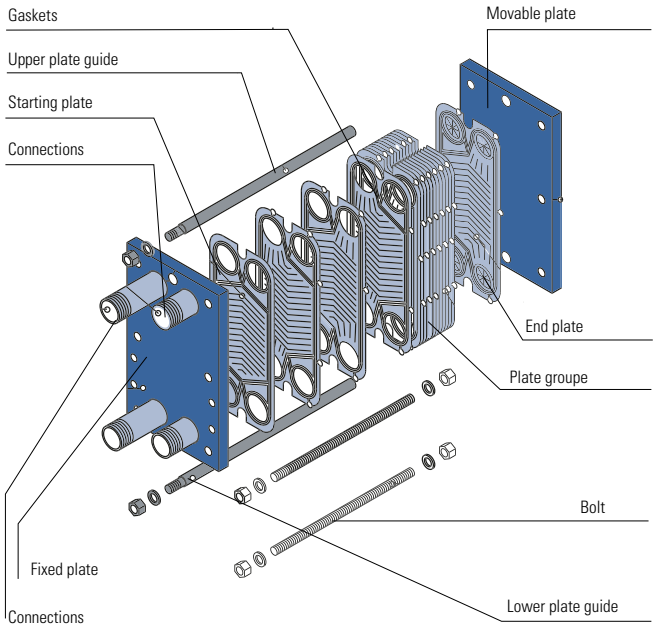
PHC PLATE HEAT EXCHANGERS
INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

CHEMICAL COMPATIBILITY

Not permitted fluids for plates
HYDROCHLORIC ACID
SULPHURIC ACID
NITRIC ACID
KETONES
ETHER
HALOGENATED HYDROCARBONS
AROMATIC HYDROCARBONS
SODA

These charts indicate the chemical compatibility of seal materials with fluids of different natures. Cordivari guarantees suitability of use of its plate heat exchangers, under the operating conditions shown in the catalogue, exclusively with water or glycol water.

Fluid	Nitrile Gaskets (NBR)	EPDMprx gaskets
DOMESTIC HOT WATER (<110°C)	☑	☑
DE-MINERALIZED WATER	☑	
SWIMMING POOL WATER	☑	
MINERAL WATER		☑
ETILENIC GLYCOLE < 30%	☑	☑
ETILENIC GLYCOLE > 30%		☑
PROPYLENIC GLYCOL < 30%	☑	☑
PROPYLENIC GLYCOL > 30%		☑
EDIBLE OILS	☑	
DIAMETRIC OIL	☑	
MINERAL OIL	☑	
SYNTHETIC OIL		☑
QUENCHING OIL (MINERAL)	☑	
WINE VINEGAR		☑
BEER	☑	☑
MILK	☑	☑
LIQUORS		☑
WINE	☑	☑
ACETONE		☑
ETHYL ALCOHOLS		☑
ETHANOL 60%		☑
ETHYLENE	☑	
METHANOL		☑



ADVANTAGES

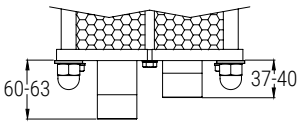
Cordivari's inspectable plate heat exchangers, seen in detail with exploded view of components.

- Quick access for inspection and maintenance
- Modular design
- Plates with an excellent overall heat transfer coefficient
- Corrosion-resistant
- Rigorous quality tests performed in-house
- Plate conformation designed for maximum exchange performance

MATERIALS AND FINISHES

- Frames (not in contact with fluids) in painted carbon steel
- Plate guides, tie rods and nuts (not in contact with fluids) in galvanised carbon steel
- Threaded fittings and heat exchange plates (in contact with fluids in AISI 316L stainless steel)
- Removable EPDM or NBR gaskets

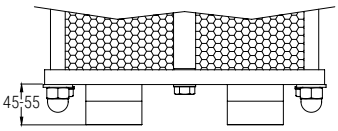
CONNECTIONS



M-threaded connections 1"1/4

Applied on models:

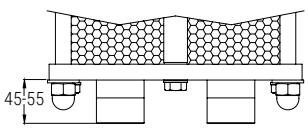
- **PHC 2030**
- **PHC 2045**
- **PHC 2075**



M-threaded connections 2" 1/2

Applied on models:

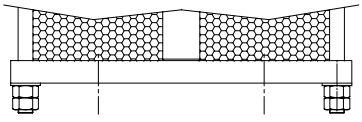
- **PHC 4060**
- **PHC 4090**
- **PHC 40120**



M-threaded connections 2"

Applied on models:

- **PHC 3080**
- **PHC 30120**



FLANGED CONNECTIONS ISO DN-100

Applied on models:

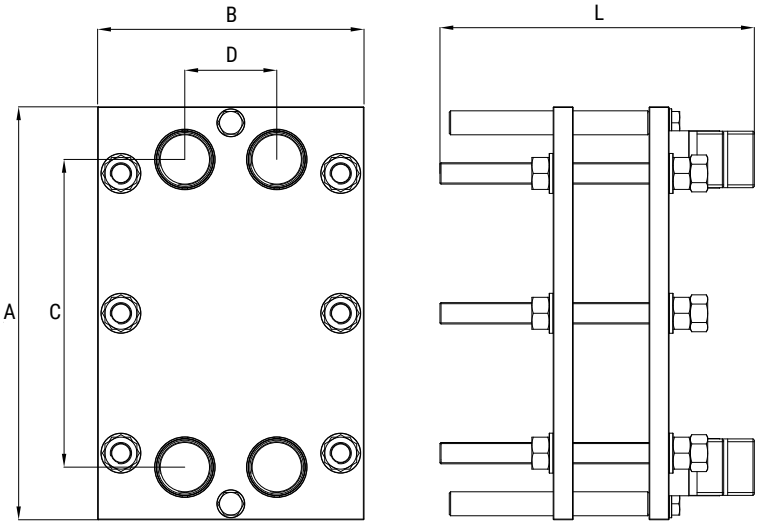
- **PHC 45120**

HEAT EXCHANGERS **PHC 2030**

INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS



PROMPT AVAILABILITY



Support feet available on request;
See Accessories section.

CONNECTIONS
DN32 (1" 1/4) M-THREADED

DIMENSIONS	
A [mm]	310
B [mm]	200
C [mm]	231
D [mm]	69

WORKING CONDITIONS		
Gaskets model	Max pressure	Temperature [min/max]
EPDM	10/16 bar	-10/+140 °C (*)
NBR	10/16 bar	-4/+110 °C (*)

(*) Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).

N° Plates	**With NBR gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	**With EPDM gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
9	3175056656061	3175056656091	3175056656001	3175056656031	220	0,2	5655000610028
11	3175056656062	3175056656092	3175056656002	3175056656032		0,3	
13	3175056656063	3175056656093	3175056656003	3175056656033		0,3	
15	3175056656064	3175056656094	3175056656004	3175056656034		0,4	
17	3175056656065	3175056656095	3175056656005	3175056656035		0,4	
19	3175056656066	3175056656096	3175056656006	3175056656036		0,5	
21	3175056656067	3175056656097	3175056656007	3175056656037		0,5	
23	3175056656068	3175056656098	3175056656008	3175056656038		0,6	
25	3175056656069	3175056656099	3175056656009	3175056656039		0,6	
27	3175056656070	3175056656100	3175056656010	3175056656040		0,7	
29	3175056656071	3175056656101	3175056656011	3175056656041		0,7	
31	3175056656072	3175056656102	3175056656012	3175056656042		0,8	
33	3175056656073	3175056656103	3175056656013	3175056656043	370	0,8	5655000610029
35	3175056656074	3175056656104	3175056656014	3175056656044		0,9	
37	3175056656075	3175056656105	3175056656015	3175056656045		0,9	
39	3175056656076	3175056656106	3175056656016	3175056656046		1,0	
41	3175056656077	3175056656107	3175056656017	3175056656047		1,0	
43	3175056656078	3175056656108	3175056656018	3175056656048		1,1	
45	3175056656079	3175056656109	3175056656019	3175056656049		1,1	
47	3175056656080	3175056656110	3175056656020	3175056656050		1,2	
49	3175056656081	3175056656111	3175056656021	3175056656051		1,2	
51	3175056656082	3175056656112	3175056656022	3175056656052		1,3	
53	3175056656083	3175056656113	3175056656023	3175056656053		1,3	
55	3175056656084	3175056656114	3175056656024	3175056656054		1,4	
57	3175056656085	3175056656115	3175056656025	3175056656055		1,4	
59	3175056656086	3175056656116	3175056656026	3175056656056		1,5	
61	3175056656087	3175056656117	3175056656027	3175056656057		1,5	
63	3175056656088	3175056656118	3175056656028	3175056656058		1,6	
65	3175056656089	3175056656119	3175056656029	3175056656059		1,6	
67	3175056656090	3175056656120	3175056656030	3175056656060		1,7	

For operating conditions please consult our online tool on www.cordivari.com

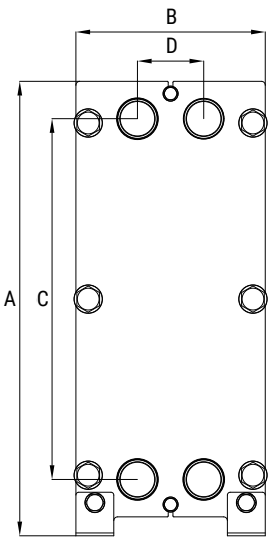
HEAT EXCHANGERS **PHC 2045**

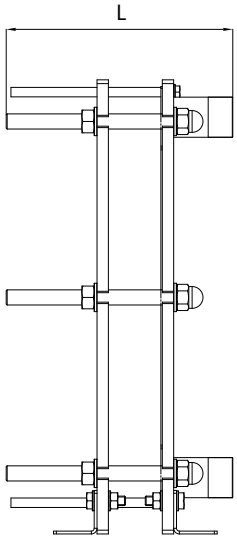
INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED



PROMPT AVAILABILITY





CONNECTIONS
DN32 (1" 1/4) M-threaded

DIMENSIONS	
A [mm]	480
B [mm]	200
C [mm]	381
D [mm]	70

WORKING CONDITIONS		
Gaskets model	Max pressure	Temperature [min/max]
EPDM	10/16 bar	-10/+140 °C (*)
NBR	10/16 bar	-4/+110 °C (*)

(*) Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).

N° Plates	**With NBR gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	**With EPDM gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
9	3175056656181	3175056656211	3175056656121	3175056656151	225	0,4	5655000610030
11	3175056656182	3175056656212	3175056656122	3175056656152		0,4	
13	3175056656183	3175056656213	3175056656123	3175056656153		0,5	
15	3175056656184	3175056656214	3175056656124	3175056656154		0,6	
17	3175056656185	3175056656215	3175056656125	3175056656155		0,7	
19	3175056656186	3175056656216	3175056656126	3175056656156		0,8	
21	3175056656187	3175056656217	3175056656127	3175056656157		0,8	
23	3175056656188	3175056656218	3175056656128	3175056656158		0,9	
25	3175056656189	3175056656219	3175056656129	3175056656159		1,0	
27	3175056656190	3175056656220	3175056656130	3175056656160		1,1	
29	3175056656191	3175056656221	3175056656131	3175056656161		1,2	
31	3175056656192	3175056656222	3175056656132	3175056656162		1,2	
33	3175056656193	3175056656223	3175056656133	3175056656163	375	1,3	5655000610031
35	3175056656194	3175056656224	3175056656134	3175056656164		1,4	
37	3175056656195	3175056656225	3175056656135	3175056656165		1,5	
39	3175056656196	3175056656226	3175056656136	3175056656166		1,6	
41	3175056656197	3175056656227	3175056656137	3175056656167		1,6	
43	3175056656198	3175056656228	3175056656138	3175056656168		1,7	
45	3175056656199	3175056656229	3175056656139	3175056656169		1,8	
47	3175056656200	3175056656230	3175056656140	3175056656170		1,9	
49	3175056656201	3175056656231	3175056656141	3175056656171		2,0	
51	3175056656202	3175056656232	3175056656142	3175056656172		2,0	
53	3175056656203	3175056656233	3175056656143	3175056656173		2,1	
55	3175056656204	3175056656234	3175056656144	3175056656174		2,2	
57	3175056656205	3175056656235	3175056656145	3175056656175		2,3	
59	3175056656206	3175056656236	3175056656146	3175056656176		2,4	
61	3175056656207	3175056656237	3175056656147	3175056656177		2,4	
63	3175056656208	3175056656238	3175056656148	3175056656178		2,5	
65	3175056656209	3175056656239	3175056656149	3175056656179		2,6	
67	3175056656210	3175056656240	3175056656150	3175056656180		2,7	

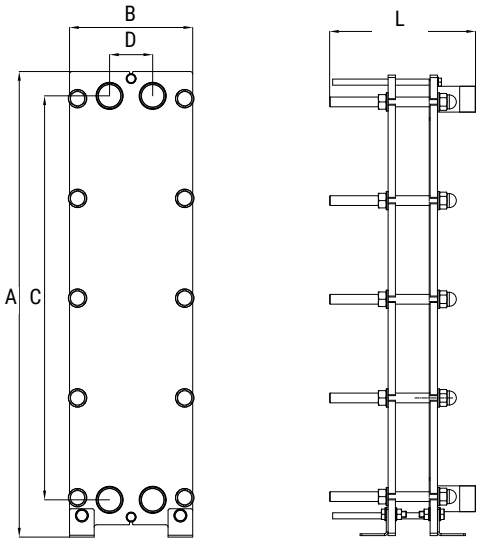
For operating conditions please consult our online tool on www.cordivari.com

HEAT EXCHANGERS **PHC 2075**
INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED



PROMPT AVAILABILITY



CONNECTIONS
DN32 (1" 1/4) M-threaded

DIMENSIONS	
A [mm]	756
B [mm]	200
C [mm]	656
D [mm]	70

WORKING CONDITIONS		
Gaskets model	Max pressure	Temperature [min/max]
EPDM	10/16 bar	-10/+140 °C (*)
NBR	10/16 bar	-4/+110 °C (*)

(*) Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).

N° Plates	**With NBR gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	**With EPDM gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
9	3175056656301	3175056656331	3175056656241	3175056656271	225	0,8	5655000610032
11	3175056656302	3175056656332	3175056656242	3175056656272		0,9	
13	3175056656303	3175056656333	3175056656243	3175056656273		1,1	
15	3175056656304	3175056656334	3175056656244	3175056656274		1,3	
17	3175056656305	3175056656335	3175056656245	3175056656275		1,4	
19	3175056656306	3175056656336	3175056656246	3175056656276		1,6	
21	3175056656307	3175056656337	3175056656247	3175056656277		1,8	
23	3175056656308	3175056656338	3175056656248	3175056656278		2,0	
25	3175056656309	3175056656339	3175056656249	3175056656279		2,1	
27	3175056656310	3175056656340	3175056656250	3175056656280		2,3	
29	3175056656311	3175056656341	3175056656251	3175056656281		2,5	
31	3175056656312	3175056656342	3175056656252	3175056656282		2,6	
33	3175056656313	3175056656343	3175056656253	3175056656283	375	2,8	5655000610033
35	3175056656314	3175056656344	3175056656254	3175056656284		3,0	
37	3175056656315	3175056656345	3175056656255	3175056656285		3,1	
39	3175056656316	3175056656346	3175056656256	3175056656286		3,3	
41	3175056656317	3175056656347	3175056656257	3175056656287		3,5	
43	3175056656318	3175056656348	3175056656258	3175056656288		3,7	
45	3175056656319	3175056656349	3175056656259	3175056656289		3,8	
47	3175056656320	3175056656350	3175056656260	3175056656290		4,0	
49	3175056656321	3175056656351	3175056656261	3175056656291		4,2	
51	3175056656322	3175056656352	3175056656262	3175056656292		4,3	
53	3175056656323	3175056656353	3175056656263	3175056656293		4,5	
55	3175056656324	3175056656354	3175056656264	3175056656294		4,7	
57	3175056656325	3175056656355	3175056656265	3175056656295		4,8	
59	3175056656326	3175056656356	3175056656266	3175056656296		5,0	
61	3175056656327	3175056656357	3175056656267	3175056656297		5,2	
63	3175056656328	3175056656358	3175056656268	3175056656298		5,4	
65	3175056656329	3175056656359	3175056656269	3175056656299		5,5	
67	3175056656330	3175056656360	3175056656270	3175056656300		5,7	

For operating conditions please consult our online tool on www.cordivari.com

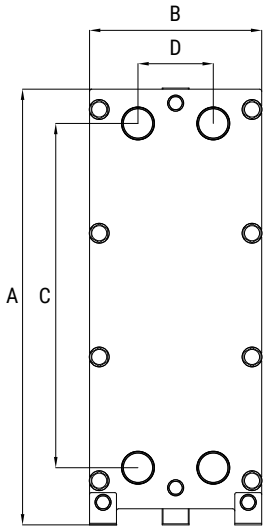
HEAT EXCHANGERS **PHC 3080**

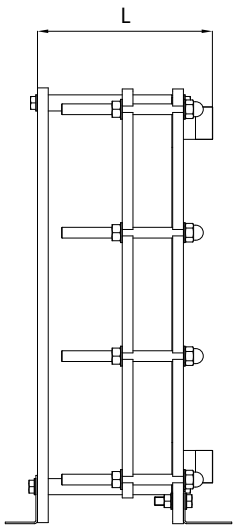
INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED



PROMPT AVAILABILITY





CONNECTIONS
DN50 (2") M-threaded

DIMENSIONS	
A [mm]	810
B [mm]	320
C [mm]	640
D [mm]	140

WORKING CONDITIONS		
Gaskets model	Max pressure	Temperature [min/max]
EPDM	10/16 bar	-10/+140 °C (*)
NBR	10/16 bar	-4/+110 °C (*)

(*) Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).

N° Plates	**With NBR gaskets** **PN10 VERSION**	**PN16 VERSION** WITH SURCHARGE	**With EPDM gaskets** **PN10 VERSION**	**PN16 VERSION** WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
13	3175056656555	3175056656652	3175056656361	3175056656458	545	1,8	5655000610034
15	3175056656556	3175056656653	3175056656362	3175056656459		2,1	
17	3175056656557	3175056656654	3175056656363	3175056656460		2,4	
19	3175056656558	3175056656655	3175056656364	3175056656461		2,7	
21	3175056656559	3175056656656	3175056656365	3175056656462		2,9	
23	3175056656560	3175056656657	3175056656366	3175056656463		3,2	
25	3175056656561	3175056656658	3175056656367	3175056656464		3,5	
27	3175056656562	3175056656659	3175056656368	3175056656465		3,8	
29	3175056656563	3175056656660	3175056656369	3175056656466		4,1	
31	3175056656564	3175056656661	3175056656370	3175056656467		4,3	
33	3175056656565	3175056656662	3175056656371	3175056656468		4,6	
35	3175056656566	3175056656663	3175056656372	3175056656469		4,9	
37	3175056656567	3175056656664	3175056656373	3175056656470		5,2	
39	3175056656568	3175056656665	3175056656374	3175056656471		5,5	
41	3175056656569	3175056656666	3175056656375	3175056656472		5,7	
43	3175056656570	3175056656667	3175056656376	3175056656473		6,0	
45	3175056656571	3175056656668	3175056656377	3175056656474		6,3	
47	3175056656572	3175056656669	3175056656378	3175056656475		6,6	
49	3175056656573	3175056656670	3175056656379	3175056656476		6,9	
51	3175056656574	3175056656671	3175056656380	3175056656477		7,1	
53	3175056656575	3175056656672	3175056656381	3175056656478	675	7,4	//
55	3175056656576	3175056656673	3175056656382	3175056656479		7,7	
57	3175056656577	3175056656674	3175056656383	3175056656480		8,0	
59	3175056656578	3175056656675	3175056656384	3175056656481		8,3	
61	3175056656579	3175056656676	3175056656385	3175056656482		8,5	
63	3175056656580	3175056656677	3175056656386	3175056656483		8,8	
65	3175056656581	3175056656678	3175056656387	3175056656484		9,1	
67	3175056656582	3175056656679	3175056656388	3175056656485		9,4	
69	3175056656583	3175056656680	3175056656389	3175056656486		9,7	
71	3175056656584	3175056656681	3175056656390	3175056656487		9,9	

For operating conditions please consult our online tool on www.cordivari.com

HEAT EXCHANGERS **PHC 3080**

INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED

N° Plates	**With NBR gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	**With EPDM gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
73	3175056656585	3175056656682	3175056656391	3175056656488	675	10,2	5655000610035
75	3175056656586	3175056656683	3175056656392	3175056656489		10,5	
77	3175056656587	3175056656684	3175056656393	3175056656490		10,8	
79	3175056656588	3175056656685	3175056656394	3175056656491		11,1	
81	3175056656589	3175056656686	3175056656395	3175056656492		11,3	
83	3175056656590	3175056656687	3175056656396	3175056656493		11,6	
85	3175056656591	3175056656688	3175056656397	3175056656494		11,9	
87	3175056656592	3175056656689	3175056656398	3175056656495		12,2	
89	3175056656593	3175056656690	3175056656399	3175056656496		12,5	
91	3175056656594	3175056656691	3175056656400	3175056656497		12,7	
93	3175056656595	3175056656692	3175056656401	3175056656498		13,0	
95	3175056656596	3175056656693	3175056656402	3175056656499		13,3	
97	3175056656597	3175056656694	3175056656403	3175056656500		13,6	
99	3175056656598	3175056656695	3175056656404	3175056656501		13,9	
101	3175056656599	3175056656696	3175056656405	3175056656502		14,1	
103	3175056656600	3175056656697	3175056656406	3175056656503		14,4	
105	3175056656601	3175056656698	3175056656407	3175056656504	825	14,7	
107	3175056656602	3175056656699	3175056656408	3175056656505		15,0	
109	3175056656603	3175056656700	3175056656409	3175056656506		15,3	
111	3175056656604	3175056656701	3175056656410	3175056656507		15,5	
113	3175056656605	3175056656702	3175056656411	3175056656508		15,8	
115	3175056656606	3175056656703	3175056656412	3175056656509		16,1	
117	3175056656607	3175056656704	3175056656413	3175056656510		16,4	
119	3175056656608	3175056656705	3175056656414	3175056656511		16,7	
121	3175056656609	3175056656706	3175056656415	3175056656512		16,9	
123	3175056656610	3175056656707	3175056656416	3175056656513		17,2	
125	3175056656611	3175056656708	3175056656417	3175056656514		17,5	
127	3175056656612	3175056656709	3175056656418	3175056656515		17,8	
129	3175056656613	3175056656710	3175056656419	3175056656516		18,1	
131	3175056656614	3175056656711	3175056656420	3175056656517		18,3	
133	3175056656615	3175056656712	3175056656421	3175056656518		18,6	
135	3175056656616	3175056656713	3175056656422	3175056656519		18,9	
137	3175056656617	3175056656714	3175056656423	3175056656520		19,2	
139	3175056656618	3175056656715	3175056656424	3175056656521		19,5	
141	3175056656619	3175056656716	3175056656425	3175056656522		19,7	
143	3175056656620	3175056656717	3175056656426	3175056656523		20,0	
145	3175056656621	3175056656718	3175056656427	3175056656524		20,3	
147	3175056656622	3175056656719	3175056656428	3175056656525		20,6	
149	3175056656623	3175056656720	3175056656429	3175056656526		20,9	
151	3175056656624	3175056656721	3175056656430	3175056656527		21,1	
153	3175056656625	3175056656722	3175056656431	3175056656528		21,4	
155	3175056656626	3175056656723	3175056656432	3175056656529		21,7	
157	3175056656627	3175056656724	3175056656433	3175056656530	1025	22,0	5655000610027
159	3175056656628	3175056656725	3175056656434	3175056656531		22,3	
161	3175056656629	3175056656726	3175056656435	3175056656532		22,5	
163	3175056656630	3175056656727	3175056656436	3175056656533		22,8	
165	3175056656631	3175056656728	3175056656437	3175056656534		23,1	
167	3175056656632	3175056656729	3175056656438	3175056656535		23,4	
169	3175056656633	3175056656730	3175056656439	3175056656536		23,7	
171	3175056656634	3175056656731	3175056656440	3175056656537		23,9	
173	3175056656635	3175056656732	3175056656441	3175056656538		24,2	
175	3175056656636	3175056656733	3175056656442	3175056656539		24,5	
177	3175056656637	3175056656734	3175056656443	3175056656540		24,8	
179	3175056656638	3175056656735	3175056656444	3175056656541		25,1	
181	3175056656639	3175056656736	3175056656445	3175056656542		25,3	
183	3175056656640	3175056656737	3175056656446	3175056656543		25,6	
185	3175056656641	3175056656738	3175056656447	3175056656544		25,9	
187	3175056656642	3175056656739	3175056656448	3175056656545		26,2	
189	3175056656643	3175056656740	3175056656449	3175056656546		26,5	
191	3175056656644	3175056656741	3175056656450	3175056656547		26,7	
193	3175056656645	3175056656742	3175056656451	3175056656548		27,0	
195	3175056656646	3175056656743	3175056656452	3175056656549		27,3	
197	3175056656647	3175056656744	3175056656453	3175056656550		27,6	
199	3175056656648	3175056656745	3175056656454	3175056656551		27,9	
201	3175056656649	3175056656746	3175056656455	3175056656552		28,1	
203	3175056656650	3175056656747	3175056656456	3175056656553		28,4	
205	3175056656651	3175056656748	3175056656457	3175056656554		28,7	

For operating conditions please consult our online tool on www.cordivari.com

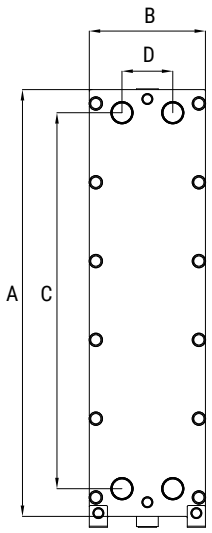
HEAT EXCHANGERS **PHC 30120**

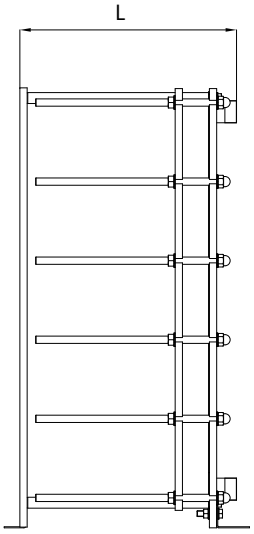
INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED



PROMPT AVAILABILITY





CONNECTIONS
DN50 (2") M-threaded

DIMENSIONS	
A [mm]	1206
B [mm]	320
C [mm]	1036
D [mm]	140

WORKING CONDITIONS		
Gaskets model	Max pressure	Temperature [min/max]
EPDM	10/16 bar	-10/+140 °C (*)
NBR	10/16 bar	-4/+110 °C (*)

(*) Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).

N° Plates	**With NBR gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	**With EPDM gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
13	3175056656943	3175056657040	3175056656749	3175056656846	545	2,0	5655000610019
15	3175056656944	3175056657041	3175056656750	3175056656847		2,3	
17	3175056656945	3175056657042	3175056656751	3175056656848		2,6	
19	3175056656946	3175056657043	3175056656752	3175056656849		2,9	
21	3175056656947	3175056657044	3175056656753	3175056656850		3,2	
23	3175056656948	3175056657045	3175056656754	3175056656851		3,5	
25	3175056656949	3175056657046	3175056656755	3175056656852		3,9	
27	3175056656950	3175056657047	3175056656756	3175056656853		4,2	
29	3175056656951	3175056657048	3175056656757	3175056656854		4,5	
31	3175056656952	3175056657049	3175056656758	3175056656855		4,8	
33	3175056656953	3175056657050	3175056656759	3175056656856		5,1	
35	3175056656954	3175056657051	3175056656760	3175056656857		5,4	
37	3175056656955	3175056657052	3175056656761	3175056656858		5,7	
39	3175056656956	3175056657053	3175056656762	3175056656859		6,0	
41	3175056656957	3175056657054	3175056656763	3175056656860		6,3	
43	3175056656958	3175056657055	3175056656764	3175056656861		6,6	
45	3175056656959	3175056657056	3175056656765	3175056656862		6,9	
47	3175056656960	3175056657057	3175056656766	3175056656863		7,3	
49	3175056656961	3175056657058	3175056656767	3175056656864		7,6	
51	3175056656962	3175056657059	3175056656768	3175056656865		7,9	
53	3175056656963	3175056657060	3175056656769	3175056656866	675	8,2	
55	3175056656964	3175056657061	3175056656770	3175056656867		8,5	
57	3175056656965	3175056657062	3175056656771	3175056656868		8,8	
59	3175056656966	3175056657063	3175056656772	3175056656869		9,1	
61	3175056656967	3175056657064	3175056656773	3175056656870		9,4	
63	3175056656968	3175056657065	3175056656774	3175056656871		9,7	
65	3175056656969	3175056657066	3175056656775	3175056656872		10,0	
67	3175056656970	3175056657067	3175056656776	3175056656873		10,3	
69	3175056656971	3175056657068	3175056656777	3175056656874		10,6	
71	3175056656972	3175056657069	3175056656778	3175056656875		11,0	
73	3175056656973	3175056657070	3175056656779	3175056656876		11,3	
75	3175056656974	3175056657071	3175056656780	3175056656877		11,6	
77	3175056656975	3175056657072	3175056656781	3175056656878		11,9	
79	3175056656976	3175056657073	3175056656782	3175056656879		12,2	

For operating conditions please consult our online tool on www.cordivari.com

HEAT EXCHANGERS **PHC 30120**

INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED

N° Plates	**With NBR gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	**With EPDM gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
81	3175056656977	3175056657074	3175056656783	3175056656880	675	12,5	
83	3175056656978	3175056657075	3175056656784	3175056656881		12,8	
85	3175056656979	3175056657076	3175056656785	3175056656882		13,1	
87	3175056656980	3175056657077	3175056656786	3175056656883		13,4	
89	3175056656981	3175056657078	3175056656787	3175056656884		13,7	
91	3175056656982	3175056657079	3175056656788	3175056656885		14,0	
93	3175056656983	3175056657080	3175056656789	3175056656886		14,3	
95	3175056656984	3175056657081	3175056656790	3175056656887		14,7	
97	3175056656985	3175056657082	3175056656791	3175056656888		15,0	
99	3175056656986	3175056657083	3175056656792	3175056656889		15,3	
101	3175056656987	3175056657084	3175056656793	3175056656890		15,6	
103	3175056656988	3175056657085	3175056656794	3175056656891		15,9	
105	3175056656989	3175056657086	3175056656795	3175056656892	825	16,2	5655000610020
107	3175056656990	3175056657087	3175056656796	3175056656893		16,5	
109	3175056656991	3175056657088	3175056656797	3175056656894		16,8	
111	3175056656992	3175056657089	3175056656798	3175056656895		17,1	
113	3175056656993	3175056657090	3175056656799	3175056656896		17,4	
115	3175056656994	3175056657091	3175056656800	3175056656897		17,7	
117	3175056656995	3175056657092	3175056656801	3175056656898		18,1	
119	3175056656996	3175056657093	3175056656802	3175056656899		18,4	
121	3175056656997	3175056657094	3175056656803	3175056656900		18,7	
123	3175056656998	3175056657095	3175056656804	3175056656901		19,0	
125	3175056656999	3175056657096	3175056656805	3175056656902		19,3	
127	3175056657000	3175056657097	3175056656806	3175056656903		19,6	
129	3175056657001	3175056657098	3175056656807	3175056656904		19,9	
131	3175056657002	3175056657099	3175056656808	3175056656905		20,2	
133	3175056657003	3175056657100	3175056656809	3175056656906		20,5	
135	3175056657004	3175056657101	3175056656810	3175056656907		20,8	
137	3175056657005	3175056657102	3175056656811	3175056656908		21,1	
139	3175056657006	3175056657103	3175056656812	3175056656909		21,4	
141	3175056657007	3175056657104	3175056656813	3175056656910		21,8	
143	3175056657008	3175056657105	3175056656814	3175056656911		22,1	
145	3175056657009	3175056657106	3175056656815	3175056656912		22,4	
147	3175056657010	3175056657107	3175056656816	3175056656913		22,7	
149	3175056657011	3175056657108	3175056656817	3175056656914		23,0	
151	3175056657012	3175056657109	3175056656818	3175056656915		23,3	
153	3175056657013	3175056657110	3175056656819	3175056656916		23,6	
155	3175056657014	3175056657111	3175056656820	3175056656917		23,9	
157	3175056657015	3175056657112	3175056656821	3175056656918	1025	24,2	
159	3175056657016	3175056657113	3175056656822	3175056656919		24,5	
161	3175056657017	3175056657114	3175056656823	3175056656920		24,8	
163	3175056657018	3175056657115	3175056656824	3175056656921		25,2	
165	3175056657019	3175056657116	3175056656825	3175056656922		25,5	
167	3175056657020	3175056657117	3175056656826	3175056656923		25,8	
169	3175056657021	3175056657118	3175056656827	3175056656924		26,1	
171	3175056657022	3175056657119	3175056656828	3175056656925		26,4	
173	3175056657023	3175056657120	3175056656829	3175056656926		26,7	
175	3175056657024	3175056657121	3175056656830	3175056656927		27,0	
177	3175056657025	3175056657122	3175056656831	3175056656928		27,3	
179	3175056657026	3175056657123	3175056656832	3175056656929		27,6	
181	3175056657027	3175056657124	3175056656833	3175056656930		27,9	
183	3175056657028	3175056657125	3175056656834	3175056656931		28,2	
185	3175056657029	3175056657126	3175056656835	3175056656932		28,5	
187	3175056657030	3175056657127	3175056656836	3175056656933		28,9	
189	3175056657031	3175056657128	3175056656837	3175056656934		29,2	
191	3175056657032	3175056657129	3175056656838	3175056656935		29,5	
193	3175056657033	3175056657130	3175056656839	3175056656936		29,8	
195	3175056657034	3175056657131	3175056656840	3175056656937		30,1	
197	3175056657035	3175056657132	3175056656841	3175056656938		30,4	
199	3175056657036	3175056657133	3175056656842	3175056656939		30,7	
201	3175056657037	3175056657134	3175056656843	3175056656940		31,0	
203	3175056657038	3175056657135	3175056656844	3175056656941		31,3	
205	3175056657039	3175056657136	3175056656845	3175056656942		31,6	

For operating conditions please consult our online tool on www.cordivari.com

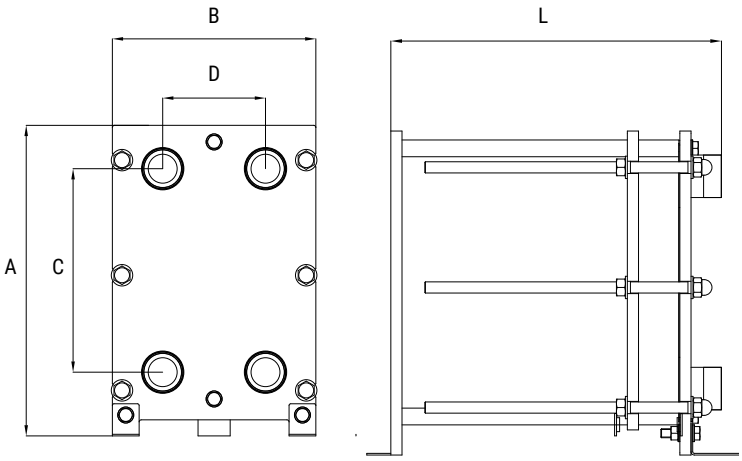
HEAT EXCHANGERS **PHC 4060**

INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED



PROMPT AVAILABILITY



CONNECTIONS
DN65 (2" 1/2) M-threaded

DIMENSIONS	
A [mm]	580
B [mm]	380
C [mm]	380
D [mm]	192

WORKING CONDITIONS		
Gaskets model	Max pressure	Temperature [min/max]
EPDM	10/16 bar	-10/+140 °C (*)
NBR	10/16 bar	-4/+110 °C (*)

(*) Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).

N° Plates	**With NBR gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	**With EPDM gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
13	3175056657331	3175056657428	3175056657137	3175056657234	545	1,7	5655000610021
15	3175056657332	3175056657429	3175056657138	3175056657235		2,0	
17	3175056657333	3175056657430	3175056657139	3175056657236		2,2	
19	3175056657334	3175056657431	3175056657140	3175056657237		2,5	
21	3175056657335	3175056657432	3175056657141	3175056657238		2,7	
23	3175056657336	3175056657433	3175056657142	3175056657239		3,0	
25	3175056657337	3175056657434	3175056657143	3175056657240		3,3	
27	3175056657338	3175056657435	3175056657144	3175056657241		3,5	
29	3175056657339	3175056657436	3175056657145	3175056657242		3,8	
31	3175056657340	3175056657437	3175056657146	3175056657243		4,0	
33	3175056657341	3175056657438	3175056657147	3175056657244		4,3	
35	3175056657342	3175056657439	3175056657148	3175056657245		4,6	
37	3175056657343	3175056657440	3175056657149	3175056657246		4,8	
39	3175056657344	3175056657441	3175056657150	3175056657247		5,1	
41	3175056657345	3175056657442	3175056657151	3175056657248		5,3	
43	3175056657346	3175056657443	3175056657152	3175056657249		5,6	
45	3175056657347	3175056657444	3175056657153	3175056657250		5,9	
47	3175056657348	3175056657445	3175056657154	3175056657251		6,1	
49	3175056657349	3175056657446	3175056657155	3175056657252		6,4	
51	3175056657350	3175056657447	3175056657156	3175056657253		6,6	
53	3175056657351	3175056657448	3175056657157	3175056657254	675	6,9	
55	3175056657352	3175056657449	3175056657158	3175056657255		7,2	
57	3175056657353	3175056657450	3175056657159	3175056657256		7,4	
59	3175056657354	3175056657451	3175056657160	3175056657257		7,7	
61	3175056657355	3175056657452	3175056657161	3175056657258		7,9	
63	3175056657356	3175056657453	3175056657162	3175056657259		8,2	
65	3175056657357	3175056657454	3175056657163	3175056657260		8,5	
67	3175056657358	3175056657455	3175056657164	3175056657261		8,7	
69	3175056657359	3175056657456	3175056657165	3175056657262		9,0	
71	3175056657360	3175056657457	3175056657166	3175056657263		9,2	
73	3175056657361	3175056657458	3175056657167	3175056657264		9,5	
75	3175056657362	3175056657459	3175056657168	3175056657265		9,8	
77	3175056657363	3175056657460	3175056657169	3175056657266		10,0	
79	3175056657364	3175056657461	3175056657170	3175056657267		10,3	

For operating conditions please consult our online tool on www.cordivari.com

HEAT EXCHANGERS **PHC 4060**

INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED

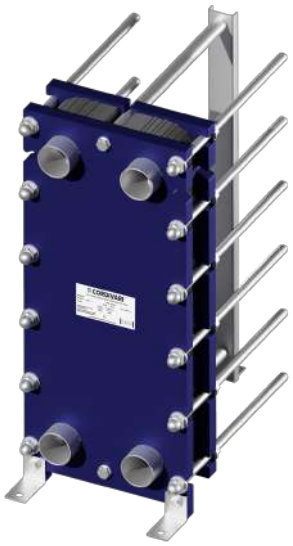
N° Plates	**With NBR gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	**With EPDM gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
81	3175056657365	3175056657462	3175056657171	3175056657268	675	10,5	
83	3175056657366	3175056657463	3175056657172	3175056657269		10,8	
85	3175056657367	3175056657464	3175056657173	3175056657270		11,1	
87	3175056657368	3175056657465	3175056657174	3175056657271		11,3	
89	3175056657369	3175056657466	3175056657175	3175056657272		11,6	
91	3175056657370	3175056657467	3175056657176	3175056657273		11,8	
93	3175056657371	3175056657468	3175056657177	3175056657274		12,1	
95	3175056657372	3175056657469	3175056657178	3175056657275		12,4	
97	3175056657373	3175056657470	3175056657179	3175056657276		12,6	
99	3175056657374	3175056657471	3175056657180	3175056657277		12,9	
101	3175056657375	3175056657472	3175056657181	3175056657278		13,1	
103	3175056657376	3175056657473	3175056657182	3175056657279		13,4	
105	3175056657377	3175056657474	3175056657183	3175056657280	825	13,7	5655000610022
107	3175056657378	3175056657475	3175056657184	3175056657281		13,9	
109	3175056657379	3175056657476	3175056657185	3175056657282		14,2	
111	3175056657380	3175056657477	3175056657186	3175056657283		14,4	
113	3175056657381	3175056657478	3175056657187	3175056657284		14,7	
115	3175056657382	3175056657479	3175056657188	3175056657285		15,0	
117	3175056657383	3175056657480	3175056657189	3175056657286		15,2	
119	3175056657384	3175056657481	3175056657190	3175056657287		15,5	
121	3175056657385	3175056657482	3175056657191	3175056657288		15,7	
123	3175056657386	3175056657483	3175056657192	3175056657289		16,0	
125	3175056657387	3175056657484	3175056657193	3175056657290		16,3	
127	3175056657388	3175056657485	3175056657194	3175056657291		16,5	
129	3175056657389	3175056657486	3175056657195	3175056657292		16,8	
131	3175056657390	3175056657487	3175056657196	3175056657293		17,0	
133	3175056657391	3175056657488	3175056657197	3175056657294		17,3	
135	3175056657392	3175056657489	3175056657198	3175056657295		17,6	
137	3175056657393	3175056657490	3175056657199	3175056657296		17,8	
139	3175056657394	3175056657491	3175056657200	3175056657297		18,1	
141	3175056657395	3175056657492	3175056657201	3175056657298		18,3	
143	3175056657396	3175056657493	3175056657202	3175056657299		18,6	
145	3175056657397	3175056657494	3175056657203	3175056657300		18,9	
147	3175056657398	3175056657495	3175056657204	3175056657301		19,1	
149	3175056657399	3175056657496	3175056657205	3175056657302		19,4	
151	3175056657400	3175056657497	3175056657206	3175056657303		19,6	
153	3175056657401	3175056657498	3175056657207	3175056657304		19,9	
155	3175056657402	3175056657499	3175056657208	3175056657305		20,2	
157	3175056657403	3175056657500	3175056657209	3175056657306	1025	20,4	
159	3175056657404	3175056657501	3175056657210	3175056657307		20,7	
161	3175056657405	3175056657502	3175056657211	3175056657308		20,9	
163	3175056657406	3175056657503	3175056657212	3175056657309		21,2	
165	3175056657407	3175056657504	3175056657213	3175056657310		21,5	
167	3175056657408	3175056657505	3175056657214	3175056657311		21,7	
169	3175056657409	3175056657506	3175056657215	3175056657312		22,0	
171	3175056657410	3175056657507	3175056657216	3175056657313		22,2	
173	3175056657411	3175056657508	3175056657217	3175056657314		22,5	
175	3175056657412	3175056657509	3175056657218	3175056657315		22,8	
177	3175056657413	3175056657510	3175056657219	3175056657316		23,0	
179	3175056657414	3175056657511	3175056657220	3175056657317		23,3	
181	3175056657415	3175056657512	3175056657221	3175056657318		23,5	
183	3175056657416	3175056657513	3175056657222	3175056657319		23,8	
185	3175056657417	3175056657514	3175056657223	3175056657320		24,1	
187	3175056657418	3175056657515	3175056657224	3175056657321		24,3	
189	3175056657419	3175056657516	3175056657225	3175056657322		24,6	
191	3175056657420	3175056657517	3175056657226	3175056657323		24,8	
193	3175056657421	3175056657518	3175056657227	3175056657324		25,1	
195	3175056657422	3175056657519	3175056657228	3175056657325		25,4	
197	3175056657423	3175056657520	3175056657229	3175056657326		25,6	
199	3175056657424	3175056657521	3175056657230	3175056657327		25,9	
201	3175056657425	3175056657522	3175056657231	3175056657328		26,1	
203	3175056657426	3175056657523	3175056657232	3175056657329		26,4	
205	3175056657427	3175056657524	3175056657233	3175056657330		26,7	

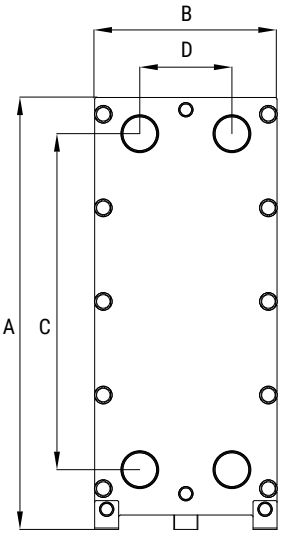
For operating conditions please consult our online tool on www.cordivari.com

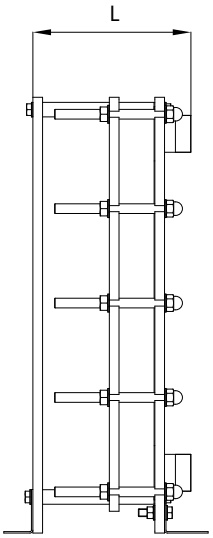
HEAT EXCHANGERS **PHC 4090**

INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED







CONNECTIONS
DN65 (2" 1/2) M-threaded

DIMENSIONS	
A [mm]	900
B [mm]	380
C [mm]	700
D [mm]	192

WORKING CONDITIONS		
Gaskets model	Max pressure	Temperature [min/max]
EPDM	10/16 bar	-10/+140 °C (*)
NBR	10/16 bar	-4/+110 °C (*)

(*) Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).

N° Plates	**With NBR gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	**With EPDM gaskets** PN10 VERSION	PN16 VERSION WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
13	3175056657719	3175056657816	3175056657525	3175056657622	545	3,1	5655000610023
15	3175056657720	3175056657817	3175056657526	3175056657623		3,6	
17	3175056657721	3175056657818	3175056657527	3175056657624		4,1	
19	3175056657722	3175056657819	3175056657528	3175056657625		4,6	
21	3175056657723	3175056657820	3175056657529	3175056657626		5,0	
23	3175056657724	3175056657821	3175056657530	3175056657627		5,5	
25	3175056657725	3175056657822	3175056657531	3175056657628		6,0	
27	3175056657726	3175056657823	3175056657532	3175056657629		6,5	
29	3175056657727	3175056657824	3175056657533	3175056657630		6,9	
31	3175056657728	3175056657825	3175056657534	3175056657631		7,4	
33	3175056657729	3175056657826	3175056657535	3175056657632		7,9	
35	3175056657730	3175056657827	3175056657536	3175056657633		8,4	
37	3175056657731	3175056657828	3175056657537	3175056657634		8,9	
39	3175056657732	3175056657829	3175056657538	3175056657635		9,3	
41	3175056657733	3175056657830	3175056657539	3175056657636		9,8	
43	3175056657734	3175056657831	3175056657540	3175056657637		10,3	
45	3175056657735	3175056657832	3175056657541	3175056657638		10,8	
47	3175056657736	3175056657833	3175056657542	3175056657639		11,3	
49	3175056657737	3175056657834	3175056657543	3175056657640		11,7	
51	3175056657738	3175056657835	3175056657544	3175056657641		12,2	
53	3175056657739	3175056657836	3175056657545	3175056657642	675	12,7	
55	3175056657740	3175056657837	3175056657546	3175056657643		13,2	
57	3175056657741	3175056657838	3175056657547	3175056657644		13,7	
59	3175056657742	3175056657839	3175056657548	3175056657645		14,1	
61	3175056657743	3175056657840	3175056657549	3175056657646		14,6	
63	3175056657744	3175056657841	3175056657550	3175056657647		15,1	
65	3175056657745	3175056657842	3175056657551	3175056657648		15,6	
67	3175056657746	3175056657843	3175056657552	3175056657649		16,0	
69	3175056657747	3175056657844	3175056657553	3175056657650		16,5	
71	3175056657748	3175056657845	3175056657554	3175056657651		17,0	
73	3175056657749	3175056657846	3175056657555	3175056657652		17,5	
75	3175056657750	3175056657847	3175056657556	3175056657653		18,0	
77	3175056657751	3175056657848	3175056657557	3175056657654		18,4	
79	3175056657752	3175056657849	3175056657558	3175056657655		18,9	

For operating conditions please consult our online tool on www.cordivari.com

HEAT EXCHANGERS **PHC 4090**

INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED

N° Plates	**With NBR gaskets** **PN10 VERSION** Art. Nr.	**PN16 VERSION** WITH SURCHARGE	**With EPDM gaskets** **PN10 VERSION** Art. Nr.	**PN16 VERSION** WITH SURCHARGE	L [mm]	Prim.=Sec. Volume [lt]	Art. Nr. Insulation
81	3175056657753	3175056657850	3175056657559	3175056657656	675	19,4	5655000610024
83	3175056657754	3175056657851	3175056657560	3175056657657		19,9	
85	3175056657755	3175056657852	3175056657561	3175056657658		20,4	
87	3175056657756	3175056657853	3175056657562	3175056657659		20,8	
89	3175056657757	3175056657854	3175056657563	3175056657660		21,3	
91	3175056657758	3175056657855	3175056657564	3175056657661		21,8	
93	3175056657759	3175056657856	3175056657565	3175056657662		22,3	
95	3175056657760	3175056657857	3175056657566	3175056657663		22,8	
97	3175056657761	3175056657858	3175056657567	3175056657664		23,2	
99	3175056657762	3175056657859	3175056657568	3175056657665		23,7	
101	3175056657763	3175056657860	3175056657569	3175056657666		24,2	
103	3175056657764	3175056657861	3175056657570	3175056657667		24,7	
105	3175056657765	3175056657862	3175056657571	3175056657668	825	25,1	
107	3175056657766	3175056657863	3175056657572	3175056657669		25,6	
109	3175056657767	3175056657864	3175056657573	3175056657670		26,1	
111	3175056657768	3175056657865	3175056657574	3175056657671		26,6	
113	3175056657769	3175056657866	3175056657575	3175056657672		27,1	
115	3175056657770	3175056657867	3175056657576	3175056657673		27,5	
117	3175056657771	3175056657868	3175056657577	3175056657674		28,0	
119	3175056657772	3175056657869	3175056657578	3175056657675		28,5	
121	3175056657773	3175056657870	3175056657579	3175056657676		29,0	
123	3175056657774	3175056657871	3175056657580	3175056657677		29,5	
125	3175056657775	3175056657872	3175056657581	3175056657678		29,9	
127	3175056657776	3175056657873	3175056657582	3175056657679		30,4	
129	3175056657777	3175056657874	3175056657583	3175056657680		30,9	
131	3175056657778	3175056657875	3175056657584	3175056657681		31,4	
133	3175056657779	3175056657876	3175056657585	3175056657682		31,9	
135	3175056657780	3175056657877	3175056657586	3175056657683		32,3	
137	3175056657781	3175056657878	3175056657587	3175056657684		32,8	
139	3175056657782	3175056657879	3175056657588	3175056657685		33,3	
141	3175056657783	3175056657880	3175056657589	3175056657686		33,8	
143	3175056657784	3175056657881	3175056657590	3175056657687		34,2	
145	3175056657785	3175056657882	3175056657591	3175056657688		34,7	
147	3175056657786	3175056657883	3175056657592	3175056657689		35,2	
149	3175056657787	3175056657884	3175056657593	3175056657690		35,7	
151	3175056657788	3175056657885	3175056657594	3175056657691		36,2	
153	3175056657789	3175056657886	3175056657595	3175056657692		36,6	
155	3175056657790	3175056657887	3175056657596	3175056657693		37,1	
157	3175056657791	3175056657888	3175056657597	3175056657694	1025	37,6	
159	3175056657792	3175056657889	3175056657598	3175056657695		38,1	
161	3175056657793	3175056657890	3175056657599	3175056657696		38,6	
163	3175056657794	3175056657891	3175056657600	3175056657697		39,0	
165	3175056657795	3175056657892	3175056657601	3175056657698		39,5	
167	3175056657796	3175056657893	3175056657602	3175056657699		40,0	
169	3175056657797	3175056657894	3175056657603	3175056657700		40,5	
171	3175056657798	3175056657895	3175056657604	3175056657701		41,0	
173	3175056657799	3175056657896	3175056657605	3175056657702		41,4	
175	3175056657800	3175056657897	3175056657606	3175056657703		41,9	
177	3175056657801	3175056657898	3175056657607	3175056657704		42,4	
179	3175056657802	3175056657899	3175056657608	3175056657705		42,9	
181	3175056657803	3175056657900	3175056657609	3175056657706		43,3	
183	3175056657804	3175056657901	3175056657610	3175056657707		43,8	
185	3175056657805	3175056657902	3175056657611	3175056657708		44,3	
187	3175056657806	3175056657903	3175056657612	3175056657709		44,8	
189	3175056657807	3175056657904	3175056657613	3175056657710		45,3	
191	3175056657808	3175056657905	3175056657614	3175056657711		45,7	
193	3175056657809	3175056657906	3175056657615	3175056657712		46,2	
195	3175056657810	3175056657907	3175056657616	3175056657713		46,7	
197	3175056657811	3175056657908	3175056657617	3175056657714		47,2	
199	3175056657812	3175056657909	3175056657618	3175056657715		47,7	
201	3175056657813	3175056657910	3175056657619	3175056657716		48,1	
203	3175056657814	3175056657911	3175056657620	3175056657717		48,6	
205	3175056657815	3175056657912	3175056657621	3175056657718		49,1	

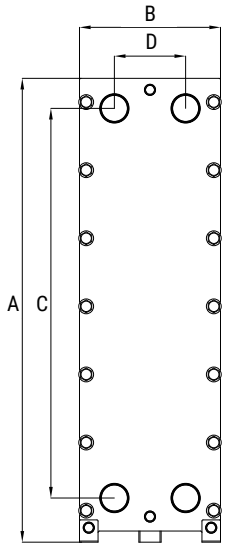
For operating conditions please consult our online tool on www.cordivari.com

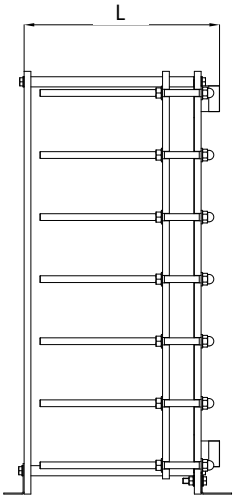
HEAT EXCHANGERS **PHC 40125**

INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED







CONNECTIONS
DN65 (2" 1/2) M-threaded

DIMENSIONS	
A [mm]	1250
B [mm]	380
C [mm]	1050
D [mm]	192

WORKING CONDITIONS		
Gaskets model	Max pressure	Temperature [min/max]
EPDM	10/16 bar	-10/+140 °C (*)
NBR	10/16 bar	-4/+110 °C (*)

(*) Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).

N° Plates	**With NBR gaskets** **PN10 VERSION**	**PN16 VERSION** WITH SURCHARGE	**With EPDM gaskets** **PN10 VERSION**	**PN16 VERSION** WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
13	3175056658107	3175056658204	3175056657913	3175056658010	545	4,7	5655000610025
15	3175056658108	3175056658205	3175056657914	3175056658011		5,4	
17	3175056658109	3175056658206	3175056657915	3175056658012		6,1	
19	3175056658110	3175056658207	3175056657916	3175056658013		6,8	
21	3175056658111	3175056658208	3175056657917	3175056658014		7,5	
23	3175056658112	3175056658209	3175056657918	3175056658015		8,3	
25	3175056658113	3175056658210	3175056657919	3175056658016		9,0	
27	3175056658114	3175056658211	3175056657920	3175056658017		9,7	
29	3175056658115	3175056658212	3175056657921	3175056658018		10,4	
31	3175056658116	3175056658213	3175056657922	3175056658019		11,1	
33	3175056658117	3175056658214	3175056657923	3175056658020		11,9	
35	3175056658118	3175056658215	3175056657924	3175056658021		12,6	
37	3175056658119	3175056658216	3175056657925	3175056658022		13,3	
39	3175056658120	3175056658217	3175056657926	3175056658023		14,0	
41	3175056658121	3175056658218	3175056657927	3175056658024		14,7	
43	3175056658122	3175056658219	3175056657928	3175056658025		15,4	
45	3175056658123	3175056658220	3175056657929	3175056658026		16,2	
47	3175056658124	3175056658221	3175056657930	3175056658027		16,9	
49	3175056658125	3175056658222	3175056657931	3175056658028		17,6	
51	3175056658126	3175056658223	3175056657932	3175056658029		18,3	
53	3175056658127	3175056658224	3175056657933	3175056658030	675	19,0	
55	3175056658128	3175056658225	3175056657934	3175056658031		19,8	
57	3175056658129	3175056658226	3175056657935	3175056658032		20,5	
59	3175056658130	3175056658227	3175056657936	3175056658033		21,2	
61	3175056658131	3175056658228	3175056657937	3175056658034		21,9	
63	3175056658132	3175056658229	3175056657938	3175056658035		22,6	
65	3175056658133	3175056658230	3175056657939	3175056658036		23,3	
67	3175056658134	3175056658231	3175056657940	3175056658037		24,1	
69	3175056658135	3175056658232	3175056657941	3175056658038		24,8	
71	3175056658136	3175056658233	3175056657942	3175056658039		25,5	
73	3175056658137	3175056658234	3175056657943	3175056658040		26,2	
75	3175056658138	3175056658235	3175056657944	3175056658041		26,9	
77	3175056658139	3175056658236	3175056657945	3175056658042		27,7	
79	3175056658140	3175056658237	3175056657946	3175056658043		28,4	

For operating conditions please consult our online tool on www.cordivari.com

HEAT EXCHANGERS **PHC 40125**

INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED

N° Plates	**With NBR gaskets** **PN10 VERSION** Art. Nr.	**PN16 VERSION** WITH SURCHARGE	**With EPDM gaskets** **PN10 VERSION** Art. Nr.	**PN16 VERSION** WITH SURCHARGE	L [mm]	Prim.=Sec. Volume [lt]	Art. Nr. Insulation
81	3175056658141	3175056658238	3175056657947	3175056658044	675	29,1	
83	3175056658142	3175056658239	3175056657948	3175056658045		29,8	
85	3175056658143	3175056658240	3175056657949	3175056658046		30,5	
87	3175056658144	3175056658241	3175056657950	3175056658047		31,3	
89	3175056658145	3175056658242	3175056657951	3175056658048		32,0	
91	3175056658146	3175056658243	3175056657952	3175056658049		32,7	
93	3175056658147	3175056658244	3175056657953	3175056658050		33,4	
95	3175056658148	3175056658245	3175056657954	3175056658051		34,1	
97	3175056658149	3175056658246	3175056657955	3175056658052		34,8	
99	3175056658150	3175056658247	3175056657956	3175056658053		35,6	
101	3175056658151	3175056658248	3175056657957	3175056658054		36,3	
103	3175056658152	3175056658249	3175056657958	3175056658055		37,0	
105	3175056658153	3175056658250	3175056657959	3175056658056	825	37,7	5655000610026
107	3175056658154	3175056658251	3175056657960	3175056658057		38,4	
109	3175056658155	3175056658252	3175056657961	3175056658058		39,2	
111	3175056658156	3175056658253	3175056657962	3175056658059		39,9	
113	3175056658157	3175056658254	3175056657963	3175056658060		40,6	
115	3175056658158	3175056658255	3175056657964	3175056658061		41,3	
117	3175056658159	3175056658256	3175056657965	3175056658062		42,0	
119	3175056658160	3175056658257	3175056657966	3175056658063		42,7	
121	3175056658161	3175056658258	3175056657967	3175056658064		43,5	
123	3175056658162	3175056658259	3175056657968	3175056658065		44,2	
125	3175056658163	3175056658260	3175056657969	3175056658066		44,9	
127	3175056658164	3175056658261	3175056657970	3175056658067		45,6	
129	3175056658165	3175056658262	3175056657971	3175056658068		46,3	
131	3175056658166	3175056658263	3175056657972	3175056658069		47,1	
133	3175056658167	3175056658264	3175056657973	3175056658070		47,8	
135	3175056658168	3175056658265	3175056657974	3175056658071		48,5	
137	3175056658169	3175056658266	3175056657975	3175056658072		49,2	
139	3175056658170	3175056658267	3175056657976	3175056658073		49,9	
141	3175056658171	3175056658268	3175056657977	3175056658074		50,6	
143	3175056658172	3175056658269	3175056657978	3175056658075		51,4	
145	3175056658173	3175056658270	3175056657979	3175056658076		52,1	
147	3175056658174	3175056658271	3175056657980	3175056658077		52,8	
149	3175056658175	3175056658272	3175056657981	3175056658078		53,5	
151	3175056658176	3175056658273	3175056657982	3175056658079		54,2	
153	3175056658177	3175056658274	3175056657983	3175056658080		55,0	
155	3175056658178	3175056658275	3175056657984	3175056658081		55,7	
157	3175056658179	3175056658276	3175056657985	3175056658082	1025	56,4	
159	3175056658180	3175056658277	3175056657986	3175056658083		57,1	
161	3175056658181	3175056658278	3175056657987	3175056658084		57,8	
163	3175056658182	3175056658279	3175056657988	3175056658085		58,6	
165	3175056658183	3175056658280	3175056657989	3175056658086		59,3	
167	3175056658184	3175056658281	3175056657990	3175056658087		60,0	
169	3175056658185	3175056658282	3175056657991	3175056658088		60,7	
171	3175056658186	3175056658283	3175056657992	3175056658089		61,4	
173	3175056658187	3175056658284	3175056657993	3175056658090		62,1	
175	3175056658188	3175056658285	3175056657994	3175056658091		62,9	
177	3175056658189	3175056658286	3175056657995	3175056658092		63,6	
179	3175056658190	3175056658287	3175056657996	3175056658093		64,3	
181	3175056658191	3175056658288	3175056657997	3175056658094		65,0	
183	3175056658192	3175056658289	3175056657998	3175056658095		65,7	
185	3175056658193	3175056658290	3175056657999	3175056658096		66,5	
187	3175056658194	3175056658291	3175056658000	3175056658097		67,2	
189	3175056658195	3175056658292	3175056658001	3175056658098		67,9	
191	3175056658196	3175056658293	3175056658002	3175056658099		68,6	
193	3175056658197	3175056658294	3175056658003	3175056658100		69,3	
195	3175056658198	3175056658295	3175056658004	3175056658101		70,0	
197	3175056658199	3175056658296	3175056658005	3175056658102		70,8	
199	3175056658200	3175056658297	3175056658006	3175056658103		71,5	
201	3175056658201	3175056658298	3175056658007	3175056658104		72,2	
203	3175056658202	3175056658299	3175056658008	3175056658105		72,9	
205	3175056658203	3175056658300	3175056658009	3175056658106		73,6	

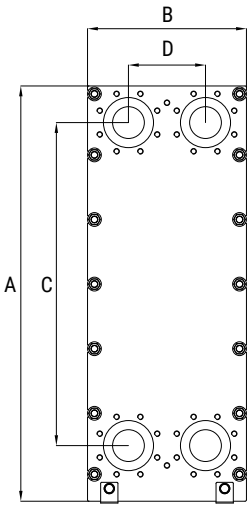
For operating conditions please consult our online tool on www.cordivari.com

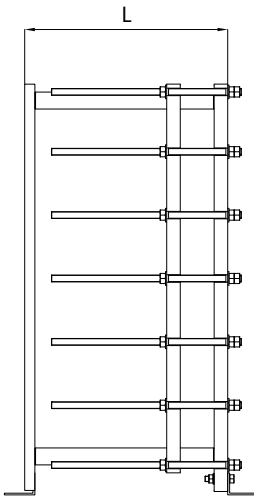
HEAT EXCHANGERS **PHC 45120**

INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED







CONNECTIONS
Flanged (ISO DN-100)

DIMENSIONS	
A [mm]	1197
B [mm]	460
C [mm]	935
D [mm]	223

WORKING CONDITIONS		
Gaskets model	Max pressure	Temperature [min/max]
EPDM	10/16 bar	-10/+140 °C (*)
NBR	10/16 bar	-4/+110 °C (*)

(*) Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).

N° Plates	**With NBR gaskets** **PN10 VERSION**	**PN16 VERSION** WITH SURCHARGE	**With EPDM gaskets** **PN10 VERSION**	**PN16 VERSION** WITH SURCHARGE	L	Prim.=Sec.	Art. Nr. Insulation
	Art. Nr.		Art. Nr.		[mm]	Volume [lt]	
13	3175056658503	3175056658604	3175056658301	3175056658402	550	5,5	5655000610036
15	3175056658504	3175056658605	3175056658302	3175056658403		6,3	
17	3175056658505	3175056658606	3175056658303	3175056658404		7,2	
19	3175056658506	3175056658607	3175056658304	3175056658405		8,0	
21	3175056658507	3175056658608	3175056658305	3175056658406		8,9	
23	3175056658508	3175056658609	3175056658306	3175056658407		9,7	
25	3175056658509	3175056658610	3175056658307	3175056658408		10,6	
27	3175056658510	3175056658611	3175056658308	3175056658409		11,4	
29	3175056658511	3175056658612	3175056658309	3175056658410		12,3	
31	3175056658512	3175056658613	3175056658310	3175056658411		13,1	
33	3175056658513	3175056658614	3175056658311	3175056658412		13,9	
35	3175056658514	3175056658615	3175056658312	3175056658413		14,8	
37	3175056658515	3175056658616	3175056658313	3175056658414		15,6	
39	3175056658516	3175056658617	3175056658314	3175056658415		16,5	
41	3175056658517	3175056658618	3175056658315	3175056658416		17,3	
43	3175056658518	3175056658619	3175056658316	3175056658417		18,2	
45	3175056658519	3175056658620	3175056658317	3175056658418		19,0	
47	3175056658520	3175056658621	3175056658318	3175056658419		19,9	
49	3175056658521	3175056658622	3175056658319	3175056658420		20,7	
51	3175056658522	3175056658623	3175056658320	3175056658421		21,6	
53	3175056658523	3175056658624	3175056658321	3175056658422		22,4	
55	3175056658524	3175056658625	3175056658322	3175056658423		23,2	
57	3175056658525	3175056658626	3175056658323	3175056658424		24,1	
59	3175056658526	3175056658627	3175056658324	3175056658425		24,9	
61	3175056658527	3175056658628	3175056658325	3175056658426		25,8	
63	3175056658528	3175056658629	3175056658326	3175056658427		26,6	
65	3175056658529	3175056658630	3175056658327	3175056658428		27,5	
67	3175056658530	3175056658631	3175056658328	3175056658429		28,3	
69	3175056658531	3175056658632	3175056658329	3175056658430		29,2	
71	3175056658532	3175056658633	3175056658330	3175056658431	710	30,0	
73	3175056658533	3175056658634	3175056658331	3175056658432		30,9	
75	3175056658534	3175056658635	3175056658332	3175056658433		31,7	
77	3175056658535	3175056658636	3175056658333	3175056658434		32,5	
79	3175056658536	3175056658637	3175056658334	3175056658435		33,4	

For operating conditions please consult our online tool on www.cordivari.com

HEAT EXCHANGERS **PHC 45120**

INSPECTIONABLE PLATE TO PLATE HEAT EXCHANGERS

SUPPORTING FEET INCLUDED

N° Plates	**With NBR gaskets** **PN10 VERSION** Art. Nr.	**PN16 VERSION** WITH SURCHARGE	**With EPDM gaskets** **PN10 VERSION** Art. Nr.	**PN16 VERSION** WITH SURCHARGE	L [mm]	Prim.=Sec. Volume [lt]	Art. Nr. Insulation
81	3175056658537	3175056658638	3175056658335	3175056658436	710	34,2	5655000610037
83	3175056658538	3175056658639	3175056658336	3175056658437		35,1	
85	3175056658539	3175056658640	3175056658337	3175056658438		35,9	
87	3175056658540	3175056658641	3175056658338	3175056658439		36,8	
89	3175056658541	3175056658642	3175056658339	3175056658440		37,6	
91	3175056658542	3175056658643	3175056658340	3175056658441		38,5	
93	3175056658543	3175056658644	3175056658341	3175056658442		39,3	
95	3175056658544	3175056658645	3175056658342	3175056658443		40,2	
97	3175056658545	3175056658646	3175056658343	3175056658444		41,0	
99	3175056658546	3175056658647	3175056658344	3175056658445		41,9	
101	3175056658547	3175056658648	3175056658345	3175056658446		42,7	
103	3175056658548	3175056658649	3175056658346	3175056658447		43,5	
105	3175056658549	3175056658650	3175056658347	3175056658448		44,4	
107	3175056658550	3175056658651	3175056658348	3175056658449		45,2	
109	3175056658551	3175056658652	3175056658349	3175056658450		46,1	
111	3175056658552	3175056658653	3175056658350	3175056658451		46,9	
113	3175056658553	3175056658654	3175056658351	3175056658452		47,8	
115	3175056658554	3175056658655	3175056658352	3175056658453		48,6	
117	3175056658555	3175056658656	3175056658353	3175056658454	1250	49,5	
119	3175056658556	3175056658657	3175056658354	3175056658455		50,3	
121	3175056658557	3175056658658	3175056658355	3175056658456		51,2	
123	3175056658558	3175056658659	3175056658356	3175056658457		52,0	
125	3175056658559	3175056658660	3175056658357	3175056658458		52,8	
127	3175056658560	3175056658661	3175056658358	3175056658459		53,7	
129	3175056658561	3175056658662	3175056658359	3175056658460		54,5	
131	3175056658562	3175056658663	3175056658360	3175056658461		55,4	
133	3175056658563	3175056658664	3175056658361	3175056658462		56,2	
135	3175056658564	3175056658665	3175056658362	3175056658463		57,1	
137	3175056658565	3175056658666	3175056658363	3175056658464		57,9	
139	3175056658566	3175056658667	3175056658364	3175056658465		58,8	
141	3175056658567	3175056658668	3175056658365	3175056658466		59,6	
143	3175056658568	3175056658669	3175056658366	3175056658467		60,5	
145	3175056658569	3175056658670	3175056658367	3175056658468		61,3	
147	3175056658570	3175056658671	3175056658368	3175056658469		62,1	
149	3175056658571	3175056658672	3175056658369	3175056658470		63,0	
151	3175056658572	3175056658673	3175056658370	3175056658471		63,8	
153	3175056658573	3175056658674	3175056658371	3175056658472		64,7	
155	3175056658574	3175056658675	3175056658372	3175056658473		65,5	
157	3175056658575	3175056658676	3175056658373	3175056658474		66,4	
159	3175056658576	3175056658677	3175056658374	3175056658475		67,2	
161	3175056658577	3175056658678	3175056658375	3175056658476		68,1	
163	3175056658578	3175056658679	3175056658376	3175056658477		68,9	
165	3175056658579	3175056658680	3175056658377	3175056658478		69,8	
167	3175056658580	3175056658681	3175056658378	3175056658479		70,6	
169	3175056658581	3175056658682	3175056658379	3175056658480		71,5	
171	3175056658582	3175056658683	3175056658380	3175056658481		72,3	
173	3175056658583	3175056658684	3175056658381	3175056658482		73,1	
175	3175056658584	3175056658685	3175056658382	3175056658483		74,0	
177	3175056658585	3175056658686	3175056658383	3175056658484		74,8	
179	3175056658586	3175056658687	3175056658384	3175056658485		75,7	
181	3175056658587	3175056658688	3175056658385	3175056658486		76,5	
183	3175056658588	3175056658689	3175056658386	3175056658487		77,4	
185	3175056658589	3175056658690	3175056658387	3175056658488		78,2	
187	3175056658590	3175056658691	3175056658388	3175056658489		79,1	
189	3175056658591	3175056658692	3175056658389	3175056658490		79,9	
191	3175056658592	3175056658693	3175056658390	3175056658491		80,8	
193	3175056658593	3175056658694	3175056658391	3175056658492		81,6	
195	3175056658594	3175056658695	3175056658392	3175056658493		82,4	
197	3175056658595	3175056658696	3175056658393	3175056658494		83,3	
199	3175056658596	3175056658697	3175056658394	3175056658495		84,1	
201	3175056658597	3175056658698	3175056658395	3175056658496		85,0	
203	3175056658598	3175056658699	3175056658396	3175056658497		85,8	
205	3175056658599	3175056658700	3175056658397	3175056658498		86,7	
207	3175056658600	3175056658701	3175056658398	3175056658499		87,5	
209	3175056658601	3175056658702	3175056658399	3175056658500		88,4	
211	3175056658602	3175056658703	3175056658400	3175056658501		89,2	
213	3175056658603	3175056658704	3175056658401	3175056658502		90,1	

For operating conditions please consult our online tool on www.cordivari.com

BRAZED PLATE EXCHANGERS **SLB 15**
BRAZED PLATE EXCHANGERS

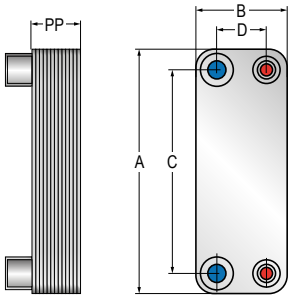


TECHNICAL DESCRIPTION
Cordivari SLB brazed plate heat exchangers represents the most compact and economic solution for many applications where it is necessary to exchange heat. The construction technology is based on the coupling of several stainless steel 316L plates. SLB plate heat exchangers are designed and manufactured for the production of domestic- and heating hot water, air-conditioning, refrigeration, evaporation and industrial processes.

MAIN ADVANTAGES:
- High Efficiency
- Long lifetime
- Savings
- High reliability
- Huge possibility to modify the relation between storage volume and Heat exchange

TECHNICAL CHARACTERISTIC:
Stainless steel AISI 316L brazed plate, braze-welded with 99,99% pure copper

WORKING CONDITIONS		(*)Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).
Max pressure	Max temperature	
10 bar	190 °C (*)	



Connections 3/4" M		Maximum volumetric flow rate (recommended)
	[mm]	m³/h
A	207	2,4
B	74	
C	172	
D	42	





N° of Plates	**NOT INSULATED** VERSION	**INSULATED** VERSION	PP	Weight
	Art. Nr.	Art. Nr.	[mm]	[Kg]
10	5250410010008	5250410011008	25	0,62
20	5250410010009	5250410011009	47	1,02
30	5250410010010	5250410011010	70	1,42
40	5250410010011	5250410011011	93	1,82

BRAZED PLATE EXCHANGERS **SLB 20**
BRAZED PLATE EXCHANGERS

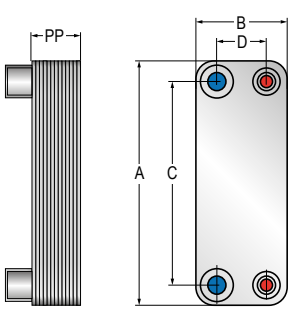


TECHNICAL DESCRIPTION
Cordivari SLB brazed plate heat exchangers represents the most compact and economic solution for many applications where it is necessary to exchange heat. The construction technology is based on the coupling of several stainless steel 316L plates. SLB plate heat exchangers are designed and manufactured for the production of domestic- and heating hot water, air-conditioning, refrigeration, evaporation and industrial processes.

MAIN ADVANTAGES:
- High Efficiency
- Long lifetime
- Savings
- High reliability
- Huge possibility to modify the relation between storage volume and Heat exchange

TECHNICAL CHARACTERISTIC:
Stainless steel AISI 316L brazed plate, braze-welded with 99,99% pure copper

WORKING CONDITIONS		(*)Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).
Max pressure	Max temperature	
10 bar	190 °C (*)	



Connections 3/4" M		Maximum volumetric flow rate (recommended)
	[mm]	m³/h
A	311	2,4
B	73	
C	278	
D	40	





N° of Plates	**NOT INSULATED** VERSION	**INSULATED** VERSION	PP	Weight
	Art. Nr.	Art. Nr.	[mm]	[Kg]
12	5250410010001	5250410011001	37	1,10
16	5250410010002	5250410011002	46	1,13
20	5250410010003	5250410011003	55	1,16
24	5250410010004	5250410011004	64	1,19
30	5250410010005	5250410011005	78	1,24
34	5250410010006	5250410011006	87	1,27
40	5250410010007	5250410011007	101	1,32

BRAZED PLATE EXCHANGERS **SLB 30**
BRAZED PLATE EXCHANGERS

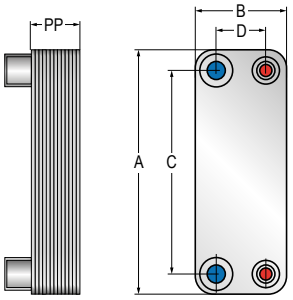


TECHNICAL DESCRIPTION
Cordivari SLB brazed plate heat exchangers represents the most compact and economic solution for many applications where it is necessary to exchange heat. The construction technology is based on the coupling of several stainless steel 316L plates. SLB plate heat exchangers are designed and manufactured for the production of domestic- and heating hot water, air-conditioning, refrigeration, evaporation and industrial processes.

MAIN ADVANTAGES:
- High Efficiency
- Long lifetime
- Savings
- High reliability
- Huge possibility to modify the relation between storage volume and Heat exchange

TECHNICAL CHARACTERISTIC:
Stainless steel AISI 316L brazed plate, braze-welded with 99,99% pure copper

WORKING CONDITIONS		(*)Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).
Max pressure	Max temperature	
10 bar	190 °C (*)	



Connections 1" M		Maximum volumetric flow rate (recommended)
	[mm]	m³/h
A	306	3,8
B	106	
C	250	
D	50	





N° of Plates	**NOT INSULATED** VERSION	**INSULATED** VERSION	PP	Weight
	Art. Nr.	Art. Nr.	[mm]	[Kg]
14	5250410010101	5250410011101	43	2,98
20	5250410010102	5250410011102	57	3,70
30	5250410010103	5250410011103	81	4,90
40	5250410010104	5250410011104	104	6,10
50	5250410010105	5250410011105	128	7,30

BRAZED PLATE EXCHANGERS **SLB 40**
BRAZED PLATE EXCHANGERS

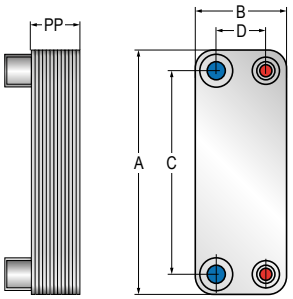


TECHNICAL DESCRIPTION
Cordivari SLB brazed plate heat exchangers represents the most compact and economic solution for many applications where it is necessary to exchange heat. The construction technology is based on the coupling of several stainless steel 316L plates. SLB plate heat exchangers are designed and manufactured for the production of domestic- and heating hot water, air-conditioning, refrigeration, evaporation and industrial processes.

MAIN ADVANTAGES:
- High Efficiency
- Long lifetime
- Savings
- High reliability
- Huge possibility to modify the relation between storage volume and Heat exchange

TECHNICAL CHARACTERISTIC:
Stainless steel AISI 316L brazed plate, braze-welded with 99,99% pure copper

WORKING CONDITIONS		(*)Values intended as temperature limits for the seals. In any case, the minimum temperature must always be higher than the freezing temperature of both fluids and the temperature and pressure in the heat exchanger must always be lower than he operating limits indicated in Art. 4.3 of the PED directive 2014/68/EU (i.e. the maximum operating temperature must not exceed the lower temperature between the two circulating fluids, corresponding to the steam pressure of 0,5 bar above atmospheric pressure).
Max pressure	Max temperature	
10 bar	190 °C (*)	



Connections 1" M		Maximum volumetric flow rate (recommended)
	[mm]	m³/h
A	522	3,8
B	106	
C	466	
D	50	

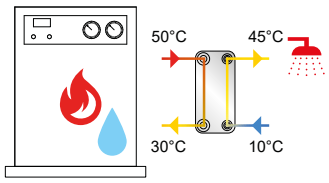




N° of Plates	**NOT INSULATED** VERSION	**INSULATED** VERSION	PP	Weight
	Art. Nr.	Art. Nr.	[mm]	[Kg]
30	5250410010201	5250410011201	81	8,3
40	5250410010202	5250410011202	104	10,2
50	5250410010203	5250410011203	128	12,1
60	5250410010204	5250410011204	151	14

QUICK-CHOICE CHARTS - BRAZED PLATE EXCHANGERS **SLB**

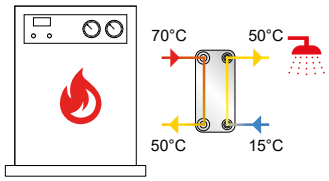
INSTANTANEOUS DHW PRODUCTION WITH CONDENSING BOILER



Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00007m²K/W (primary and secondary circuits).
Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product.

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	50°C	30°C	10°C	45°C				
kW	m³/h	kPa	l/min	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
20	0,87	3	8,19	1	**SLB30**	40	5250410010104	5250410011104
25	1,09	3	10,24	1	**SLB30**	50	5250410010105	5250410011105
30	1,31	20	12,29	8	**SLB40**	30	5250410010201	5250410011201
35	1,52	26	14,34	11	**SLB40**	30	5250410010201	5250410011201
40	1,74	20	16,39	8	**SLB40**	40	5250410010202	5250410011202
50	2,18	30	20,48	12	**SLB40**	40	5250410010202	5250410011202
60	2,61	28	24,58	11	**SLB40**	50	5250410010203	5250410011203
75	3,26	31	30,73	12	**SLB40**	60	5250410010204	5250410011204

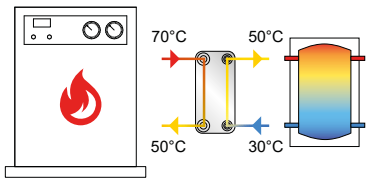
INSTANTANEOUS DHW PRODUCTION WITH BIOMASS (OR TRADITIONAL) BOILER



Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00007m²K/W (primary and secondary circuits). Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product.

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	70°C	50°C	15°C	50°C				
kW	m³/h	kPa	l/min	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
12	0,53	5	4,92	2	**SLB15**	20	5250410010009	5250410011009
16	0,70	4	6,56	2	**SLB15**	30	5250410010010	5250410011010
20	0,88	6	8,20	3	**SLB15**	30	5250410010010	5250410011010
25	1,10	31	10,25	16	**SLB30**	14	5250410010101	5250410011101
30	1,32	52	12,30	24	**SLB20**	20	5250410010003	5250410011003
35	1,54	30	14,35	14	**SLB30**	20	5250410010102	5250410011102
40	1,76	38	16,40	18	**SLB30**	20	5250410010102	5250410011102
50	2,20	28	20,50	12	**SLB30**	30	5250410010103	5250410011103
60	2,64	39	24,59	17	**SLB30**	30	5250410010103	5250410011103
75	3,30	36	30,74	15	**SLB30**	40	5250410010104	5250410011104

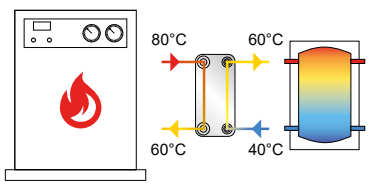
HOT WATER TANK WARM-UP WITH BIOMASS (OR TRADITIONAL) BOILER



Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00007m²K/W (primary and secondary circuits). Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product.

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	70°C	50°C	30°C	50°C				
kW	m³/h	kPa	m³/h	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
8	0,35	3	0,35	2	**SLB15**	20	5250410010009	5250410011009
12	0,53	3	0,52	2	**SLB15**	30	5250410010010	5250410011010
16	0,70	31	0,69	26	**SLB20**	16	5250410010002	5250410011002
20	0,88	27	0,86	22	**SLB30**	14	5250410010101	5250410011101
25	1,10	45	1,08	39	**SLB20**	20	5250410010003	5250410011003
30	1,32	44	1,30	40	**SLB20**	24	5250410010004	5250410011004
35	1,54	38	1,51	36	**SLB20**	30	5250410010005	5250410011005
40	1,76	49	1,73	45	**SLB30**	30	5250410010103	5250410011103
50	2,20	43	2,16	42	**SLB20**	40	5250410010007	5250410011007
60	2,64	26	2,59	25	**SLB30**	40	5250410010104	5250410011104
70	3,08	35	3,02	33	**SLB30**	50	5250410010105	5250410011105

HOT WATER TANK WARM-UP WITH BIOMASS (OR TRADITIONAL) BOILER

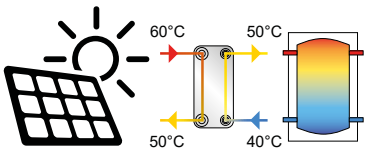


Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00007m²K/W (primary and secondary circuits). Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product.

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	80°C	60°C	40°C	60°C				
kW	m³/h	kPa	m³/h	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
8	0,35	3	0,35	2	**SLB15**	20	5250410010009	5250410011009
12	0,53	3	0,52	2	**SLB15**	30	5250410010010	5250410011010
16	0,71	31	0,69	25	**SLB20**	16	5250410010002	5250410011002
20	0,88	26	0,87	21	**SLB30**	14	5250410010101	5250410011101
25	1,11	44	1,08	38	**SLB20**	20	5250410010003	5250410011003
30	1,33	43	1,30	39	**SLB20**	24	5250410010004	5250410011004
35	1,55	37	1,52	35	**SLB20**	30	5250410010005	5250410011005
40	1,77	21	1,73	19	**SLB30**	30	5250410010103	5250410011103
50	2,21	42	2,17	41	**SLB20**	40	5250410010007	5250410011007
60	2,65	26	2,60	24	**SLB30**	40	5250410010104	5250410011104
70	3,10	23	3,03	22	**SLB30**	50	5250410010105	5250410011105

QUICK-CHOICE CHARTS - BRAZED PLATE EXCHANGERS **SLB**

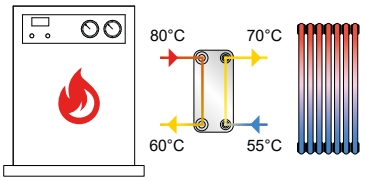
HOT WATER TANK WARM-UP WITH SOLAR THERMAL PANELS



Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00007m²K/W (primary and secondary circuits). Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	60°C	50°C	40°C	50°C				
kW	m³/h	kPa	m³/h	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
5	0,44	4	0,43	4	**SLB15**	20	5250410010009	5250410011009
10	0,87	48	0,87	38	**SLB30**	14	5250410010101	5250410011101
15	1,31	44	1,30	39	**SLB20**	24	5250410010004	5250410011004
20	1,75	21	1,73	19	**SLB30**	30	5250410010103	5250410011103
25	2,19	44	2,17	41	**SLB20**	40	5250410010007	5250410011007
30	2,62	26	2,60	25	**SLB30**	40	5250410010104	5250410011104

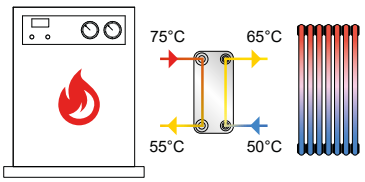
DOMESTIC HEATING WITH HIGH TEMPERATURE TERMINALS AND BIOMASS (OR TRADITIONAL) BOILER



Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00003m²K/W (primary and secondary circuits). Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product.

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	80°C	60°C	55°C	70°C				
kW	m³/h	kPa	m³/h	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
10	0,44	6	0,58	9	**SLB20**	24	5250410010004	5250410011004
15	0,66	8	0,87	12	**SLB20**	30	5250410010005	5250410011005
20	0,88	8	1,16	12	**SLB20**	40	5250410010007	5250410011007
25	1,11	5	1,45	8	**SLB30**	40	5250410010104	5250410011104
30	1,33	5	1,75	8	**SLB30**	50	5250410010105	5250410011105
35	1,55	27	2,04	41	**SLB40**	30	5250410010201	5250410011201
40	1,77	20	2,33	32	**SLB40**	40	5250410010202	5250410011202
50	2,21	30	2,91	48	**SLB40**	40	5250410010202	5250410011202
60	2,65	28	3,49	45	**SLB40**	50	5250410010203	5250410011203

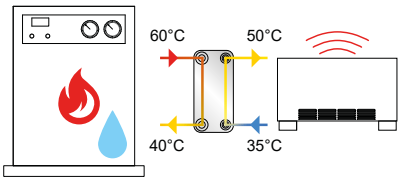
DOMESTIC HEATING WITH HIGH TEMPERATURE TERMINALS AND BIOMASS (OR TRADITIONAL) BOILER



Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00003m²K/W (primary and secondary circuits). Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	75°C	55°C	50°C	65°C				
kW	m³/h	kPa	m³/h	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
10	0,44	6	0,58	9	**SLB20**	24	5250410010004	5250410011004
15	0,66	8	0,87	12	**SLB20**	30	5250410010005	5250410011005
20	0,88	8	1,16	13	**SLB20**	40	5250410010007	5250410011007
25	1,10	5	1,45	8	**SLB30**	40	5250410010104	5250410011104
30	1,32	5	1,74	8	**SLB30**	50	5250410010105	5250410011105
35	1,54	28	2,03	42	**SLB40**	30	5250410010201	5250410011201
40	1,76	20	2,32	32	**SLB40**	40	5250410010202	5250410011202
50	2,21	31	2,90	48	**SLB40**	40	5250410010202	5250410011202
60	2,65	29	3,48	46	**SLB40**	50	5250410010203	5250410011203

DOMESTIC HEATING WITH MEDIUM TEMPERATURE TERMINALS AND CONDENSING BOILER

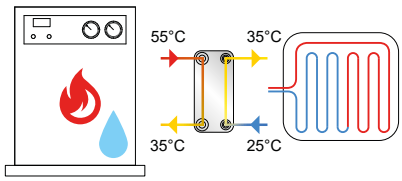


Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00003m²K/W (primary and secondary circuits). Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product.

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	60°C	40°C	35°C	50°C				
kW	m³/h	kPa	m³/h	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
20	0,87	4	1,15	6	**SLB30**	40	5250410010104	5250410011104
25	1,09	4	1,44	6	**SLB30**	50	5250410010105	5250410011105
30	1,31	22	1,73	33	**SLB40**	30	5250410010201	5250410011201
35	1,53	28	2,02	44	**SLB40**	30	5250410010201	5250410011201
40	1,75	21	2,31	33	**SLB40**	40	5250410010202	5250410011202
50	2,19	21	2,88	34	**SLB40**	50	5250410010203	5250410011203
60	2,62	21	3,46	35	**SLB40**	60	5250410010204	5250410011204

QUICK-CHOICE CHARTS - BRAZED PLATE EXCHANGERS **SLB**

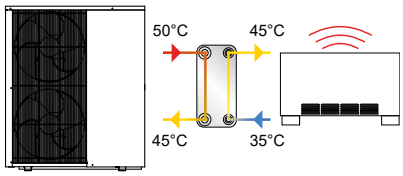
DOMESTIC HEATING WITH LOW TEMPERATURE TERMINALS AND CONDENSING BOILER



Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00003m²K/W (primary and secondary circuits). Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product.

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	55°C	35°C	25°C	35°C				
kW	m³/h	kPa	m³/h	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
20	0,87	14	1,73	42	**SLB30**	20	5250410010102	5250410011102
25	1,09	20	2,16	63	**SLB30**	20	5250410010102	5250410011102
30	1,31	13	2,59	43	**SLB30**	30	5250410010103	5250410011103
35	1,53	17	3,02	56	**SLB30**	30	5250410010103	5250410011103
40	1,75	13	3,45	44	**SLB30**	40	5250410010104	5250410011104
50	2,18	19	4,31	66	**SLB30**	40	5250410010104	5250410011104

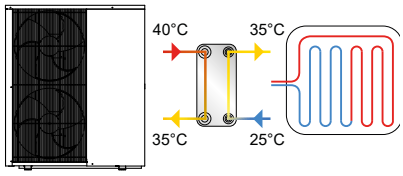
DOMESTIC HEATING WITH MEDIUM TEMPERATURE TERMINALS AND HEAT PUMP



Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00003m²K/W (primary and secondary circuits). Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product.

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	50°C	45°C	35°C	45°C				
kW	m³/h	kPa	m³/h	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
5	0,87	6	0,43	2	**SLB15**	30	5250410010010	5250410011010
7	1,22	11	0,61	4	**SLB15**	30	5250410010010	5250410011010
11	1,92	44	0,95	16	**SLB30**	20	5250410010102	5250410011102
16	2,79	45	1,38	15	**SLB30**	30	5250410010103	5250410011103
20	3,48	42	1,73	13	**SLB30**	40	5250410010104	5250410011104

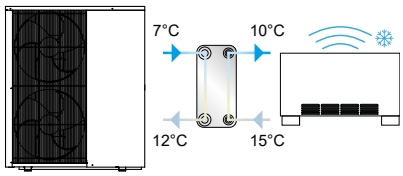
DOMESTIC HEATING WITH LOW TEMPERATURE TERMINALS AND HEAT PUMP



Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00003m²K/W (primary and secondary circuits). Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product.

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	40°C	35°C	25°C	35°C				
kW	m³/h	kPa	m³/h	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
5	0,87	6	0,43	2	**SLB15**	30	5250410010010	5250410011010
7	1,22	12	0,61	4	**SLB15**	30	5250410010010	5250410011010
11	1,92	48	0,95	17	**SLB30**	20	5250410010102	5250410011102
16	2,79	47	1,38	15	**SLB30**	30	5250410010103	5250410011103
20	3,48	43	1,73	13	**SLB30**	40	5250410010104	5250410011104

DOMESTIC COOLING WITH FANCOIL TERMINALS AND HEAT PUMP



Performance data are obtained with fouling resistance of 0.00003m²K/W and 0.00003m²K/W (primary and secondary circuits). Visit our website **www.cordivari.com/configurator_plate_exchangers** to get your tailored product.

	Primary		Secondary					
	Inlet	Outlet	Inlet	Outlet				
	7°C	12°C	15°C	10°C				
kW	m³/h	kPa	m³/h	kPa	Model	N° of plates	Art. Nr. (not insulated)	Art. Nr. (insulated)
5	0,86	16	0,86	14	**SLB20**	30	5250410010005	5250410011005
7	1,20	18	1,21	16	**SLB20**	40	5250410010007	5250410011007
11	1,89	12	1,89	11	**SLB30**	50	5250410010105	5250410011105
16	2,75	38	2,75	35	**SLB40**	50	5250410010203	5250410011203
20	3,44	41	3,44	39	**SLB40**	60	5250410010204	5250410011204

PLATE EXCHANGERS TOOL

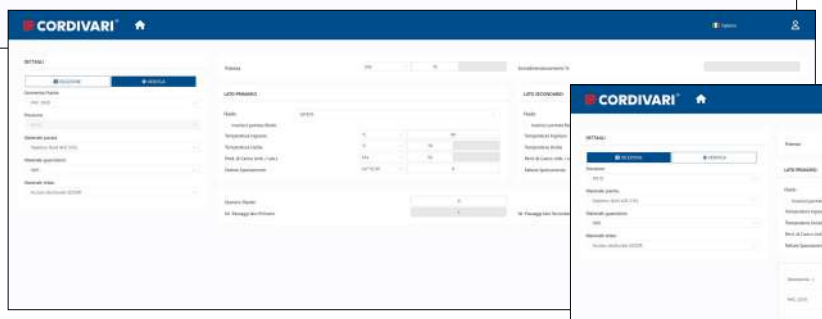
Cordivari online plate heat exchanger dimensioning tool

Dimensioning of brazed and inspectable heat exchangers **with one software**

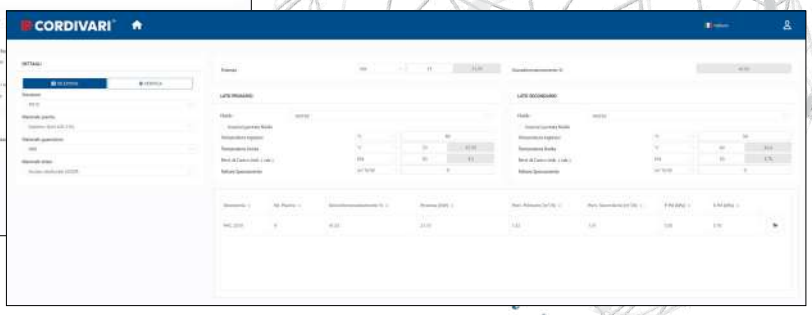
Home screen



In the screen check, the user can make adjustments (e.g. varying the number of plates) and check the impact on the results.



Selection and check screen



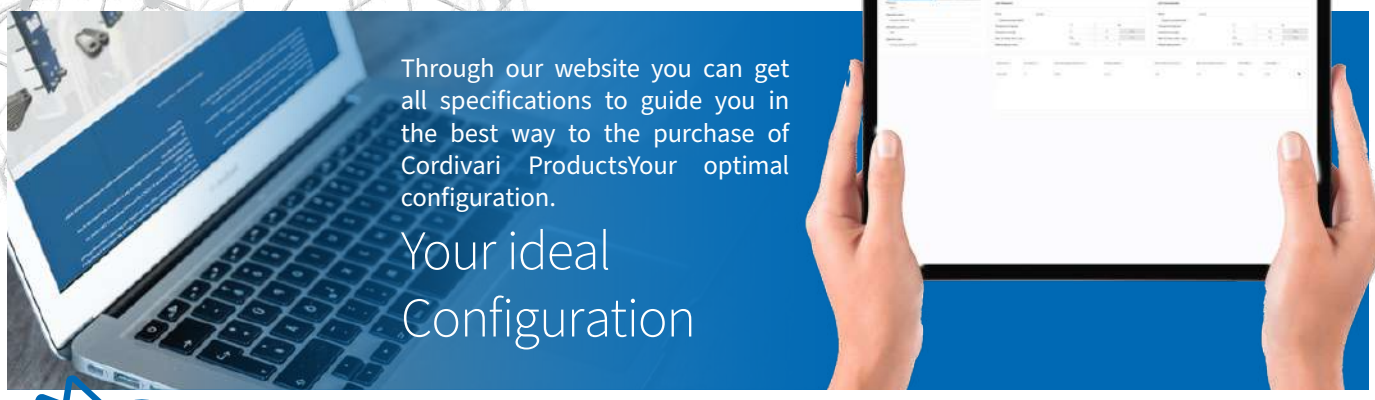
A professional tool.



Available online a report of the dimensioning, complete with technical data and drawings.

In just a few clicks you get your customised dimensioning, free of charge, wherever you are. You can download your report immediately, or save it and retrieving it any time from your private area. The software designed for professionals in the sector, versatile, intuitive and always accessible to everyone.





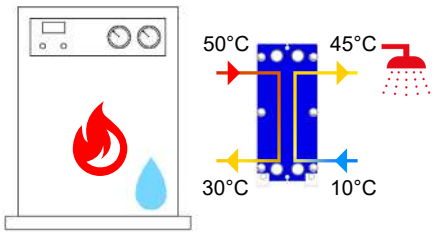
Through our website you can get all specifications to guide you in the best way to the purchase of Cordivari ProductsYour optimal configuration.

Your ideal Configuration

tool online on **www.cordivari.com**

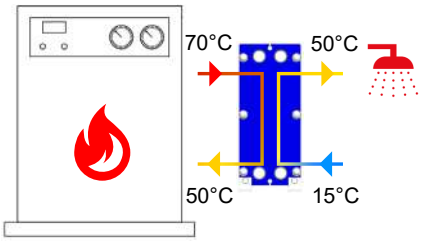
QUICK-CHOICE CHARTS

INSTANTANEOUS DHW PRODUCTION WITH CONDENSING BOILER



	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	1090	2,1	620	1,0	**PHC 2045**	19	3175056656186
35	1520	2,8	860	1,2	**PHC 2045**	23	3175056656188
50	2170	3,1	1230	1,3	**PHC 2045**	31	3175056656192
75	3260	3,4	1850	1,4	**PHC 2045**	45	3175056656199
100	4340	22,6	2470	9,6	**PHC 2075**	31	3175056656312
125	5430	24,8	3090	10,3	**PHC 2075**	37	3175056656315
150	6510	24,4	3700	10,0	**PHC 2075**	45	3175056656319
200	8680	27,0	4940	10,9	**PHC 2075**	57	3175056656325
250	10850	19,4	6170	8,6	**PHC 4090**	13H + 10L	3175050000418
300	13020	20,4	7410	8,8	**PHC 4090**	15H + 12L	3175050000419

INSTANTANEOUS DHW PRODUCTION WITH TRADITIONAL / BIOMASS BOILER



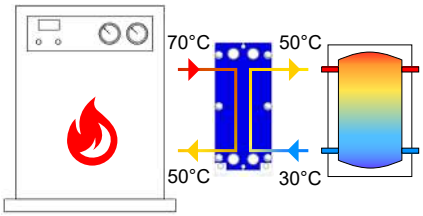
	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	1090	2,0	540	0,8	**PHC 2030**	11	3175056656062
35	1530	2,1	760	0,8	**PHC 2030**	15	3175056656064
50	2190	24,5	1080	11,4	**PHC 2045**	9	3175056656181
75	3280	27,7	1620	11,4	**PHC 2045**	13	3175056656183
100	4380	29,6	2160	11,4	**PHC 2045**	17	3175056656185
125	5470	30,9	2700	11,4	**PHC 2045**	21	3175056656187
150	6560	31,7	3244	11,4	**PHC 2045**	25	3175056656189
200	8750	36,7	4330	12,8	**PHC 2045**	31	3175056656192
250	10940	44,4	5410	15,3	**PHC 2045**	35	3175056656194
300	12030	43,0	6490	14,5	**PHC 2045**	43	3175056656198

In these charts all codes refer to models in PN10 version with NBR gasket. It is possible to choose all PN10 and PN16 combinations with NBR and EPDM gaskets.

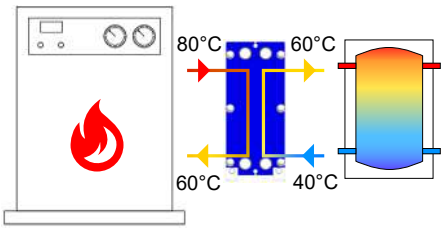
The present charts allow a quick choice of Cordivari PHC products, for the most common thermohydraulic applications. The results are referred to the temperatures, flow rates and pressure drops indicated. In case of deviations from the given conditions, please use the online configurator. It is recommended to always refer to a qualified design engineer.

QUICK-CHOICE CHARTS

INSTANTANEOUS DHW PRODUCTION WITH TRADITIONAL / BIOMASS BOILER



	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	1090	10,4	1090	11,0	**PHC 2045**	9	3175056656181
35	1530	19,2	1520	20,3	**PHC 2045**	9	3175056656181
50	2190	24,5	2170	25,8	**PHC 2045**	11	3175056656182
75	3280	27,7	3260	29,3	**PHC 2045**	15	3175056656184
100	4380	29,6	4340	31,3	**PHC 2045**	19	3175056656186
125	5470	30,8	5430	32,6	**PHC 2045**	23	3175056656188
150	6560	31,7	6510	33,5	**PHC 2045**	27	3175056656190
200	8750	36,7	8680	38,8	**PHC 2045**	33	3175056656193
250	10940	40,3	10850	42,5	**PHC 2045**	39	3175056656196
300	12030	43,0	13020	45,4	**PHC 2045**	45	3175056656199



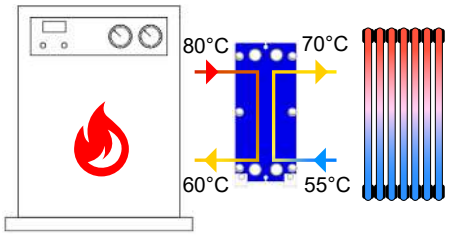
	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	1100	1,9	1090	2,0	**PHC 2030**	13	3175056656063
35	1540	18,7	1530	19,7	**PHC 2045**	9	3175056656181
50	2200	23,9	2180	25,1	**PHC 2045**	11	3175056656182
75	3300	27,1	3270	28,5	**PHC 2045**	15	3175056656184
100	4390	28,9	4360	30,4	**PHC 2045**	19	3175056656186
125	5490	30,2	5450	31,7	**PHC 2045**	23	3175056656188
150	6590	31,0	6540	32,6	**PHC 2045**	27	3175056656190
200	8790	35,9	8710	37,6	**PHC 2045**	33	3175056656193
250	10990	43,4	10890	45,6	**PHC 2045**	37	3175056656195
300	13180	45,7	13070	48,0	**PHC 2045**	45	3175056656199

In these charts all codes refer to models in PN10 version with NBR gasket. It is possible to choose all PN10 and PN16 combinations with NBR and EPDM gaskets.

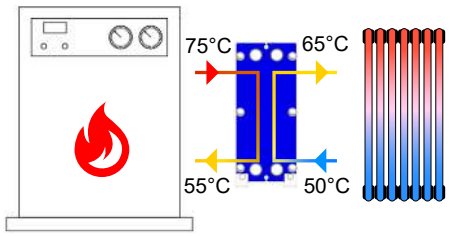
The present charts allow a quick choice of Cordivari PHC products, for the most common thermohydraulic applications. The results are referred to the temperatures, flow rates and pressure drops indicated. In case of deviations from the given conditions, please use the online configurator. It is recommended to always refer to a qualified design engineer.

QUICK-CHOICE CHARTS

HEATING WITH HIGH TEMPERATURE TERMINALS AND TRADITIONAL/BIOMASS BOILER



	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	1100	2,9	1460	5,0	**PHC 2045**	17	3175056656185
35	1540	3,0	1460	5,1	**PHC 2045**	23	3175056656188
50	2200	3,2	2920	5,6	**PHC 2045**	31	3175056656192
75	3300	3,7	4380	6,3	**PHC 2045**	43	3175056656198
100	4400	3,8	5840	6,4	**PHC 2045**	57	3175056656205
125	5490	31,3	7300	53,8	**PHC 2075**	33	3175056656313
150	6590	32,0	8760	54,8	**PHC 2075**	39	3175056656316
200	8790	32,7	11680	56,2	**PHC 2075**	51	3175056656322
250	10990	20,9	14600	35,9	**PHC 4090**	13H + 10L	3175050000418
300	13180	21,5	17520	36,9	**PHC 4090**	15H + 12L	3175050000419



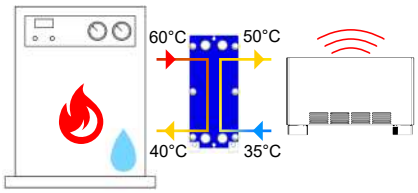
	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	1100	2,9	1460	5,0	**PHC 2045**	17	3175056656185
35	1530	3,0	2040	5,2	**PHC 2045**	23	3175056656188
50	2190	3,3	2910	5,7	**PHC 2045**	31	3175056656192
75	3290	3,4	4370	5,9	**PHC 2045**	45	3175056656199
100	4380	30,8	5830	52,9	**PHC 2075**	27	3175056656310
125	5480	31,7	7280	54,4	**PHC 2075**	33	3175056656313
150	6580	29,4	8740	50,5	**PHC 2075**	41	3175056656317
200	8770	21,6	11650	37,1	**PHC 4090**	11H + 8L	3175050000420
250	10960	22,5	14570	38,6	**PHC 4090**	14H + 9L	3175050000421
300	13150	23,1	17480	39,7	**PHC 4090**	16H + 11L	3175050000422

In these charts all codes refer to models in PN10 version with NBR gasket. It is possible to choose all PN10 and PN16 combinations with NBR and EPDM gaskets.

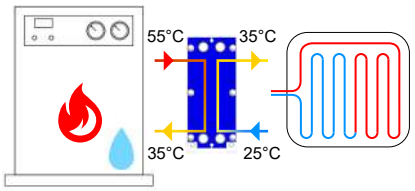
The present charts allow a quick choice of Cordivari PHC products, for the most common thermohydraulic applications. The results are referred to the temperatures, flow rates and pressure drops indicated. In case of deviations from the given conditions, please use the online configurator. It is recommended to always refer to a qualified design engineer.

QUICK-CHOICE CHARTS

HEATING WITH LOW TEMPERATURE TERMINALS AND CONDENSING BOILER



	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	1090	2,5	1450	4,2	**PHC 2045**	19	3175056656186
35	1530	2,3	2030	4,0	**PHC 2045**	27	3175056656190
50	2180	2,7	2900	4,7	**PHC 2045**	35	3175056656194
75	3270	30,5	4340	52,7	**PHC 2075**	21	3175056656307
100	4360	32,0	5790	55,1	**PHC 2075**	27	3175056656310
125	5450	38,8	7240	50,8	**PHC 2075**	35	3175056656314
150	6530	30,7	8690	52,7	**PHC 2075**	41	3175056656317
200	8714	26,5	11590	45,6	**PHC 4090**	14H + 5L	3175050000423
250	10890	27,6	14480	47,5	**PHC 4090**	17H + 6L	3175050000424
300	13070	28,3	17380	48,8	**PHC 4090**	20H + 7L	3175050000425



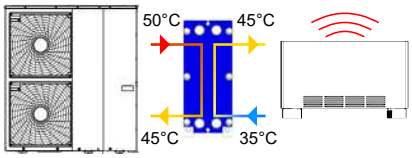
	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	1090	10,8	2160	40,0	**PHC 2045**	9	3175056656181
35	1520	9,6	3030	35,3	**PHC 2045**	13	3175056656183
50	2170	10,8	4330	40,0	**PHC 2045**	17	3175056656185
75	3260	12,7	6490	46,9	**PHC 2045**	23	3175056656188
100	4350	13,8	8650	51,0	**PHC 2045**	29	3175056656191
125	5440	13,1	10800	48,5	**PHC 2045**	37	3175056656195
150	6520	13,8	12980	51,0	**PHC 2045**	43	3175056656198
200	8700	13,8	17300	51,0	**PHC 2045**	57	3175056656205
250	10870	13,8	21630	50,2	**PHC 3080**	27L	3175050000432
300	13050	14,7	25950	53,9	**PHC 3080**	31L	3175050000433

In these charts all codes refer to models in PN10 version with NBR gasket. It is possible to choose all PN10 and PN16 combinations with NBR and EPDM gaskets.

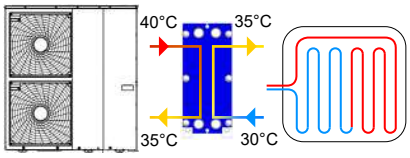
The present charts allow a quick choice of Cordivari PHC products, for the most common thermohydraulic applications. The results are referred to the temperatures, flow rates and pressure drops indicated. In case of deviations from the given conditions, please use the online configurator. It is recommended to always refer to a qualified design engineer.

QUICK-CHOICE CHARTS

HEATING WITH LOW TEMPERATURE TERMINALS AND HEAT PUMP



	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	4350	48,3	2170	18,6	**PHC 2045**	13	3175056656183
35	6090	46,6	3040	16,4	**PHC 2045**	19	3175056656186
50	8710	48,3	4340	16,0	**PHC 2045**	27	3175056656190
75	13058	48,3	6510	15,3	**PHC 2045**	41	3175056656197
100	17410	51,6	8680	16,0	**PHC 2045**	53	3175056656203
125	21760	50,9	10850	15,6	**PHC 2045**	67	3175056656210
150	26120	50,4	13020	17,0	**PHC 3080**	29L	3175050000427
200	34820	46,4	17360	16,1	**PHC 4090**	23L	3175050000429
250	43530	52,7	21700	17,9	**PHC 4090**	27L	3175050000430
300	52230	51,4	24060	17,0	**PHC 4090**	33L	3175050000431



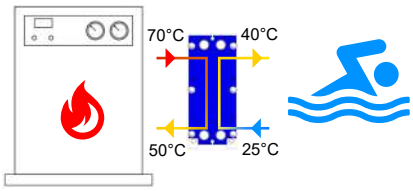
	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	4340	26,0	4330	32,0	**PHC 2045**	19	3175056656186
35	6070	29,8	6060	35,0	**PHC 2045**	25	3175056656189
50	8670	31,5	8660	35,6	**PHC 2045**	35	3175056656194
75	13010	31,5	12990	34,3	**PHC 2045**	53	3175056656203
100	17350	28,7	17320	33,4	**PHC 3080**	27L	3175050000432
125	21680	30,1	21650	34,3	**PHC 3080**	33L	3175050000435
150	26020	31,3	25980	35,0	**PHC 3080**	39L	3175050000437
200	34700	25,8	34630	29,3	**PHC 4090**	33L	3175050000431
250	46370	28,8	43290	32,2	**PHC 4090**	39L	3175050000439
300	52040	28,8	51950	31,7	**PHC 4090**	47L	3175050000441

In these charts all codes refer to models in PN10 version with NBR gasket. It is possible to choose all PN10 and PN16 combinations with NBR and EPDM gaskets.

The present charts allow a quick choice of Cordivari PHC products, for the most common thermohydraulic applications. The results are referred to the temperatures, flow rates and pressure drops indicated. In case of deviations from the given conditions, please use the online configurator. It is recommended to always refer to a qualified design engineer.

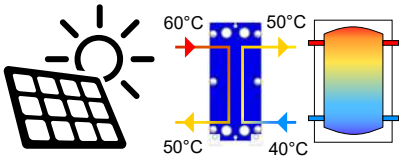
QUICK-CHOICE CHARTS

SWIMMING POOL HEATING WITH TRADITIONAL BOILER



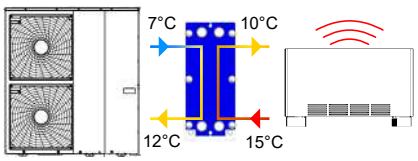
	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	1100	4,1	1440	7,5	**PHC 2030**	9	3175056656061
35	1530	5,0	2020	9,2	**PHC 2030**	11	3175056656062
50	2190	5,2	2890	9,5	**PHC 2030**	15	3175056656064
75	3280	5,7	4330	10,4	**PHC 2030**	21	3175056656067
100	4380	6,0	5770	10,9	**PHC 2030**	27	3175056656070
125	5470	6,1	7220	11,2	**PHC 2030**	33	3175056656073
150	6560	6,9	8660	12,6	**PHC 2030**	37	3175056656075
200	8750	6,9	11540	12,6	**PHC 2030**	49	3175056656081
250	10940	6,9	14430	12,6	**PHC 2030**	61	3175056656087
300	12030	22,2	17320	40,5	**PHC 4060**	11H + 6L	3175050000443

HEATING WITH LOW TEMPERATURE TERMINALS AND SOLAR THERMAL SYSTEM



	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	2180	37,2	2170	38,2	**PHC 2045**	9	3175056656181
35	3060	45,6	3040	46,9	**PHC 2045**	11	3175056656182
50	4370	47,4	4350	48,7	**PHC 2045**	15	3175056656184
75	6550	43,5	6520	44,7	**PHC 2045**	23	3175056656188
100	8730	47,4	8700	48,7	**PHC 2045**	29	3175056656191
125	10910	45,0	10870	46,2	**PHC 2045**	37	3175056656195
150	13100	43,5	13050	44,7	**PHC 2045**	45	3175056656199
200	17460	44,4	17400	45,7	**PHC 2045**	59	3175056656206
250	21830	45,9	21740	47,4	**PHC 3080**	27L	3175050000432
300	26190	43,9	26090	45,3	**PHC 3080**	33L	3175050000435

COOLING WITH CHILLERS AND FAN COILS



	Primary		Secondary				
kW	l/h	kPa	l/h	kPa	Model	N° of plates	Art. Nr.
25	4290	6,4	4300	6,3	**PHC 2045**	47	3175056656200
35	6000	6,5	6020	6,4	**PHC 2045**	65	3175056656209
50	8580	34,5	8590	34,0	**PHC 2075**	55	3175056656324
75	12870	33,3	12890	32,8	**PHC 4090**	12H + 11L	3175050000426
100	17160	31,9	17190	34,7	**PHC 4090**	16H + 15L	3175050000428
125	21460	34,4	21480	33,9	**PHC 4090**	19H + 18L	3175050000434
150	25750	36,2	25780	35,7	**PHC 4090**	22H + 21L	3175050000436
200	34330	36,2	34370	35,7	**PHC 4090**	29H + 28L	3175050000438
250	42910	36,2	42970	35,7	**PHC 4090**	36H + 35L	3175050000440
300	51490	36,2	51560	35,7	**PHC 4090**	43H + 42L	3175050000442

In these charts all codes refer to models in PN10 version with NBR gasket. It is possible to choose all PN10 and PN16 combinations with NBR and EPDM gaskets.

The present charts allow a quick choice of Cordivari PHC products, for the most common thermohydraulic applications. The results are referred to the temperatures, flow rates and pressure drops indicated. In case of deviations from the given conditions, please use the online configurator. It is recommended to always refer to a qualified design engineer.

PIASTRATERM® **SLB**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK WITH STAINLESS STEEL BRAZED PLATE HEAT EXCHANGER





APPLICATION
Production and storage of domestic hot water (DHW).
MATERIAL
Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
SLB brazed plate exchanger in stainless steel 316L, insulated, supplied not mounted on the tank.
INSULATION
Models 200 ÷ 500 (HARD FOAM): High thermal insulation with ecological polyurethane hard foam.
Models 800 ÷ 2000 (Dismountable soft): NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.
CATHODE PROTECTION
Magnesium anode. Models > 1500 n° 2 magnesium anodes.

DRAIN
External confluence through drain connection. Models > 1000 external confluence through drain pipe.
GASKET- FLANGE PLATE
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE); max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated and connection for electric immersion heater (for models > 1000).
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

CIRCULATOR INCLUDED IN THE PRICE


IMMEDIATE DHW PRODUCTION


POLYWARM® COATED DHW STORAGE

PIASTRATERM® SLB WB - WC

INSULATION	Model		(WB) HARD FOAM: **200 ÷ 300 -** (WC) Dismountable soft fleece: **500 ÷ 2000** NR. OF PLATES ***(model SLB30)***					ENERGY EFFICIENCY CLASS
			14	20	30	40	50	
HARD FOAM	**200**	Art. Nr.	3170161722201					B
HARD FOAM	**300**	Art. Nr.	3170161722211	3170161722212				C
DISMOUNTABLE SOFT FLEECE	**500**	Art. Nr.	3170161722221	3170161722222	3170161722223	3170161722224	3170161722225	C
DISMOUNTABLE SOFT FLEECE	**800**	Art. Nr.		3170161722232	3170161722233	3170161722234	3170161722235	C
DISMOUNTABLE SOFT FLEECE	**1000**	Art. Nr.			3170161722243	3170161722244	3170161722245	C
DISMOUNTABLE SOFT FLEECE	**1500**	Art. Nr.				3170161722254	3170161722255	C
DISMOUNTABLE SOFT FLEECE	**2000**	Art. Nr.					3170161722265	C
[°C] 80 10/45		Output KW	38	72	120	150	200	
		DHW lt./h	887	1680	2801	3501	4668	
[°C] 65 10/45		Output KW	21	42	74	95	129	
		DHW lt./h	483	972	1722	2228	3019	

ACCESSORIES

ELECTRIC IMMERSION HEATERS



Mod.	Heated volume by electric immersion heater [lt]	MONOPHASE 1,5 kW	MONOPHASE 2 kW	MONOPHASE 3 kW	THREEPHASE 4 kW	THREEPHASE 5 kW	THREEPHASE 6 kW	THREEPHASE 9 kW	THREEPHASE 12 kW
		5240000000051	5240000000052	5240000000053	5240000000047	5240000000048	5240000000049	5240000000050	5240000000031
		Ignition time from 10 °C to 45 °C with electric immersion heaters [min]			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]				
200	49	87	65	44	33	//	//	//	//
300	76	136	102	68	51	//	//	//	//
500	127	228	171	114	85	68	57	//	//
800	178	318	239	159	120	96	80	//	//
1000	243	436	327	218	163	131	109	73	54
1500	288	516	387	258	194	155	129	86	65
2000	443	793	595	396	297	238	198	132	99

Thermometer

Art. Nr.
5032240000107
5 units box



Titanium anode

Art. Nr.	**Model**
5200000000008	200, 300
5200000000009	500, 800
5200000000011	1000, 1500
5200000000013	2000

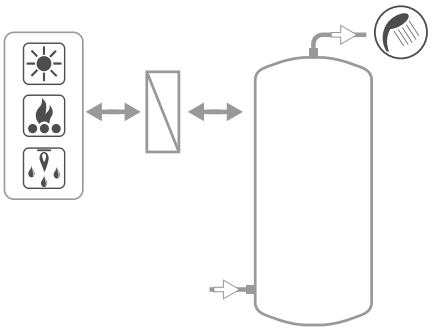


P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

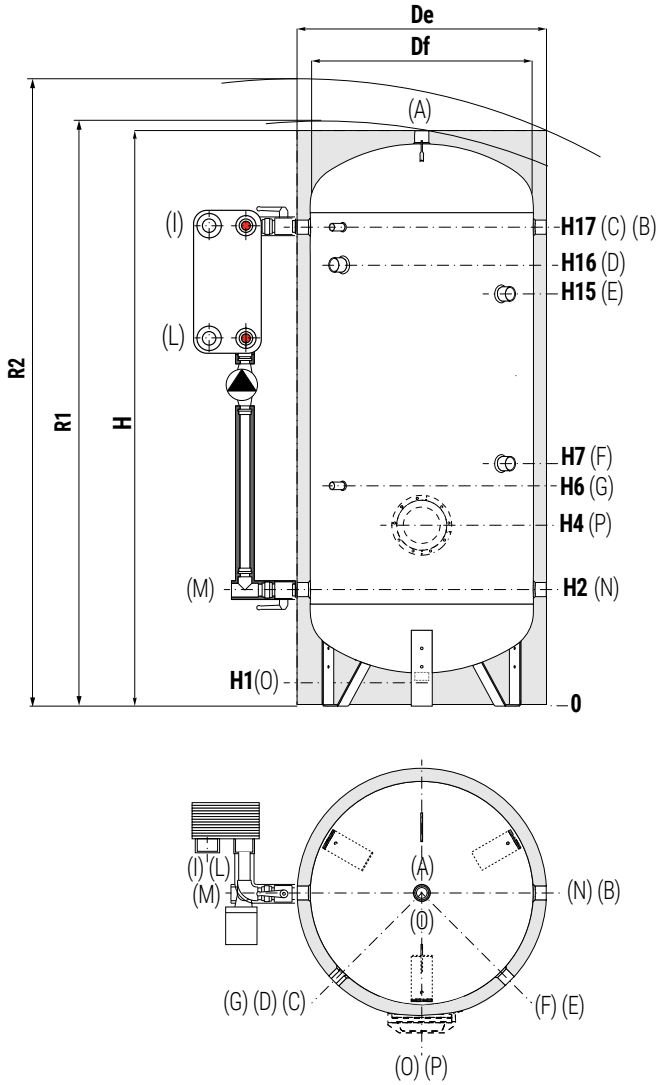
PIASTRATERM® **SLB**

POLYWARM® COATED DOMESTIC HOT WATER ACCUMULATION TANK WITH STAINLESS STEEL BRAZED PLATE HEAT EXCHANGER

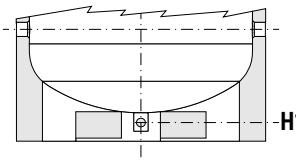
	STORAGE		HEAT EXCHANGER		D.H.W. HARDNESS
Model	Pmax	Tmax	Pmax	Tmax	F max
200 ÷ 1000	8 bar	90 °C	10 bar	99 °C	30 °f
1500 ÷ 2000	6 bar				



See TECHNICAL SUPPORT chapter for example of installation



A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet
C	Connection for instrumentation 1/2" G F
D	Connection for electric immersion heater
E	Connection for 2nd magnesium anode 1"1/4 G F (only for models > 1500)
F	Connection for magnesium anode 1" 1/4 G F
G	Connection for instrumentation 1/2" G F
I	Primary circuit inlet 1" 1/4 G F
L	Primary circuit outlet 1" 1/4 G F
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks
O	Drain 1" 1/4 F. For model 1000 Connection 1"1/2 G F
P	Flange (only for models > 1000)



Models from 1500 to 2000 are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow total emptying.

Model	Volume	De	DF	H	R1	R2	H1	H2	H4	H6	H7	H15	H16	H17	P	A	B M	D
	[lt]	[mm]														Connections F		
200	192	550	//	1449	//	1560	85	325	//	520	650	//	1075	1185	//	1"1/4	1"1/4	1"1/2
300	293	650	//	1499	//	1640	85	350	//	545	735	//	1100	1210	//	1"1/4	1"1/4	1"1/2
500	501	870	650	1891	1998	2090	101	416	//	611	801	//	1370	1526	//	1"1/4	1"1/4	1"1/2
800	792	970	750	2188	2220	2400	113	433	//	628	898	//	1638	1793	//	1"1/4	1"1/4	1"1/2
1000	1041	1070	850	2242	2270	2490	101	454	//	649	989	//	1660	1814	//	1"1/2	1"1/2	2"
1500	1443	1210	950	2440	2495	2730	109	440	525	635	1075	//	1895	2050	Øi170/Øe240	2"	1"1/2	2"
2000	1975	1360	1100	2492	2570	2850	91	467	542	652	842	1952	1877	2057	Øi170/Øe240	2"	2"	2"

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

FRESH WATER MODULE **MACS®**

MODULE FOR IMMEDIATE D.H.W. PRODUCTION WITH ELECTRONIC CONTROL UNIT

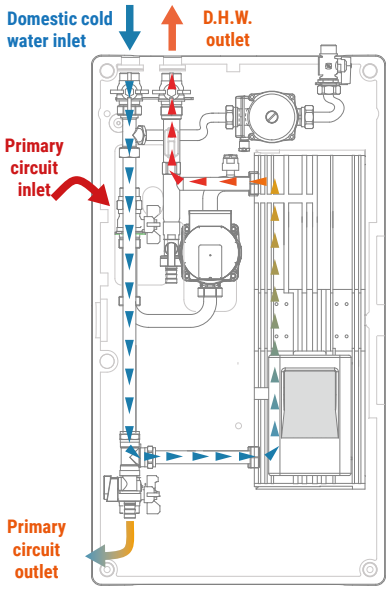


APPLICATION
MACS® module produces instantly D.H.W. with high flow rate.

HEAT EXCHANGER, MATERIAL
Copper primary pipes, Stainless steel 316L DHW sanitary circuit; brass fittings and valves.
Stainless steel 316L brazed plate heat exchanger.
PPE module case housing and insulating the exchangers circuits.

TECHNICAL DESCRIPTION
MACS® module produces instantly D.H.W. with high flow rate without storage.
Thanks to a variable flow rate on the primary the risk of limescale formation on the sanitary side is highly reduced
The immediate and fast production of D.H.W. granted by the external plate exchanger system allows the following benefits:
- reduced dimensions of the tank for DHW productions
- easy maintenance
- maximum hygiene for anti-legionellosis bacteria's
- to produce more DHW than the quantity obtained by water heater with similar capacity, thanks to the heating water stored at an higher temperature than DHW.

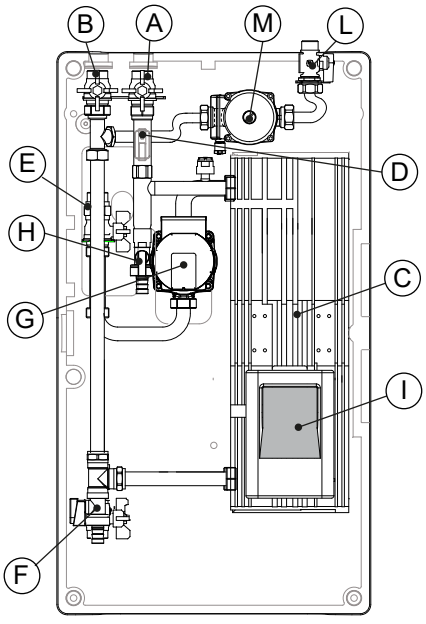
WARRANTY
2 years - 1 year on electronic parts.
See general sales conditions and warranty

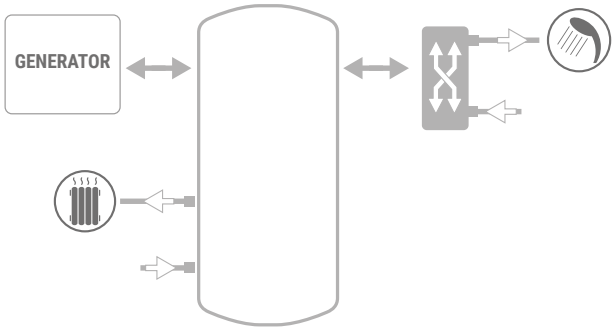


MACS® MODULE ELECTRONIC

	Model	Stainless steel 316L Plate Exchanger
		Art. Nr.
	70	3316006700007
	120	3316006700008
NEW	**180 HP**	3316006700019

TECHNICAL DATA MACS® MODULE	MACS® 70	MACS® 120	MACS® 180 HP
D.H. W. Operation range	2-40 lt/min	5-100 lt/min	5-100 lt/min
DHW production (10-45°C) with accumulation at 80°C	40 lt/min	75 lt/min	86 lt/min
Maximum working temperature	90°C	90°C	90°C
Maximum working pressure	8 bar	8 bar	8 bar
Electric supply and characteristic	230 V AC, 43 W	230 V AC, 50 W	230 V AC, 75 W
Dimnension of the case (BxHxP) mm	L 500 x H 905 x P 310	L 500 x H 905 x P 310	L 500 x H 905 x P 310
Connections	1"F/ 3/4"F	1"F/ 3/4"F	1"F/ 3/4"F





A	Domestic hot water outlet (DHW)	**F**	Primary Outlet
B	Domestic Water inlet	**G**	*"Energy Savings" Circulation Pump*
C	Stainless Steel Plate Exchanger	**H**	Valves In/Out for DHW
D	Flow rate/ temperature probe	**I**	Electronic control unit
E	Primary Inlet		

DHW recirculation kit for MACS® module (optional)

L	Connection for D.H.W. recirculation (optional)
M	D.H.W. recirculation pump (optional)

ACCESSORIES

DHW recirculation group

Art. Nr.	
5221000000073	

The recirculation kit for Electronic MACS® module allows the implementation of a sanitary recirculation circuit on the system where modules are installed.
The main advantage of such sanitary recirculation circuit is to improve comfort and speed in achieving and enjoying the desired DHW temperature, reducing energy waste.
The control unit included as standard with the electronic MACS® modules allow the complete management of all settings of the recirculation circuit, such as temperature, setting etc.

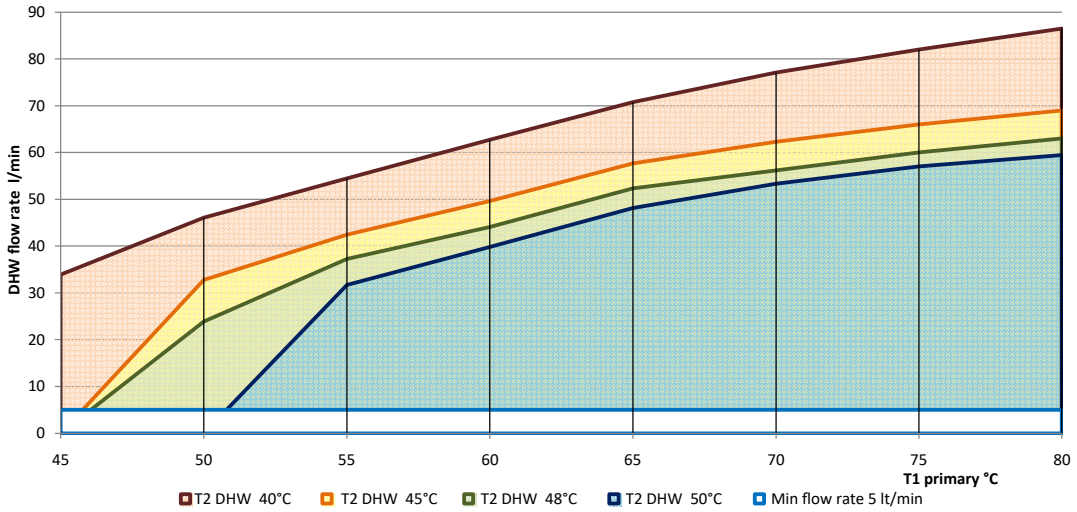
FRESH WATER MODULE **MACS®**

MODULE FOR IMMEDIATE D.H.W. PRODUCTION WITH ELECTRONIC CONTROL UNIT

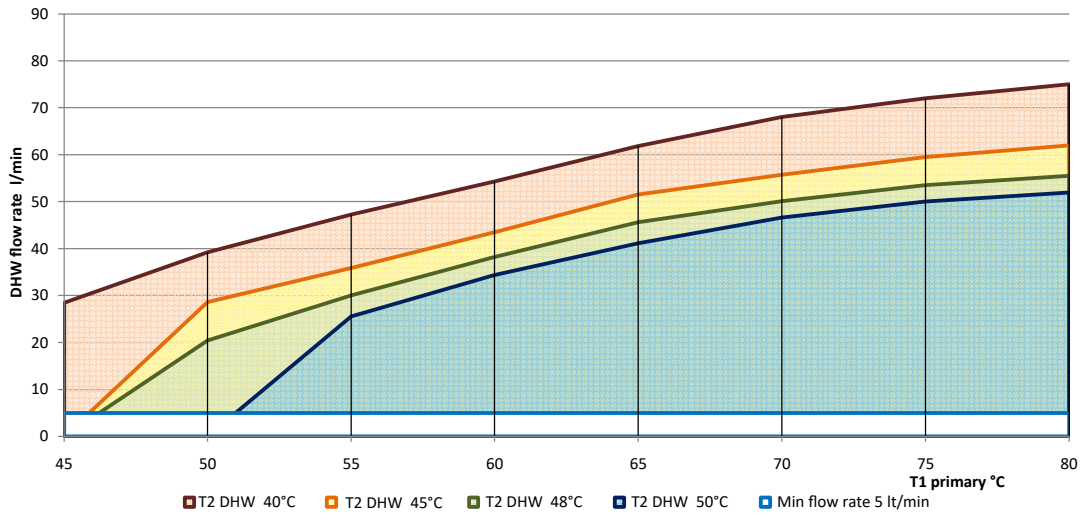
ELECTRONIC MACS® TECHNICAL DATA CHART

The curves shown in these charts allow to obtain the DHW flow rate that can be produced by the individual MACS® module according to the storage / primary circuit temperature (value on the horizontal axis).
The curves are parameterized based on the desired DHW temperature and indicate the maximum DHW flow rate that can be produced at that temperature (with cold water inlet temperature at 10°C)
The MACS modules can produce all the DHW flow rates included in the area between the minimum activation flow rate and maximum flow curve of each temperature.

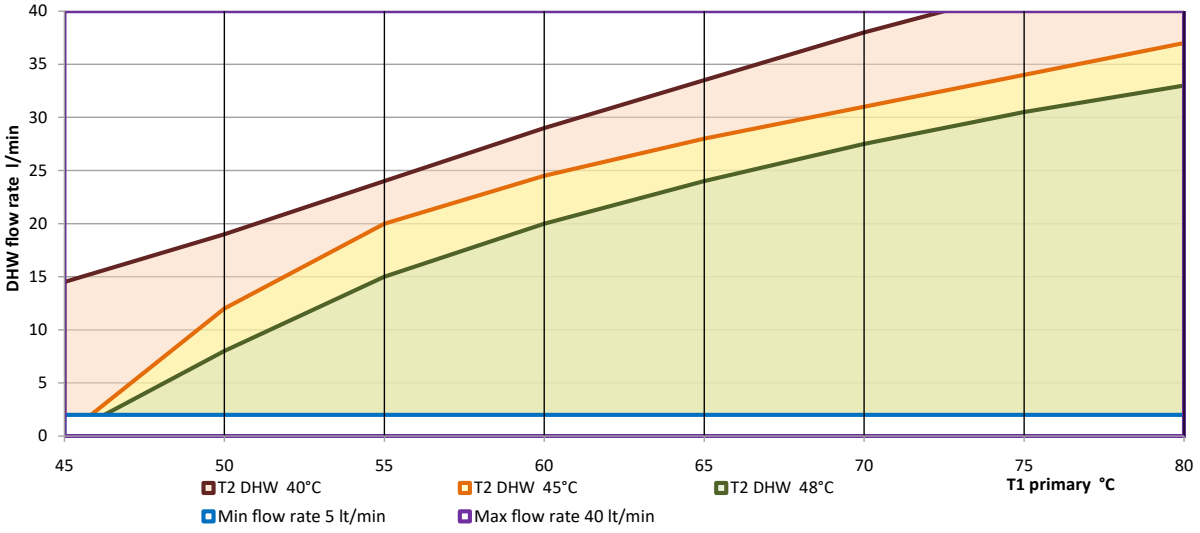
MACS® 180 HP



MACS® 120



MACS® 70



FRESH WATER MODULE **MACS® CASCADE SETUP**

CASCADE MACS® SYSTEM WITH ELECTRONIC CONTROL UNIT FOR IMMEDIATE DHW PRODUCTION ON LARGE INSTALLATIONS



APPLICATION
MACS® module produces instantly D.H.W. with high flow rate even if there is installed a limited power thermal generator.

EXCHANGER, MATERIAL
Copper primary pipes, Stainless steel 316L DHW sanitary circuit; brass fittings and valves.
Stainless steel 316L brazed plate heat exchanger.
PPE module case housing and insulating the exchangers circuits.

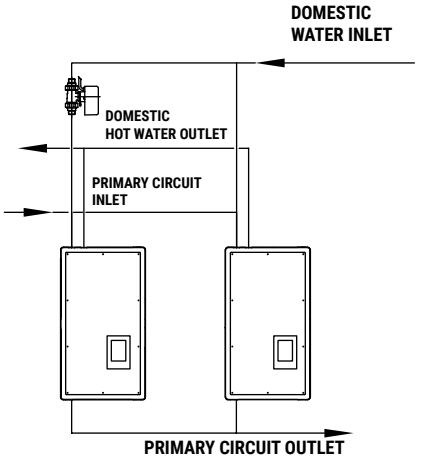
TECHNICAL DESCRIPTION
The management of additional MACS® modules in cascade allows to meet high DHW requirements.
The complete system manages trough the electronic control unit, the working of each module following the DHW request from the users.
The cascade configuration can eventually also manage the link of the DHW recirculation. The use of the MACS module in cascade takes all the benefits from the MACS module also in big installation where large DHW flows are needed to produce immediate DHW without the necessity to accumulate it.

WARRANTY
2 years
1 year electronical parts
See general sales conditions and warranty

CASCADE MACS® SYSTEM

	N° of MACS® modules	Stainless steel 316L Plate Exchanger Art. Nr.
	120 x2	3316006700015
	120 x3	3316006700016
NEW	**180 x2**	3316006700020
NEW	**180 x3**	3316006700021

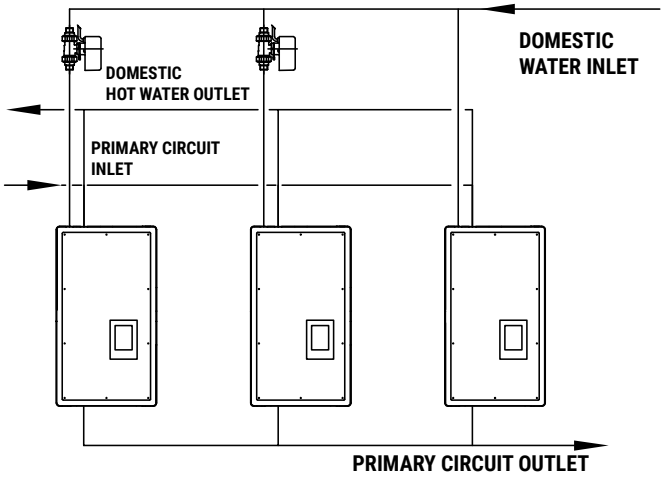
CASCADE SETUP WITH 2X MACS® 120 MODULES



The system includes:

MACS® 120 module	2-ways valve - 1”
 **x 2**	**x 1** 

CASCADE SETUP WITH 3X MACS® 180 HP MODULES



The system includes:

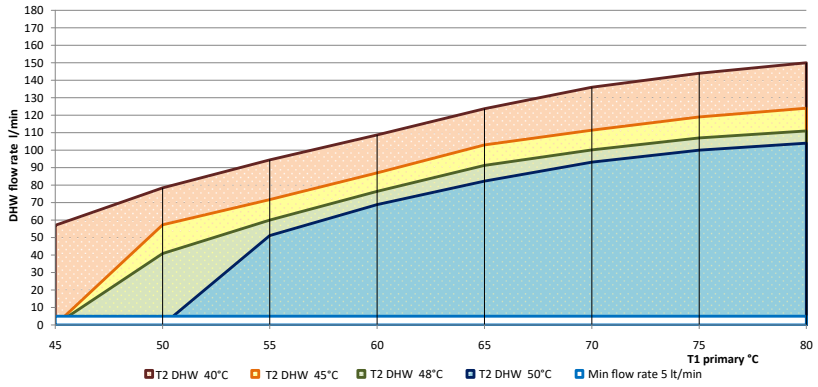
MACS® 180 HP module	2-ways valve - 1”
 **x 3**	**x 2** 

FRESH WATER MODULE **MACS® CASCADE SETUP**

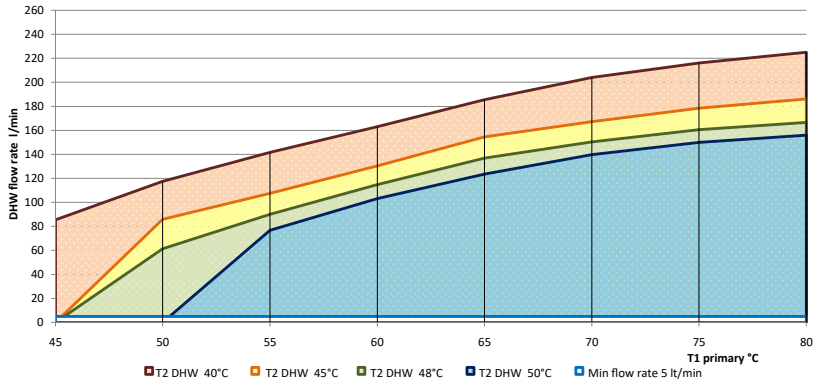
CASCADE MACS® SYSTEM WITH ELECTRONIC CONTROL UNIT FOR IMMEDIATE DHW PRODUCTION ON LARGE INSTALLATIONS

ELECTRONIC **MACS® 120** TECHNICAL DATA CHART

x2

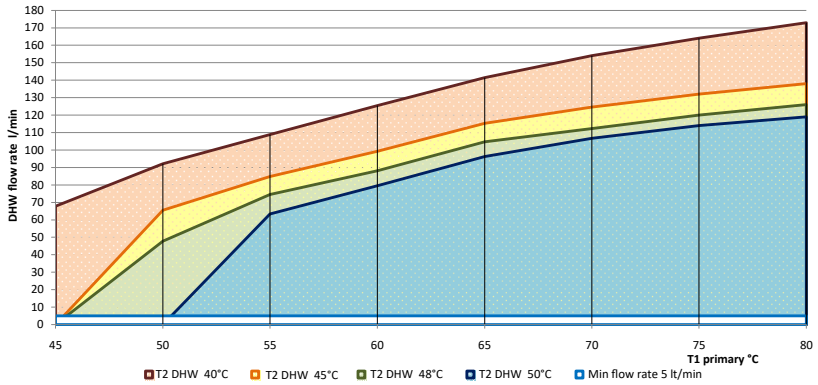


x3

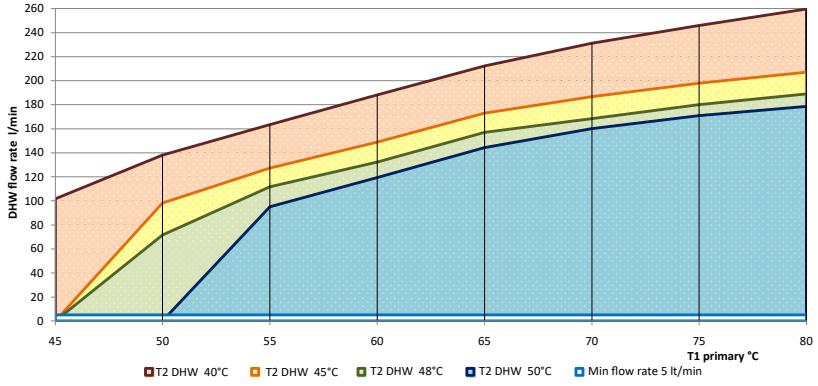


ELECTRONIC **MACS® 180 HP** TECHNICAL DATA CHART

x2



x3



FRESH WATER STATION **PRS**

MODULE FOR IMMEDIATE DHW PRODUCTION





DESCRIPTION

The new PRS modules are designed to rapidly prepare Domestic Hot Water for medium and large-scale facilities; they can work both with accumulation (semi-immediate mode) or without (immediate mode).

COMPONENTS

- Inspectable plate heat exchanger with steel structure and exchanger plates made in stainless steel AISI 316L with EPDM gaskets
- Single or double pump for primary circuit
- Motorized 3-way mixing valve (only on high temperature version)
- Electrical control panel with control unit for programmation
- Temperature probes
- Galvanized steel frame
- 230V AC single phase supply.

OPTIONAL

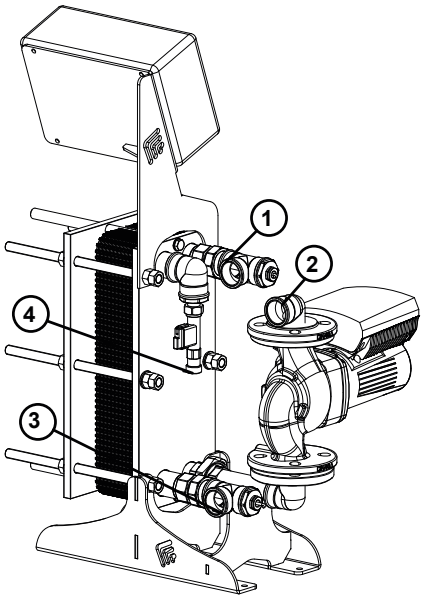
- Insulation for the heat exchanger in aluminium and mineral wool (M0-A1 reaction to fire class)
- Data Logger

OPERATING CONDITIONS

Maximum Working pressure = 10 bar
Maximum temperature of the gaskets = 140 °C

WARRANTY

2 years – See general sales conditions and warranty on the Calorifiers catalogue in force.



1	Primary Inlet
2	Primary Outlet
3	Domestic water inlet
4	Domestic hot water circuit outlet

FEATURES AND FUNCTIONS OF THE PRS CONTROL UNIT

- Back-lighted display with representation of graphs and texts
- Self-explanatory menu with captions
- Simple visualization of the measured values
- Temperature maintenance of the DHW inlet and of the DHW accumulation, set from the controller
- High operational efficiency thanks to the proportional control of primary pumps speed
- Performance of a series of anti-legionella disinfection cycles, schedulable at preferred time and day of the week, final result showed on the display
- DHW recirculation function control
- Analysis and monitoring of the system through statistics
- Computation of the exchanged heat, on a daily and weekly basis
- Diagnostic unit function for temperature and flow probes



ACCESSORIES

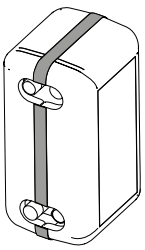
DATA LOGGER

Art. Nr.	
5755280000029	

- Remote monitoring
- Historical anti-legionella cycles data recording on Micro SD card
- Registration of the temperatures achieved in the system

Kit includes: transformer 5 V DC, Micro SD card, CAN-bus cable, terminating resistors and wall plugs.

INSULATION

Art. Nr.	PRS Model	
5655000610013	2045 (up to 31 plates)	
5655000610014	2045 (from 33 to 45 plates)	
5655000610015	2075 (up to 31 plates)	
5655000610016	2075 (from 33 to 45 plates)	
5655000610017	3080 (up to 49 plates)	
5655000610018	3080 (from 51 to 57 plates)	

Insulation with practical velcro closure for quick and easy assembly / disassembly; made in closed cell expanded cross-linked polymeric material with low thermal conductivity. Designed to completely contain the exchanger and its linkage and ensure complete insulation, in order to reduce heat loss and improve the efficiency of the system.
Fire reaction class B2 (DIN 4102)

FRESH WATER STATION **PRS**

MODULE FOR IMMEDIATE DHW PRODUCTION

MOD.	N° of Plates	P	H	L mod. HIGH temp.	L mod. LOW temp.
		[mm]			
2045 SINGLE PUMP	9	400	906	760	596
	13				
	17				
	21				
	25				
	29				
	33			780	617
	37				
	41				
	45				

MOD.	N° of Plates	P	H	L mod. HIGH temp.	L mod. LOW temp.
		[mm]			
2075 SINGLE PUMP	17	400	1192	760	596
	21				
	25				
	29				
	33			780	617
	37				
	41				
	45				

MOD.	N° of Plates	P	H	L mod. HIGH temp.	L mod. LOW temp.
		[mm]			
3080 SINGLE PUMP	13	493	1156	1085	990
	17				
	21				
	25	532		1091	996
	29	542		1111	1016
	33				
	37				
	41				
	45	545		1113	1018
	49			1363	1268
	53				
	57				

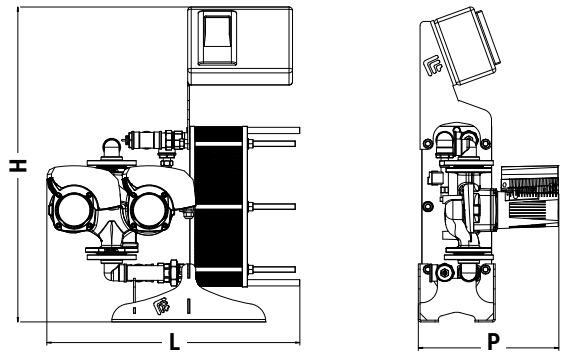
MOD.	N° of Plates	P	H	L mod. HIGH temp.	L mod. LOW temp.
		[mm]			
2045 DOUBLE PUMP	9	403	906	868	703
	13				
	17				
	21				
	25				
	29				
	33			888	724
	37				
	41				
	45				

MOD.	N° of Plates	P	H	L mod. HIGH temp.	L mod. LOW temp.
		[mm]			
2075 DOUBLE PUMP	17	403	1192	868	703
	21				
	25				
	29				
	33			888	724
	37				
	41				
	45				

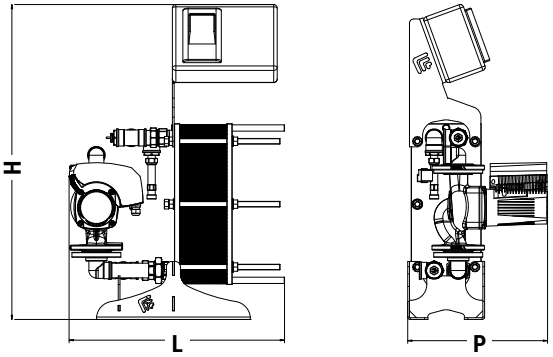
MOD.	N° of Plates	P	H	L mod. HIGH temp.	L mod. LOW temp.
		[mm]			
3080 DOUBLE PUMP	13	535	1156	1205	1110
	17				
	21				
	25			1220	1125
	29				
	33				
	37				
	41	542		1236	1141
	45				
	49	551		1471	1376
	53				
	57				

PRS – FOR LOW TEMPERATURE SYSTEMS

with **DOUBLE** pump

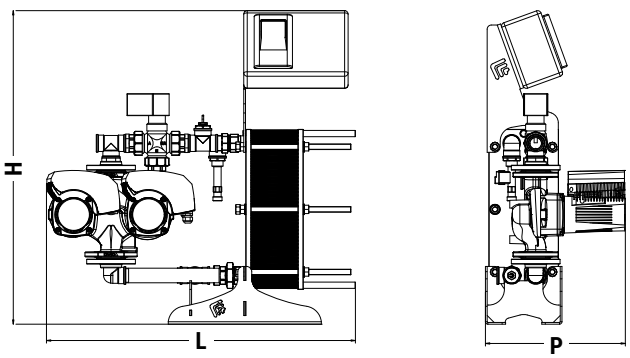


with **SINGLE** pump

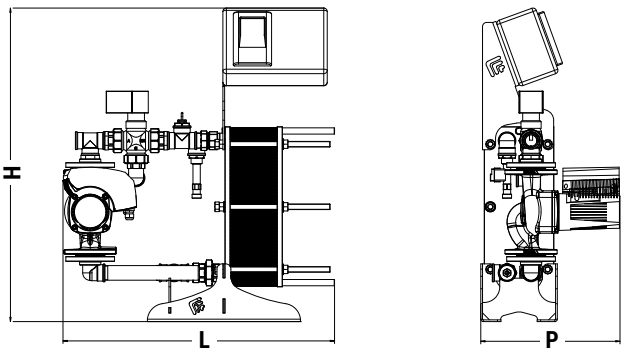


PRS - FOR HIGH TEMPERATURE SYSTEMS

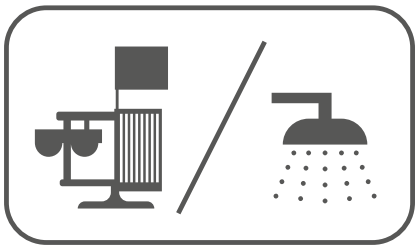
with **DOUBLE** pump



with **SINGLE** pump



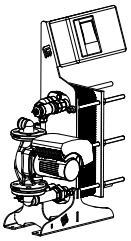




CONFIGURATION WITHOUT DHW ACCUMULATION

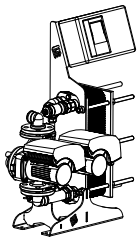
LOW TEMPERATURE

SINGLE PUMP



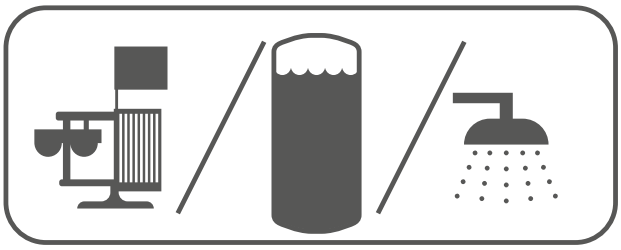
Model	N° plates	Art. Nr.
PHC 2045	**9**	3435316701330
	13	3435316701331
	17	3435316701332
	21	3435316701333
	25	3435316701334
	29	3435316701335
	33	3435316701336
	37	3435316701337
	41	3435316701338
	45	3435316701339
PHC 2075	**17**	3435316701410
	21	3435316701411
	25	3435316701412
	29	3435316701413
	33	3435316701414
	37	3435316701415
	41	3435316701416
	45	3435316701417
PHC 3080	**13**	3435316701474
	17	3435316701475
	21	3435316701476
	25	3435316701477
	29	3435316701478
	33	3435316701479
	37	3435316701480
	41	3435316701481
	45	3435316701482
	49	3435316701483
	53	3435316701484
	57	3435316701485

DOUBLE PUMP



Model	N° plates	Art. Nr.
PHC 2045	**9**	3435316701340
	13	3435316701341
	17	3435316701342
	21	3435316701343
	25	3435316701344
	29	3435316701345
	33	3435316701346
	37	3435316701347
	41	3435316701348
	45	3435316701349
PHC 2075	**17**	3435316701418
	21	3435316701419
	25	3435316701420
	29	3435316701421
	33	3435316701422
	37	3435316701423
	41	3435316701424
	45	3435316701425
PHC 3080	**13**	3435316701486
	17	3435316701487
	21	3435316701488
	25	3435316701489
	29	3435316701490
	33	3435316701491
	37	3435316701492
	41	3435316701493
	45	3435316701494
	49	3435316701495
	53	3435316701496
	57	3435316701497

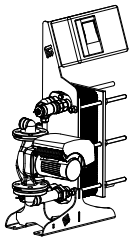




CONFIGURATION FOR DHW ACCUMULATION

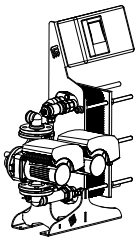
LOW TEMPERATURE

SINGLE PUMP



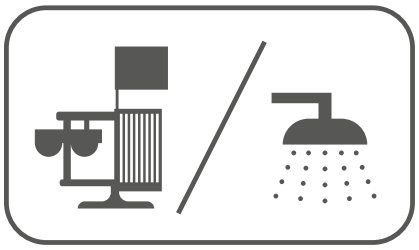
Model	N° plates	Art. Nr.
PHC 2045	9	3435316701350
	13	3435316701351
	17	3435316701352
	21	3435316701353
	25	3435316701354
	29	3435316701355
	33	3435316701356
	37	3435316701357
	41	3435316701358
	45	3435316701359
PHC 2075	17	3435316701426
	21	3435316701427
	25	3435316701428
	29	3435316701429
	33	3435316701430
	37	3435316701431
	41	3435316701432
	45	3435316701433
PHC 3080	13	3435316701498
	17	3435316701499
	21	3435316701500
	25	3435316701501
	29	3435316701502
	33	3435316701503
	37	3435316701504
	41	3435316701505
	45	3435316701506
	49	3435316701507
	53	3435316701508
	57	3435316701509

DOUBLE PUMP



Model	N° plates	Art. Nr.
PHC 2045	9	3435316701360
	13	3435316701361
	17	3435316701362
	21	3435316701363
	25	3435316701364
	29	3435316701365
	33	3435316701366
	37	3435316701367
	41	3435316701368
	45	3435316701369
PHC 2075	17	3435316701434
	21	3435316701435
	25	3435316701436
	29	3435316701437
	33	3435316701438
	37	3435316701439
	41	3435316701440
	45	3435316701441
PHC 3080	13	3435316701510
	17	3435316701511
	21	3435316701512
	25	3435316701513
	29	3435316701514
	33	3435316701515
	37	3435316701516
	41	3435316701517
	45	3435316701518
	49	3435316701519
	53	3435316701520
	57	3435316701521

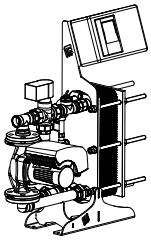




CONFIGURATION WITHOUT DHW ACCUMULATION

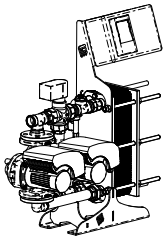
HIGH TEMPERATURE

SINGLE PUMP



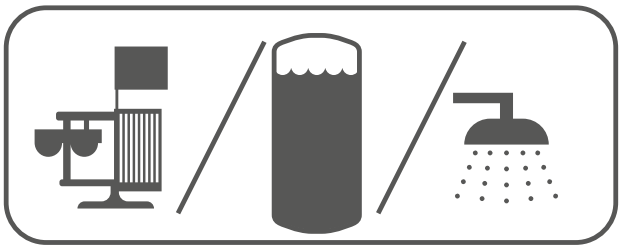
Model	N° plates	Art. Nr.
PHC 2045	**9**	3435316701370
	13	3435316701371
	17	3435316701372
	21	3435316701373
	25	3435316701374
	29	3435316701375
	33	3435316701376
	37	3435316701377
	41	3435316701378
	45	3435316701379
PHC 2075	**17**	3435316701442
	21	3435316701443
	25	3435316701444
	29	3435316701445
	33	3435316701446
	37	3435316701447
	41	3435316701448
	45	3435316701449
PHC 3080	**13**	3435316701522
	17	3435316701523
	21	3435316701524
	25	3435316701525
	29	3435316701526
	33	3435316701527
	37	3435316701528
	41	3435316701529
	45	3435316701530
	49	3435316701531
	53	3435316701532
	57	3435316701533

DOUBLE PUMP



Model	N° plates	Art. Nr.
PHC 2045	**9**	3435316701380
	13	3435316701381
	17	3435316701382
	21	3435316701383
	25	3435316701384
	29	3435316701385
	33	3435316701386
	37	3435316701387
	41	3435316701388
	45	3435316701389
PHC 2075	**17**	3435316701450
	21	3435316701451
	25	3435316701452
	29	3435316701453
	33	3435316701454
	37	3435316701455
	41	3435316701456
	45	3435316701457
PHC 3080	**13**	3435316701534
	17	3435316701535
	21	3435316701536
	25	3435316701537
	29	3435316701538
	33	3435316701539
	37	3435316701540
	41	3435316701541
	45	3435316701542
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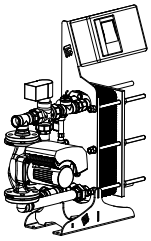




CONFIGURATION FOR DHW ACCUMULATION

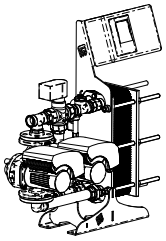
HIGH TEMPERATURE

SINGLE PUMP



Model	N° plates	Art. Nr.
PHC 2045	9	3435316701390
	13	3435316701391
	17	3435316701392
	21	3435316701393
	25	3435316701394
	29	3435316701395
	33	3435316701396
	37	3435316701397
	41	3435316701398
	45	3435316701399
PHC 2075	17	3435316701458
	21	3435316701459
	25	3435316701460
	29	3435316701461
	33	3435316701462
	37	3435316701463
	41	3435316701464
	45	3435316701465
PHC 3080	13	3435316701546
	17	3435316701547
	21	3435316701548
	25	3435316701549
	29	3435316701550
	33	3435316701551
	37	3435316701552
	41	3435316701553
	45	3435316701554
	49	3435316701555
	53	3435316701556
	57	3435316701557

DOUBLE PUMP

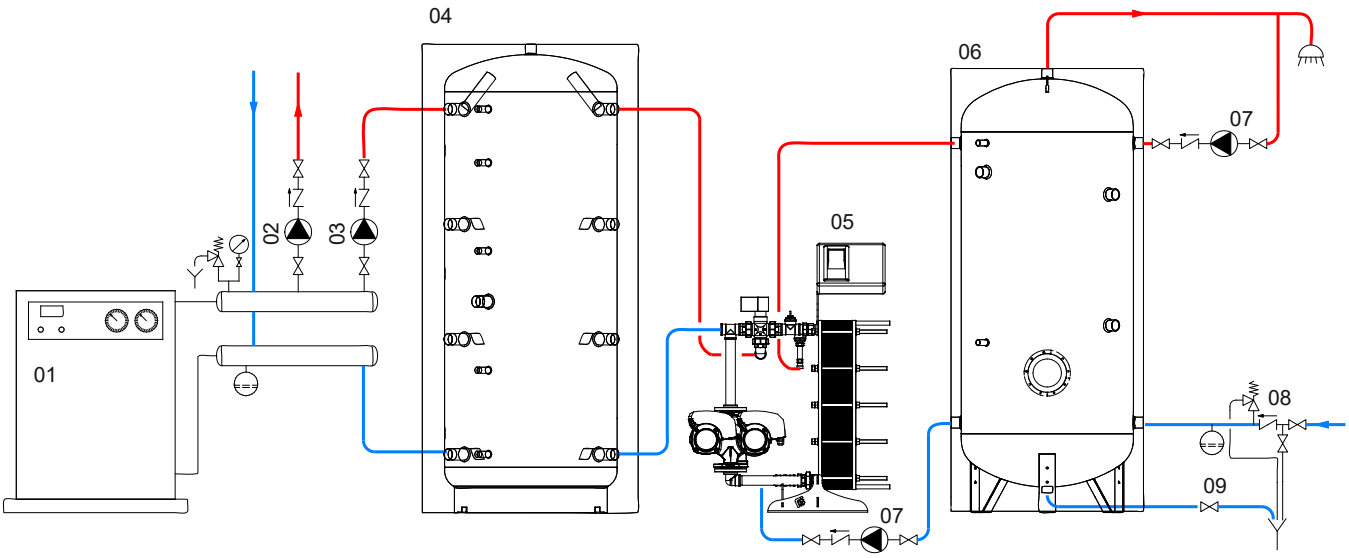


Model	N° plates	Art. Nr.
PHC 2045	9	3435316701400
	13	3435316701401
	17	3435316701402
	21	3435316701403
	25	3435316701404
	29	3435316701405
	33	3435316701406
	37	3435316701407
	41	3435316701408
	45	3435316701409
PHC 2075	17	3435316701466
	21	3435316701467
	25	3435316701468
	29	3435316701469
	33	3435316701470
	37	3435316701471
	41	3435316701472
	45	3435316701473
PHC 3080	13	3435316701558
	17	3435316701559
	21	3435316701560
	25	3435316701561
	29	3435316701562
	33	3435316701563
	37	3435316701564
	41	3435316701565
	45	3435316701566
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FRESH WATER STATION **PRS**

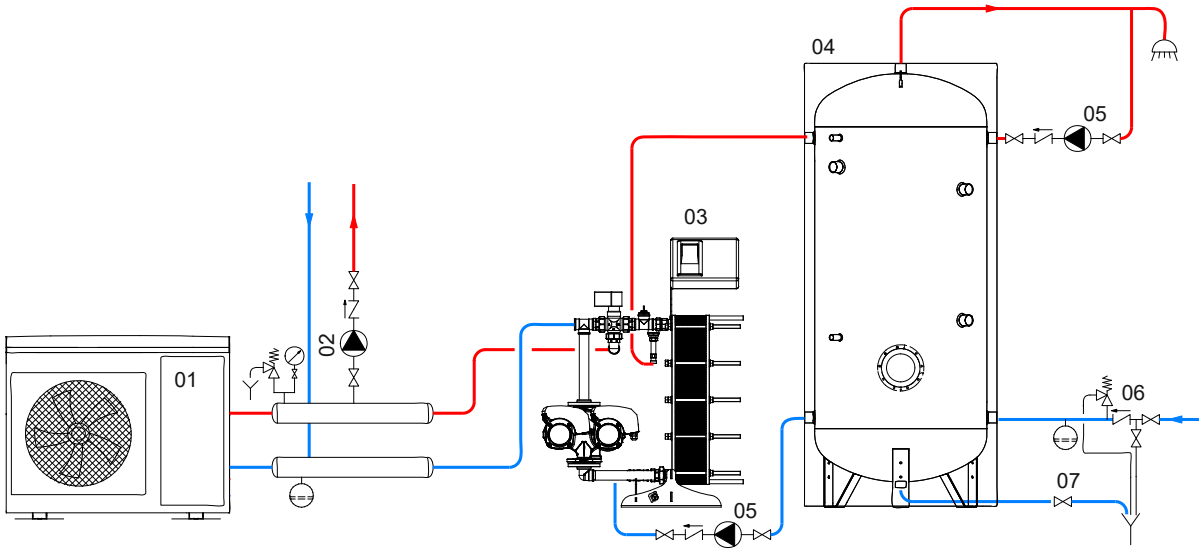


EXAMPLE OF INSTALLATION WITH **PRS MODULE -** FOR DHW ACCUMULATION



01	Generator	04	PUFFER (Buffer tank)	07	D.H.W. recirculation group
02	Heating system circulation group	05	PRS MODULE	08	Hydraulic safety group
03	Primary circuit circulation group	06	VASO INERZIALE	09	Blowdown valve

EXAMPLE OF INSTALLATION WITH **PRS MODULE -** FOR DHW ACCUMULATION



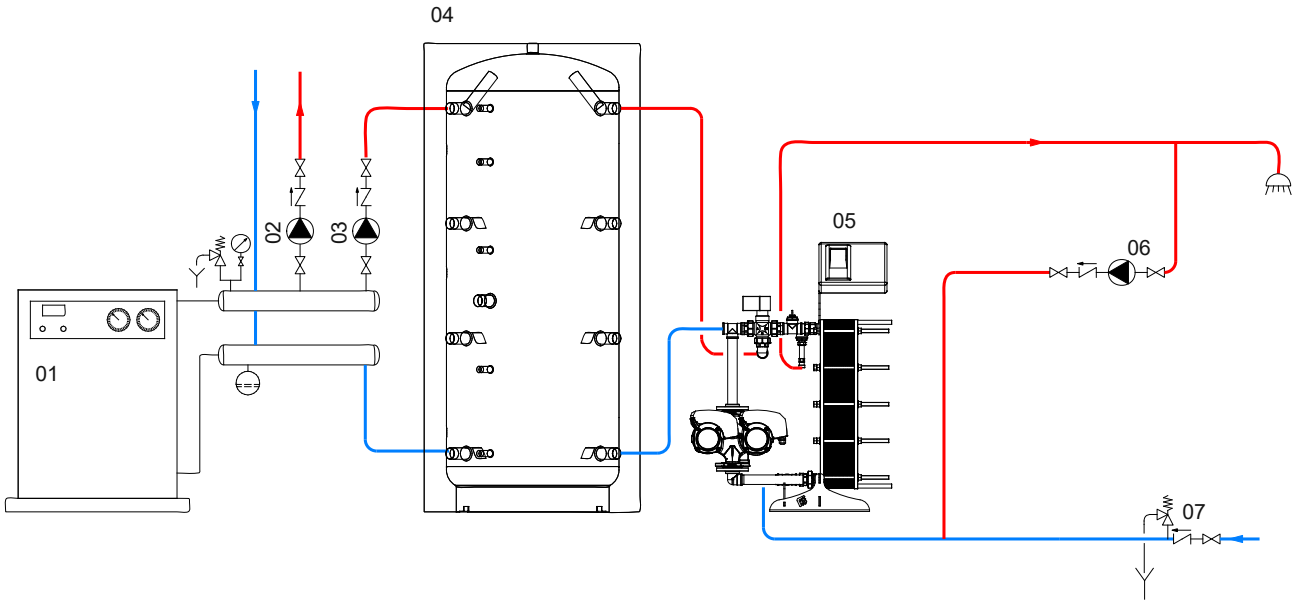
01	Generator	04	VASO INERZIALE	07	Blowdown valve
02	Heating system circulation group	05	D.H.W. recirculation group		
03	PRS MODULE	06	Hydraulic safety group		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

FRESH WATER STATION **PRS**



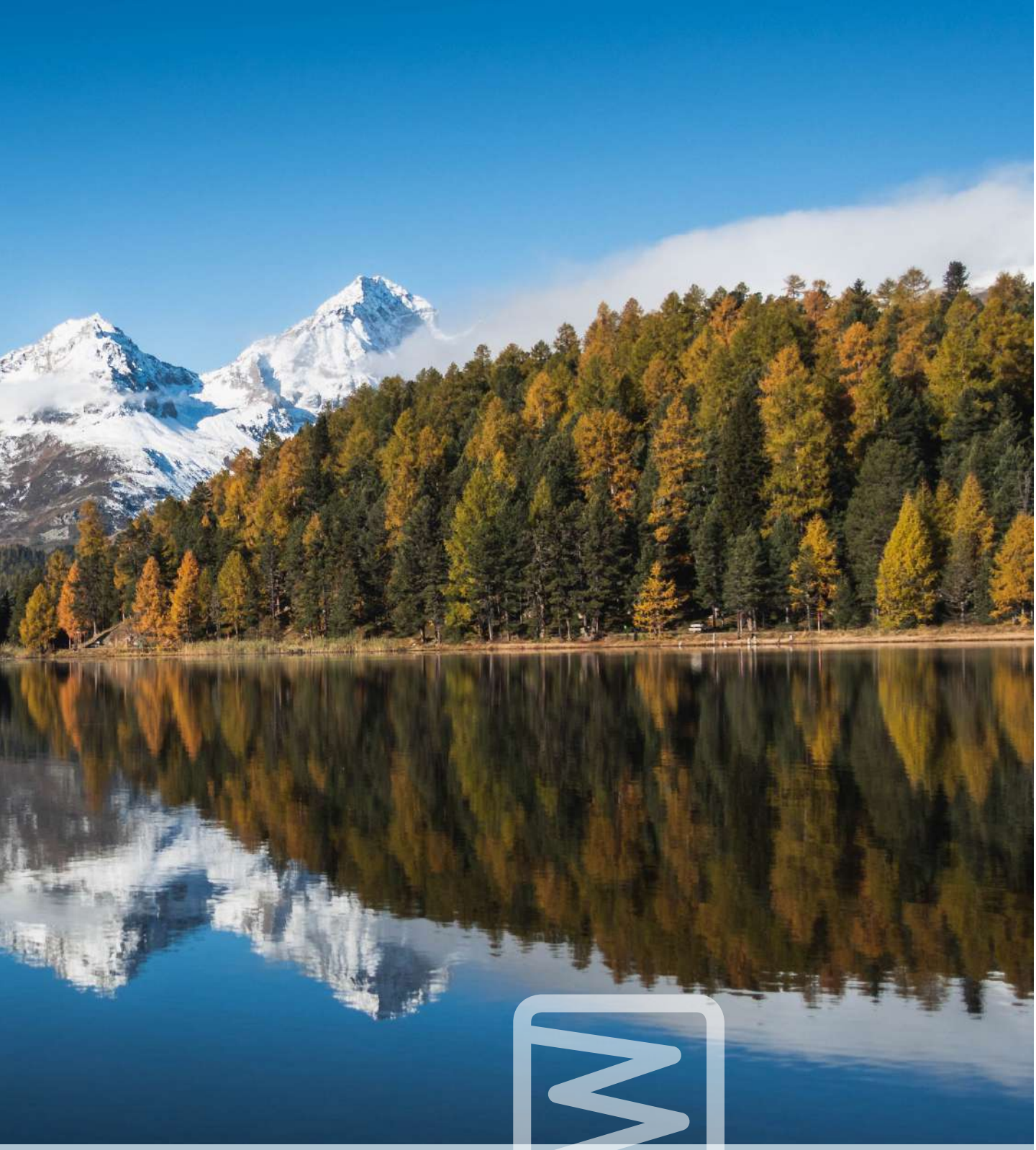
EXAMPLE OF INSTALLATION WITH **PRS MODULE -** WITHOUT D.H.W. STORAGE



01	Generator	03	Primary circulation group	05	PRS Module	07	Hydraulic safety group
02	Heating system circulation group	04	PUFFER (Buffer tank)	06	D.H.W. recirculation group		



PUFFER



PUFFER
HEATING WATER BUFFER TANK



APPLICATION
Efficient storage of hot water for heating purpose.
MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
TECHNICAL DESCRIPTION
Used to improve flexibility and performance of pellets, stoves and burners. PUFFER are used in units with a typically discontinuous energy source.
Available models with 3 or 6 bar working pressure.

INSULATION
- ***HARD:*** High thermal insulation with ecological polyurethane hard foam.
- ***SOFT:*** NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

STORAGE	
Pmax	Tmax
3 bar	99 °C

PROMPT AVAILABILITY



STORAGE	
Pmax	Tmax
6 bar	99 °C

PUFFER VB 6 BAR

Model	HARD FOAM INSULATION	ENERGY EFFICIENCY CLASS
	Art. Nr.	
500	3251162312531	**C**

PUFFER VC 6 BAR

Model	DISMOUNTABLE SOFT FLEECE INSULATION	ENERGY EFFICIENCY CLASS
	Art. Nr.	
800	3251162282611	**C**
1000	3251162282612	**C**
1500	3251162282613	**C**
2000	3251162282614	**C**
3000	3251162282615	
5000	3251162282616	

PUFFER VB

Model	HARD FOAM INSULATION	ENERGY EFFICIENCY CLASS
	Art. Nr.	
200	3251162312501	**B**
300	3251162312502	**B**
500	3251162312503	**C**
600	3251162312504	**C**
750	3251162312525	**B**
800	3251162312526	**B**
1000	3251162312527	**C**
1250	3251162312508	**B**
1500	3251162312509	**C**
2000	3251162312510	**B**

PUFFER VB

Model	DISMOUNTABLE HARD FOAM INSULATION	ENERGY EFFICIENCY CLASS
	Art. Nr.	
750	3251162312505	**B**
800	3251162312506	**B**
1000	3251162312507	**C**

PUFFER VC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	ENERGY EFFICIENCY CLASS
	Art. Nr.	
750	3251162282804	**C**
800	3251162282805	**C**
1000	3251162282806	**C**
1500	3251162282807	**C**
2000	3251162282808	**C**
3000	3251162282608	
5000	3251162282610	

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



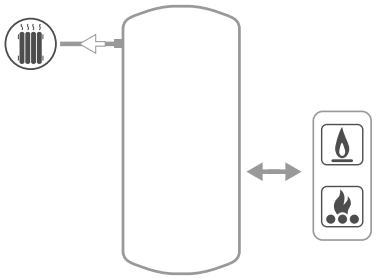
Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

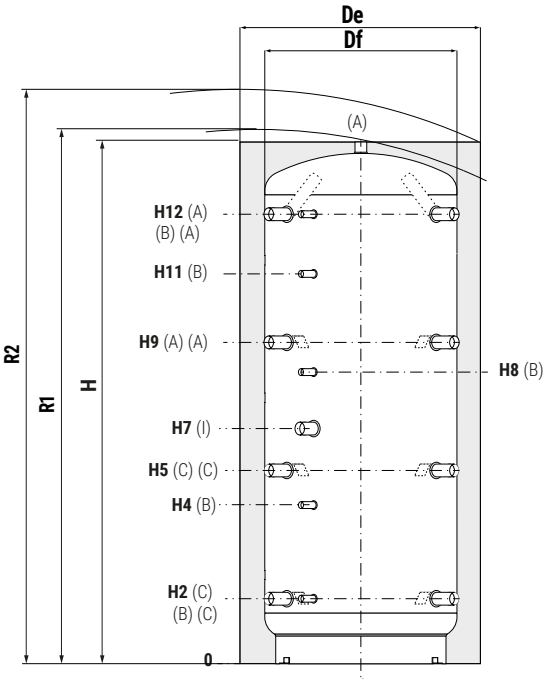


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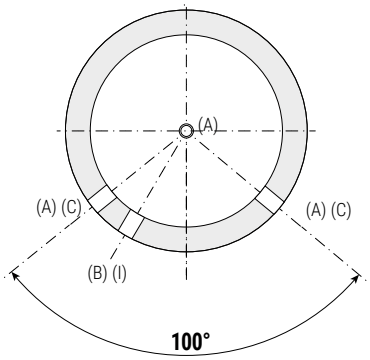
PUFFER
HEATING WATER BUFFER TANK

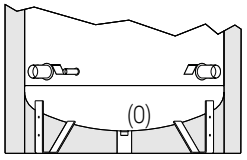


See TECHNICAL SUPPORT chapter for example of installation



A	Heating delivery/From generator
B	Connection for instrumentation 1/2" G F
C	Heating return/to generator
I	Connection for electric immersion heater
O	Drain only for models 3000 and 5000





Standard supporting feet for models 3000 and 5000. Drain welded on the bottom.

Model	Volume	Df (vers. VC)	De (vers. VC)	De (vers. VB)	H	R1	R2	H2	H4
	[lt]	[mm]				[mm]			
200	180	//	//	550	1299	//	1415	218	430
300	279	//	//	650	1340	//	1495	232	444
500	478	//	//	750	1645	//	1815	259	545
600	560	//	//	750	1870	//	2020	247	582
750	717	790	1010	950	1658	1710	1915	265	584
800	805	790	1010	950	1840	1890	2075	265	584
1000	946	790	1010	950	2130	2175	2340	265	656
1250	1248	//	//	1050	2201	//	2445	313	705
1500	1454	950	1210	1100	2250	2305	2510	313	736
2000	1973	1100	1360	1300	2320	2390	2665	347	770
3000	2915	1250	1450	//	2814	2890	3170	556	1017
5000	4985	1600	1800	//	2929	3045	3445	586	1047

Model	H5	H7	H8	H9	H11	H12	A - C - I	O
							Connections F	
200	500	576	711	782	871	1064	1"1/2	//
300	514	590	725	796	885	1078	1"1/2	//
500	641	853	950	1023	1243	1355	1"1/2	//
600	695	915	1060	1144	1382	1593	1"1/2	//
750	630	823	942	995	1180	1371	1"1/2	//
800	690	823	988	1115	1332	1541	1"1/2	//
1000	787	998	1188	1309	1588	1831	1"1/2	//
1250	835	986	1168	1357	1568	1879	1"1/2	//
1500	845	1061	1286	1377	1653	1909	1"1/2	//
2000	879	1060	1300	1411	1687	1943	1"1/2	//
3000	1071	1693	1879	1786	2140	2402	2"	1"
5000	1101	1691	1889	1816	2159	2432	2"	2"

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PUFFER **COMPACT**

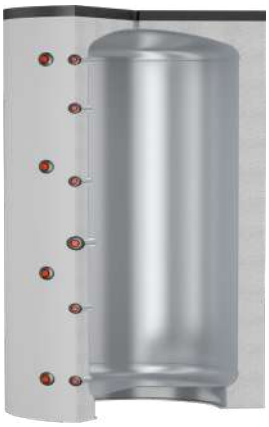
HEATING WATER BUFFER TANK SUITABLE FOR LOW-CEILINGED ROOMS



APPLICATION
Efficient storage of hot water for heating purpose.
Suitable for low-ceilinged room.
MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
TECHNICAL DESCRIPTION
Used to improve flexibility and performance of pellets, stoves and burners. PUFFER COMPACT are used in units with a typically discontinuous energy source.
Suitable for low-ceilinged rooms.

INSULATION
NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

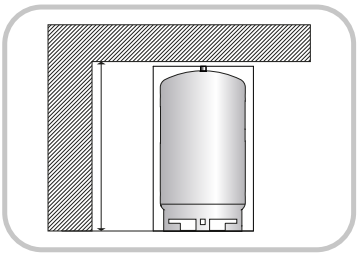
PROMPT AVAILABILITY



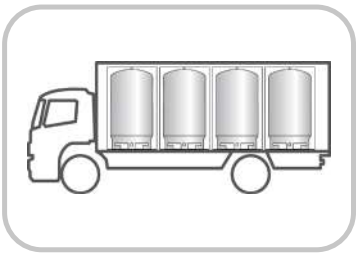


PUFFER COMPACT VC

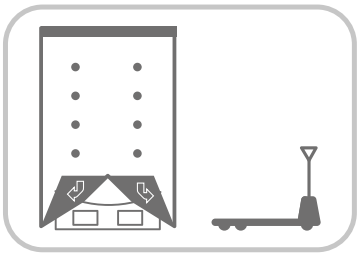
Model	DISMOUNTABLE SOFT FLEECE INSULATION
	Art. Nr.
2500	3251162280370
3000	3251162282658
4000	3251162282659
4500	3251162282660
5000	3251162282661
6000	3251162282662
8000	3251162282663



SUITABLE FOR LOW-CEILINGED ROOMS



EASY TO TRANSPORT



EASY TO MOVE

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box

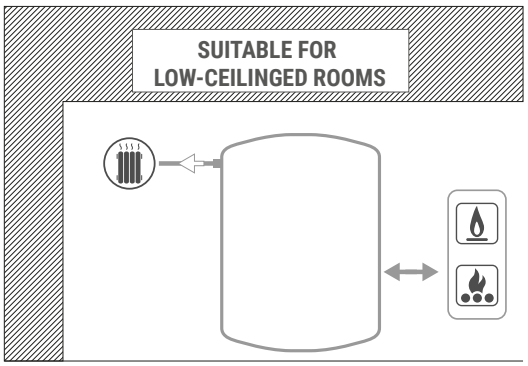


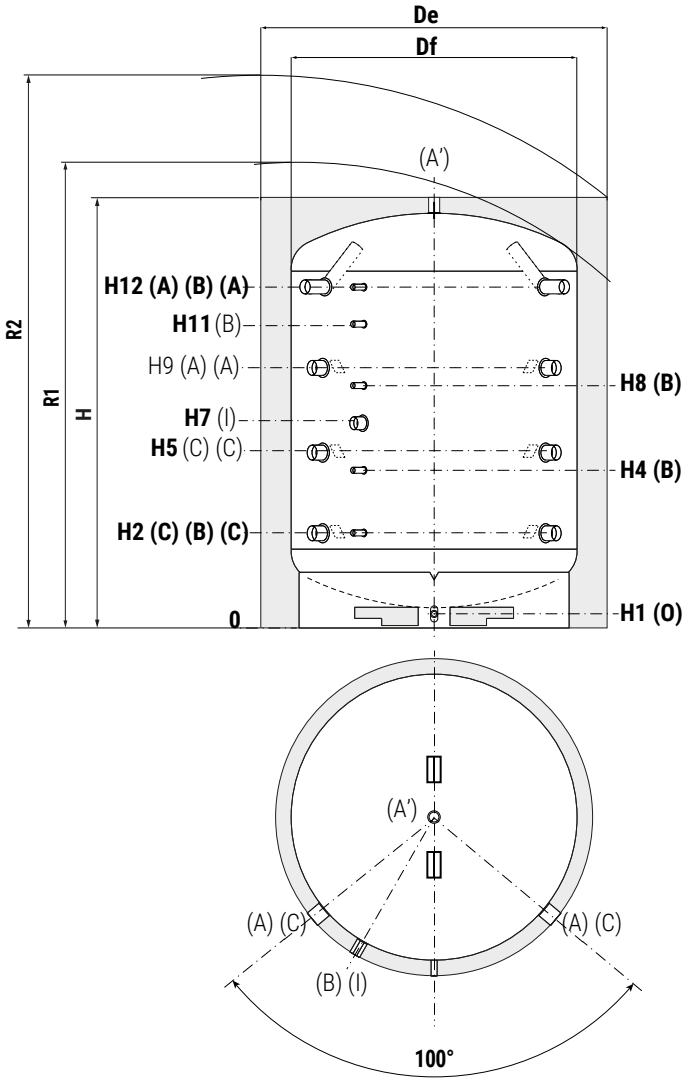
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PUFFER **COMPACT**

HEATING WATER BUFFER TANK SUITABLE FOR LOW-CEILINGED ROOMS

STORAGE	
Pmax	Tmax
3 bar	99 °C





A'	Heating delivery
A	Heating delivery/From generator
B	Connection for instrumentation 1/2" G F
C	Heating return/to generator
I	Connection for electric immersion heater
O	Drain

Model	Volume	Df	De	H	R1	R2	H1	H2	H4
	[lt]	[mm]							
2500	2306	1250	1450	2351	2465	2770	140	556	886
3000	3017	1500	1700	2180	2372	2770	109,5	567	841
4000	3986	1600	1800	2456	2643	3050	94,5	574	910
4500	4411	1800	2000	2230	2565	3000	90	582	856
5000	5042	1800	2000	2480	2758	3190	90	583	919
6000	5672	1800	2000	2730	2960	3390	90	605	1005
8000	7564	1800	2000	3480	3650	4020	90	606	1066

Model	H5	H7	H8	H9	H11	H12	A - C	A' - I	O
	[mm]						Connections F		
2500	996	1051	1216	1436	1546	1876	1"1/2	1"1/2	-
3000	932	1252	1115	1297	1389	1662	2"	2"	1"
4000	1022	1414	1246	1470	1582	1918	2"	2"	1"
4500	947	1267	1130	1312	1404	1677	2"	2"	1"
5000	1031	1423	1255	1479	1591	1927	2"	2"	1"
6000	1114	1295	1535	1646	1922	2155	3"	2"	1"
8000	1372	1526	1986	2138	2446	2904	3"	2"	1"

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PUFFER **FLANGED CONNECTIONS**

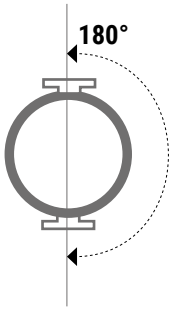
HEATING WATER BUFFER TANKS WITH 90° AND 180° FLANGED CONNECTIONS



APPLICATION
Efficient storage of hot water for heating purpose.
MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
TECHNICAL DESCRIPTION
Used to improve flexibility and performance of pellets, stoves and burners. PUFFER FLANGED are used in units with a typically discontinuous energy source.
PUFFER FLANGED have been conceived for medium/large biomass heating plants where flanged connections are required.
PUFFER FLANGED have reduced height for maximum installation flexibility.

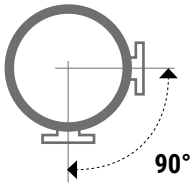
INSULATION
NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.





PUFFER FLANGIATI VC (180°)

Model	DISMOUNTABLE SOFT FLEECE INSULATION
	Art. Nr.
2500	3251162282680
3000	3251162282681
4000	3251162282682
4500	3251162282683
5000	3251162282684
6000	3251162282685
8000	3251162282686
10000	3251162282620
12000	3251162282621
20000	3251162282697



PUFFER FLANGIATI VC (90°)

Model	DISMOUNTABLE SOFT FLEECE INSULATION
	Art. Nr.
2500	3251162282690
3000	3251162282691
4000	3251162282692
4500	3251162282693
5000	3251162282694
6000	3251162282695
8000	3251162282696
10000	3251162282622
12000	3251162282623
20000	3251162282698

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

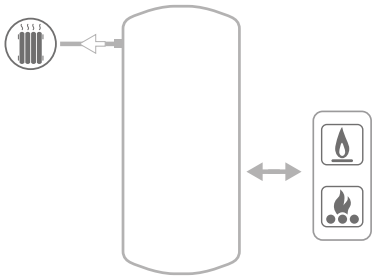


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PUFFER **FLANGED CONNECTIONS**

HEATING WATER BUFFER TANKS WITH 90° AND 180° FLANGED CONNECTIONS

STORAGE	
Pmax	Tmax
3 bar	99 °C



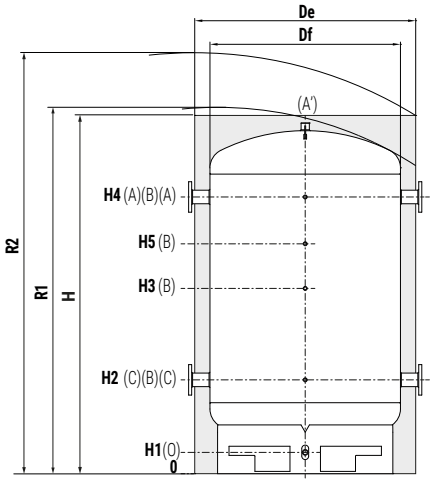


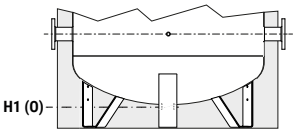
A'	Heating delivery
A	Heating delivery/From generator
B	Connection for instrumentation 1/2" G F
C	Heating return/to generator
O	Drain



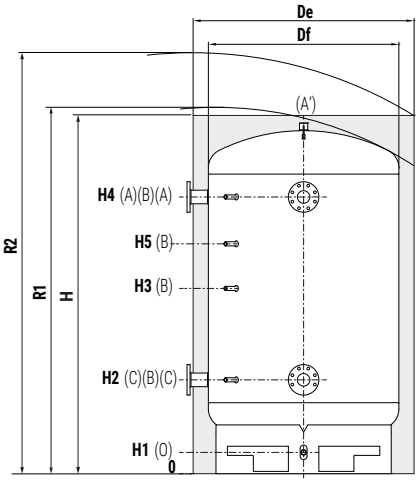
180° FLANGED CONNECTIONS

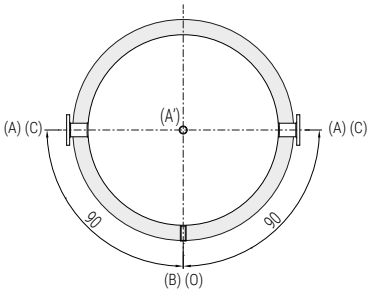
90° FLANGED CONNECTIONS

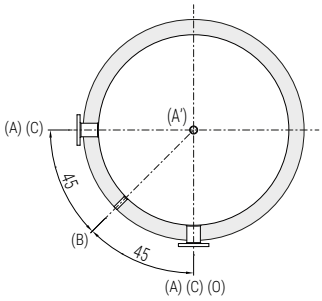




Standard supporting feet for models 10000 - 12000







Model	Volume	Df	De	H	R1	R2	H1	H2	H3	H4	H5	A - C	A'	O
	[lt]	[mm]										Connections F		
2500	2304	1250	1450	2351	2460	2770	140	616	1216	1816	//	PN16 DN80	1"1/2	1"
3000	3018	1500	1700	2180	2375	2770	109	640	1115	1590	//	PN16 DN80	2"	1"
4000	3987	1600	1800	2456	2655	3050	95	646	1246	1846	//	PN16 DN80	2"	1"
4500	4412	1800	2000	2230	2560	3000	89	655	1130	1605	//	PN16 DN80	2"	1"
5000	5042	1800	2000	2480	2755	3190	89	675	1255	1835	//	PN16 DN100	2"	1"
6000	5673	1800	2000	2730	2985	3390	89	675	1380	2085	//	PN16 DN100	2"	1"
8000	7564	1800	2000	3480	3665	4020	89	675	1705	2835	//	PN16 DN100	2"	1"
10000	10455	2000	2200	3916	4050	4500	191	826	1636	3256	2446	PN16 DN100	2"	2"
12000	12010	2000	2200	4461	4580	4980	191	826	1803	3756	2779	PN16 DN100	2"	2"
20000	19984	2400	2600	5060	5240	5695	140	840	1990	3140	4290	PN16 DN100	2"	2"

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PUFFER 1

HEATING WATER BUFFER TANK WITH 1 FIXED HEAT EXCHANGER



APPLICATION
Efficient storage of hot water for heating purpose.
MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
HEAT EXCHANGER
N° 1 mild steel fixed heat exchanger.
TECHNICAL DESCRIPTION
Used to improve flexibility and performance of pellets, stoves and burners. PUFFER 1 are used in units with a typically discontinuous energy source.
PUFFER 1 allows the solar energy system integration.

INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

PROMPT AVAILABILITY



PUFFER 1 VB

Model	HARD FOAM INSULATION	HEAT EXCHANGER SURFACE	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]	
300	3251162312201	1,0	**B**
500	3251162312202	1,9	**C**
600	3251162312203	2,1	**C**
750	3251162312214	2,3	**B**
800	3251162312215	2,5	**B**
1000	3251162312216	3,1	**C**
1250	3251162312207	3,4	**B**
1500	3251162312208	3,8	**C**
2000	3251162312209	4,6	**B**

PUFFER 1 VB

Model	DISMOUNTABLE HARD FOAM INSULATION	HEAT EXCHANGER SURFACE	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]	
750	3251162312204	2,3	**B**
800	3251162312205	2,5	**B**
1000	3251162312206	3,1	**C**

PUFFER 1 VC

Model	DISMOUNTABLE SOFT FLEECE INSULATION	HEAT EXCHANGER SURFACE	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]	
750	3251162282814	2,3	**C**
800	3251162282815	2,5	**C**
1000	3251162282816	3,1	**C**
1500	3251162282817	3,8	**C**
2000	3251162282818	4,6	**C**
3000	3251162282308	6,2	
5000	3251162282309	7,5	

ACCESSORIES

Electric immersion heaters



Available kit:	
[Kw]	Tension [V]
from **1,5** to **3**	220 - MONOPHASE
from **4** to **12**	400 - THREEPHASE
See accessories	

Thermometer

Art. Nr.
5032240000107
5 units box



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

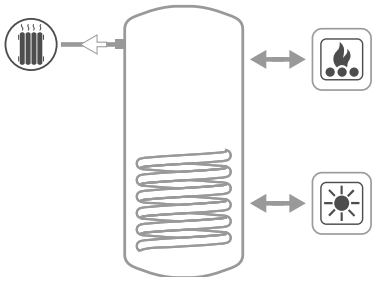


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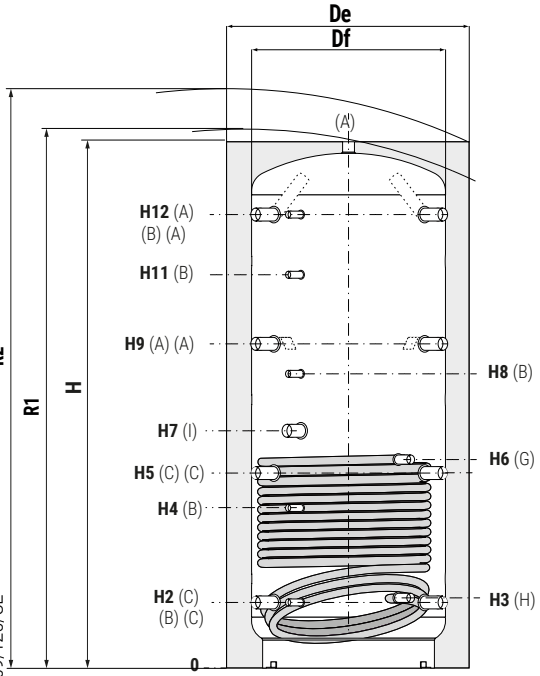
PUFFER **1**

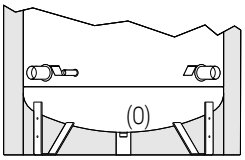
HEATING WATER BUFFER TANK WITH 1 FIXED HEAT EXCHANGER

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	12 bar	110 °C

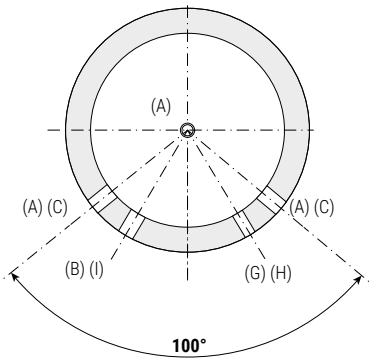


See TECHNICAL SUPPORT chapter for example of installation





Standard supporting feet for models 3000 and 5000. Drain welded on the bottom.



A	Heating delivery/From generator
B	Connection for instrumentation 1/2" G F
C	Heating return/to generator
I	Connection for electric immersion heater
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
O	Drain only for models 3000 and 5000

Model	Volume	Df (vers. VC)	De (vers. VC)	De (vers. VB)	H	R1	R2	H2	H3	H4
	[lt]	[mm]								
300	279	//	//	650	1340	//	1495	232	217	444
500	478	//	//	750	1645	//	1815	259	272	545
600	560	//	//	750	1870	//	2020	247	260	582
750	717	790	1010	950	1658	1665	1915	265	278	584
800	805	790	1010	950	1840	1845	2075	265	278	584
1000	946	790	1010	950	2130	2135	2340	265	284	656
1250	1248	//	//	1050	2201	//	2445	313	326	705
1500	1454	950	1210	1100	2250	2255	2510	313	336	736
2000	1973	1100	1360	1300	2320	2325	2665	347	370	770
3000	2915	1250	1450	//	2814	2820	3170	556	569	1017
5000	4985	1600	1800	//	2929	2935	3445	586	609	1047

Model	H5	H6	H7	H8	H9	H11	H12	A - C - I	O
	[mm]							Connections F	
300	514	514	590	725	796	885	1078	1"1/2	//
500	641	756	853	950	1023	1243	1355	1"1/2	//
600	695	855	915	1060	1144	1382	1593	1"1/2	//
750	630	679	823	938	995	1180	1371	1"1/2	//
800	690	762	823	988	1115	1332	1541	1"1/2	//
1000	787	953	998	1188	1309	1588	1831	1"1/2	//
1250	835	884	986	1168	1357	1568	1879	1"1/2	//
1500	845	1006	1061	1286	1377	1653	1909	1"1/2	//
2000	879	1001	1060	1300	1411	1687	1943	1"1/2	//
3000	1071	1551	1693	1879	1786	2140	2402	2"	1"
5000	1101	1522	1691	1889	1816	2159	2432	2"	2"

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PUFFER **2**

HEATING WATER BUFFER TANK WITH 2 FIXED HEAT EXCHANGERS



APPLICATION
Efficient storage of hot water for heating purpose.
MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
HEAT EXCHANGERS
N° 2 mild steel fixed heat exchangers.
TECHNICAL DESCRIPTION
Used to improve flexibility and performance of pellets, stoves and burners. PUFFER 1 are used in units with a typically discontinuous energy source.
PUFFER 2 allows the solar energy system integration as well as another heat source.

INSULATION
- ***HARD:*** High thermal insulation with ecological polyurethane hard foam.
- ***SOFT:*** NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.
Grey PVC external lining.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.





PUFFER 2 VB

Model	**HARD FOAM** INSULATION	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
500	3251162312703	1,3	1,9	**C**
600	3251162312704	1,3	2,1	**C**
750	3251162312715	1,5	2,3	**B**
800	3251162312716	1,8	2,5	**B**
1000	3251162312717	2,5	3,1	**C**
1500	3251162312709	2,8	3,8	**C**
2000	3251162312710	2,8	4,6	**B**



PUFFER 2 VB

Model	**DISMOUNTABLE HARD FOAM** INSULATION	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
750	3251162312705	1,5	2,3	**B**
800	3251162312706	1,8	2,5	**B**
1000	3251162312707	2,5	3,1	**C**



PUFFER 2 VC

Model	**DISMOUNTABLE SOFT FLEECE** INSULATION	HEAT EXCHANGER SURFACE Upper	Lower	ENERGY EFFICIENCY CLASS
	Art. Nr.	[m²]		
750	3251162282824	1,5	2,3	**C**
800	3251162282825	1,8	2,5	**C**
1000	3251162282826	2,5	3,1	**C**
1500	3251162282827	2,8	3,8	**C**
2000	3251162282828	2,8	4,6	**C**

ACCESSORIES

Electric immersion heaters



Available kit:	
[Kw]	Tension [V]
from **1,5** to **3**	220 - MONOPHASE
from **4** to **12**	400 - THREEPHASE
See accessories	

Thermometer

Art. Nr.
5032240000107
5 units box



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

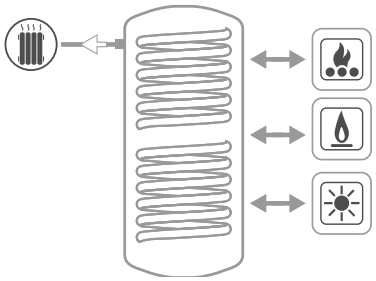


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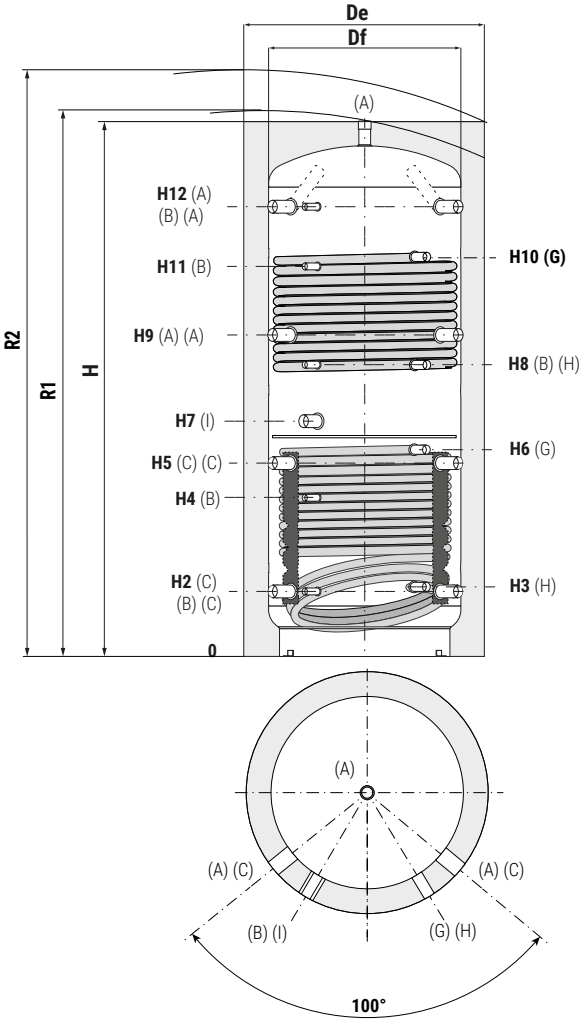
PUFFER **2**

HEATING WATER BUFFER TANK WITH 2 FIXED HEAT EXCHANGERS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	12 bar	110 °C



See TECHNICAL SUPPORT chapter for example of installation



A	Heating delivery/From generator
B	Connection for instrumentation 1/2" G F
C	Heating return/to generator
I	Connection for electric immersion heater
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F

Model	Volume	Df (vers. VC)	De (vers. VC)	De (vers. VB)	H	R1	R2	H2	H3
	[lt]	[mm]		[mm]					
500	478	//	//	750	1620	//	1790	247	260
600	560	//	//	750	1870	//	2020	247	260
750	717	790	1010	950	1658	1710	1915	265	278
800	805	790	1010	950	1840	1890	2075	265	278
1000	946	790	1010	950	2130	2175	2340	265	284
1500	1435	950	1210	1100	2250	2305	2510	313	336
2000	1973	1100	1360	1300	2320	2390	2665	347	370

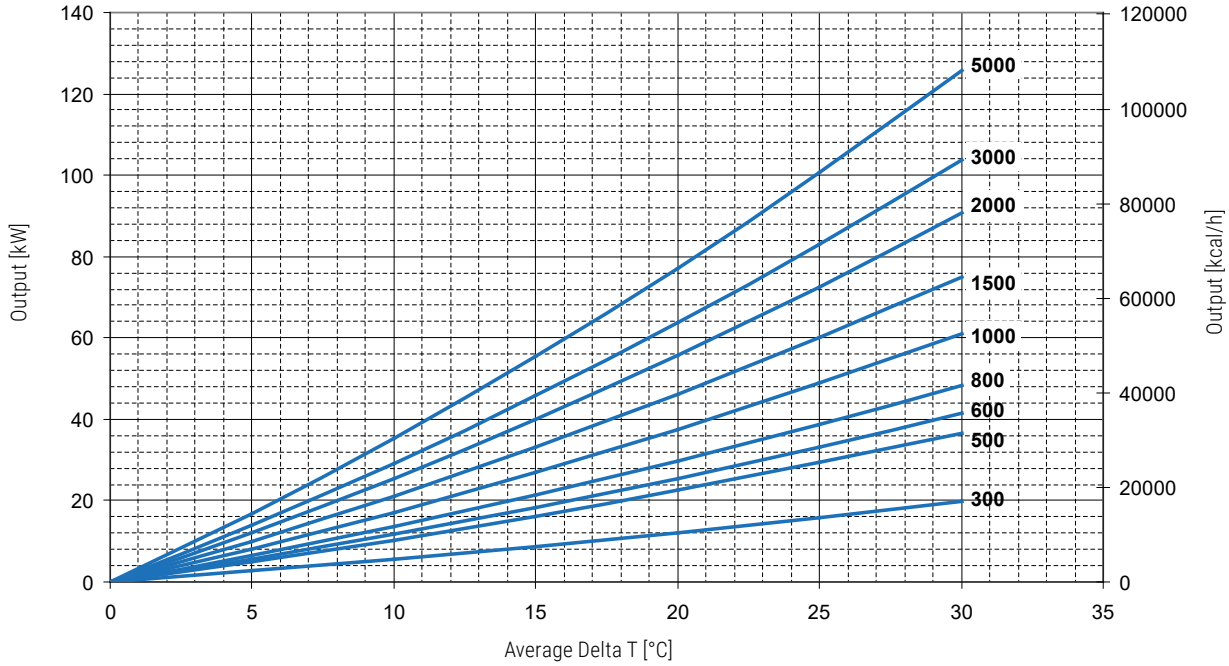
Model	H4	H5	H6	H7	H8	H9	H10	H11	H12	A - C - I
	[mm]									Connections F
500	533	629	745	841	930	1011	1231	1231	1343	1"1/2
600	582	695	855	915	1060	1144	1361	1382	1593	1"1/2
750	584	630	679	823	938	995	1196	1180	1371	1"1/2
800	584	690	762	823	988	1115	1332	1332	1541	1"1/2
1000	656	787	953	998	1188	1309	1661	1588	1831	1"1/2
1500	736	845	1006	1061	1286	1377	1672	1653	1909	1"1/2
2000	770	879	1001	1060	1300	1411	1687	1687	1943	1"1/2

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PUFFER **1**

LOWER HEAT EXCHANGER POWER

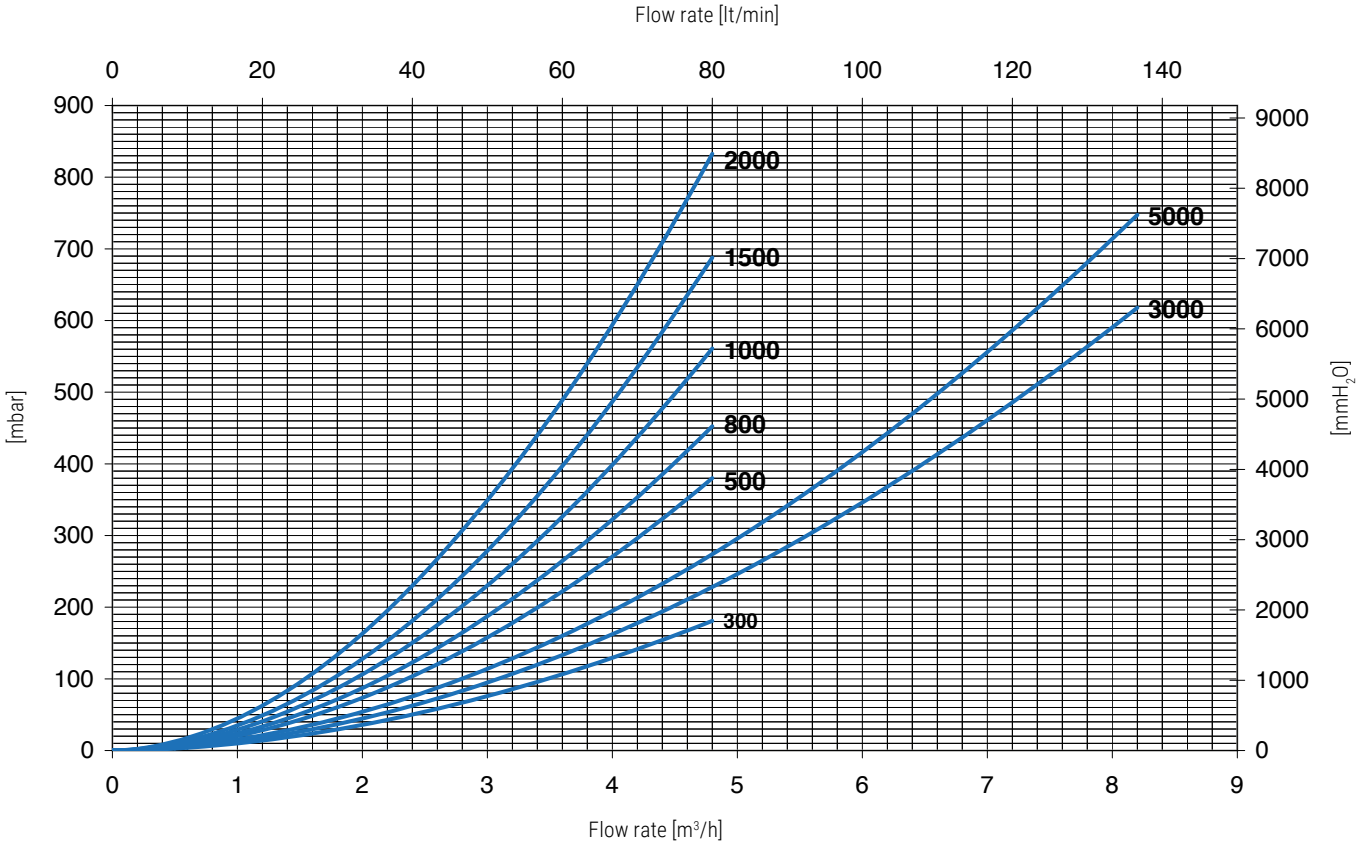




Thermal output is given in both kW or kcal/h in terms of average temperature difference between primary and secondary circuit, all for a range of primary 3 m^3/h.
For example, a PUFFER 1 T of 1000 liters capacity with a water flow of 3 m^3/h at 80 °C inlet and outlet at 70 °C, has on the storage of water an average temperature of 60 °C, the main difference of temperature will be:
(80 +70) / 20-60 = 15 °C and therefore you can exchange up to approximately 34 kW.

Output of the lower heat exchangers PUFFER 1 depending on the average DeltaT between primary and accumulation considering flow rate 3 m^3/h.

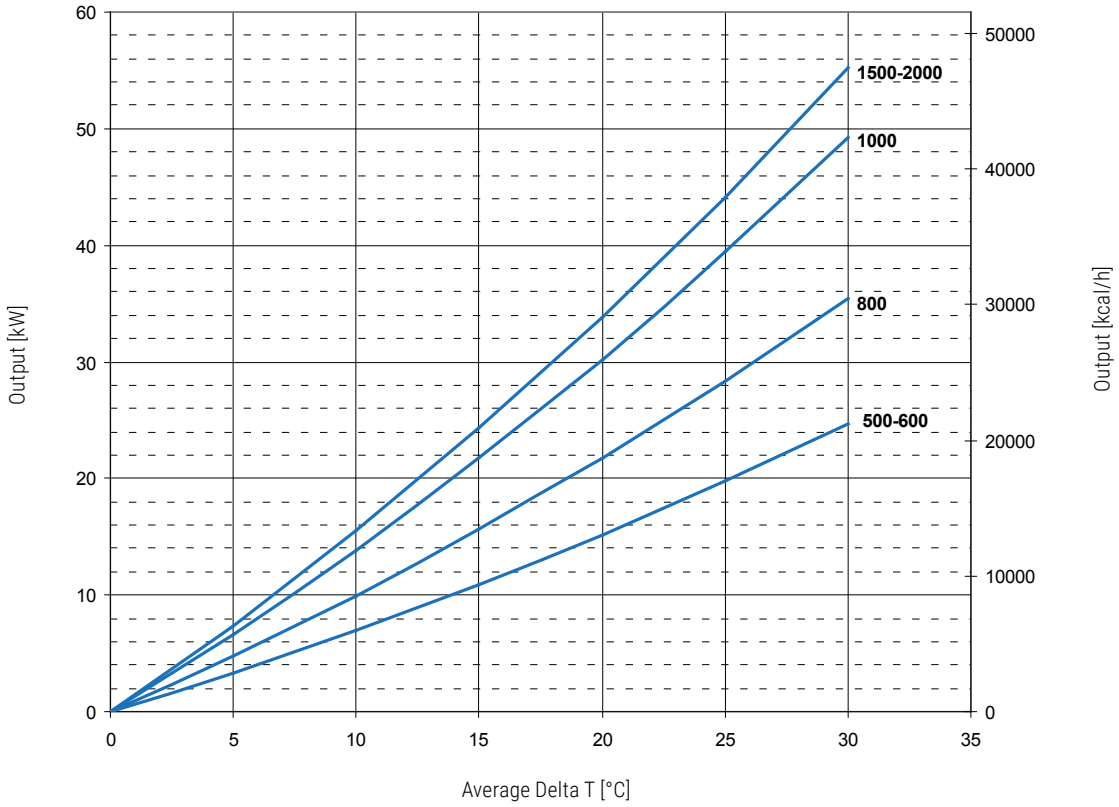
LOWER HEAT EXCHANGER PRESSURE DROP



PUFFER **2**

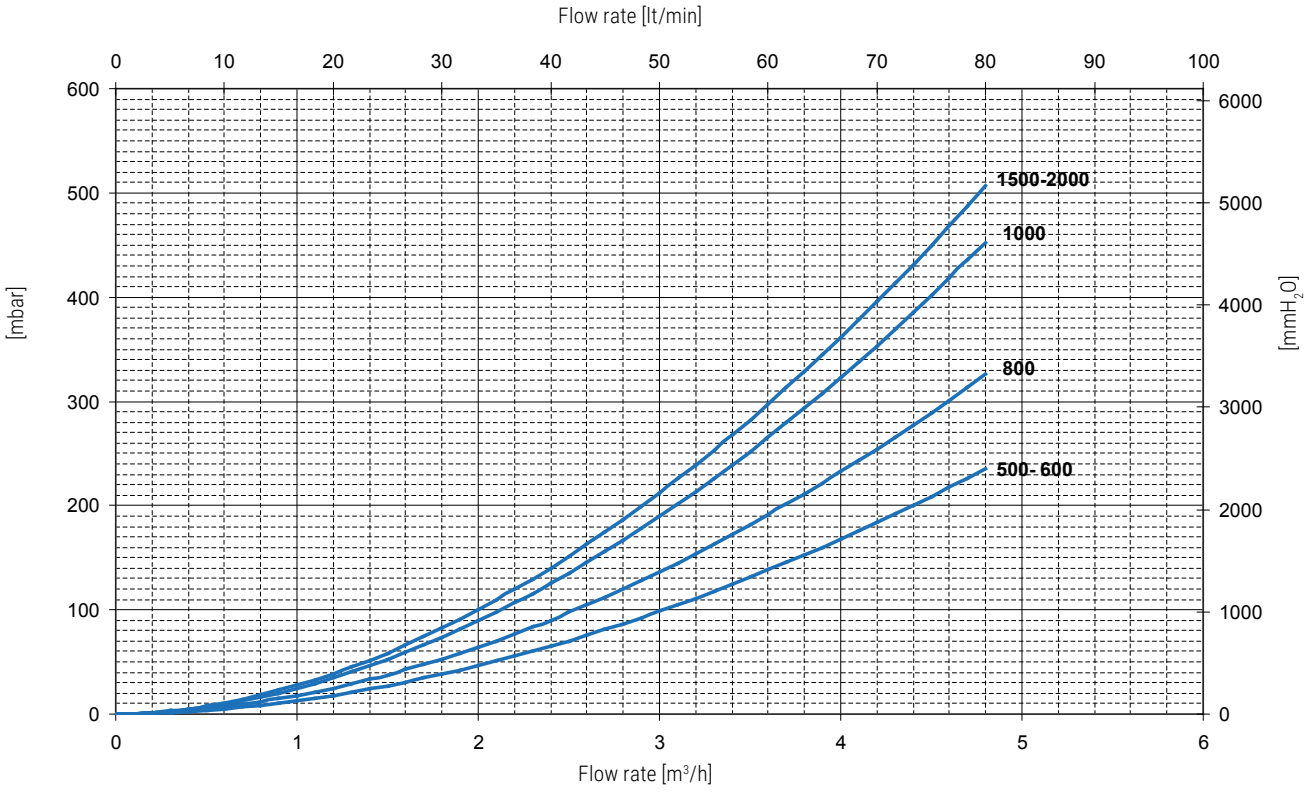
UPPER HEAT EXCHANGER POWER





Output of the upper heat exchangers PUFFER 2 depending on the average DeltaT between primary and accumulation considering flow rate 3 m^3/h.

UPPER HEAT EXCHANGER PRESSURE DROP



For lower exchanger power data see PUFFER 1

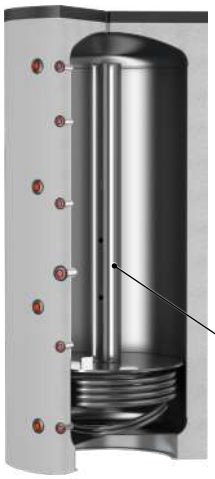
PUFFER **1 CTS®**

STORAGE BUFFER TANKS FOR HEATING WATER WITH STRATIFICATION DEVICE AND 1 FIXED HEAT EXCHANGER

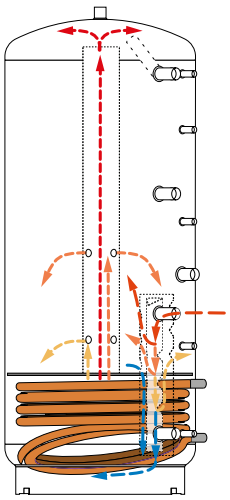


APPLICATION
Efficient storage of hot water for heating purpose.
MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
HEAT EXCHANGER
N° 1 mild steel fixed heat exchanger and CTS® stratificator system, suitable for solar thermal systems.
TECHNICAL DESCRIPTION
Used to improve flexibility of pellets, stoves and burners. PUFFER 1 CTS® are used in units with a typically discontinuous energy source such as biomass boiler and solar thermal systems.
PUFFER 1 CTS® is characterized by multiple stratification system based on the combination of Cordivari Labyrinth spreader for returning heating water with a new stratification device that conveys in the upper part of the tank the heated water up by the lower fixed exchanger. This combination ensures a perfect natural stratification inside the tank with no valve or additional external device.
The lower fixed exchanger can be connected with a solar system. Positioned at the bottom lower part of the buffer tank and with very small footprint, it increases the volume available for the storage.

INSULATION
High thermal insulation with ecological hard polyurethane foam.
Dismountable hard foam insulation available for 800-1000.
Grey PVC external lining.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.



CTS® stratificator system



PUFFER 1 CTS® VB

Model	**HARD FOAM** INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
500	3251162313002	1,9	C
600	3251162313003	2,1	C
800	3251162313014	2,5	B
1000	3251162313015	3,1	C
1500	3251162313006	3,8	C
2000	3251162313007	4,6	B

PUFFER 1 CTS® VB

Model	**DISMOUNTABLE HARD FOAM** INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
800	3251162313004	2,5	B
1000	3251162313005	3,1	C

SUITABLE FOR SOLAR THERMAL SYSTEMS

THE ILLUSTRATION UNDERLINES THE STRATIFICATION PROCESS (FROM TOP TO BOTTOM) THAT ALLOWS TO HAVE ALL NEEDED ENERGY RAPIDLY AVAILABLE

ACCESSORIES

Electric immersion heaters



Available kit:	
[Kw]	Tension [V]
from **1,5** to **3**	220 - MONOPHASE
from **4** to **12**	400 - THREEPHASE
See accessories	

Thermometer

Art. Nr.
5032240000107
5 units box



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

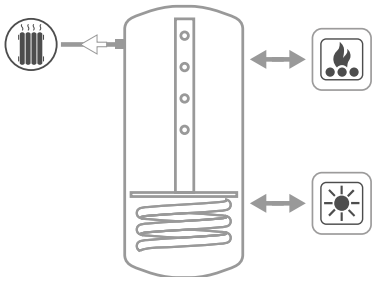


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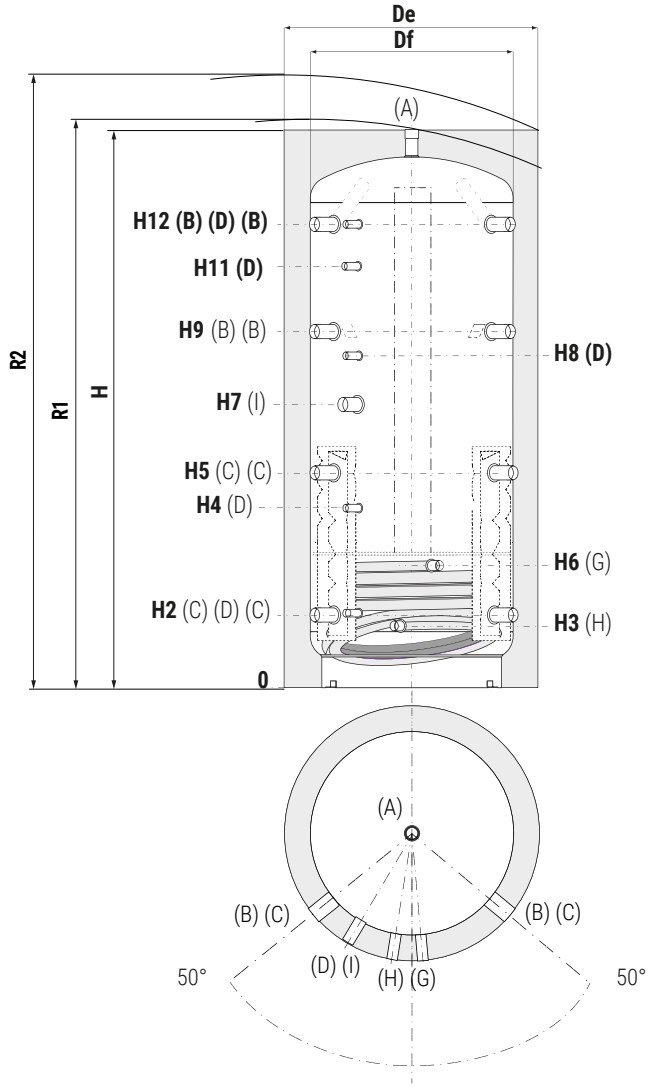
PUFFER **1 CTS®**

STORAGE BUFFER TANKS FOR HEATING WATER WITH STRATIFICATION DEVICE AND 1 FIXED HEAT EXCHANGER

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	12 bar	110 °C



See TECHNICAL SUPPORT chapter for example of installation



A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Heating delivery/From generator 1"1/2 G F
C	Heating return/to generator 1"1/2 G F
D	Probe 1/2" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F

Model	Volume	De	Df	H	R1	R2	H2	H3	H4	H5	H7	H8	H9	H11	H12
	[lt]	[mm]													
500	478	750	//	1620	//	1790	247	215	533	629	841	940	1011	1231	1343
600	560	750	//	1870	//	2020	247	215	582	695	915	1060	1144	1382	1593
800	805	950	790	1840	1890	2075	265	233	584	690	823	988	1115	1332	1541
1000	946	950	790	2130	2175	2340	265	233	656	787	998	1188	1309	1588	1831
1500	1435	1100	//	2250	//	2510	313	281	736	845	1061	1286	1377	1653	1909
2000	1973	1300	//	2320	//	2665	347	315	770	879	1060	1300	1411	1687	1943

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BUFFER AND COMBINED TANKS



BUFFERS AND COMBINED TANKS RANGE



DHW production



Heating





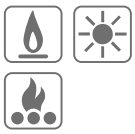


	COMBI	ECO-COMBI	ECO-COMBI "DOMUS"
Heat exchanger model	-Fixed coil heat exchanger - DHW storage material: Stainless steel 316L / Polywarm®	- Fixed coil heat exchanger - Corrugated Stainless steel 316L coil for DHW Production	- Fixed coil heat exchanger - Corrugated Stainless steel 316L coil for DHW Production
Number of heat exchangers			
Energy source			
Energy efficiency class	**B-C**	**B-C**	**B-C**
Insulation	- Polyurethane hard foam - Dismountable polyester fleece	- Polyurethane hard foam - Dismountable polyester fleece	Polyurethane hard foam
Available range	500 ÷ 2000	500 ÷ 2000	200 - 300
Installation	floor standing	floor standing	floor standing
Suggested Application	Biomass with possible integration with other source	Biomass with possible integration with other source	Biomass with possible integration with other source







PUFFERMAS®	PUFFERMAS® CTS	PUFFERMAS® CTS POWER
- MACS® module for DHW production	- Patented stratification module - MACS® module for DHW production	- Patented stratification module - MACS® module for DHW production - Integrated solar station
		
		
C	**C**	**C**
Polyurethane hard foam	Polyurethane hard foam	Polyurethane hard foam
500 ÷ 1500	500 ÷ 1500	500 ÷ 1500
floor standing	floor standing	floor standing
Biomass with possible integration with other source	Ideal for installations combining biomass and solar installations with possible integration with other source	Ideal for installations combining biomass and solar installations with possible integration with other source

COMBI **1**

MULTI-HEAT ENERGY BUFFER WITH POLYWARM® COATED TANK IN TANK CALORIFIER FOR D.H.W.



APPLICATION
Heating hot water storage and D.H.W. production.
MATERIAL
Buffer tank: Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
D.H.W. storage: Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
TECHNICAL DESCRIPTION
Multi-Heat Energy tanks COMBI 1 are used in units with a typically discontinuous energy source for double use: heating systems and domestic hot water systems.

INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.Grey PVC external lining.
CATHODE PROTECTION
Chain magnesium anode
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

PROMPT AVAILABILITY



COMBI 1 WB

Model	HARD FOAM **INSULATION** Art. Nr.	D.H.W. Storage Volume [lt]	D.H.W. Storage Surface [m²]	Energy efficiency class (ErP)
500	3270162314001	99	1,1	C
600	3270162314002	146	1,3	C
800	3270162314003	191	1,6	B
1000	3270162314004	226	1,8	C
1500	3270162314005	412	2,5	C
2000	3270162314006	566	3,1	B

COMBI 1 WC

Model	**DISMOUNTABLE SOFT FLEECE** INSULATION Art. Nr.	D.H.W. Storage Volume [lt]	D.H.W. Storage Surface [m²]	Energy efficiency class (ErP)
800	3270162284012	191	1,6	C
1000	3270162284013	226	1,8	C
1500	3270162284014	412	2,5	C
2000	3270162284015	566	3,1	C

AVAILABLE IN STAINLESS STEEL 316L MODELS
SEE STAINLESS STEEL CHAPTER

ACCESSORIES

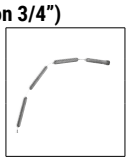
Thermometer

Art. Nr.
5032240000107
5 units box



Chain magnesium anode (Connection 3/4")

Art. Nr.	For models
5200000041007	800÷2000
5200000041016	500,600
N° 2 chain anodes + insulated cap + gasket	



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

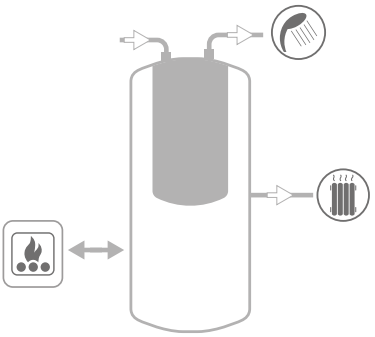


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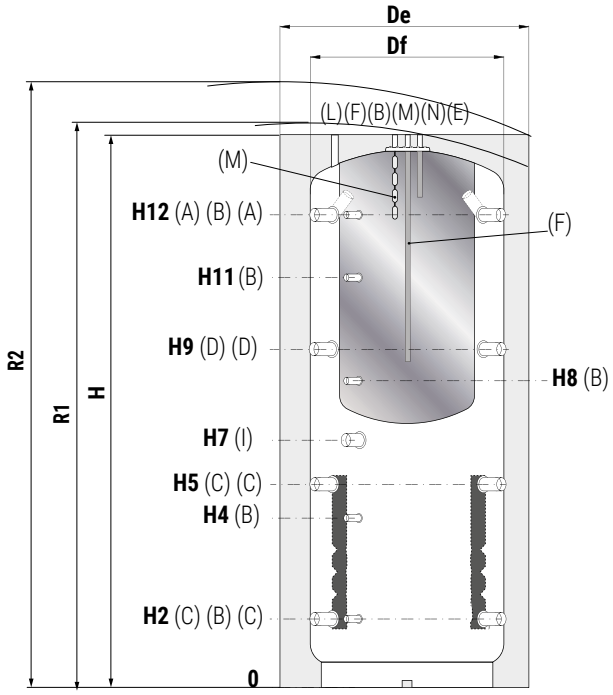
COMBI **1**

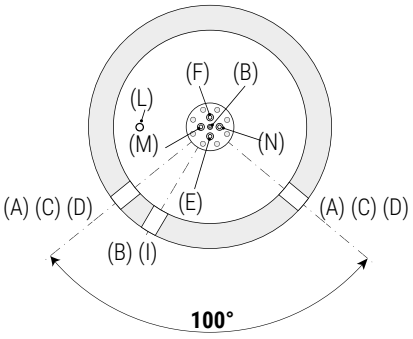
MULTI-HEAT ENERGY BUFFER WITH POLYWARM® COATED TANK IN TANK CALORIFIER FOR D.H.W.

TECHNICAL STORAGE		D.H.W. STORAGE	
Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	6 bar	90 °C



See TECHNICAL SUPPORT chapter for example of installation





A	Heating delivery/From generator 1"1/2 G F
B	Connection for instrumentation 1/2" G F
C	Heating return/to generator 1"1/2 G F
D	Heating delivery 1"1/2 G F
E	Domestic hot water outlet 3/4" G F
F	Domestic cold water circuit inlet 3/4" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Air purge 1/2" G F
M	Connection for magnesium anode 3/4" G F
N	Recirculation 3/4" G F



COMBI 1 WB - HARD FOAM INSULATION

Model	Volume	Df	De	H	R1	R2	H2	H4	H5	H7	H8	H9	H11	H12
	[lt]							[mm]						
500	478	//	750	1670	//	1835	247	533	629	841	940	1011	1231	1343
600	560	//	750	1920	//	2070	247	582	695	915	1060	1144	1382	1593
800	805	790	950	1855	1900	2120	265	584	690	823	988	1115	1332	1541
1000	946	790	950	2150	2180	2380	265	656	787	998	1188	1309	1588	1831
1500	1454	//	1100	2280	//	2590	313	736	845	1061	1286	1377	1653	1909
2000	1973	//	1300	2345	//	2715	347	770	879	1060	1300	1411	1687	1943

COMBI 1 WC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	Df	De	H	R1	R2	H2	H4	H5	H7	H8	H9	H11	H12
	[lt]							[mm]						
800	805	790	1010	1855	1900	2090	265	584	690	823	988	1115	1332	1541
1000	946	790	1010	2150	2180	2355	265	656	787	998	1188	1309	1588	1831
1500	1454	950	1210	2280	2315	2540	313	736	845	1061	1286	1377	1653	1909
2000	1973	1100	1360	2345	2400	2690	347	770	879	1060	1300	1411	1687	1943

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

COMBI **2**

MULTI-HEAT ENERGY BUFFER WITH POLYWARM® COATED TANK IN TANK CALORIFIER FOR D.H.W. AND 1 FIXED HEAT EXCHANGER



APPLICATION
Heating hot water storage and D.H.W. production.
MATERIAL
Buffer tank: Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
D.H.W. storage: Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGER:
Nr. 1 fixed heat exchanger.
TECHNICAL DESCRIPTION
Multi-Heat Energy tanks Combi 2 are used in units with a typically discontinuous energy source for double use: heating systems and domestic hot water systems.

INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam. Models 800-1000 available with dismountable hard foam insulation.
- SOFT (Dismountable): NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.

Grey PVC external lining, complete with top and flange cover.
CATHODE PROTECTION
Chain magnesium anode
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

PROMPT AVAILABILITY



COMBI 2 WB

Model	HARD FOAM **INSULATION**	D.H.W. Storage Volume	D.H.W. Storage Surface	Fixed heat exchanger Volume	Fixed heat exchanger Surface	Energy efficiency class
	Art. Nr.	[lt]	[m²]	[lt]	[m²]	
500	3270162314101	99	1,1	11,5	1,9	**C**
600	3270162314102	146	1,3	18	2,8	**C**
800	3270162314103	191	1,6	20	3,1	**B**
1000	3270162314104	226	1,8	24	3,7	**C**
1500	3270162314105	412	2,5	32	4,9	**C**
2000	3270162314106	566	3,1	35	5,4	**B**

COMBI 2 WC

Model	**DISMOUNTABLE SOFT FLEECE** INSULATION	D.H.W. Storage Volume	D.H.W. Storage Surface	Fixed heat exchanger Volume	Fixed heat exchanger Surface	Energy efficiency class
	Art. Nr.	[lt]	[m²]	[lt]	[m²]	
800	3270162284112	191	1,6	20	3,1	**C**
1000	3270162284113	226	1,8	24	3,7	**C**
1500	3270162284114	412	2,5	32	4,9	**C**
2000	3270162284115	566	3,1	35	5,4	**C**

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Chain magnesium anode (Connection 3/4")

Art. Nr.	For models
5200000041007	800÷2000
5200000041016	500,600
N° 2 chain anodes + insulated cap + gasket	



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

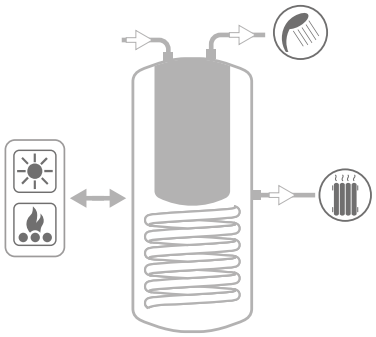


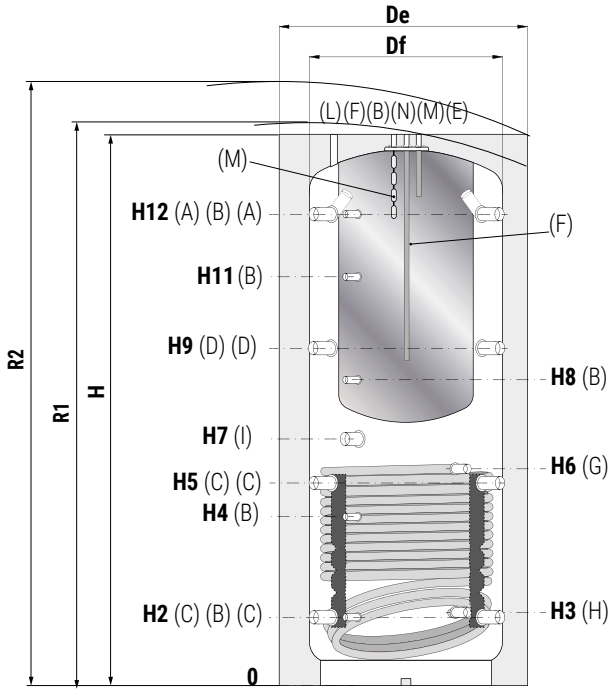
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

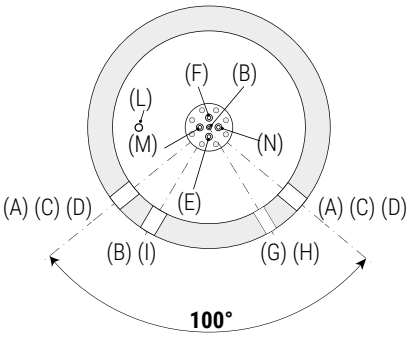
COMBI **2**

MULTI-HEAT ENERGY BUFFER
WITH POLYWARM® COATED TANK IN TANK CALORIFIER FOR D.H.W. AND 1 FIXED HEAT EXCHANGER

TECHNICAL STORAGE		D.H.W. STORAGE		FIXED HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	6 bar	90 °C	12 bar	110 °C







A	Heating delivery/From generator 1"1/2 G F
B	Connection for instrumentation 1/2" G F
C	Heating return/to generator 1"1/2 G F
D	Heating delivery 1"1/2 G F
E	Domestic hot water outlet 3/4" G F
F	Domestic cold water circuit inlet 3/4" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Air purge 1/2" G F
M	Connection for magnesium anode 3/4" G F
N	Recirculation 3/4" G F



COMBI 2 WB - HARD FOAM INSULATION

Model	Volume	Df	De	H	R1	R2	H2	H3	H4	H5	H6	H7	H8	H9	H11	H12
	[lt]								[mm]							
500	478	//	750	1670	//	1835	247	260	533	629	744	841	940	1011	1231	1343
600	560	//	750	1920	//	2070	247	260	582	695	855	915	1060	1144	1382	1593
800	805	790	950	1855	1900	2120	265	278	584	690	762	823	988	1115	1332	1541
1000	946	790	950	2150	2180	2380	265	284	656	787	953	998	1188	1309	1588	1831
1500	1454	//	1100	2280	//	2590	313	336	736	845	1006	1061	1286	1377	1653	1909
2000	1973	//	1300	2345	//	2715	347	370	770	879	1001	1060	1300	1411	1687	1943

COMBI 2 WC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	Df	De	H	R1	R2	H2	H3	H4	H5	H6	H7	H8	H9	H11	H12
	[lt]								[mm]							
800	805	790	1010	1855	1900	2090	265	278	584	690	762	823	988	1115	1332	1541
1000	946	790	1010	2150	2180	2355	265	284	656	787	953	998	1188	1309	1588	1831
1500	1454	950	1210	2280	2315	2540	313	336	736	845	1006	1061	1286	1377	1653	1909
2000	1973	1100	1360	2345	2400	2690	347	370	770	879	1001	1060	1300	1411	1687	1943

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

COMBI **3**

MULTI-HEAT ENERGY BUFFER WITH POLYWARM® COATED TANK IN TANK CALORIFIER FOR D.H.W. AND 2 FIXED HEAT EXCHANGERS



APPLICATION
Heating hot water storage and D.H.W. production.
MATERIAL
Buffer tank: Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
D.H.W. storage: Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).
HEAT EXCHANGERS:
N° 2 mild steel fixed heat exchangers.
TECHNICAL DESCRIPTION
Multi-Heat Energy tanks Combi 3 are used in units with a typically discontinuous energy source for double use: heating systems and domestic hot water systems.

INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam. Models 800-1000 available with dismountable hard foam insulation.
- SOFT (Dismountable): NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.

Grey PVC external lining, complete with top and flange cover.
CATHODE PROTECTION
Chain magnesium anode
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

POLYWARM® COATED DHW STORAGE

PROMPT AVAILABILITY

COMBI 3 WB

Model	HARD FOAM **INSULATION**	D.H.W. Storage Volume	D.H.W. Storage Surface	Upper heat exchanger Volume	Upper heat exchanger Surface	Lower heat exchanger Volume	Lower heat exchanger Surface	Energy efficiency class
	Art. Nr.	[lt]	[m²]	[lt]	[m²]	[lt]	[m²]	ErP
500	3270162314201	99	1,1	8	1,3	11,5	1,9	C
600	3270162314202	146	1,3	12	1,9	18	2,8	C
800	3270162314203	191	1,6	16	2,4	20	3,1	B
1000	3270162314204	226	1,8	20	3,1	24	3,7	C
1500	3270162314205	412	2,5	23	3,5	32	4,9	C
2000	3270162314206	566	3,1	27	4,1	35	5,4	B



COMBI 3 WC

Model	**DISMOUNTABLE SOFT FLEECE** INSULATION	D.H.W. Storage Volume	D.H.W. Storage Surface	Upper heat exchanger Volume	Upper heat exchanger Surface	Lower heat exchanger Volume	Lower heat exchanger Surface	Energy efficiency class
	Art. Nr.	[lt]	[m²]	[lt]	[m²]	[lt]	[m²]	ErP
800	3270162284212	191	1,6	16	2,4	20	3,1	C
1000	3270162284213	226	1,8	20	3,1	24	3,7	C
1500	3270162284214	412	2,5	23	3,5	32	4,9	C
2000	3270162284215	566	3,1	27	4,1	35	5,4	C

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Chain magnesium anode (Connection 3/4")

Art. Nr.	For models
5200000041007	800÷2000
5200000041016	500,600
N° 2 chain anodes + insulated cap + gasket	



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

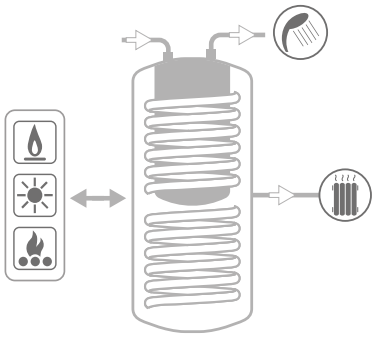


P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

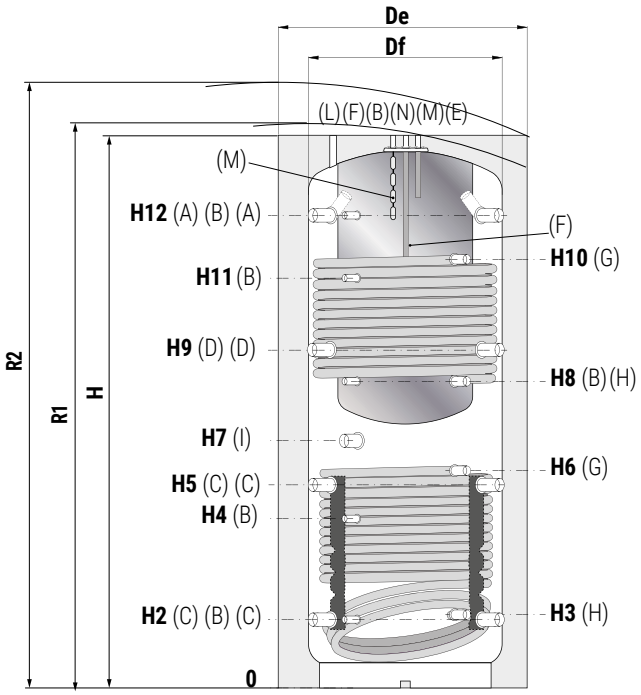
COMBI **3**

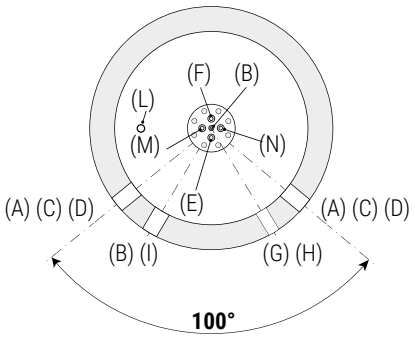
MULTI-HEAT ENERGY BUFFER
WITH POLYWARM® COATED TANK IN TANK CALORIFIER FOR D.H.W. AND 2 FIXED HEAT EXCHANGERS

TECHNICAL STORAGE		D.H.W. STORAGE		FIXED HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	6 bar	90 °C	12 bar	110 °C



See TECHNICAL SUPPORT chapter for example of installation





A	Heating delivery/From generator 1"1/2 G F
B	Connection for instrumentation 1/2" G F
C	Heating return/to generator 1"1/2 G F
D	Heating delivery 1"1/2 G F
E	Domestic hot water outlet 3/4" G F
F	Domestic cold water circuit inlet 3/4" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Air purge 1/2" G F
M	Connection for magnesium anode 3/4" G F
N	Recirculation 3/4" G F



COMBI 3 WB - HARD FOAM INSULATION

Model	Volume	Df	De	H	R1	R2	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
	[lt]	[mm]															
500	478	//	750	1670	//	1835	247	260	533	629	744	841	930	1011	1231	1231	1343
600	560	//	750	1920	//	2070	247	260	582	695	855	915	1060	1144	1500	1382	1593
800	805	790	950	1855	1900	2120	265	278	584	690	762	823	988	1115	1428	1332	1541
1000	946	790	950	2150	2180	2380	265	284	656	787	953	998	1188	1309	1748	1588	1831
1500	1454	//	1100	2280	//	2590	313	336	736	845	1006	1061	1286	1377	1805	1653	1909
2000	1973	//	1300	2345	//	2715	347	370	770	879	1001	1060	1300	1411	1820	1687	1943

COMBI 3 WC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	Df	De	H	R1	R2	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
	[lt]	[mm]															
800	805	790	1010	1855	1900	2090	265	278	584	690	762	823	988	1115	1428	1332	1541
1000	946	790	1010	2150	2180	2355	265	284	656	787	953	998	1188	1309	1748	1588	1831
1500	1454	950	1210	2280	2315	2540	313	336	736	845	1006	1061	1286	1377	1805	1653	1909
2000	1973	1100	1360	2345	2400	2690	347	370	770	879	1001	1060	1300	1411	1820	1687	1943

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

D.H.W. STORAGE PERFORMANCES

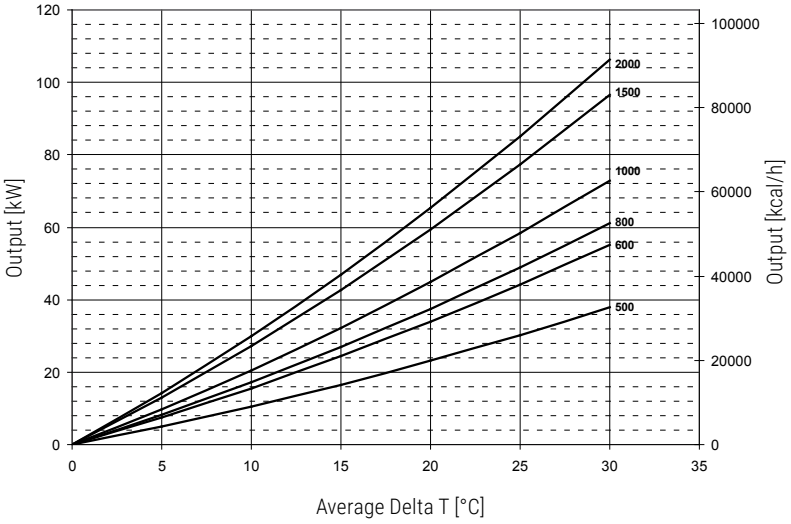


Model	DHW Volume	DHW exchanger surface	COMPLETE HEATED STORAGE VOLUME		UPPER PART HEATED STORAGE VOLUME	
			Max flowrate of sanitary water sustained from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off	Max flowrate of sanitary water sustained from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off
	[lt]	[m²]	[lt/min]	[lt]	[lt/min]	[lt]
500	99	1,1	2,5	10 lt/min: 198 lt 25 lt/min: 176 lt	1,57	10 lt/min: 148 lt 25 lt/min: 132 lt
600	146	1,3	3,0	10 lt/min: 239 lt 25 lt/min: 213 lt	1,86	10 lt/min: 179 lt 25 lt/min: 160 lt
800	191	1,6	3,5	10 lt/min: 320 lt 25 lt/min: 280 lt	2,17	10 lt/min: 240 lt 25 lt/min: 210 lt

LOWER HEAT EXCHANGER POWER COMBI 2 - COMBI 3

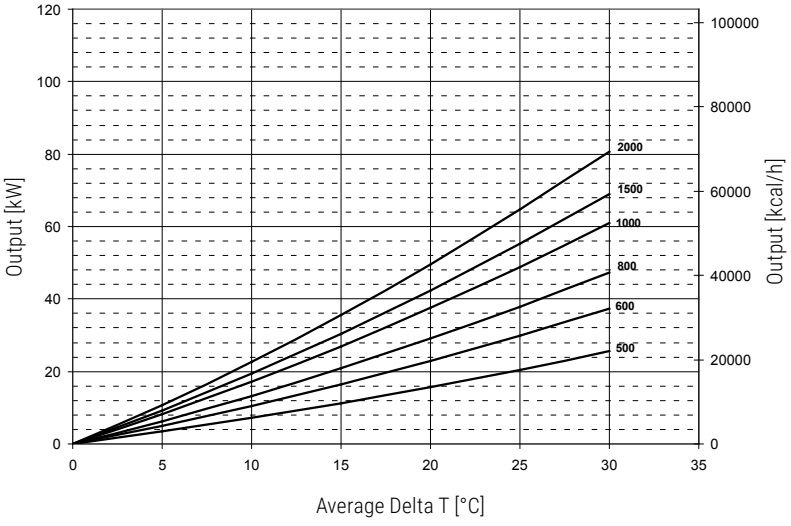
Output of the Combi 2 - Combi 3 lower heat exchangers depending on the average DeltaT between primary and accumulation considering flow rate 3 m³/h.

Thermal output is given in both kW or kcal/h in terms of average temperature difference between primary and secondary circuit, all for a range of primary 3 m³/h.
For example, a 1000 liters COMBI 2 with a water flow of 3 m³/h at 80 °C inlet and outlet at 70 °C, has on the storage of water an average temperature of 60 °C, the main difference of temperature will be:
(80 +70) / 20-60 = 15 °C and therefore you can exchange up to approximately 32 kW.



UPPER HEAT EXCHANGER POWER COMBI 3

Output of the Combi 3 upper heat exchangers depending on the average DeltaT between primary and accumulation considering flow rate 3 m³/h.

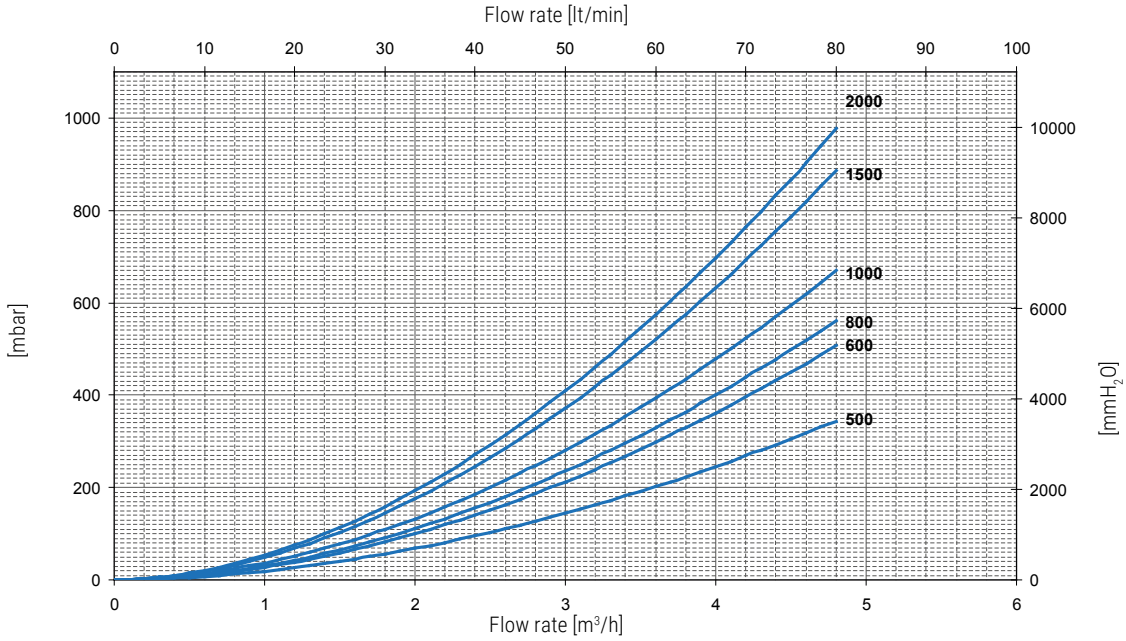


D.H.W. STORAGE PERFORMANCES

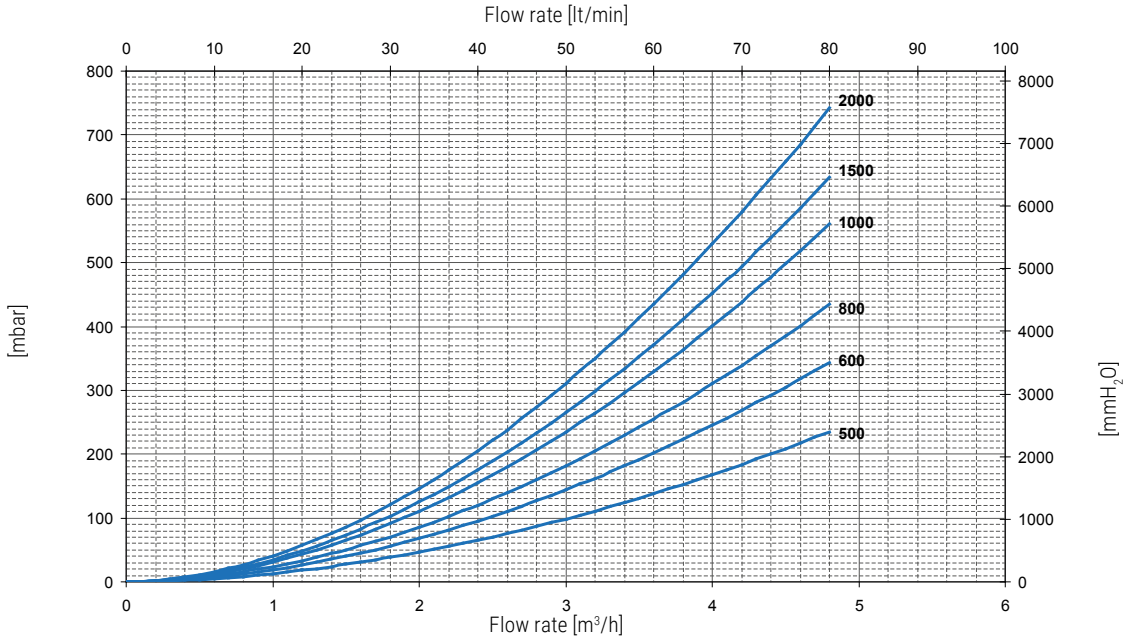


Model	DHW Volume	DHW exchanger surface	COMPLETE HEATED STORAGE VOLUME		UPPER PART HEATED STORAGE VOLUME	
			Max flowrate of sanitary water sustained from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off	Max flowrate of sanitary water sustained from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off
	[lt]	[m²]	[lt/min]	[lt]	[lt/min]	[lt]
1000	226	1,8	4,1	10 lt/min: 389 lt 25 lt/min: 330 lt	2,26	10 lt/min: 291 lt 25 lt/min: 250 lt
1500	412	2,5	5,6	10 lt/min: 753 lt 25 lt/min: 614 lt	3,36	10 lt/min: 565 lt 25 lt/min: 461 lt
2000	566	3,1	6,8	10 lt/min: 1083 lt 25 lt/min: 852 lt	4,08	10 lt/min: 812 lt 25 lt/min: 639 lt

LOWER HEAT EXCHANGER PRESSURE DROP COMBI 2 - COMBI 3



UPPER HEAT EXCHANGER PRESSURE DROP COMBI 3



ECO-COMBI **1**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L D.H.W. CORRUGATED COIL



APPLICATION
Heating hot water storage and rapid D.H.W. production.
MATERIAL
- ***BUFFER TANK:*** Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
- ***D.H.W. STORAGE :*** Stainless steel 316L corrugated coil, suitable for D.H.W. according to D. M. n. 174 dated 06.04.04

TECHNICAL DESCRIPTION
- Thermal storage, combining the possibility to produce hot water for sanitary use. In such case , storage heating volume allows the generator to regularly work , limiting number of stops due to the inadequate energy request of the heating system. Moreover, it limits the emission of smoke and the creation of corrosive condensate (smoke side).
- Domestic hot water production system for domestic and sanitary use where heating water is stored. In this system, the high potentiality of the Eco Combi allows to obtain a good production of hot sanitary water even if temperatures of the primary system are not so high (i.e using heat pumps as primary source and solar source as support)

The particular shape of the corrugated coil is avoiding any problem relating to the storage of domestic hot water and ensure high heat exchange performances.

INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam. Models 800-1000 available with dismountable hard foam insulation.
- SOFT (Dismountable): NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.Grey PVC external lining.

WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L STAINLESS STEEL DH.W. CORRUGATED COIL

PROMPT AVAILABILITY



ECO-COMBI 1 VB

316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION

Model	HARD FOAM **INSULATION** Art. Nr.	Volume [lt]	Surface [m²]	ENERGY EFFICIENCY CLASS
500	3270162316010	26,6	4,5	**C**
600	3270162316011	31,0	5,3	**C**
800	3270162316012	33,4	5,8	**B**
1000	3270162316013	45,5	7,8	**C**
1250	3270162316014	45,5	7,8	**B**
1500	3270162316015	55,3	9,5	**C**
2000	3270162316016	72,2	12,3	**B**

ECO-COMBI 1 VC

316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION

Model	**DISMOUNTABLE SOFT FLEECE** INSULATION Art. Nr.	Volume [lt]	Surface [m²]	ENERGY EFFICIENCY CLASS
800	3270162282262	33,4	5,8	**C**
1000	3270162282263	45,5	7,8	**C**
1250	3270162282264	45,5	7,8	**C**
1500	3270162282265	55,3	9,5	**C**
2000	3270162282266	72,2	12,3	**C**

ACCESSORIES

Electric immersion heaters




Available kit:	
[Kw]	Tension [V]
from **1,5** to **3**	220 - MONOPHASE
from **4** to **9**	400 - THREEPHASE
See accessories	

Thermometer

Art. Nr.
5032240000107
5 units box



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

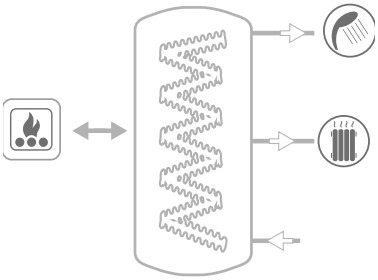


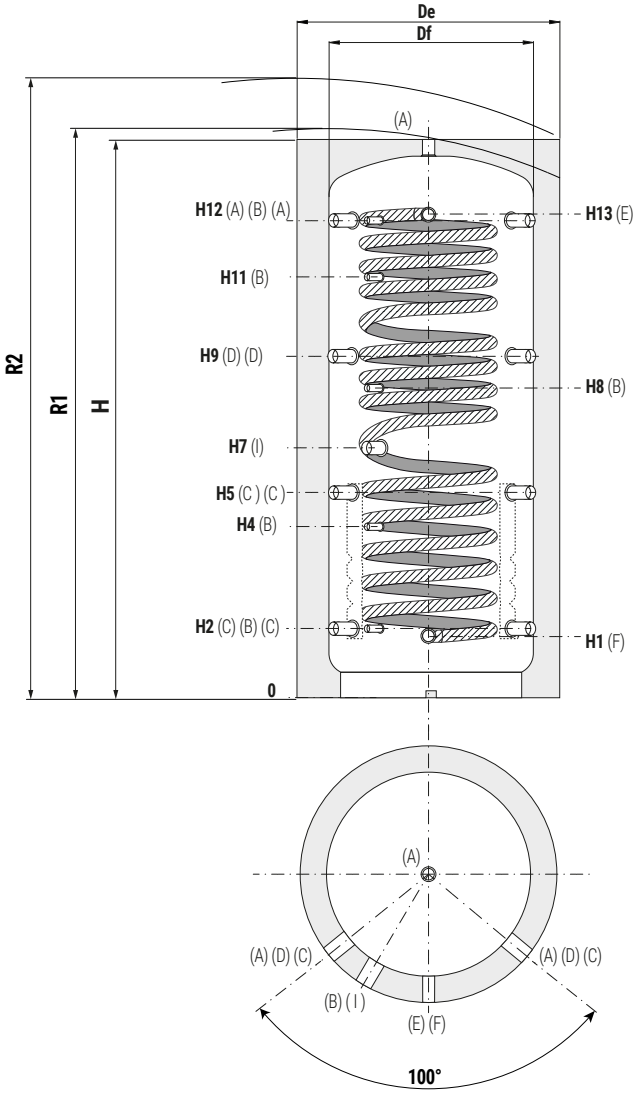
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ECO-COMBI **1**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L D.H.W. CORRUGATED COIL

STORAGE		CORRUGATED DHW STAINLESS STEEL 316L COIL
Pmax	Tmax	Pmax
3 bar	99 °C	6 bar





A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Probe 1/2" G F
C	Heating return/to generator
D	Heating delivery/From generator 1"1/2 G F
E	Domestic hot water outlet 1" G
F	Domestic cold water circuit inlet 1" G M
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F



ECO-COMBI 1 VB - HARD FOAM INSULATION

Model	Volume	Df	De	H	R1	R2	H1	H2	H4	H5	H7	H8	H9	H11	H12	H13
	[lt]								[mm]							
500	478	//	750	1620	//	1800	230	247	533	629	841	940	1011	1231	1343	1360
600	560	//	750	1870	//	2025	230	247	582	695	915	1060	1144	1382	1593	1610
800	803	790	940	1840	1895	2070	248	265	584	690	823	988	1115	1332	1541	1558
1000	944	790	940	2130	2180	2340	248	265	656	787	998	1188	1309	1588	1831	1843
1250	1248	//	1100	2202	//	2475	296	313	705	835	986	1068	1357	1586	1879	1896
1500	1432	//	1100	2250	//	2505	296	313	736	845	1061	1286	1377	1653	1909	1921
2000	1970	//	1300	2320	//	2670	330	347	770	879	1060	1300	1411	1687	1943	1955

ECO-COMBI 1 VC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	Df	De	H	R1	R2	H1	H2	H4	H5	H7	H8	H9	H11	H12	H13
	[lt]								[mm]							
800	803	790	1010	1840	1895	2100	248	265	584	690	823	988	1115	1332	1541	1558
1000	944	790	1010	2130	2180	2370	248	265	656	787	998	1188	1309	1588	1831	1843
1250	1248	900	1120	2202	2262	2475	296	313	705	835	986	1068	1357	1586	1879	1896
1500	1432	950	1210	2250	2315	2565	296	313	736	845	1061	1286	1377	1653	1909	1921
2000	1970	1100	1360	2320	2400	2700	330	347	770	879	1060	1300	1411	1687	1943	1955

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ECO-COMBI **2**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L D.H.W. CORRUGATED COIL AND 1 FIXED HEAT EXCHANGER



APPLICATION
Heating hot water storage and rapid D.H.W. production.
MATERIAL
- BUFFER TANK: Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
- D.H.W. STORAGE : Stainless steel 316L corrugated coil, suitable for D.H.W. according to D. M. n. 174 dated 06.04.04

HEAT EXCHANGER
N° 1 fixed heat exchanger.
TECHNICAL DESCRIPTION
Multi-Heat Energy tanks EcoCombi 2 are used in units with a typically discontinuous energy source for double use: heating system and sanitary hot water system.
- Thermal storage, combining the possibility to produce hot water for sanitary use. In such case , storage heating volume allows the generator to regularly work , limiting number of stops due to the inadequate energy request of the heating system. Moreover, it limits the emission of smoke and the creation of corrosive condensate (smoke side).
- Domestic hot water production system for domestic and sanitary use where heating water is stored. In this system , the high potentiality of the Eco Combi allows to obtain a good production of hot sanitary water even if temperatures of the primary system are not so high (i.e using heat pumps as primary source and solar source as support).

The particular shape of the corrugated coil is avoiding any problem relating to the storage of domestic hot water and ensure high heat exchange performances.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam. Models 800-1000 available with dismountable hard foam insulation.
- SOFT (Dismountable): NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.

Grey PVC external lining, complete with top and flange cover.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L STAINLESS STEEL DH.W. CORRUGATED COIL

PROMPT AVAILABILITY



ECO-COMBI 2 VB

Model	HARD FOAM **INSULATION**	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		LOWER HEAT EXCHANGER		ENERGY EFFICIENCY CLASS
	Art. Nr.	Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	ErP
500	3270162316101	26,6	4,5	11,5	1,9	C
600	3270162316102	31,0	5,3	13	2,1	C
800	3270162316103	33,4	5,8	16,3	2,5	B
1000	3270162316104	45,5	7,8	20,7	3,1	C
1250	3270162316105	45,5	7,8	22,3	3,4	B
1500	3270162316106	55,3	9,5	25,3	3,8	C
2000	3270162316107	72,2	12,3	29,6	4,6	B

ECO-COMBI 2 VC

Model	**DISMOUNTABLE SOFT FLEECE** INSULATION	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		LOWER HEAT EXCHANGER		ENERGY EFFICIENCY CLASS
	Art. Nr.	Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	ErP
800	3270162282272	33,4	5,8	16,3	2,5	C
1000	3270162282273	45,5	7,8	20,7	3,1	C
1250	3270162282274	45,5	7,8	22,3	3,4	C
1500	3270162282275	55,3	9,5	25,3	3,8	C
2000	3270162282276	72,2	12,3	29,6	4,6	C

ACCESSORIES

Electric immersion heaters




Available kit:	
[Kw]	Tension [V]
from **1,5** to **3**	220 - MONOPHASE
from **4** to **9**	400 - THREEPHASE
See accessories	

Thermometer

Art. Nr.
5032240000107
5 units box



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

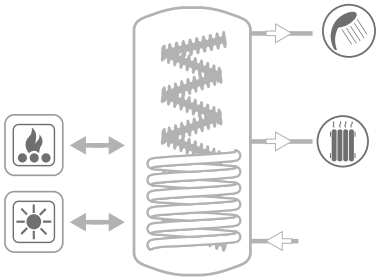


P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

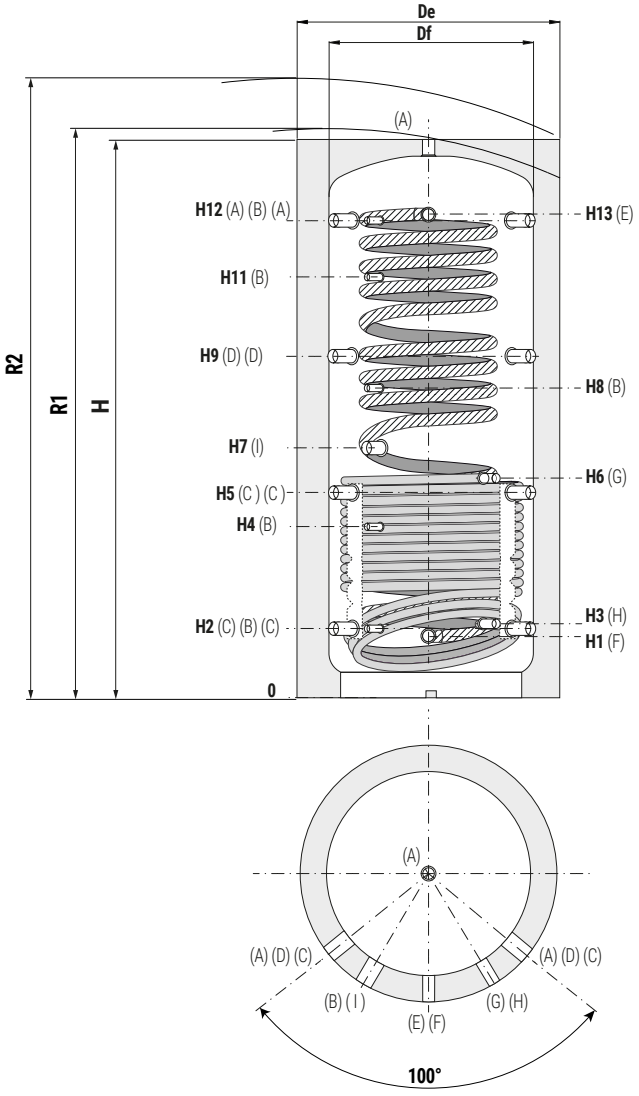
ECO-COMBI **2**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L D.H.W. CORRUGATED COIL AND 1 FIXED HEAT EXCHANGER

STORAGE		CORRUGATED DHW STAINLESS STEEL COIL	FIXED HEAT EXCHANGER	
Pmax	Tmax	Pmax	Pmax	Tmax
3 bar	99 °C	6 bar	12 bar	110 °C



See TECHNICAL SUPPORT chapter for example of installation



A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Probe 1/2" G F
C	Heating return/to generator
D	Heating delivery/From generator 1"1/2 G F
E	Domestic hot water outlet 1" G
F	Domestic cold water circuit inlet 1" G M
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F



ECO-COMBI 2 VB - HARD FOAM INSULATION

Model	Volume	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H11	H12	H13
	[lt]	[mm]																
500	478	//	750	1620	//	1800	230	247	260	533	629	744	841	940	1011	1231	1343	1360
600	560	//	750	1870	//	2025	230	247	260	582	695	855	915	1060	1144	1382	1593	1610
800	803	790	940	1840	1895	2070	248	265	278	584	690	762	823	988	1115	1332	1541	1558
1000	944	790	940	2130	2180	2340	248	265	284	656	787	953	998	1188	1309	1588	1831	1843
1250	1248	//	1100	2202	//	2475	296	313	326	705	835	884	986	1068	1357	1586	1879	1896
1500	1432	//	1100	2250	//	2505	296	313	336	736	845	1006	1061	1286	1377	1653	1909	1921
2000	1970	//	1300	2320	//	2670	330	347	370	770	879	1001	1060	1300	1411	1687	1943	1955

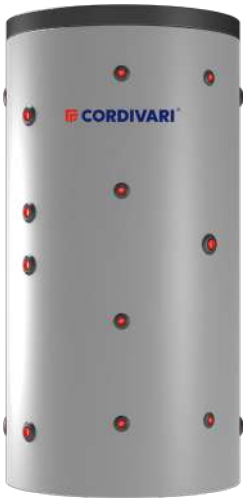
ECO-COMBI 2 VC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H11	H12	H13
	[lt]	[mm]																
800	803	790	1010	1840	1895	2100	248	265	278	584	690	762	823	988	1115	1332	1541	1558
1000	944	790	1010	2130	2180	2370	248	265	284	656	787	953	998	1188	1309	1588	1831	1843
1250	1248	900	1120	2202	2262	2475	296	313	326	705	835	884	986	1068	1357	1586	1879	1896
1500	1432	950	1210	2250	2315	2565	296	313	336	736	845	1006	1061	1286	1377	1653	1909	1921
2000	1970	1100	1360	2320	2400	2700	330	347	370	770	879	1001	1060	1300	1411	1687	1943	1955

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ECO-COMBI **3**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L D.H.W. CORRUGATED COIL AND 2 FIXED HEAT EXCHANGERS



APPLICATION
Heating hot water storage and rapid D.H.W. production.
MATERIAL
- BUFFER TANK: Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
- D.H.W. STORAGE : Stainless steel 316L corrugated coil, suitable for D.H.W. according to D. M. n. 174 dated 06.04.04

HEAT EXCHANGER
N° 2 fixed heat exchangers.
TECHNICAL DESCRIPTION
Multi-Heat Energy tanks EcoCombi 3 are used in units with a typically discontinuous energy source for double use: heating system and sanitary hot water system .
- Thermal storage, combining the possibility to produce hot water for sanitary use. In such case , storage heating volume allows the generator to regularly work , limiting number of stops due to the inadequate energy request of the heating system. Moreover, it limits the emission of smoke and the creation of corrosive condensate (smoke side).
- Domestic hot water production system for domestic and sanitary use where heating water is stored. In this system , the high potentiality of the Eco Combi allows to obtain a good production of hot sanitary water even if temperatures of the primary system are not so high (i.e using heat pumps as primary source and solar source as support)

The particular shape of the corrugated coil is avoiding any problem relating to the storage of domestic hot water and ensure high heat exchange performances.
INSULATION
- HARD: High thermal insulation with ecological polyurethane hard foam. Models 800-1000 available with dismountable hard foam insulation.
- SOFT (Dismountable): NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.

Grey PVC external lining, complete with top and flange cover.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L STAINLESS STEEL DH.W. CORRUGATED COIL

PROMPT AVAILABILITY



ECO-COMBI 3 VB

Model	HARD FOAM **INSULATION**	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		UPPER HEAT EXCHANGER		LOWER HEAT EXCHANGER		ENERGY EFFICIENCY CLASS
	Art. Nr.	Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	ErP
500	3270162316201	26,6	4,5	8	1,3	11,5	1,9	**C**
600	3270162316202	31,0	5,3	8	1,3	13	2,1	**C**
800	3270162316203	33,4	5,8	11,8	1,8	16,3	2,5	**B**
1000	3270162316204	45,5	7,8	16,3	2,5	20,7	3,1	**C**
1250	3270162316205	45,5	7,8	16,3	2,5	22,3	3,4	**B**
1500	3270162316206	55,3	9,5	16,8	2,8	25,3	3,8	**C**
2000	3270162316207	72,2	12,3	19,1	2,8	29,6	4,6	**B**

ECO-COMBI 3 VC

Model	**DISMOUNTABLE SOFT FLEECE** INSULATION	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		UPPER HEAT EXCHANGER		LOWER HEAT EXCHANGER		ENERGY EFFICIENCY CLASS
	Art. Nr.	Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	ErP
800	3270162282282	33,4	5,8	11,8	1,8	16,3	2,5	**C**
1000	3270162282283	45,5	7,8	16,3	2,5	20,7	3,1	**C**
1250	3270162282284	45,5	7,8	16,3	2,5	22,3	3,4	**C**
1500	3270162282285	55,3	9,5	16,8	2,8	25,3	3,8	**C**
2000	3270162282286	72,2	12,3	19,1	2,8	29,6	4,6	**C**

ACCESSORIES

Electric immersion heaters




Available kit:	
[Kw]	Tension [V]
from **1,5** to **3**	220 - MONOPHASE
from **4** to **9**	400 - THREEPHASE
See accessories	

Thermometer

Art. Nr.
5032240000107
5 units box



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

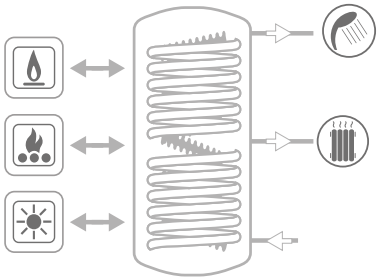


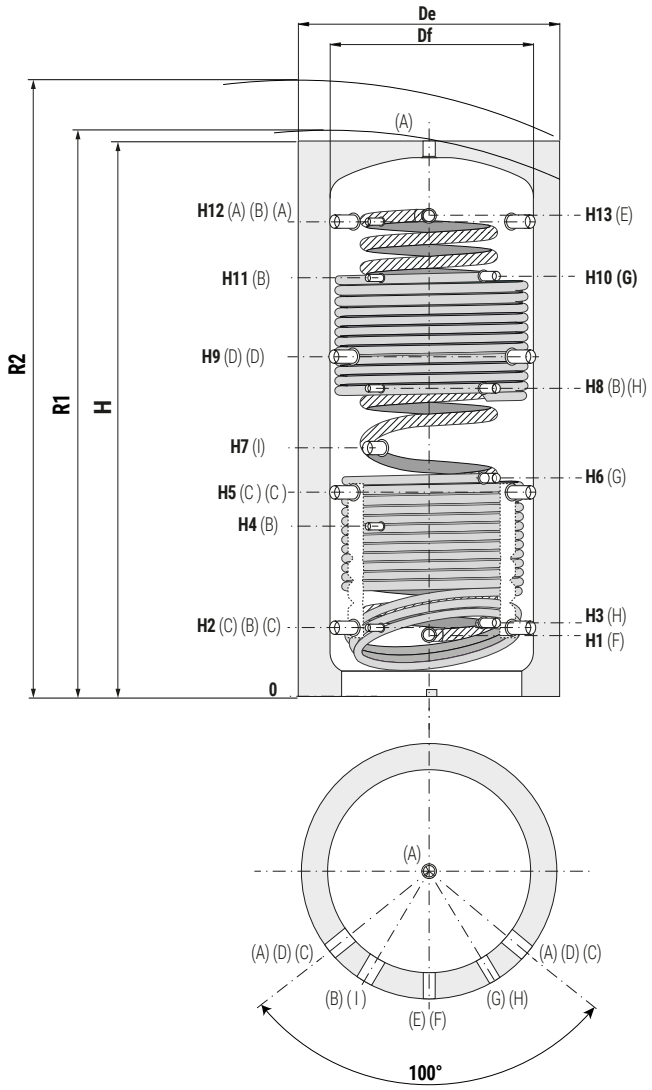
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ECO-COMBI **3**

MULTI-HEAT ENERGY BUFFER
WITH STAINLESS STEEL 316L D.H.W. CORRUGATED COIL AND 2 FIXED HEAT EXCHANGERS

STORAGE		CORRUGATED DHW STAINLESS STEEL COIL	FIXED HEAT EXCHANGER	
Pmax	Tmax	Pmax	Pmax	Tmax
3 bar	99 °C	6 bar	12 bar	110 °C





A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Probe 1/2" G F
C	Heating return/to generator
D	Heating delivery/From generator 1"1/2 G F
E	Domestic hot water outlet 1" G
F	Domestic cold water circuit inlet 1" G M
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F



ECO-COMBI 3 VB - HARD FOAM INSULATION

Model	Volume	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
	[lt]	[mm]																	
500	478	//	750	1620	//	1800	230	247	260	533	629	744	841	930	1011	1231	1231	1343	1360
600	560	//	750	1870	//	2025	230	247	260	582	695	855	915	1060	1144	1361	1382	1593	1610
800	803	790	940	1840	1895	2070	248	265	278	584	690	762	823	988	1115	1332	1332	1541	1558
1000	944	790	940	2130	2180	2340	248	265	284	656	787	953	998	1188	1309	1661	1588	1831	1843
1250	1248	//	1100	2202	//	2475	296	313	326	705	835	884	986	1068	1357	1641	1586	1879	1896
1500	1432	//	1100	2250	//	2505	296	313	336	736	845	1006	1061	1286	1377	1673	1653	1909	1921
2000	1970	//	1300	2320	//	2670	330	347	370	770	879	1001	1060	1300	1411	1687	1687	1943	1955

ECO-COMBI 3 VC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
	[lt]	[mm]																	
800	803	790	1010	1840	1895	2100	248	265	278	584	690	762	823	988	1115	1332	1332	1541	1558
1000	944	790	1010	2130	2180	2370	248	265	284	656	787	953	998	1188	1309	1661	1588	1831	1843
1250	1248	900	1120	2202	2262	2475	296	313	326	705	835	884	986	1068	1357	1641	1586	1879	1896
1500	1432	950	1210	2250	2315	2565	296	313	336	736	845	1006	1061	1286	1377	1673	1653	1909	1921
2000	1970	1100	1360	2320	2400	2700	330	347	370	770	879	1001	1060	1300	1411	1687	1687	1943	1955

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ECO-COMBI

CORRUGATED COIL - PERFORMANCES DURING DHW PRODUCTION PHASE

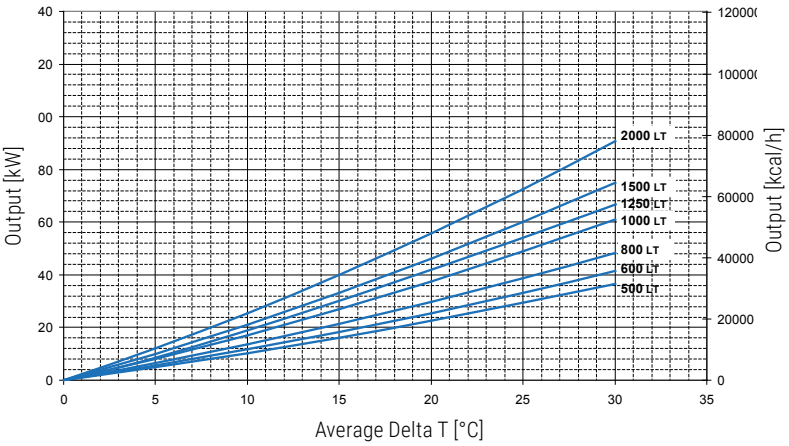


WITH STORAGE AT 65 °C			COMPLETE HEATED STORAGE VOLUME		UPPER PART HEATED STORAGE VOLUME	
Model	DHW Volume	DHW exchanger surface	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off
	[lt]	[m²]	[lt/min]	[lt]	[lt/min]	[lt]
500	26,6	4,5	29	10 lt/min: 354 lt 25 lt/min: 227 lt	15	10 lt/min: 102 lt 25 lt/min: 75 lt
600	31	5,3	34	10 lt/min: 400 lt 25 lt/min: 257 lt	18	10 lt/min: 115 lt 25 lt/min: 85 lt
800	33,4	5,8	37	10 lt/min: 587 lt 25 lt/min: 377 lt	23	10 lt/min: 218 lt 25 lt/min: 160 lt
1000	45,5	7,8	50	10 lt/min: 800 lt 25 lt/min: 541 lt	27	10 lt/min: 294 lt 25 lt/min: 216 lt
1250	45,5	7,8	50	10 lt/min: 922 lt 25 lt/min: 592 lt	27	10 lt/min: 310 lt 25 lt/min: 230 lt
1500	55,3	9,5	57	10 lt/min: 1144 lt 25 lt/min: 735 lt	34	10 lt/min: 345 lt 25 lt/min: 258 lt
2000	72,2	12,3	74	10 lt/min: 1657 lt 25 lt/min: 1142 lt	44	10 lt/min: 463 lt 25 lt/min: 340 lt

LOWER HEAT EXCHANGER POWER - ECO COMBI 2 - ECO COMBI 3

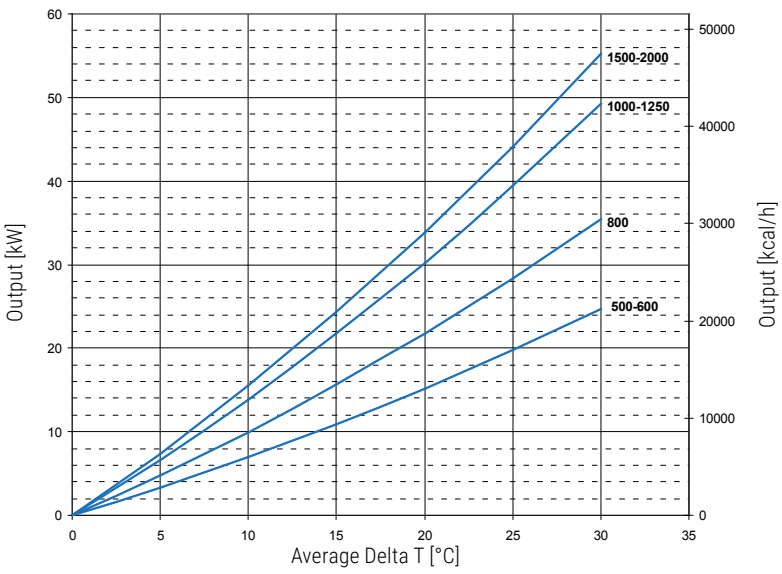
Output of the EcoCombi 2 - EcoCombi 3 lower heat exchangers depending on the average DeltaT between primary and accumulation considering flow rate 3 m³/h.

Thermal output is given in both kW or kcal/h in terms of average temperature difference between primary and secondary circuit, all for a range of primary 3 m³/h.
For example, a 1000 liters ECOCOMBI 2 with a water flow of 3 m³/h at 80 °C inlet and outlet at 70 °C, has on the storage of water an average temperature of 60 °C, the main difference of temperature will be:
(80 +70) / 2-60 = 15 °C and therefore you can exchange up to approximately 32 kW.



UPPER HEAT EXCHANGER POWER - ECO COMBI 3

Output of the EcoCombi 3 upper heat exchangers depending on the average DeltaT between primary and accumulation considering flow rate 3 m³/h.



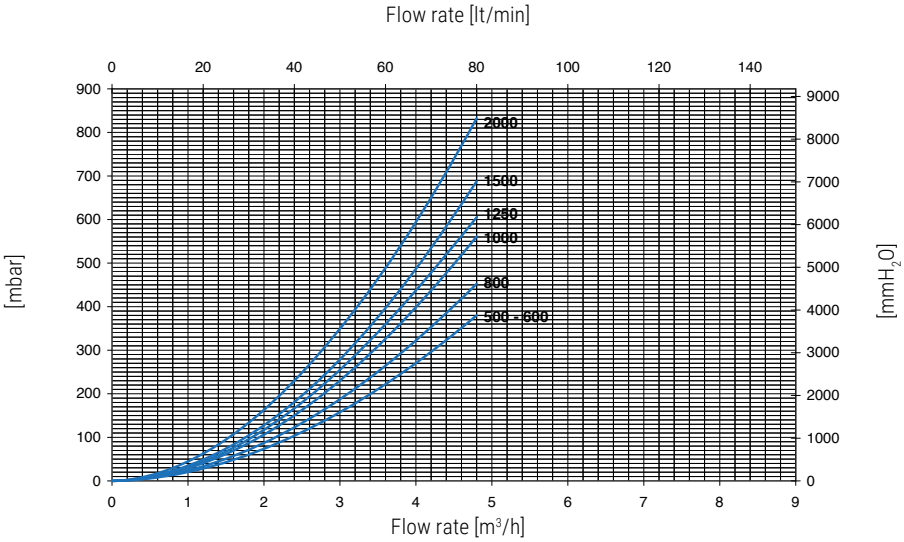
ECO-COMBI

CORRUGATED COIL - PERFORMANCES DURING DHW PRODUCTION PHASE

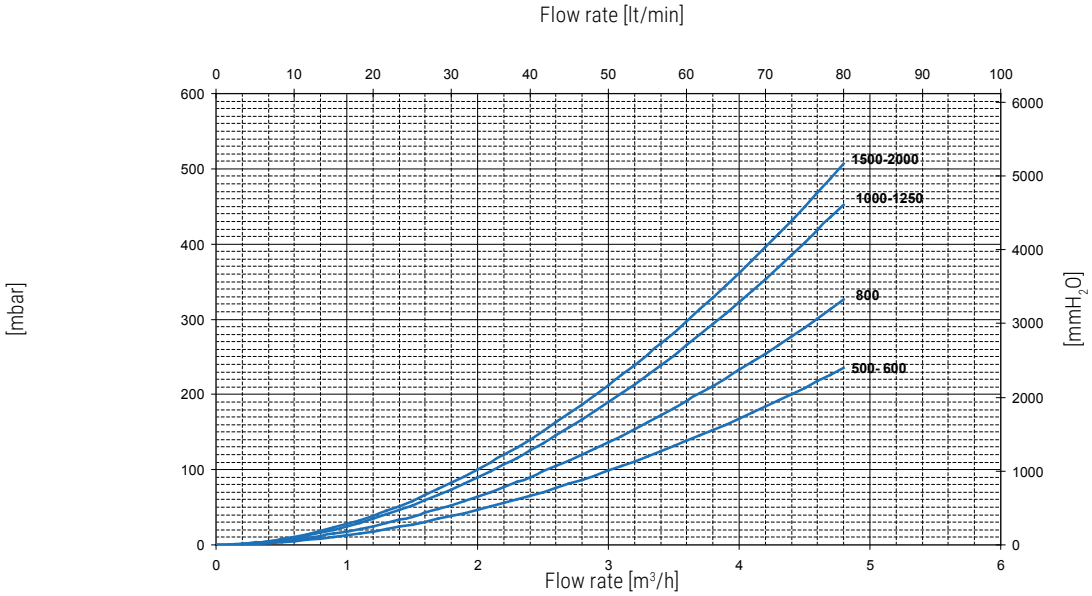


WITH STORAGE AT 55 °C			COMPLETE HEATED STORAGE VOLUME		UPPER PART HEATED STORAGE VOLUME	
Model	DHW Volume	DHW exchanger surface	Max sanitary water produced from 10°C to 45°C with storage at 55°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 55°C and boiler off	Max sanitary water produced from 10°C to 45°C with storage at 55°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 55°C and boiler off
	[lt]	[m²]	[lt/min]	[lt]	[lt/min]	[lt]
500	26,6	4,5	24	10 lt/min: 260 lt 25 lt/min: 166 lt	14	10 lt/min: 75 lt 25 lt/min: 55 lt
600	31	5,3	28	10 lt/min: 293 lt 25 lt/min: 188 lt	17	10 lt/min: 84 lt 25 lt/min: 62 lt
800	33,4	5,8	31	10 lt/min: 430 lt 25 lt/min: 276 lt	19	10 lt/min: 160 lt 25 lt/min: 216 lt
1000	45,5	7,8	42	10 lt/min: 587 lt 25 lt/min: 397 lt	25	10 lt/min: 158 lt 25 lt/min: 216 lt
1250	45,5	7,8	42	10 lt/min: 676 lt 25 lt/min: 434 lt	25	10 lt/min: 158 lt 25 lt/min: 227 lt
1500	55,3	9,5	51	10 lt/min: 539 lt 25 lt/min: 1215 lt	30	10 lt/min: 253 lt 25 lt/min: 189 lt
2000	72,2	12,3	65	10 lt/min: 539 lt 25 lt/min: 1215 lt	39	10 lt/min: 340 lt 10 lt/min: 249

LOWER HEAT EXCHANGER PRESSURE DROP - ECO COMBI 2 - ECO COMBI 3



UPPER HEAT EXCHANGER PRESSURE DROP - ECO COMBI 3



ECO-COMBI **1 DOMUS**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L D.H.W. CORRUGATED COIL



APPLICATION
Heating hot water storage and rapid D.H.W. production.
MATERIAL
- BUFFER TANK: Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
- D.H.W. STORAGE : Stainless steel 316L corrugated coil, suitable for D.H.W. according to D. M. n. 174 dated 06.04.04

TECHNICAL DESCRIPTION
Multi-Heat Energy tanks EcoCombi 1 Domus are used in units with a typically discontinuous energy source for double use: heating system and domestic hot water systems.
- Thermal storage, combining the possibility to produce hot water for sanitary use. In such case, storage heating volume allows the generator to regularly work, limiting number of stops due to the inadequate energy request of the heating systems. Moreover, it limits the emission of smoke and the creation of corrosive condensate (smoke side).
- Domestic hot water production system for domestic and sanitary use where heating water is stored. In this system , the high potentiality of the Eco Combi allows to obtain a good production of hot sanitary water even if temperatures of the primary system are not so high (i.e using heat pumps as primary source and solar source as support).

The particular shape of the corrugated pipe avoids any problem relating to the storage of domestic hot water and ensures high heat exchange performances.
INSULATION
High thermal insulation with ecological hard polyurethane foam. Grey PVC external lining complete with top cover.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L STAINLESS STEEL DH.W. CORRUGATED COIL

PROMPT AVAILABILITY



ECO-COMBI 1 DOMUS VB

Model	HARD FOAM **INSULATION**	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		ENERGY EFFICIENCY CLASS
	Art. Nr.	Volume [lt]	Surface [m²]	ErP
200	3270162316021	2,9	1,4	**B**
300	3270162316022	5,1	2,5	**B**

Model	Max sanitary water produced from 10°C to 45°C with storage at 60°C	Max sanitary water produced from 10°C to 45°C with storage at 50°C
	[lt/min]	[lt/min]
200	11	8
300	23	16

ACCESSORIES

Electric immersion heaters



Available kit:	
[Kw]	Tension [V]
from **1,5** to **3**	220 - MONOPHASE
See accessories	

Thermometer

Art. Nr.
5032240000107
5 units box

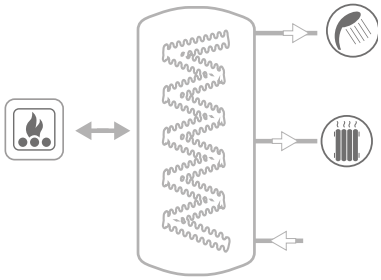


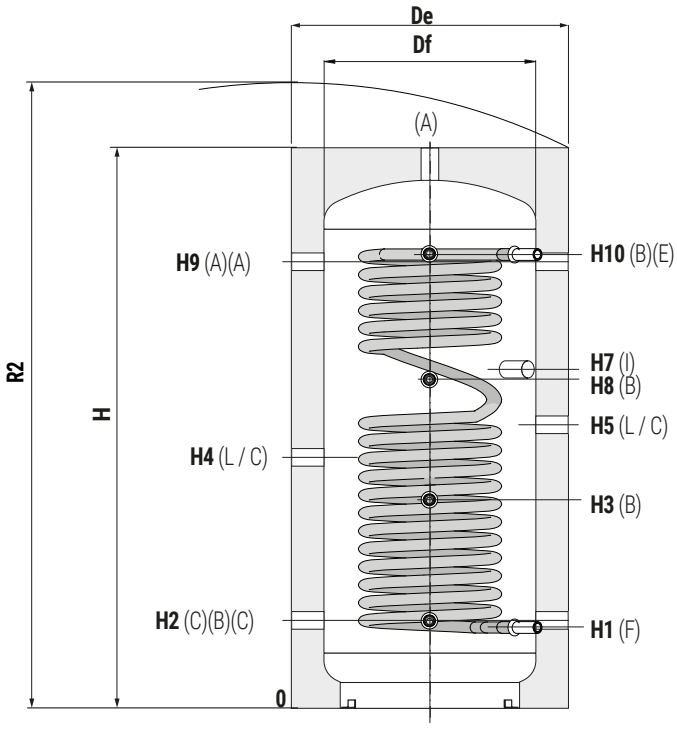
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

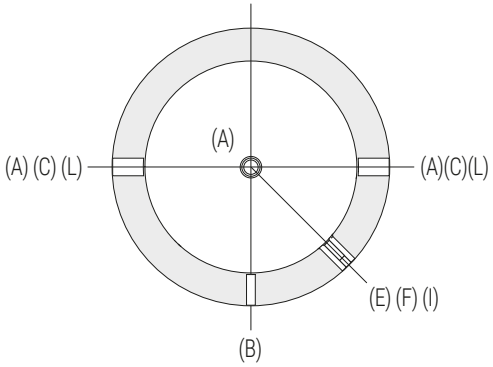
ECO-COMBI **1 DOMUS**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L D.H.W. CORRUGATED COIL

STORAGE		CORRUGATED DHW STAINLESS STEEL 316L COIL
Pmax	Tmax	Pmax
3 bar	99 °C	6 bar







A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Probe 1/2" G F
C	Heating return/to generator
E	Domestic hot water outlet 1/2" G F
F	Domestic cold water circuit inlet 1/2" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Heating delivery 1"1/2 G F

Model	Volume	DE	H	R2	H1	H2	H3	H4	H5	H7	H8	H9	H10
	[lt]	[mm]											
200	180	590	1310	1445	227	252	552	602	702	852	822	1052	1079
300	279	690	1360	1530	257	272	572	622	722	872	812	1072	1084

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ECO-COMBI **2 DOMUS**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L D.H.W. CORRUGATED COIL AND 1 FIXED HEAT EXCHANGER



APPLICATION
Heating hot water storage and rapid D.H.W. production.
MATERIAL
- BUFFER TANK: Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
- D.H.W. STORAGE : Stainless steel 316L corrugated coil, suitable for D.H.W. according to D. M. n. 174 dated 06.04.04

HEAT EXCHANGER
N° 1 mild steel fixed heat exchanger.
TECHNICAL DESCRIPTION
Multi-Heat Energy tanks EcoCombi 2 Domus are used in units with a typically discontinuous energy source for double use: heating system and domestic hot water systems.
- Thermal storage, combining the possibility to produce hot water for sanitary use. In such case, storage heating volume allows the generator to regularly work, limiting number of stops due to the inadequate energy request of the heating systems. Moreover, it limits the emission of smoke and the creation of corrosive condensate (smoke side).
- Domestic hot water production system for domestic and sanitary use where heating water is stored. In this system , the high potentiality of the Eco Combi allows to obtain a good production of hot sanitary water even if temperatures of the primary system are not so high (i.e using heat pumps as primary source and solar source as support).

The particular shape of the corrugated pipe avoids any problem relating to the storage of domestic hot water and ensures high heat exchange performances.
INSULATION
High thermal insulation with ecological hard polyurethane foam. Grey PVC external lining complete with top cover.
WARRANTY
5 years (See general sales conditions and warranty)
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

316L STAINLESS STEEL DH.W. CORRUGATED COIL

PROMPT AVAILABILITY



ECO-COMBI 2 DOMUS VB

Model	HARD FOAM **INSULATION** Art. Nr.	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION Volume [lt]	Surface [m²]	FIXED HEAT EXCHANGER Surface [m²]	ENERGY EFFICIENCY CLASS
200	3270162282501	2,9	1,4	1	**B**
300	3270162282502	5,1	2,5	1,2	**B**

Model	Max solar collectors surface [m²]	Max sanitary water produced from 10°C to 45°C with storage at 60°C [lt/min]	Max sanitary water produced from 10°C to 45°C with storage at 50°C [lt/min]
200	5	11	8
300	7,5	23	16

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

ACCESSORIES

Electric immersion heaters



Available kit:	
[Kw]	Tension [V]
from **1,5** to **3**	220 - MONOPHASE
See accessories	

Thermometer

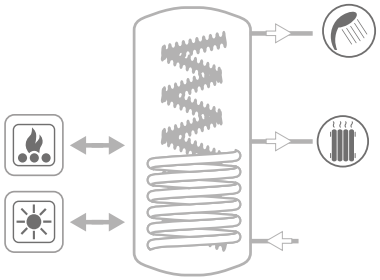
Art. Nr.
5032240000107
5 units box

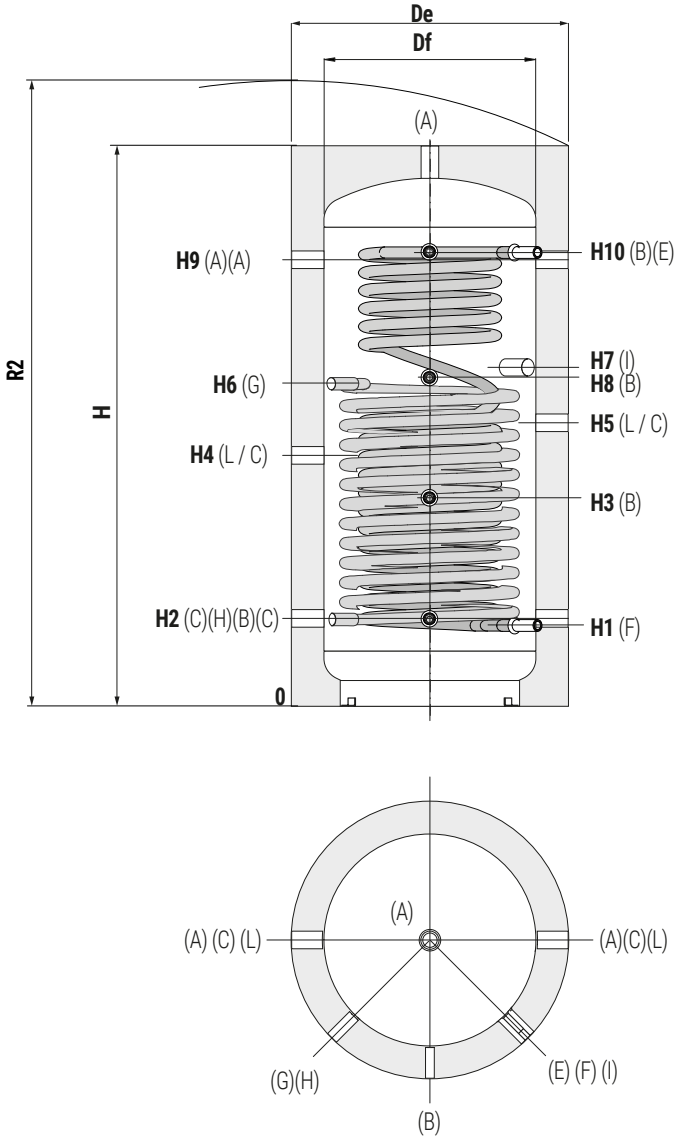


ECO-COMBI **2 DOMUS**

MULTI-HEAT ENERGY BUFFER WITH STAINLESS STEEL 316L D.H.W. CORRUGATED COIL AND 1 FIXED HEAT EXCHANGER

STORAGE		CORRUGATED DHW STAINLESS STEEL COIL	FIXED HEAT EXCHANGER	
Pmax	Tmax	Pmax	Pmax	Tmax
3 bar	99 °C	6 bar	12 bar	110 °C





A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Probe 1/2" G F
C	Heating return/to generator
E	Domestic hot water outlet 1/2" G F
F	Domestic cold water circuit inlet 1/2" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Heating delivery 1"1/2 G F

Model	Volume	DE	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
	[lt]	[mm]												
200	180	590	1310	1445	227	252	552	602	702	822	852	822	1052	1079
300	279	690	1360	1530	257	272	572	622	722	812	872	812	1072	1084

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® 1

HEATING WATER BUFFER TANK WITH MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION



APPLICATION
Stratified storage of technical water and instantaneous production of domestic hot water (DHW) with high flow rates.

MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.

DHW HEAT EXCHANGER
External MACS® module with Stainless steel 316L brazed plate exchanger for immediate D.H.W. production.

TECHNICAL DESCRIPTION
The immediate and fast production of D.H.W. granted by the MACS® module allows the following benefits:
- to reduce dimensions of the water heater needed
- easy maintenance
- maximum hygiene for anti-legionellosis bacteria's
- to produce more DHW than the quantity obtained by boiler with similar capacity because hot water is stored at a higher temperature than DHW.

INSULATION
Buffer tank: High thermal insulation with ecological hard polyurethane foam. Models 800-1000 available with dismountable hard foam insulation
MACS® module: insulating PPE cover.
Grey PVC external lining.

WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

IMMEDIATE DHW PRODUCTION



PATENTED

PUFFERMAS® 1 VB

Model	MACS® module model	HARD FOAM INSULATION Art. Nr.	SLB heat exchanger model / plates nr.	ENERGY EFFICIENCY CLASS
500	70	3251162314803	SLB20 / 34	C
600		3251162314804		C
800		3251162314805		B
1000		3251162314806		C
1500		3251162314807		C
1000	120	3251162314808	SLB40/ 40	C
1500		3251162314809		C

FOR GREATER PERFORMANCE AND LOW TEMPERATURE SYSTEMS SEE PAGE 246

Model	MACS® module model	DHW production (10-45°C) with accumulation at 80°C [lt/min]	Maximum availability of DHW (10-45°C) with accumulation at 80°C [lt]
500	70	37	680
600		37	800
800		37	1150
1000		37	1350
1500		37	2080
1000	120	61	1680
1500		61	2580

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

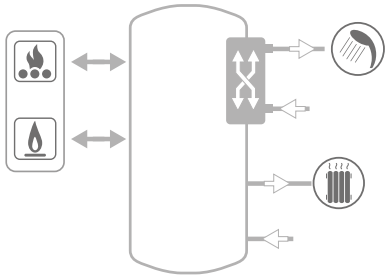


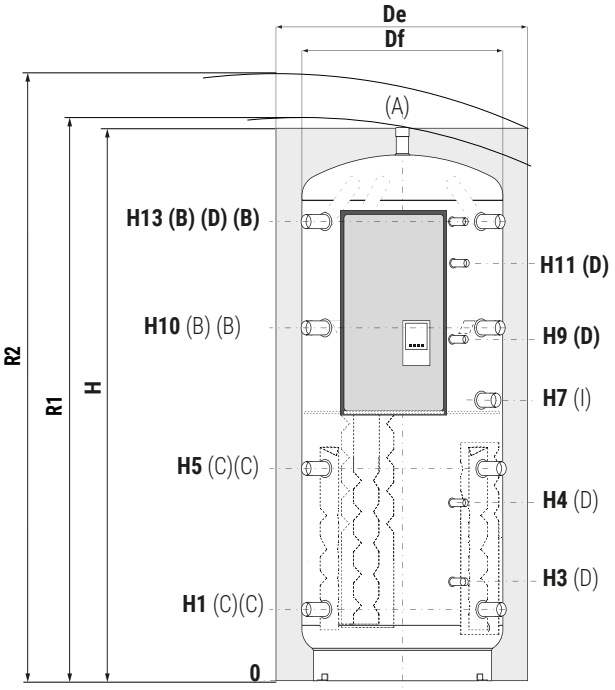
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® 1

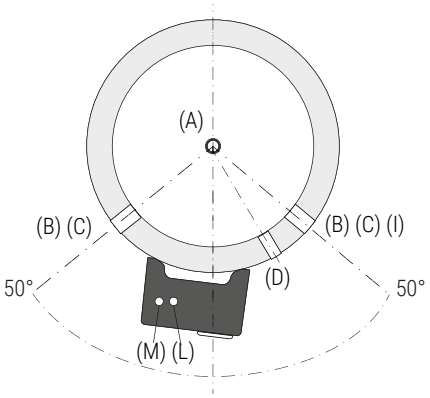
HEATING WATER BUFFER TANK WITH MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION

STORAGE		STAINLESS STEEL 316L BRAZED PLATE EXCHANGER (MACS®)		D.H.W. HARDNESS
Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	8 bar	99 °C	30 °f





A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Heating delivery/From generator 1"1/2 G F
C	Heating return/to generator 1"1/2 G F
D	Probe 1/2" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 3/4" G M (1" G M for models 120)
M	Domestic cold water circuit inlet 3/4" G M (1" G M for models with MACS® 120)

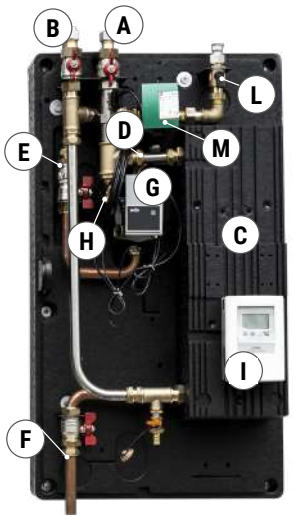




Dismountable insulation

Model	Volume	De	Df	H	R1	R2	H1	H3	H4	H5	H7	H9	H10	H11	H13
	[lt]	[mm]													
500	478	750	650	1619	//	1785	247	360	533	629	870	1025	1011	1130	1343
600	560	750	650	1870	//	2015	247	360	582	695	970	1200	1144	1485	1593
800	805	940	790	1840	1880	2067	265	378	584	690	918	1115	1115	1442	1541
1000	946	940	790	2130	2165	2329	265	384	656	787	1145	1388	1309	1588	1831
1500	1454	1100	950	2250	//	2505	313	432	736	845	1236	1396	1377	1783	1909

MACS® ELECTRONIC MODULE FOR IMMEDIATE D.H.W. PRODUCTION



A	Domestic hot water outlet (DHW)
B	Domestic Water inlet
C	Stainless steel 316L brazed plate exchanger
D	Flow rate/ temperature probe
E	Primary Inlet
F	Primary Outlet
G	"Energy Savings" Circulation Pump
H	Valves In/Out for DHW
I	Electronic control unit

D.H.W. recirculation kit (optional)	
L	Connection for D.H.W. recirculation (optional)
M	D.H.W. recirculation pump (optional)

The MACS® module is an external unit that immediately produces D.H.W., using the heat energy stored in the Buffer thanks to the stainless steel plate exchanger, granting safety and comfort with the possibility to regulate outlet temperature.
With the new electronic regulation system, the management of the temperature on the DHW side is guaranteed and maintained in an optimal manner and with immediate response times from the electronic control unit on the module.

FOR DHW FLOW RATE CHARTS REFER TO HYDRONIC SECTION - ELECTRONIC MACS® MODULE

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® 2

HEATING WATER BUFFER TANK WITH 1 FIXED HEAT EXCHANGER AND MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION



APPLICATION
Stratified storage of technical water and instantaneous production of domestic hot water (DHW) with high flow rates.

MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.

DHW HEAT EXCHANGER
External MACS® module with Stainless steel 316L brazed plate exchanger for immediate D.H.W. production.

HEATING WATER HEAT EXCHANGER
N° 1 fixed heat exchanger suitable for solar thermal systems.

TECHNICAL DESCRIPTION
The immediate and fast production of D.H.W. granted by the MACS® module allows the following benefits:
- to reduce dimensions of the water heater needed
- easy maintenance
- maximum hygiene for anti-legionellosis bacteria's
- to produce more DHW than the quantity obtained by boiler with similar capacity because hot water is stored at a higher temperature than DHW.

INSULATION
Buffer tank: High thermal insulation with ecological hard polyurethane foam. Models 800-1000 available with dismountable hard foam insulation
MACS® module: insulating PPE cover.
Grey PVC external lining.

WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

IMMEDIATE DHW PRODUCTION



PATENTED

PUFFERMAS® 2 VB

Model	MACS® module model	HARD FOAM INSULATION Art. Nr.	SLB heat exchanger model / plates nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
500	70	3251162314823	SLB20 / 34	1,9	C
600		3251162314824		2,1	C
800		3251162314825		2,5	B
1000		3251162314826		3,1	C
1500		3251162314827		3,8	C
1000	120	3251162314828	SLB40/ 40	3,1	C
1500		3251162314829		3,8	C

Model	MACS® module model	DHW production (10-45°C) with accumulation at 80°C [lt/min]	Maximum availability of DHW (10-45°C) with accumulation at 80°C [lt]
500	70	37	680
600		37	800
800		37	1150
1000		37	1350
1500		37	2080
1000	120	61	1680
1500		61	2580

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

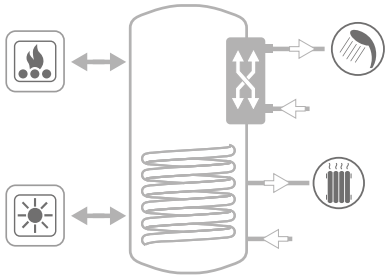


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PUFFERMAS® 2

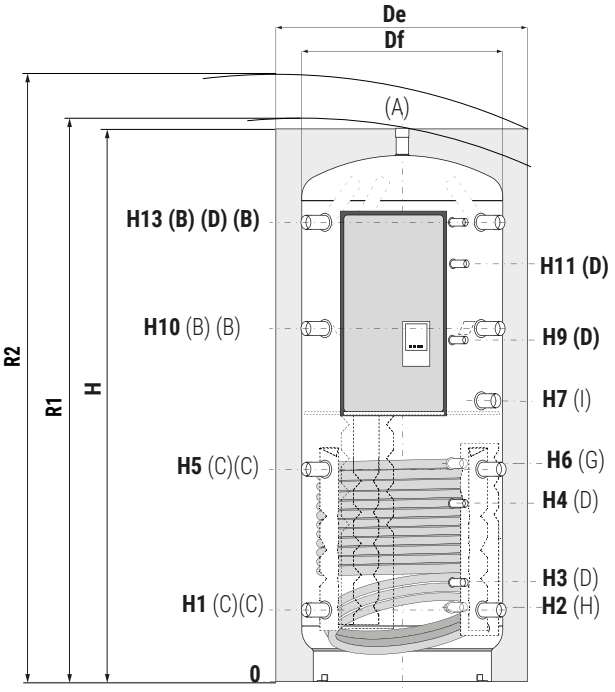
HEATING WATER BUFFER TANK WITH 1 FIXED HEAT EXCHANGER AND MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION

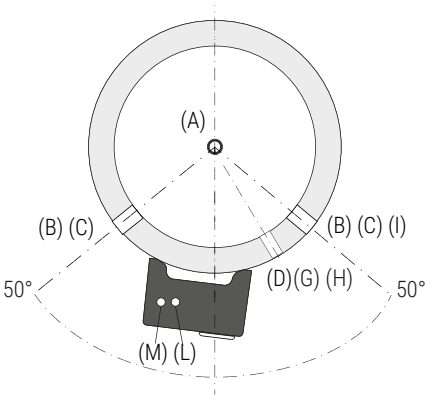
STORAGE		FIXED HEAT EXCHANGER		HEAT EXCHANGER STAINLESS STEEL PLATES (MACS®)		DHW HARDNESS
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	12 bar	110 °C	8 bar	99 °C	30 °f



See TECHNICAL SUPPORT chapter for example of installation

A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Heating delivery/From generator 1"1/2 G F
C	Heating return/to generator 1"1/2 G F
D	Probe 1/2" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 3/4" G M (1" G M for models 120)
M	Domestic cold water circuit inlet 3/4" G M (1" G M for models with MACS® 120)



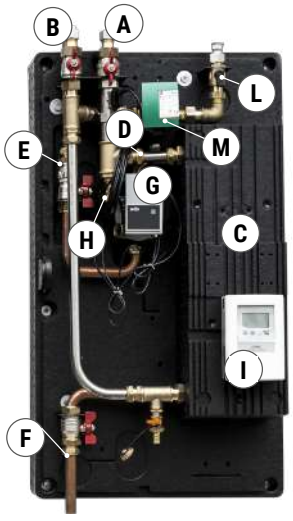




Dismountable insulation

Model	Volume	De	Df	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H9	H10	H11	H13
	[lt]	[mm]															
500	478	750	650	1619	//	1785	247	260	360	533	629	744	870	1025	1011	1130	1343
600	560	750	650	1870	//	2015	247	260	360	582	695	855	970	1200	1144	1485	1593
800	805	940	790	1840	1880	2067	265	278	378	584	690	762	918	1115	1115	1442	1541
1000	946	940	790	2130	2165	2329	265	284	384	656	787	953	1145	1388	1309	1588	1831
1500	1454	1100	950	2250	//	2505	313	336	432	736	845	1006	1236	1396	1377	1783	1909

MACS® ELECTRONIC MODULE FOR IMMEDIATE D.H.W. PRODUCTION



A	Domestic hot water outlet (DHW)
B	Domestic Water inlet
C	Stainless steel 316L brazed plate exchanger
D	Flow rate/ temperature probe
E	Primary Inlet
F	Primary Outlet
G	"Energy Savings" Circulation Pump
H	Valves In/Out for DHW
I	Electronic control unit

D.H.W. recirculation kit (optional)	
L	Connection for D.H.W. recirculation (optional)
M	D.H.W. recirculation pump (optional)

The MACS® module is an external unit that immediately produces D.H.W., using the heat energy stored in the Buffer thanks to the stainless steel plate exchanger, granting safety and comfort with the possibility to regulate outlet temperature.
With the new electronic regulation system, the management of the temperature on the DHW side is guaranteed and maintained in an optimal manner and with immediate response times from the electronic control unit on the module.

FOR DHW FLOW RATE CHARTS REFER TO HYDRONIC SECTION - ELECTRONIC MACS® MODULE

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® 3

HEATING WATER BUFFER TANK WITH 2 FIXED HEAT EXCHANGERS AND MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION



APPLICATION
Stratified storage of technical water and instantaneous production of domestic hot water (DHW) with high flow rates.

MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.

DHW HEAT EXCHANGER
External MACS® module with Stainless steel 316L brazed plate exchanger for immediate D.H.W. production.

HEATING WATER HEAT EXCHANGER
N° 2 fixed heat exchangers suitable for solar thermal systems and other heat source.

TECHNICAL DESCRIPTION
The immediate and fast production of D.H.W. granted by the MACS® module allows the following benefits:
- to reduce dimensions of the water heater needed
- easy maintenance
- maximum hygiene for anti-legionellosis bacteria's
- to produce more DHW than the quantity obtained by boiler with similar capacity because hot water is stored at a higher temperature than DHW.

INSULATION
Buffer tank: High thermal insulation with ecological hard polyurethane foam. Models 800-1000 available with dismountable hard foam insulation
MACS® module: insulating PPE cover.
Grey PVC external lining.

WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

IMMEDIATE DHW PRODUCTION

PUFFERMAS® 3 VB

Model	MACS® module model	HARD FOAM INSULATION Art. Nr.	SLB heat exchanger model / plates nr.	HEAT EXCHANGER SURFACE Upper [m²]	HEAT EXCHANGER SURFACE Lower [m²]	ENERGY EFFICIENCY CLASS
500	70	3251162314843	SLB20 / 34	1,3	1,9	C
600		3251162314844		1,3	2,1	C
800		3251162314845		1,8	2,5	B
1000		3251162314846		2,5	3,1	C
1500		3251162314847		2,8	3,8	C
1000	120	3251162314848	SLB40/ 40	2,5	3,1	C
1500		3251162314849		2,8	3,8	C



PATENTED

Model	MACS® module model	DHW production (10-45°C) with accumulation at 80°C [lt/min]	Maximum availability of DHW (10-45°C) with accumulation at 80°C [lt]
500	70	37	680
600		37	800
800		37	1150
1000		37	1350
1500		37	2080
1000	120	61	1680
1500		61	2580

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

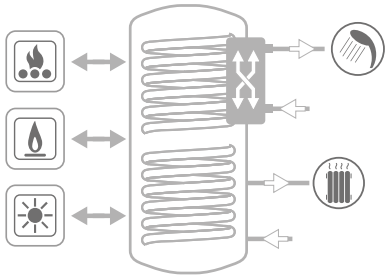


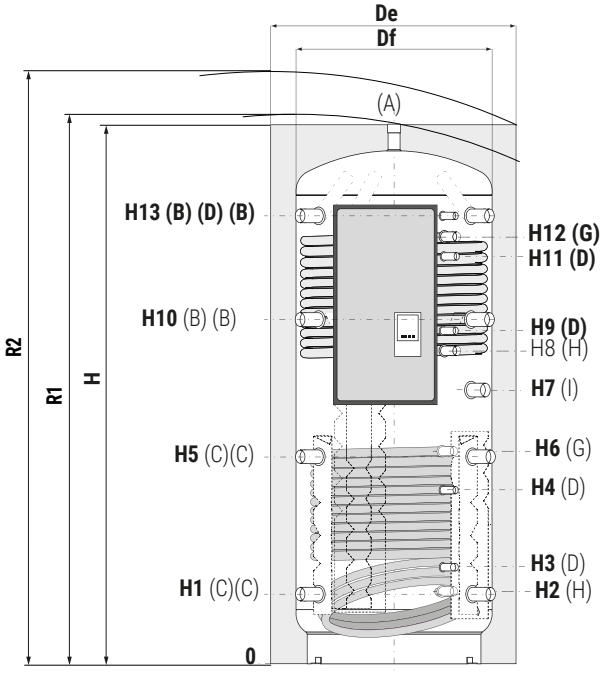
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PUFFERMAS® 3

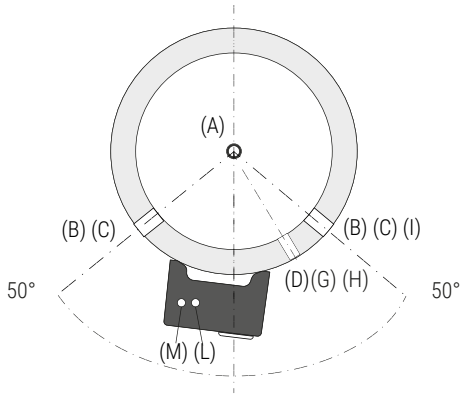
HEATING WATER BUFFER TANK WITH 2 FIXED HEAT EXCHANGERS AND MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION

STORAGE		FIXED HEAT EXCHANGER		HEAT EXCHANGER STAINLESS STEEL PLATES (MACS®)		DHW HARDNESS
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	12 bar	110 °C	8 bar	99 °C	30 °f





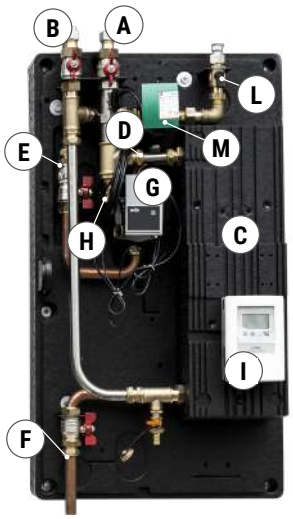
A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Heating delivery/From generator 1"1/2 G F
C	Heating return/to generator 1"1/2 G F
D	Probe 1/2" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 3/4" G M (1" G M for models 120)
M	Domestic cold water circuit inlet 3/4" G M (1" G M for models with MACS® 120)





Model	Volume	De	Df	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
	[lt]	[mm]																	
500	478	750	650	1619	//	1785	247	260	360	533	629	744	870	930	1025	1011	1130	1231	1343
600	560	750	650	1870	//	2015	247	260	360	582	695	855	970	1090	1200	1144	1485	1391	1593
800	805	940	790	1840	1880	2067	265	278	378	584	690	762	918	1003	1115	1115	1442	1347	1541
1000	946	940	790	2130	2165	2329	265	284	384	656	787	953	1145	1188	1388	1309	1588	1661	1831
1500	1454	1100	950	2250	//	2505	313	336	432	736	845	1006	1236	1286	1396	1377	1783	1673	1909

MACS® ELECTRONIC MODULE FOR IMMEDIATE D.H.W. PRODUCTION



A	Domestic hot water outlet (DHW)
B	Domestic Water inlet
C	Stainless steel 316L brazed plate exchanger
D	Flow rate/ temperature probe
E	Primary Inlet
F	Primary Outlet
G	"Energy Savings" Circulation Pump
H	Valves In/Out for DHW
I	Electronic control unit

D.H.W. recirculation kit (optional)	
L	Connection for D.H.W. recirculation (optional)
M	D.H.W. recirculation pump (optional)

The MACS® module is an external unit that immediately produces D.H.W., using the heat energy stored in the Buffer thanks to the stainless steel plate exchanger, granting safety and comfort with the possibility to regulate outlet temperature.
With the new electronic regulation system, the management of the temperature on the DHW side is guaranteed and maintained in an optimal manner and with immediate response times from the electronic control unit on the module.

FOR DHW FLOW RATE CHARTS REFER TO HYDRONIC SECTION - ELECTRONIC MACS® MODULE

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® **2 CTS**

HEATING WATER BUFFER TANK WITH STRATIFICATION DEVICE, 1 FIXED HEAT EXCHANGER AND MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION



APPLICATION
Stratified storage of technical water and instantaneous production of domestic hot water (DHW) with high flow rates.
MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.
DHW HEAT EXCHANGER
External MACS® module with Stainless steel 316L brazed plate exchanger for immediate D.H.W. production.
HEATING WATER HEAT EXCHANGER
N° 1 fixed heat exchanger and CTS® stratificator system, suitable for solar thermal systems.
TECHNICAL DESCRIPTION
The immediate and fast production of D.H.W. granted by the MACS® module allows the following benefits:
- to reduce dimensions of the water heater needed
- easy maintenance
- maximum hygiene for anti-legionellosis bacteria's
- to produce more DHW than the quantity obtained by calorifier with similar capacity because hot water is stored at a higher temperature than DHW.

Puffermas 2 CTS® is characterized by multiple thermal stratification system based on the combination of Cordivari Labyrinth spreader for returning heating water (both from heating installation and from MACS® DHW station) with a new stratification device that conveys in the upper part of the tank the heated water up by the lower fixed exchanger. This combination ensures a perfect natural stratification inside the tank with no valve or additional external device.
The lower fixed exchanger can be connected with a solar system. Being positioned at the bottom lower part of the buffer tank and with very small footprint, it increases the volume available for the storage.
INSULATION
Buffer tank: High thermal insulation with ecological hard polyurethane foam. Models 800-1000 available with dismountable hard foam insulation
MACS® module: insulating PPE cover.
Grey PVC external lining.
WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.
ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

IMMEDIATE DHW PRODUCTION



PATENTED

PUFFERMAS® 2 CTS B

Model	MACS® module model	HARD FOAM INSULATION Art. Nr.	SLB heat exchanger model / plates nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
500	70	3251162316503	SLB20 / 34	1,9	C
600		3251162316504		2,1	C
800		3251162316505		2,5	B
1000		3251162316506		3,1	C
1500		3251162316507		3,8	C
1000	120	3251162316508	SLB40/ 40	3,1	C
1500		3251162316509		3,8	C

Model	MACS® module model	DHW production (10-45°C) with accumulation at 80°C [lt/min]	Maximum availability of DHW (10-45°C) with accumulation at 80°C [lt]
500	70	37	680
600		37	800
800		37	1150
1000		37	1350
1500		37	2080
1000	120	61	1680
1500		61	2580

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

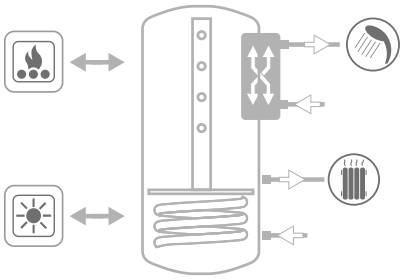


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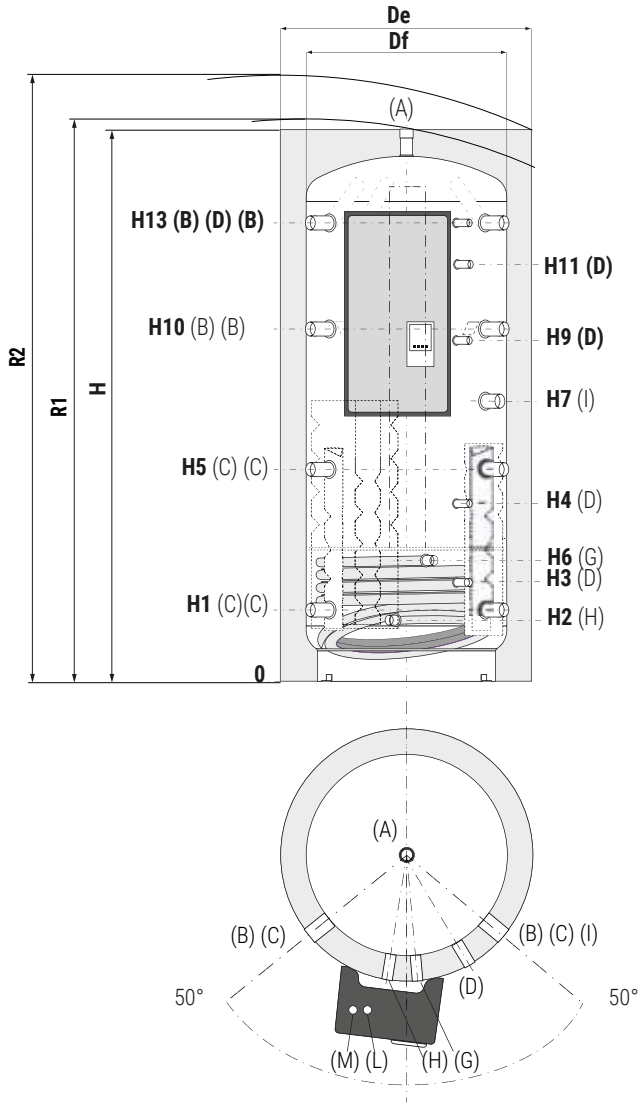
PUFFERMAS® **2 CTS**

HEATING WATER BUFFER TANK WITH STRATIFICATION DEVICE, 1 FIXED HEAT EXCHANGER AND MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION

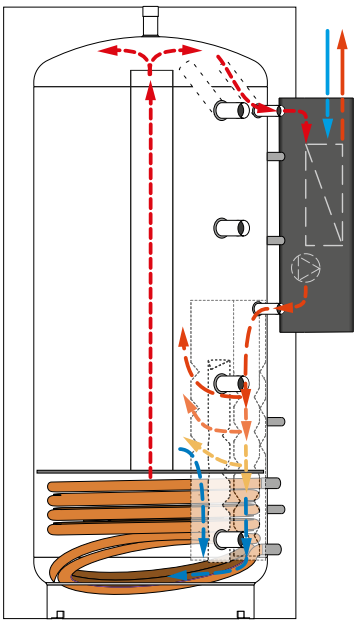
STORAGE		FIXED HEAT EXCHANGER		HEAT EXCHANGER STAINLESS STEEL PLATES (MACS®)		DHW HARDNESS
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	12 bar	110 °C	8 bar	99 °C	30 °f



See TECHNICAL SUPPORT chapter for example of installation



A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Heating delivery/From generator 1"1/2 G F
C	Heating return/to generator 1"1/2 G F
D	Probe 1/2" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 3/4" G M (1" G M for models 120)
M	Domestic cold water circuit inlet 3/4" G M (1" G M for models with MACS® 120)



SUITABLE FOR SOLAR THERMAL SYSTEMS

THE ILLUSTRATION UNDERLINES THE STRATIFICATION PROCESS (FROM TOP TO BOTTOM) THAT ALLOWS TO HAVE ALL NEEDED ENERGY RAPIDLY AVAILABLE



Dismountable insulation

Model	Volume	De	Df	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
	[lt]	[mm]																	
500	478	750	650	1619	//	1785	247	215	360	533	629	425	870	//	1025	1011	1130	//	1343
600	560	750	650	1870	//	2015	247	215	360	582	695	425	970	//	1200	1144	1485	//	1593
800	805	940	790	1840	1880	2067	265	233	378	584	690	443	918	//	1115	1115	1442	//	1541
1000	946	940	790	2130	2165	2329	265	233	384	656	787	443	1145	//	1388	1309	1588	//	1831
1500	1454	1100	950	2250	//	2505	313	281	432	736	845	491	1236	//	1396	1377	1783	//	1909

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® **3 CTS**

HEATING WATER BUFFER TANK WITH STRATIFICATION DEVICE, 2 FIXED HEAT EXCHANGERS AND MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION



APPLICATION
Storage of heating hot water with stratification device and D.H.W immediate production with high flow rate. Ideal for solar thermal solutions and for heating systems with mixed energy sources such as biomass and solar and even allowing the integration of a third energy source.

MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.

DHW HEAT EXCHANGER
External MACS® module with Stainless steel 316L brazed plate exchanger for immediate D.H.W. production.

HEATING WATER HEAT EXCHANGER
N° 2 fixed heat exchangers and CTS® stratificator system, suitable for solar thermal systems and other generator.

TECHNICAL DESCRIPTION
The immediate and fast production of D.H.W. granted by the MACS® module allows the following benefits:
- to reduce dimensions of the water heater needed
- easy maintenance
- maximum hygiene for anti-legionellosis bacteria's
- to produce more DHW than the quantity obtained by calorifier with similar capacity because hot water is stored at a higher temperature than DHW.

Puffermas 3 CTS® is characterized by multiple thermal stratification system based on the combination of Cordivari Labyrinth spreader for returning heating water (both from heating installation and from MACS® DHW station) with a new stratification device that conveys in the upper part of the tank the heated water up by the lower fixed coil. This combination ensures a perfect natural stratification inside the tank with no valve or additional external device.
The lower fixed coil allows the possibility of connecting with a solar system. Being positioned at the bottom lower part of the buffer tank and with very small footprint, it increases the volume available for the storage. Puffermas® 3 CTS is able to integrate the use of a third separate heat source in addition to solar and biomass.

INSULATION
Buffer tank: High thermal insulation with ecological hard polyurethane foam. Models 800-1000 available with dismountable hard foam insulation
MACS® module: insulating PPE cover.
Grey PVC external lining.

WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

IMMEDIATE DHW PRODUCTION

PUFFERMAS® 3 CTS VB

Model	MACS® module model	HARD FOAM INSULATION Art. Nr.	SLB heat exchanger model / plates nr.	HEAT EXCHANGER SURFACE Upper [m²]	HEAT EXCHANGER SURFACE Lower [m²]	ENERGY EFFICIENCY CLASS
500	70	3251162316543	SLB20 / 34	1,3	1,9	C
600		3251162316544		1,3	2,1	C
800		3251162316545		1,8	2,5	B
1000		3251162316546		2,5	3,1	C
1500		3251162316547		2,8	3,8	C
1000	120	3251162316548	SLB40/ 40	2,5	3,1	C
1500		3251162316549		2,8	3,8	C

FOR GREATER PERFORMANCE AND LOW TEMPERATURE SYSTEMS SEE PAGE 248



PATENTED

Model	MACS® module model	DHW production (10-45°C) with accumulation at 80°C [lt/min]	Maximum availability of DHW (10-45°C) with accumulation at 80°C [lt]
500	70	37	680
600		37	800
800		37	1150
1000		37	1350
1500		37	2080
1000	120	61	1680
1500		61	2580

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

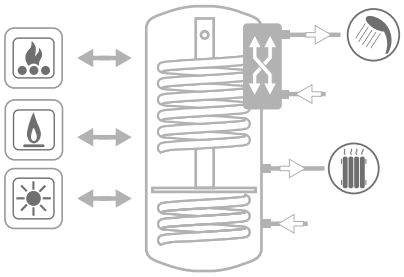


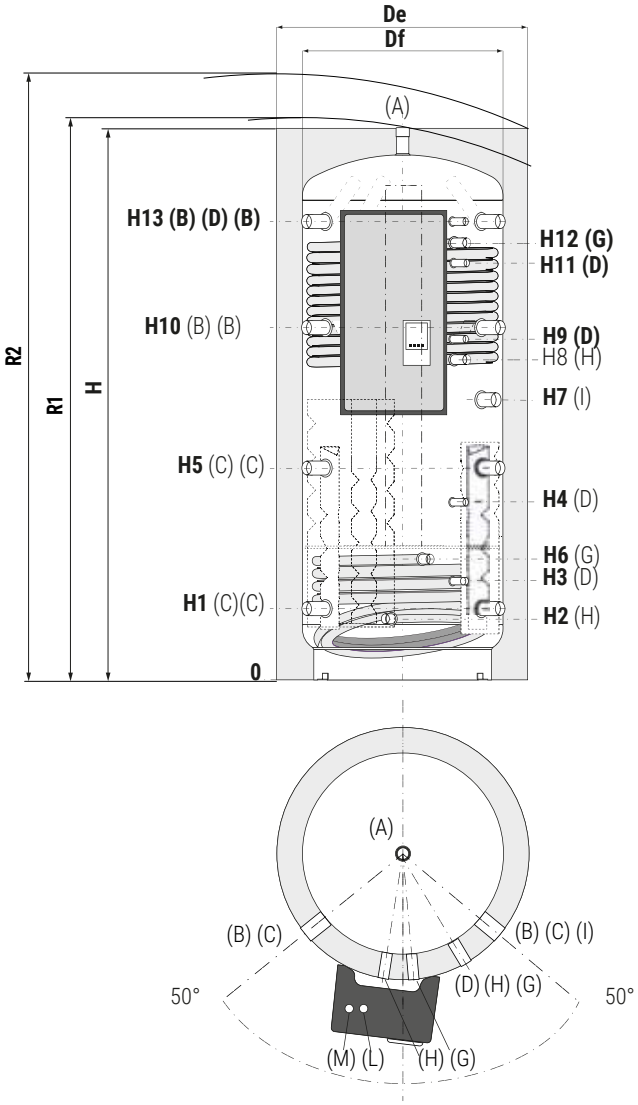
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PUFFERMAS® **3 CTS**

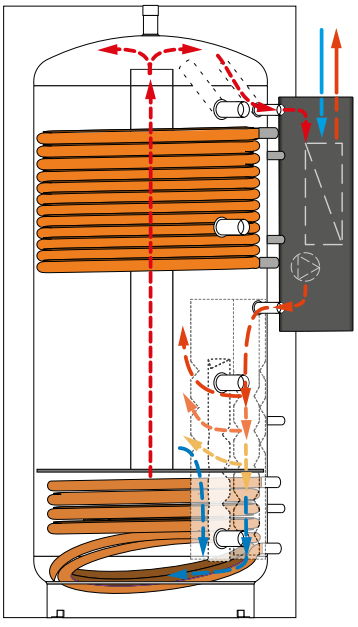
HEATING WATER BUFFER TANK WITH STRATIFICATION DEVICE, 2 FIXED HEAT EXCHANGERS AND MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION

STORAGE		FIXED HEAT EXCHANGER		HEAT EXCHANGER STAINLESS STEEL PLATES (MACS®)		DHW HARDNESS
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	12 bar	110 °C	8 bar	99 °C	30 °f





A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Heating delivery/From generator 1"1/2 G F
C	Heating return/to generator 1"1/2 G F
D	Probe 1/2" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 3/4" G M (1" G M for models 120)
M	Domestic cold water circuit inlet 3/4" G M (1" G M for models with MACS® 120)



SUITABLE FOR SOLAR THERMAL SYSTEMS

THE ILLUSTRATION UNDERLINES THE STRATIFICATION PROCESS (FROM TOP TO BOTTOM) THAT ALLOWS TO HAVE ALL NEEDED ENERGY RAPIDLY AVAILABLE



Dismountable insulation

Model	Volume	De	Df	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
	[lt]	[mm]																	
500	478	750	650	1619	//	1785	247	215	360	533	629	425	870	930	1025	1011	1130	1231	1343
600	560	750	650	1870	//	2015	247	215	360	582	695	425	970	1090	1200	1144	1485	1391	1593
800	805	940	790	1840	1880	2067	265	233	378	584	690	443	918	1003	1115	1115	1442	1347	1541
1000	946	940	790	2130	2165	2329	265	233	384	656	787	443	1145	1188	1388	1309	1588	1661	1831
1500	1454	1100	950	2250	//	2505	313	281	432	736	845	491	1236	1286	1396	1377	1783	1673	1909

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

CORDIVARI

PUFFERMAS® **2 CTS POWER**

HEATING WATER BUFFER TANK WITH STRATIFICATION DEVICE, 1 FIXED HEAT EXCHANGER, MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION AND INTEGRATED SOLAR STATION



APPLICATION
Storage by stratification of heating water, immediate production of domestic hot water (DHW) with high flow rates and performances and management of the solar circulation, in solar thermal system / biomass boiler.

MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.

DHW HEAT EXCHANGER
External MACS® module with Stainless steel 316L brazed plate exchanger for immediate D.H.W. production.

SOLAR STATION
Complete with electronic control unit with 5 temperatures probes able to manage up to 27 types of system and complete circulation group.

HEATING WATER HEAT EXCHANGER
N° 1 fixed heat exchanger and CTS® stratificator system, suitable for solar thermal systems.

TECHNICAL DESCRIPTION
Specific for accumulation and management of the heat produced by the thermal solar system, combines the use of the Puffer's characteristics with the ones of a fast DHW producer without the storage of domestic hot water, with the following advantages:

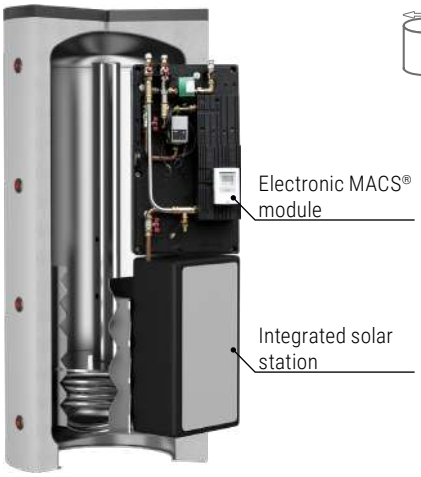
- to reduce dimensions of the needed water heater
- easy maintenance
- maximum hygiene for anti-legionellosis bacteria's
- to produce more DHW than the quantity obtained by boiler with similar capacity because hot water is stored at a higher temperature than DHW.

INSULATION
Buffer tank: High thermal insulation with ecological hard polyurethane foam. Models 800-1000 available with dismountable hard foam insulation
MACS® module: insulating PPE cover.
Grey PVC external lining.

WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

IMMEDIATE DHW PRODUCTION



PATENTED

PUFFERMAS® 2 CTS POWER VB

Model	MACS® module model	HARD FOAM INSULATION Art. Nr.	SLB heat exchanger model / plates nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS
500	70	3251162316523	SLB20 / 34	1,9	C
600		3251162316524		2,1	C
800		3251162316525		2,5	B
1000		3251162316526		3,1	C
1500		3251162316527		3,8	C
1000	120	3251162316528	SLB40/ 40	3,1	C
1500		3251162316529		3,8	C

Model	MACS® module model	DHW production (10-45°C) with accumulation at 80°C [lt/min]	Maximum availability of DHW (10-45°C) with accumulation at 80°C [lt]
500	70	37	680
600		37	800
800		37	1150
1000		37	1350
1500		37	2080
1000	120	61	1680
1500		61	2580

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

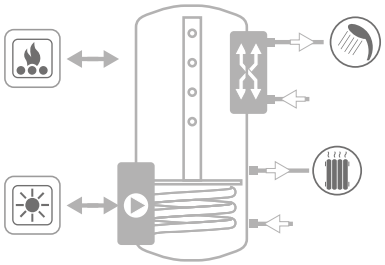


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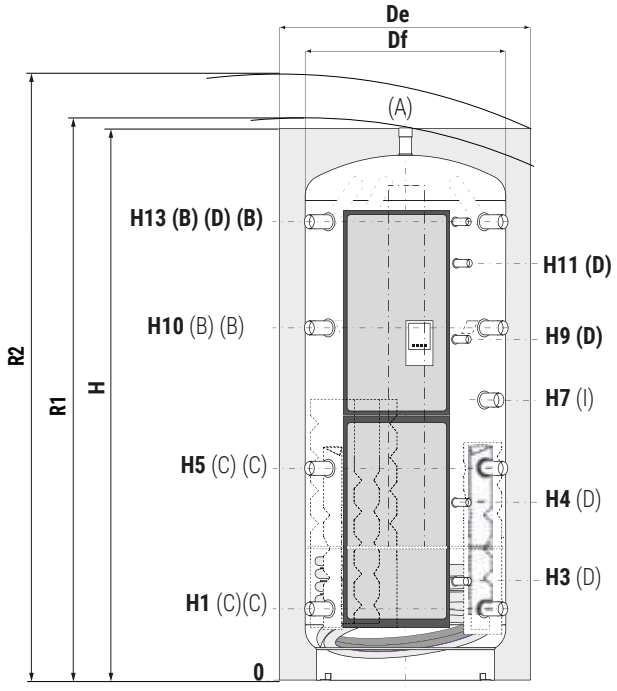
PUFFERMAS® **2 CTS POWER**

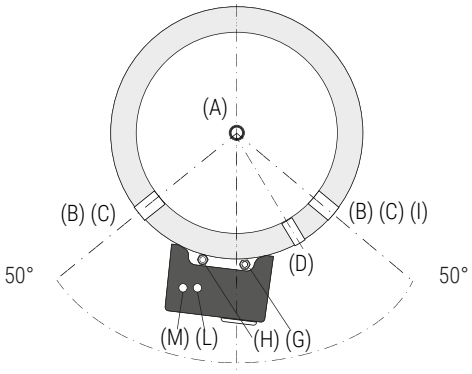
HEATING WATER BUFFER TANK WITH STRATIFICATION DEVICE, 1 FIXED HEAT EXCHANGER, MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION AND INTEGRATED SOLAR STATION

STORAGE		FIXED HEAT EXCHANGER		HEAT EXCHANGER STAINLESS STEEL PLATES (MACS®)		DHW HARDNESS
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	12 bar	110 °C	8 bar	99 °C	30 °f

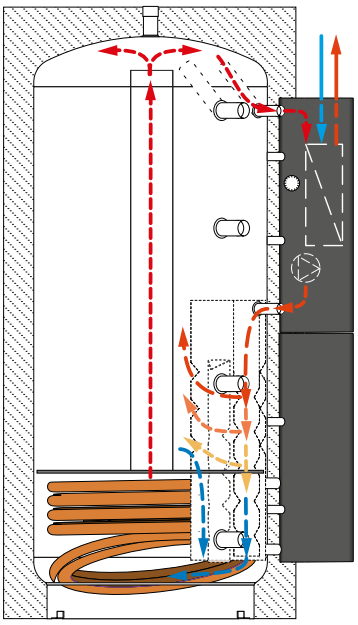


See TECHNICAL SUPPORT chapter for example of installation





A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Heating delivery/From generator 1"1/2 G F
C	Heating return/to generator 1"1/2 G F
D	Probe 1/2" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 3/4" G M (1" G M for models 120)
M	Domestic cold water circuit inlet 3/4" G M (1" G M for models with MACS® 120)



SUITABLE FOR SOLAR THERMAL SYSTEMS

THE ILLUSTRATION UNDERLINES THE STRATIFICATION PROCESS (FROM TOP TO BOTTOM) THAT ALLOWS TO HAVE ALL NEEDED ENERGY RAPIDLY AVAILABLE



Dismountable insulation

Model	Volume	De	Df	H	R1	R2	H1	H3	H4	H5	H7	H9	H10	H11	H13
	[lt]	[mm]													
500	478	750	650	1619	//	1785	247	360	533	629	870	1025	1011	1130	1343
600	560	750	650	1870	//	2015	247	360	582	695	970	1200	1144	1485	1593
800	805	940	790	1840	1880	2067	265	378	584	690	918	1115	1115	1442	1541
1000	946	940	790	2130	2165	2329	265	384	656	787	1145	1388	1309	1588	1831
1500	1454	1100	950	2250	//	2505	313	432	736	845	1236	1396	1377	1783	1909

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

PUFFERMAS® **3 CTS POWER**

HEATING WATER BUFFER TANK WITH STRATIFICATION DEVICE, 2 FIXED HEAT EXCHANGERS, MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION AND INTEGRATED SOLAR STATION



APPLICATION
Storage by stratification of heating water, immediate production of domestic hot water (DHW) with high flow rates and performances and management of the solar circulation, in solar thermal system / biomass boiler.

MATERIAL
Mild steel painted on the outside. Buffer intented for closed circuit installation, so no anti-corrosion treatment is provided.

DHW HEAT EXCHANGER
External MACS® module with Stainless steel 316L brazed plate exchanger for immediate D.H.W. production.

HEATING WATER HEAT EXCHANGER
N° 2 fixed heat exchangers and CTS® stratificator system, suitable for solar thermal systems and other generator.

TECHNICAL DESCRIPTION
Specific for accumulation and management of the heat produced by the thermal solar system, combines the use of the Puffer's characteristics with the ones of a fast DHW producer without the storage of domestic hot water, with the following advantages:
- to reduce dimensions of the needed water heater
- easy maintenance
- maximum hygiene for anti-legionellosis bacteria's
- to produce more DHW than the quantity obtained by boiler with similar capacity because hot water is stored at a higher temperature than DHW.

Puffermas® 3 CTS POWER is able to integrate the use of a third separate heat source in addition to solar and biomass.

INSULATION
Buffer tank: High thermal insulation with ecological hard polyurethane foam. Models 800-1000 available with dismountable hard foam insulation
MACS® module: insulating PPE cover.
Grey PVC external lining.

WARRANTY
5 years (tank). See general sales conditions and warranty for electrical parts.

ACCESSORIES AND SPARE PARTS
See Accessories section for the entire list.

IMMEDIATE DHW PRODUCTION



PATENTED

PUFFERMAS® 3 CTS POWER VB

Model	Model MACS® Module	HARD FOAM INSULATION Art. Nr.	SLB heat exchanger model / plates nr.	HEAT EXCHANGER SURFACE Upper [m²]	HEAT EXCHANGER SURFACE Lower [m²]	ENERGY EFFICIENCY CLASS
500	70	3251162316563	SLB20 / 34	1,3	1,9	C
600		3251162316564		1,3	2,1	C
800		3251162316565		1,8	2,5	B
1000		3251162316566		2,5	3,1	C
1500		3251162316567		2,8	3,8	C
1000	120	3251162316568	SLB40/ 40	2,5	3,1	C
1500		3251162316569		2,8	3,8	C

Model	MACS® module model	DHW production (10-45°C) with accumulation at 80°C [lt/min]	Maximum availability of DHW (10-45°C) with accumulation at 80°C [lt]
500	70	37	680
600		37	800
800		37	1150
1000		37	1350
1500		37	2080
1000	120	61	1680
1500		61	2580

ACCESSORIES

Thermometer

Art. Nr.
5032240000107
5 units box



Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



Buffer tanks connecting kit

Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	

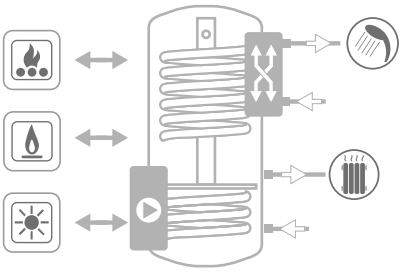


P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE

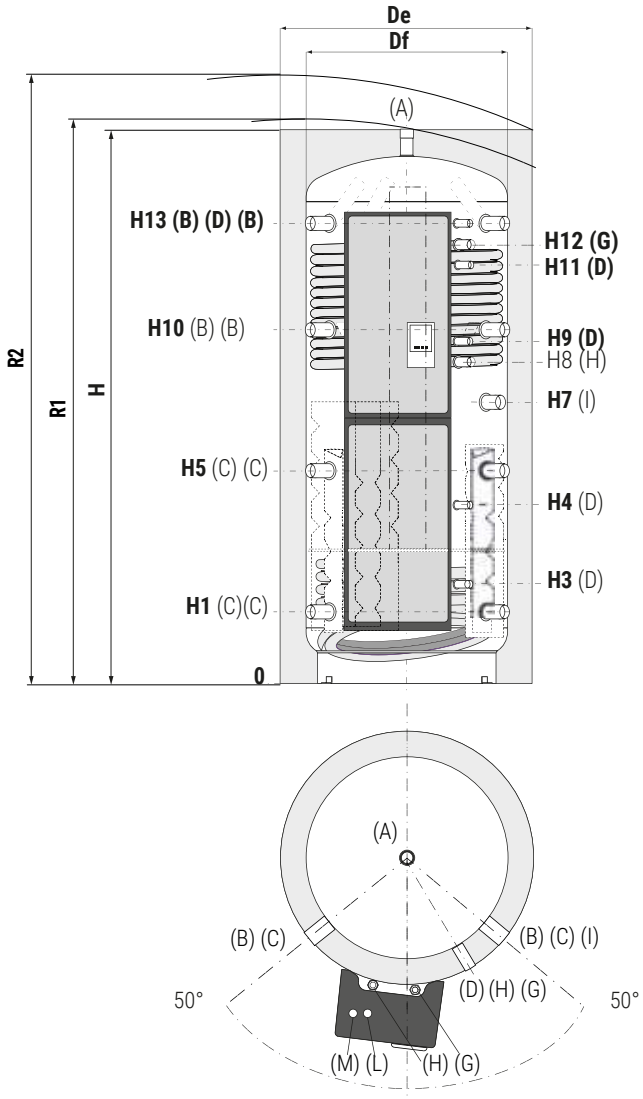
PUFFERMAS® **3 CTS POWER**

HEATING WATER BUFFER TANK WITH STRATIFICATION DEVICE, 2 FIXED HEAT EXCHANGERS, MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION AND INTEGRATED SOLAR STATION

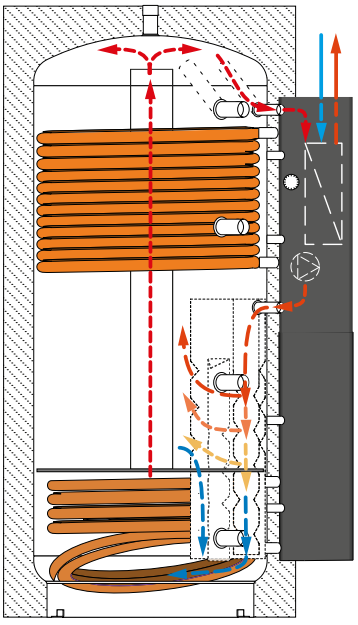
STORAGE		FIXED HEAT EXCHANGER		HEAT EXCHANGER STAINLESS STEEL PLATES (MACS®)		DHW HARDNESS
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	12 bar	110 °C	8 bar	99 °C	30 °f



See TECHNICAL SUPPORT chapter for example of installation



A	Heating delivery/From generator/Air purge 1"1/2 G F
B	Heating delivery/From generator 1"1/2 G F
C	Heating return/to generator 1"1/2 G F
D	Probe 1/2" G F
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Connection for electric immersion heater 1"1/2 G F
L	Domestic hot water outlet 3/4" G M (1" G M for models 120)
M	Domestic cold water circuit inlet 3/4" G M (1" G M for models with MACS® 120)



SUITABLE FOR SOLAR THERMAL SYSTEMS

THE ILLUSTRATION UNDERLINES THE STRATIFICATION PROCESS (FROM TOP TO BOTTOM) THAT ALLOWS TO HAVE ALL NEEDED ENERGY RAPIDLY AVAILABLE



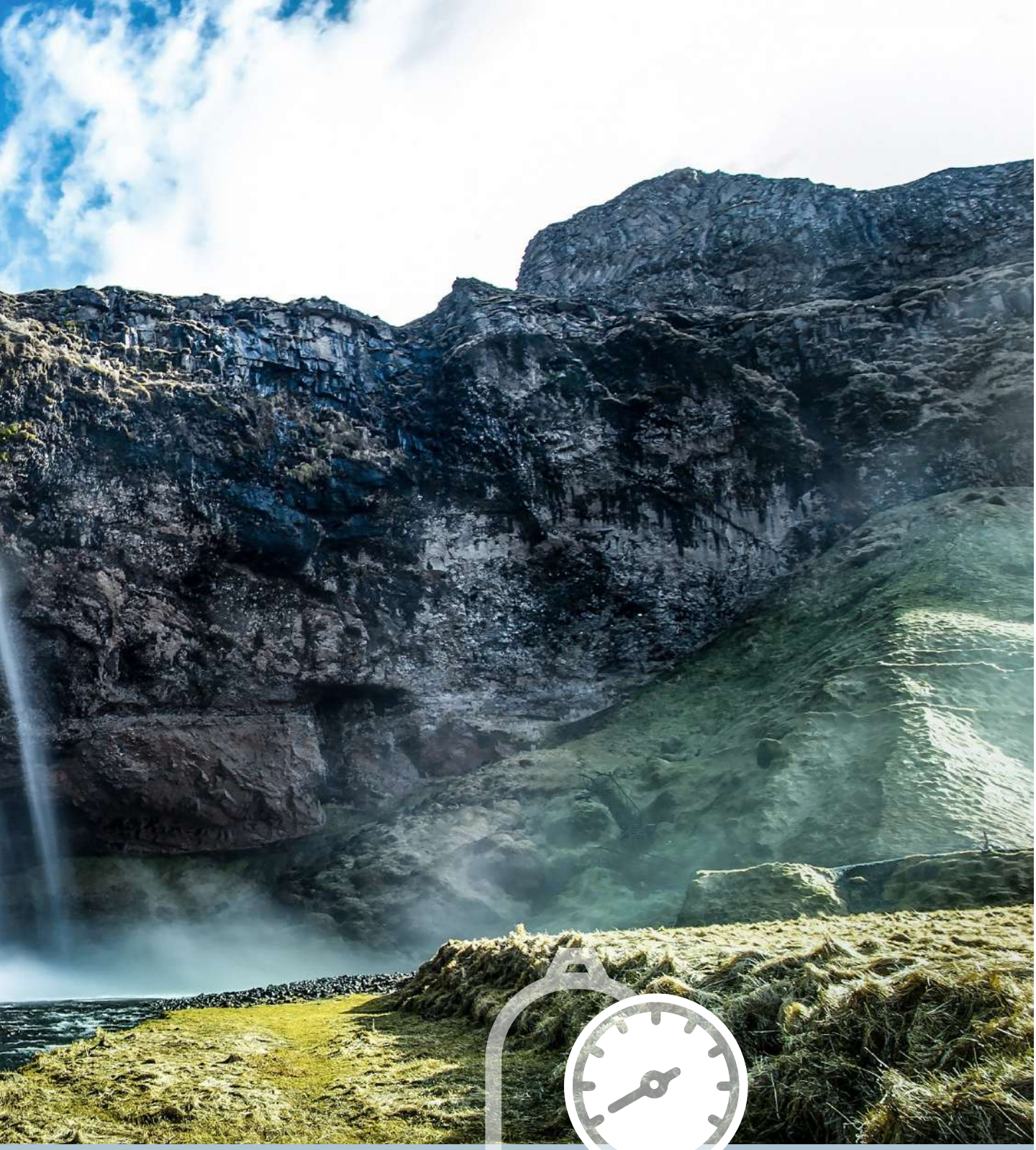
Dismountable insulation

Model	Volume	De	Df	H	R1	R2	H1	H3	H4	H5	H7	H8	H9	H10	H11	H12	H13
	[lt]	[mm]															
500	478	750	650	1619	//	1785	247	360	533	629	870	930	1025	1011	1130	1231	1343
600	560	750	650	1870	//	2015	247	360	582	695	970	1090	1200	1144	1485	1391	1593
800	805	940	790	1840	1880	2067	265	378	584	690	918	1003	1115	1115	1442	1347	1541
1000	946	940	790	2130	2165	2329	265	384	656	787	1145	1188	1388	1309	1588	1661	1831
1500	1454	1100	950	2250	//	2505	313	432	736	845	1236	1286	1396	1377	1783	1673	1909

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesgin directive 2009/125/CE



PRESSURIZED WATER



WATER PRESSURE TANKS

TESTED PRESSURIZED TANKS P.E.D.
CE marked storage tanks for pressurized water in compliance with Directive 2014/68/UE P.E.D.
The range of tested pressurized tanks **PED** includes all the pressurized storages designed for water-lifting systems, for accumulation of compressed air or for closed expansion vessels.
Air-cushion pressure vessels and membrane expansion vessels are part of this family. These products are manufactured according the European Directive for pressurized devices (2014/68/UE Pressure Equipment Device) and are designed to contain dangerous fluids at high pressure and/or temperature.







THE PRESSURE EQUIPMENT DEVICE (P.E.D.) DIRECTIVE
Any device that overcomes the maximum working pressure limit of **0,5 BAR** is subject to design and manufacture indications according to the directive 2014/68/EU.

This directive establishes an index of hazardousness of the equipment (tanks in our case), determined according to the type of fluid contained, the maximum temperature admissible, the pressure and the capacity of the tank.

Fluids are categorized in 2 groups:
• **GROUP 1**, hazardous fluids (explosive, flammable, easily flammable, highly flammable, oxidizer, toxic and highly toxic)
• **GROUP 2**, not hazardous fluids (all fluids that are not included in **GROUP 1**)

Note: all the Cordivari products involved in the application of the **PED** directive are intended to contain fluids belonging to GROUP 2 (water, steam, compressed air).
The categorization of the equipment in accordance with the level of hazardousness is established in the Annex II of the directive that defines six classes:

Category	Application of the PED directive	CE Marking	Reference
PS ≤ 0,5 and specific exceptions	Not applicable	No	Art. 1.1 e 1.2
PS ≥ 0,5 in conditions of low hazard level	Applicable	No	Art. 4.3
Category I	Applicable	Yes	Table from 1 to 9 Annex II
Category II	Applicable	Yes	
Category III	Applicable	Yes	
Category IV	Applicable	Yes	

USE OF PRESSURE EQUIPMENT ACCORDING TO ITALIAN LAWS AND REGULATIONS
The use of pressure equipment is regulated in Italy by Ministerial Decree No. 329/2004.
This decree establishes requirements for the correct operation of pressure equipments both during installation and start-up and in terms of subsequent periodic checks. On this regard, following activities are defined:

- **DECLARATION OF COMMISSIONING:** Is intended the declaration to be submitted to National Labour Security Institute and to the competent for the territory Sanitary Office, containing the following annexes according to the provisions of art. 6.1 of Ministerial Decree no. 329/2004.
- **FIRST INSTALLATION COMMISSIONING:** control consisting in verifying by competent approved body (Labour or Medical Institute) that the tank has been correctly installed in compliance with user manual and maintenance issued by the manufacturer of the equipment and in compliance with the local laws in force.
- **PERIODICAL RE-QUALIFICATION:** compulsory periodic checks to be carried out by authorised bodies on pressure equipments in service under responisibility of user, in order to check the compliance for a continuous operation.
- **OPERATION CHECK:** performed to assess the compliance of the actual conditions of use of the equipment with what is reported in the declaration of commissioning and in manual. During this phase, the safety accessories are also subjected to a functional check.
- **INTEGRITY CHECK:** this is carried out through a visual examination both inside and outside the pressure equipment and through instrumental checks that determine whether the equipment is still within the limits set by the manufacturer, e.g. by checking the thickness.

DECREE 329 states exclusions cases (total or partial) from the operational checks, according to following scheme.

CAPACITY V [liters]	MAXIMUM OPERATING PRESSURE PS [bar]	PS x V [bar x liter]	POTENTIAL CORROSION INTERNAL OR EXTERNAL (*)	DECLARATION OF COMMISSIONING	COMMISSIONING CHECK	PERIODIC REQUALIFICATION
≤ 25	whatever	–	–	No	No	No (**)
25 < V ≤ 50	≤ 12	–	–	No	No	
> 50	≤ 12	≤ 8000	No	Yes	No	
	≤ 12	≤ 8000	Yes	Yes	No	Yes (***)
	≤ 12	≤ 12000	No	Yes	Yes	No (**)

(*) The absence of corrosive phenomena inside or outside the equipments can be declared by the designer in the declaration of commissioning only for fluid under Group 2 , except steam.

(**) The user must always follow the instructions in the operating and maintenance manual.

(***) Always to be carried out by an approved body.
Categories I and II Functional check Four-yearly - Integrity check Ten-yearly
Categories III and IV Operation check Every four years - Integrity check: Every ten years

We recommend always to check the national laws in force at place of installation for the use of pressure equipment.

PRESSURE VESSEL **GALVANIZED Z PED VT**

CERTIFIED VERTICAL GALVANIZED PRESSURE VESSEL (DIRECTIVE 2014/68/UE)



PRESSURE	TEMPERATURE
Pmax	Tmax
[see table chart]	-10 / +50 °C

PROMPT AVAILABILITY

Model	AUTOCL. Z VT	Working Pressure
	Art. Nr.	[Bar]
100	3052171990001	
200	3052171990022	
300	3052171990003	
500	3052171990004	
750	3052171990025	
1000	3052171990026	
1500	3051171990015	
2000	3051171990016	
2500	3051171990017	
3000	3051171990068	
4000	3051171990019	
5000 ø1450	3051171990020	
8000	3051172020021	
10000	3051172020022	

Surcharge for insul. 20 mm

8

Models from 100 to 1000 are provided with safety valve and pressure gauge.

Model	AUTOCL. Z VT	Working Pressure
	Art. Nr.	[Bar]
100	3052171990015	
200	3051171990074	**11,76**
300	3051171990025	
500	3051171990026	
750	3051171990077	
1000	3051171990078	
1500	3051171990029	
2000	3051171990030	
2500	3051171990031	
3000	3051171990082	**12**
4000	3051171990033	
5000 ø1450	3051171990035	
8000	3051172020018	
10000	3051172020019	

Surcharge for insul. 20 mm

Models from 100 and 500 are provided with safety valve and pressure gauge.

Model	AUTOCL. Z VT WITH MANHOLE	Working Pressure
	Art. Nr.	[Bar]
5000 ø1600	3051172020007	
8000	3051172020011	**8**
10000	3051172020012	

Model	AUTOCL. Z VT WITH MANHOLE	Working Pressure
	Art. Nr.	[Bar]
4000	3051172020008	
5000 ø1450	3051172020004	**12**
8000	3051172020013	
10000	3051172020014	

APPLICATION E TECHNICAL DESCRIPTION
Air cushion pressure vessels.
Suitable to supply water to the highest floors of the buildings and to compensate the water shortage of the water-works. The air cushion pressure vessels Z PED VT are made for water pumping and they work as a pressured water lung that, if correctly dimensioned, can limit the self-starting of the pump.
These products are made in galvanized mild steel.

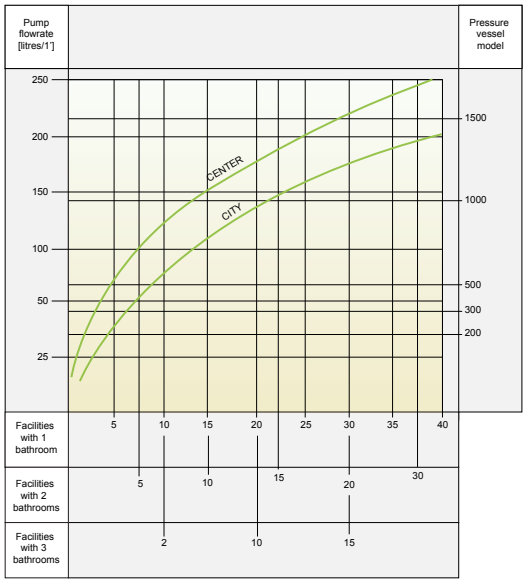
ANTI-CORROSION TREATMENT
These tanks are galvanized inside and outside, with immersion in a pool of fused zinc with pureness not below than 99,99% (Uni EN 1179)

DOCUMENTS ATTACHED
- CE certification
- User Instructions

CERTIFICATIONS
The Z PED VT pressure vessels are made according to the security policy of the standard 2014/68/UE that rules the pressurized products. Under surveillance of the Notified Body, a CE mark is stuck on them as well as the following project data that characterize the product:
- Pressurized fluid: water + air or nitrogen
- Fluid group: 2
- Max operating pressure: see the table chart
- Temperature: -10/+50 °C

INSULATION (on request)
Closed cell anti-condensation polyethylene foam glued to the body of the tank (not removable). Non self-extinguishing version, thickness 20 mm.

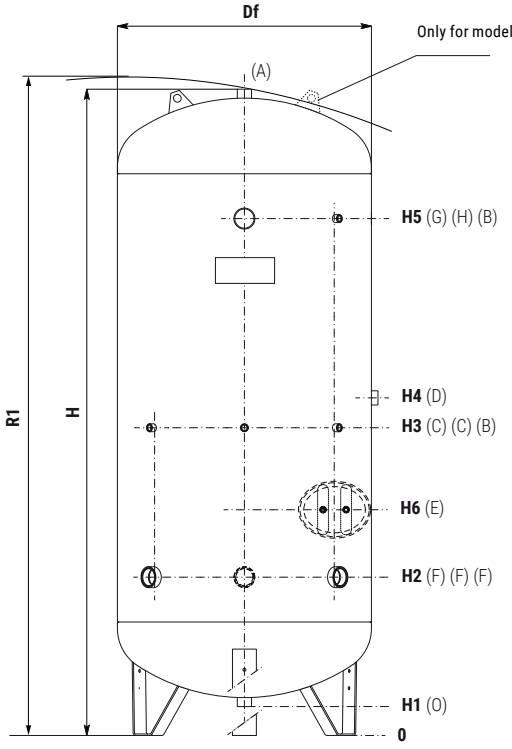
WARRANTY
2 years-See general sales conditions and warranty.

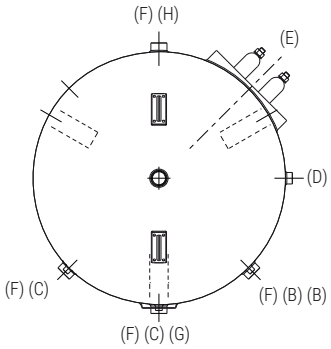


To quickly determine both the capacity of the pressure vessel and the pump according to the number of the flats, you can use the following chart (always valid for 15 self-starting per hour).

PRESSURE VESSEL **GALVANIZED Z PED VT**

CERTIFIED VERTICAL GALVANIZED PRESSURE VESSEL (DIRECTIVE 2014/68/UE)





A	Safety Valve
B	Visual level indicator
C	Instrumentation
D	Level switch – Pressure switch
E	Manhole (only on models > 4000)
F	Input - use
G	Instrumentation 2" (only on models > 5000)
H	Level switch – Pressure switch (only on models > 3000)
O	Drain



Manometer



Safety Valve

As standard for pressure vessels from 100 to 1000 lt (8 bar)



The LEVEL INDICATOR KIT is available on demand. See the Accessories section for further information.

	Model	Df	De*	H	R1	H1	H2	H3	H4	H5	H6	O-A	F	H	B-C	D	G
		[mm]										Connections F					
WORKING PRESSURE 8 bar	**100**	400	440	1055	1065	90	350	500	600	800	-	1"1/4	1"	-	1/2"	1"1/4	-
	200	450	490	1420	1435	85	355	655	755	1155	-	1"1/4	1"	-	1/2"	1"1/4	-
	300	550	590	1530	1555	140	435	735	835	1235	-	1"1/4	1"1/4	-	1/2"	1"1/4	-
	500	650	690	1825	1840	135	455	855	955	1505	-	1"1/4	1"1/2	-	1/2"	1"1/4	-
	750	790	830	1865	1880	110	510	960	1060	1460	-	1"1/4	1"1/2	-	1/2"	1"1/4	-
	1000	790	830	2380	2395	110	510	1010	1110	1960	-	1"1/4	1"1/2	-	1/2"	1"1/4	-
	1500	950	990	2470	2490	110	570	1070	1170	2020	-	2"	2"	-	1/2"	1"1/4	-
	2000	1100	1140	2535	2560	100	595	1095	1195	2045	-	2"	2"	-	1/2"	1"1/4	-
	2500	1200	1240	2660	2690	140	680	1280	1380	2130	-	2"	3"	-	1/2"	1"1/4	-
	3000	1200	1240	3000	3075	135	700	1300	1400	2400	-	2"	3"	-	1/2"	2"	-
	4000	1450	1490	3000	3030	115	710	1310	1410	2410	-	2"	3"	2"	1/2"	2"	-
	5000	1450	1490	3500	3525	115	710	1610	1710	2910	-	2"	3"	2"	1/2"	2"	-
	5000	1600	1640	3050	3090	100	725	1325	1425	2425	1025	2"	3"	2"	1/2"	2"	-
	8000	1650	1690	4205	4270	200	905	1905	2033	3506	1155	2"	4"	2"	1/2"	2"	2"
	10000	1650	1690	5205	5270	200	905	2255	2478	4506	1155	2"	4"	2"	1/2"	2"	2"

Models from 100 to 1000 are provided with security valve and pressure gauge. 5000 lt (Ø 1600) included with manhole.
(*De = diameter with insulation on request)

	Model	Df	De*	H	R1	H1	H2	H3	H4	H5	H6	O-A	F	H	B-C	D	G
		[mm]										Connections F					
WORKING PRESSURE 11,76 bar	**100**	400	440	1055	1065	90	350	500	600	800	-	1"1/4	1"	-	1/2"	1"1/4	-
	200	450	490	1420	1435	85	355	655	755	1155	-	1"1/4	1"	-	1/2"	1"1/4	-
	300	550	590	1530	1555	140	435	735	835	1235	-	1"1/4	1"1/4	-	1/2"	1"1/4	-
	500	650	690	1825	1840	135	455	855	955	1505	-	1"1/4	1"1/2	-	1/2"	1"1/4	-
WORKING PRESSURE 12 bar	**750**	790	830	1865	1880	110	510	960	1060	1460	-	1"1/4	1"1/2	-	1/2"	1"1/4	-
	1000	790	830	2380	2395	110	510	1010	1110	1960	-	1"1/4	1"1/2	-	1/2"	1"1/4	-
	1500	950	990	2470	2490	110	570	1070	1170	2020	-	2"	2"	-	1/2"	1"1/4	-
	2000	1100	1140	2535	2560	100	595	1095	1195	2045	-	2"	2"	-	1/2"	1"1/4	-
	2500	1200	1240	2660	2690	140	680	1280	1380	2130	-	2"	3"	-	1/2"	1"1/4	-
	3000	1200	1240	3000	3075	135	700	1300	1400	2400	-	2"	3"	-	1/2"	2"	-
	4000	1450	1490	3000	3030	115	710	1310	1410	2410	1010	2"	3"	2"	1/2"	2"	-
	5000	1450	1490	3500	3525	115	710	1610	1710	2910	1010	2"	3"	2"	1/2"	2"	-
	8000	1650	1690	4205	4270	200	905	1905	2033	3506	1155	2"	4"	2"	1/2"	2"	2"
	10000	1650	1690	5205	5270	200	905	2255	2478	4506	1155	2"	4"	2"	1/2"	2"	2"

Models from 100 to 500 are provided with security valve and pressure gauge.
(*De = diameter with insulation on request)

PRESSURE VESSEL **GALVANIZED Z PED HORIZONTAL**

CERTIFIED HORIZONTAL GALVANIZED PRESSURE VESSEL (DIRECTIVE 2014/68/UE)

CE



PRESSURE	TEMPERATURE
Pmax	Tmax
[see table chart]	-10 / +50 °C

ON REQUEST:
Closed cell anti-condensation polyethylene foam glued to the body of the tank (not removable).
Thickness 20 mm, anti-condensation.
Surcharge +15%

Model	AUTOCL. Z OR Art. Nr.	Max Pressure [Bar]
100	3052170990001	8
200	3052170990022	
300	3052170990003	
500	3052170990004	
750	3052170990025	
1000	3052170990026	
1500	3051170990015	
2000	3051170990016	
3000	3051170990068	
4000	3051170990019	
5000	3051170990020	

Models from 100 to 1000 are provided with safety valve and pressure gauge.

Model	AUTOCL. Z OR Art. Nr.	Max Pressure [Bar]
100	3052170990015	11,76
200	3051170990072	
300	3051170990025	
500	3051170990026	
750	3051170990077	12
1000	3051170990078	
1500	3051170990040	
2000	3051170990030	
2500	3051170990041	
3000	3051170990082	
4000	3051170990042	
5000	3051170990044	

Models from 100 to 500 are provided with safety valve and pressure gauge.

APPLICATION E TECHNICAL DESCRIPTION
Air cushion pressure vessels.
Suitable to supply water to the highest floors of the buildings and to compensate the water shortage of the water-works. The air cushion pressure vessels Z PED OR are made for water pumping and they work as a pressured water lung that, if correctly dimensioned, can limit the self-starting of the pump.
These products are made in galvanized mild steel.

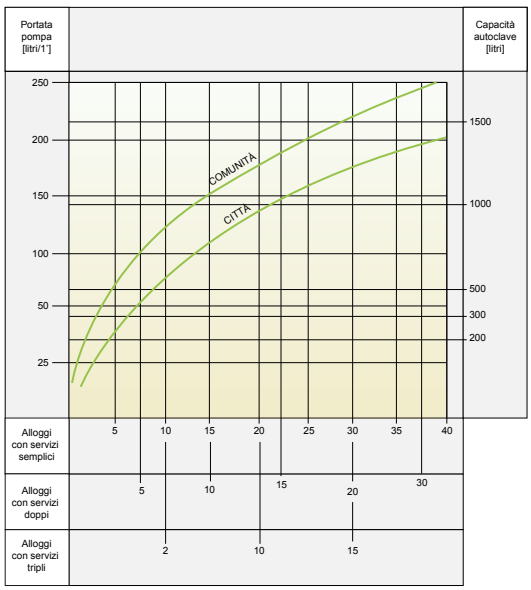
ANTI-CORROSION TREATMENT
These tanks are galvanized inside and outside, with immersion in a pool of fused zinc with pureness not below than 99,99% (Uni EN 1179)

DOCUMENTS ATTACHED
• CE certification
• User Instructions

CERTIFICATIONS
The Z PED pressure vessels are made according to the security policy of the standard 2014/68/UE that rules the pressurized products. Under surveillance of the Notified Body, a CE mark is stuck on them as well as the following project data that characterize the product:
• Pressurized fluid: water + air or nitrogen
• Fluid group: 2
• Max operating pressure: see the table chart
• Temperature: -10/+50 °C

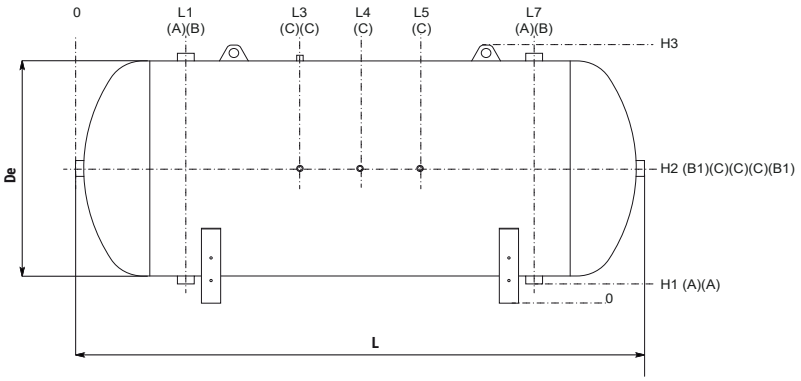
WARRANTY
2 years-See general sales conditions and warranty.

To quickly determine both the capacity of the pressure vessel and the pump according to the number of the flats, you can use the following chart (always valid for 15 self-starting per hour).



PRESSURE VESSEL **GALVANIZED Z PED HORIZONTAL**

CERTIFIED HORIZONTAL GALVANIZED PRESSURE VESSEL (DIRECTIVE 2014/68/UE)



A	Input - use
B	Safety Valve/Instrumentation
B1	Safety Valve/Instrumentation
C	Instrumentation



Manometer



Safety Valve

As standard for pressure vessels from 100 to 1000 (8 bar) and from 100 to 500 (12 bar)

	Model	De	L	L1	L2	L3	L4	L5	L6	L7	H1	H2	H3	B1	A-B	C
		[mm]												Connections F		
WORKINP RESSURE 8 bar	**100**	400	955	230	300	338	478	618	655	725	69	294	518	1" 1/4	1"	1/2"
	200	450	1350	240	340	475	675	875	1010	1110	67	317	568	1" 1/4	1"	1/2"
	300	550	1399	285	370	500	700	900	1030	1115	119	424	762	1" 1/4	1" 1/4	1/2"
	500	650	1700	325	420	650	850	1050	1280	1375	115	470	870	1" 1/4	1" 1/2	1/2"
	750	790	1750	350	520	675	875	1075	1230	1400	107	532	987	1" 1/4	1" 1/2	1/2"
	1000	790	2250	350	520	900	1150	1400	1730	2000	107	532	987	1" 1/4	1" 1/2	1/2"
	1500	950	2340	415	565	1020	1170	1420	1775	1945	143	643	1196	2"	2"	1/2"
	2000	1100	2450	470	615	975	1225	1475	1835	1980	100	683	1280	2"	2"	1/2"
	3000	1200	2770	550	685	1085	1385	1685	2085	2220	140	784	1480	3"	2"	1/2"
	4000	1450	2890	600	745	1065	1445	1825	2145	2290	122	887	1670	3"	2"	1/2"
	5000	1450	3390	600	745	1315	1695	2075	2645	2790	122	887	1670	3"	2"	1/2"

Models from 100 to 1000 are provided with security valve and pressure gauge

	Model	De	L	L1	L2	L3	L4	L5	L6	L7	H1	H2	H3	B1	A-B	C
		[mm]												Connections F		
WORKINP RESSURE 11,76 bar	**100**	400	960	240	310	345	480	615	650	720	75	305	535	1" 1/4	1"	1/2"
	200	450	1340	268	350	470	670	870	990	1072	75	330	615	1" 1/4	1"	1/2"
	300	550	1400	295	375	500	700	900	1025	1105	120	430	765	1" 1/4	1" 1/4	1/2"
	500	650	1700	320	450	650	850	1050	1250	1380	115	480	890	1" 1/4	1" 1/2	1/2"
	750	790	1750	330	550	675	875	1075	1200	1420	107	532	987	1" 1/4	1" 1/2	1/2"
	1000	790	2250	330	550	875	1125	1375	1700	1920	107	532	987	1" 1/4	1" 1/2	1/2"
WORKINP RESSURE 12 bar	**1500**	950	2360	420	570	930	1180	1430	1790	1940	117	622	1196	2"	2"	1/2"
	2000	1100	2450	470	615	975	1225	1475	1835	1980	100	683	1280	2"	2"	1/2"
	2500	1200	2520	510	650	1010	1260	1510	1870	2010	140	784	1480	3"	2"	1/2"
	3000	1200	2770	550	685	1085	1385	1685	2085	2220	140	784	1480	3"	2"	1/2"
	4000	1450	2890	600	745	1065	1445	1825	2145	2290	122	887	1670	3"	2"	1/2"
	5000	1450	3390	600	745	1315	1695	2075	2645	2790	122	887	1670	3"	2"	1/2"

Models from 100 to 500 are provided with security valve and pressure gauge

PRESSURE VESSEL**STAINLESS STEEL 316L X PED VT**

CERTIFIED VERTICAL STAINLESS STEEL 316L PRESSURE VESSEL (DIRECTIVE 2014/68/UE)



PRESSURE	TEMPERATURE
Pmax	Tmax
8 bar	-10 / +50 °C

ON REQUEST:
Insulation version with elastolen 20 mm – anti-condensation

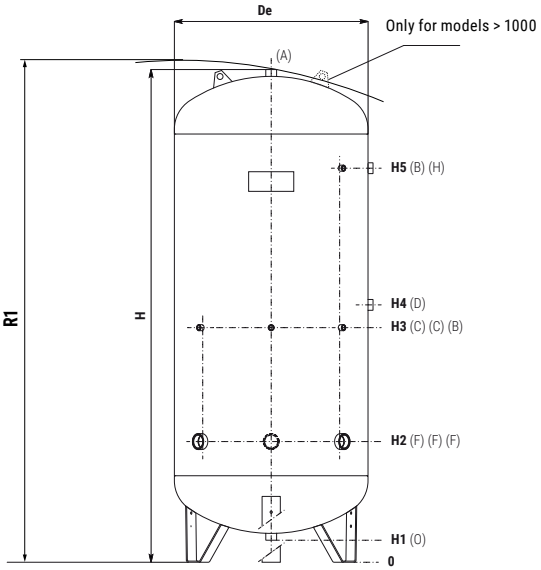
Model	**AUTOCL. X PED VT**
	Art. Nr.
100	3051052010021
200	3051052010022
300	3051052010023
500	3051052010024
750	3051052010025
1000	3051052010026
1500	3051052010027
2000	3051052010028
3000	3051052010029
4000	3051052010030
5000	3051052010031

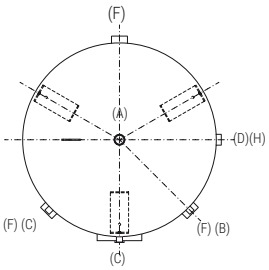
APPLICATION E TECHNICAL DESCRIPTION
Air cushion pressure vessels.
Suitable to supply water to the highest floor of the buildings and to compensate the water shortage of the water-works.
The air cushion pressure vessels X PED VT are made for the water pumping and they work as a pressured water lung that, if correctly dimensioned, can limit the self-starting of the pump. These products are entirely made in Stainless steel 316L.

DOCUMENTS ATTACHED
• CE certification
• User Instructions

CERTIFICATIONS
The X PED VT pressure vessels are made according to the security policy of the standard 2014/68/UE that rules the pressurized products. Under surveillance of the Notified Body, a CE mark is stuck on them as well as the following project data that characterize the product:
• Pressurized fluid: water + air or nitrogen
• Fluid group: 2
• Max operating pressure: see the table chart
• Temperature: -10/+50 °C

WARRANTY
2 years-See general sales conditions and warranty.





A	Safety Valve
B	Visual level indicator
C	Instrumentation
D	Level switch – Pressure switch
F	Input - use
H	Level switch – Pressure switch
O	Drain


Manometer


Safety Valve

As standard for pressure vessels from 100 to 1000 (8 bar)

Model	De	H	R1	H1	H2	H3	H4	H5	A-D-O	F	B-C	H
	[mm]								Connections F			
100	400	1050	1095	76	350	500	600	770	1"1/4	1"	1/2"	-
200	450	1450	1490	71	350	650	750	1150	1"1/4	1"	1/2"	-
300	550	1550	1585	135	440	740	840	1240	1"1/4	1"1/4	1/2"	-
500	650	1840	1880	131	460	860	960	1510	1"1/4	1"1/2	1/2"	1"
750	750	2130	2170	108	510	960	1068	1718	1"1/4	2"	1/2"	1"
1000	750	2630	2665	108	510	960	1100	1600	1"1/4	2"	1/2"	1"
1500	1000	2290	2350	100	590	1100	1200	1800	1"1/4	2"	1/2"	1"
2000	1000	2790	2840	100	590	1100	1200	2100	1"1/4	2"	1/2"	1"
3000	1200	2940	2955	115	675	1275	1380	2380	1"1/4	3"	1/2"	1"
4000	1450	2973	3070	84	679	1279	1379	2379	1"1/4	3"	1/2"	1"
5000	1450	3473	3555	84	679	1579	1679	2879	1"1/4	3"	1/2"	1"

PRESSURE VESSEL **STAINLESS STEEL 316L X PED HORIZONTAL**

CERTIFIED HORIZONTAL STAINLESS STEEL 316L PRESSURE VESSEL (DIRECTIVE 2014/68/UE)



PRESSURE	TEMPERATURE
Pmax	Tmax
8 bar	-10 / +50 °C

ON REQUEST:
Insulation version with elastolen 20 mm – anti-condensation

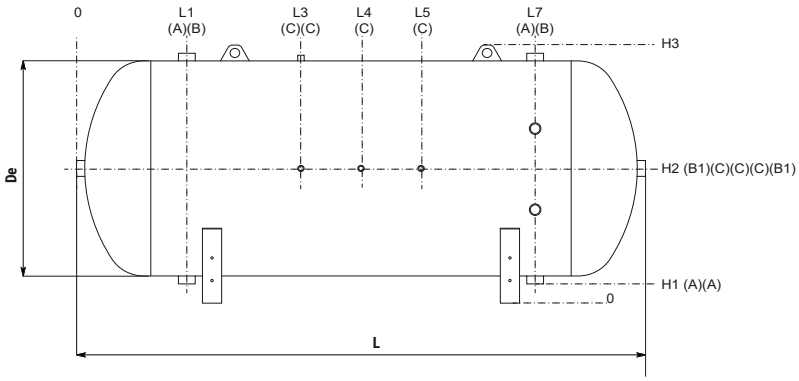
Model	**AUTOCL. X PED OR**
	Art. Nr.
100	3051051010021
200	3051051010022
300	3051051010023
500	3051051010024
750	3051051010025
1000	3051051010026
1500	3051051010027
2000	3051051010028
3000	3051051010029
4000	3051051010030
5000	3051051010031

APPLICATION E TECHNICAL DESCRIPTION
Air cushion pressure vessels.
Suitable to supply water to the highest floor of the buildings and to compensate the water shortage of the water-works.
The air cushion pressure vessels X PED OR are made for the water pumping and they work as a pressured water lung that, if correctly dimensioned, can limit the self-starting of the pump. These products are entirely made in Stainless steel 316L.

DOCUMENTS ATTACHED
• CE certification
• User Instructions

CERTIFICATIONS
The X PED OR pressure vessels are made according to the security policy of the standard 2014/68/UE that rules the pressurized products. Under surveillance of the Notified Body, a CE mark is stuck on them as well as the following project data that characterize the product:
• Pressurized fluid: water + air or nitrogen
• Fluid group: 2
• Max operating pressure: see the table chart
• Temperature: -10/+50 °C

WARRANTY
2 years-See general sales conditions and warranty.



A	Input - use
B	Safety Valve/Instrumentation.
B1	Safety Valve/Instrumentation.
C	Instrumentation


Manometer


Safety Valve

As standard for pressure vessels from 100 to 1000 (8 bar)

Model	De	L	L1	L2	L3	L4	L5	L6	L7	H1	H2	H3	B1	A-B	C
	[mm]												Connections F		
100	400	960	240	327	330	480	630	633	720	70	300	530	1" 1/4	1"	1/2"
200	450	1340	244	350	470	670	870	990	1096	75	330	615	1" 1/4	1"	1/2"
300	550	1400	300	380	500	700	900	1020	1100	120	430	765	1" 1/4	1" 1/4	1/2"
500	650	1700	320	405	650	850	1050	1295	1380	115	480	880	1" 1/4	1" 1/2	1/2"
750	750	2000	350	500	750	1000	1250	1500	1650	122	530	962	1" 1/4	2"	1/2"
1000	750	2500	350	500	1000	1250	1500	2000	2150	122	530	962	1" 1/4	2"	1/2"
1500	1000	2180	440	590	840	1090	1340	1590	1740	117	630	1200	1" 1/4	2"	1/2"
2000	1000	2660	440	580	1080	1330	1580	2080	2220	117	630	1200	1" 1/4	2"	1/2"
3000	1200	2800	560	700	1100	1400	1700	2100	2240	140	784	1480	1" 1/4	3"	1/2"
4000	1450	2930	615	765	1115	1465	1815	2165	2315	130	890	1690	1" 1/4	3"	1/2"
5000	1450	3430	615	790	1315	1715	2115	2640	2815	130	890	1690	1" 1/4	3"	1/2"

EXPANSION VESSELS-MEMBRANE **PAINTED PED VT**

VERTICAL PAINTED EXPANSION VESSEL WITH MEMBRANE (DIRECTIVE 2014/68/UE)



CE

PROMPT AVAILABILITY

Model	VASO MEMB. V PED VT
	Art. Nr.
50	3911162241007
80	3911162241008
100	3911162241003
200	3911162241004
300	3911162241011
500	3911162241012

VASO MEMB. V PED 50 LT (9 unit box)

Model	9 unit box
	Art. Nr.
50	391116224100709

TECHNICAL DESCRIPTION
Vertical V PED expansion vessels with membrane are used for lifted water systems and they represent a pressurised water lung that, if duly dimensioned, reduces pump cycling.
The peculiarity of this product is the physic separation between water and air made by the membrane.

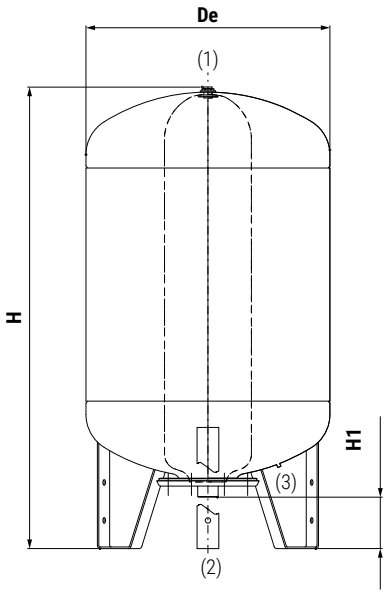
APPLICATION
Perfect to ensure water deliveries to the top floors of the building or to work in case of insufficient water supplied by waterworks, or to stabilize pressure in the domestic water supply by absorbing expansion when the water is heated.

MATERIAL
Painted mild steel.

MEMBRANE
Elastic EPDM membrane suitable for drinking water.

CERTIFICATIONS
V PED VT expansion vessels with membrane are produced in accordance with safety disposal of European Directive 2014/68/UE in terms of pressurized devices.
They are CE labelled with design data:
- pressurized fluid: water+air or nitrogen
- Fluid group: 2
- max. working pressure: 10bar

DOCUMENTS ATTACHED
• CE certification
• User Instructions



Model	De	H	H1	1	2	3	WORKING CONDITIONS min/max Temp.	WORKING CONDITIONS max Press.
	[mm]			Connections G			[°C]	[bar]
50	400	627	91	Air inlet valve	1" M	Water in/out -	-10/+99	10
80	450	717	88	Air inlet valve	1" M	Water in/out -	-10/+99	10
100	450	872	88	1/2" Instrumentation	1" M	Water in/out Air inlet valve	-10/+99	10
200	550	1187	151	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+99	10

Model	De	H	H1	1	2	3	Used as air cushion pressure vessel min/max Temp.	Used as air cushion pressure vessel max Press.	Used as expansion vessel min/max Temp.	Used as expansion vessel max Press.
	[mm]			Connections G			[°C]	[bar]	[°C]	[bar]
300	650	1254	150	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+50	10	-10/+99	10
500	750	1511	144	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+50	10	-10/+99	10

EXPANSION VESSEL-MEMBRANE **PAINTED PED 24 LT**

PAINTED EXPANSION VESSEL WITH MEMBRANE (DIRECTIVE 2014/68/UE)



CE

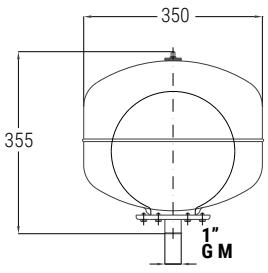
PRESSURE	TEMPERATURE
Pmax	Tmax
8 bar	-10/+99 °C

PROMPT AVAILABILITY

VASO MEMB. V PED 24 LT (36 unit box)

Model	36 unit box
	Art. Nr.
24	390119061000136

Model	VASO MEMB. V PED 24 LT
	Art. Nr.
24	3901190610001



EXPANSION VESSELS-MEMBRANE **PAINTED PED HORIZONTAL**

HORIZONTAL PAINTED EXPANSION VESSEL WITH MEMBRANE (DIRECTIVE 2014/68/UE)

Model	**VASO MEMB. V PED OR**
	Art. Nr.
50	3911161341007
80	3911161341008
100	3911161341003
200	3911161341004
300	3911161341011
500	3911161341012

PROMPT AVAILABILITY



TECHNICAL DESCRIPTION
Horizontal V PED expansion vessels with membrane are used for lifted water systems and they represent a pressurised water lung that, if duly dimensioned, reduces pump cycling.
The peculiarity of this product is the physic separation between water and air made by the membrane.

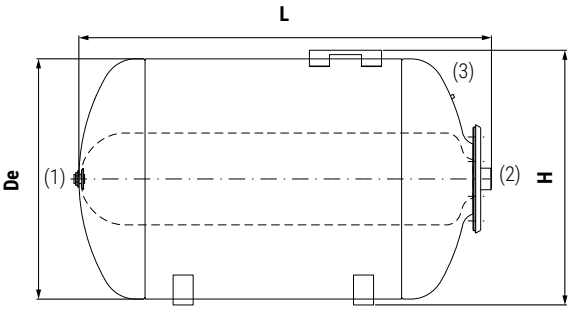
APPLICATION
Perfect to ensure water deliveries to the top floors of the building or to work in case of insufficient water supplied by waterworks, or to stabilize pressure in the domestic water supply by absorbing expansion when the water is heated.

MATERIAL
Painted mild steel.

MEMBRANE
Elastic EPDM membrane suitable for drinking water.

CERTIFICATIONS
V PED OR expansion vessels with membrane are produced in accordance with safety disposal of European Directive 2014/68/UE in terms of pressurized devices.
They are CE labelled with design data:
- pressurized fluid: water+air or nitrogen
- Fluid group: 2
- max. working pressure: 10bar

DOCUMENTS ATTACHED
• CE certification
• User Instructions

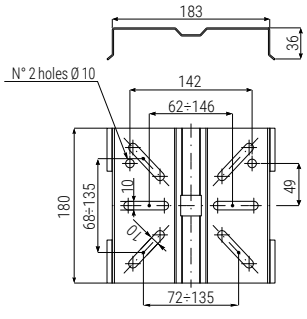


Model	De	H	L	1	2	3	WORKING CONDITIONS min/max Temp.	WORKING CONDITIONS max Press.
	[mm]			Connections G			[°C]	[bar]
50	400	424	583	Air inlet valve	1" M	Water in/out -	-10/+99	10
80	450	473	598	Air inlet valve	1" M	Water in/out -	-10/+99	10
100	450	473	783	1/2" Instrumentation	1" M	Water in/out Air inlet valve	-10/+99	10
200	550	583	1066	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+99	10

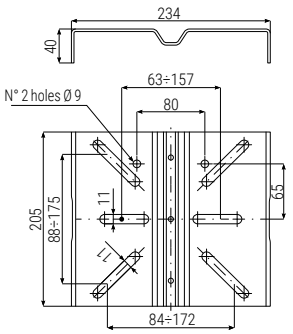
Model	De	H	L	1	2	3	Used as air cushion pressure vessel min/max Temp.	Used as air cushion pressure vessel max Press.	Used as expansion vessel min/max Temp.	Used as expansion vessel max Press.
	[mm]			Connections G			[°C]	[bar]	[°C]	[bar]
300	650	807	1080	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+50	10	-10/+99	10
500	750	900	1350	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+50	10	-10/+99	10

MOTOR SUPPORT PLATE

MOTOR SUPPORT PLATE
50/80/100/200 liters



MOTOR SUPPORT PLATE
300/500 liters



CORDIVARI

EXPANSION VESSELS-MEMBRANE **GALVANIZED PED VT**

VERTICAL GALVANIZED EXPANSION VESSEL WITH MEMBRANE (DIRECTIVE 2014/68/UE)



CE

PROMPT AVAILABILITY

Model	VASO MEMB. Z PED VT
	Art. Nr.
50	3911161991007
80	3911161991008
100	3911161991003
200	3911161991004
300	3911161991011
500	3911161991012

VASO MEMB. Z PED 50 LT (9 unit box)

Model	9 unit box
	Art. Nr.
50	391116199100709

TECHNICAL DESCRIPTION
Vertical Z PED expansion vessels with membrane are used for lifted water systems and they represent a pressurised water lung that, if duly dimensioned, reduces pump cycling.
The peculiarity of this product is the physic separation between water and air made by the membrane.

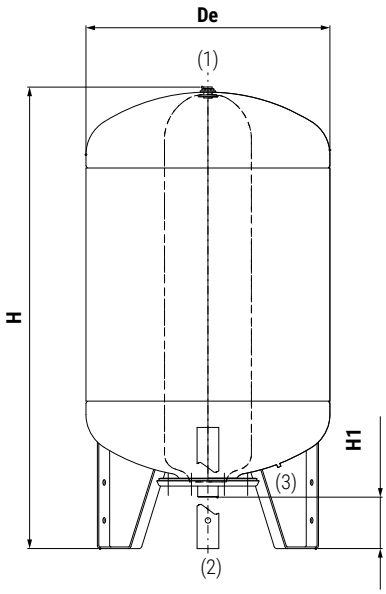
APPLICATION
Perfect to ensure water deliveries to the top floors of the building or to work in case of insufficient water supplied by waterworks, or to stabilize pressure in the domestic water supply by absorbing expansion when the water is heated.

MATERIAL
Galvanized mild steel.

MEMBRANE
Elastic EPDM foodstuff membrane suitable for drinking water.

CERTIFICATIONS
Z PED VT expansion vessels with membrane are produced in accordance with safety disposal of European Directive 2014/68/UE in terms of pressurized devices.
They are CE labelled with design data:
- pressurized fluid: water+air or nitrogen
- Fluid group: 2
- max. working pressure: 10bar

DOCUMENTS ATTACHED
• CE certification
• User Instructions



Model	De	H	H1	1	2	3	WORKING CONDITIONS min/max Temp.	WORKING CONDITIONS max Press.
	[mm]			Connections G			[°C]	[bar]
50	400	627	91	Air inlet valve	1" M	Water in/out -	-10/+99	10
80	450	717	88	Air inlet valve	1" M	Water in/out -	-10/+99	10
100	450	872	88	1/2" Instrumentation	1" M	Water in/out Air inlet valve	-10/+99	10
200	550	1187	151	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+99	10

Model	De	H	H1	1	2	3	Used as air cushion pressure vessel min/max Temp.	Used as air cushion pressure vessel max Press.	Used as expansion vessel min/max Temp.	Used as expansion vessel max Press.
	[mm]			Connections G			[°C]	[bar]	[°C]	[bar]
300	650	1254	150	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+50	10	-10/+99	10
500	750	1511	144	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+50	10	-10/+99	10

EXPANSION VESSEL-MEMBRANE **GALVANIZED PED 24 LT**

GALVANIZED EXPANSION VESSEL WITH MEMBRANE (DIRECTIVE 2014/68/UE)



CE

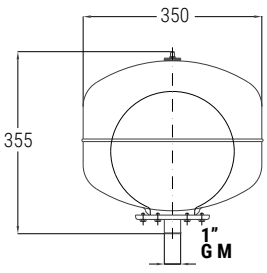
PRESSURE	TEMPERATURE
Pmax	Tmax
8 bar	-10/+99 °C

PROMPT AVAILABILITY

VASO MEMB. Z PED 24 LT (36 unit box)

Model	36 unit box
	Art. Nr.
24	390119060000136

Model	VASO MEMB. Z PED 24 LT
	Art. Nr.
24	3901190600001



EXPANSION VESSELS-MEMBRANE **GALVANIZED PED OR**

HORIZONTAL GALVANIZED EXPANSION VESSEL WITH MEMBRANE (DIRECTIVE 2014/68/UE)

Model	VASO MEMB. Z PED OR
	Art. Nr.
50	3911160991007
80	3911160991008
100	3911160991003
200	3911160991004
300	3911160991011
500	3911160991012

PROMPT AVAILABILITY



TECHNICAL DESCRIPTION
Horizontal Z PED expansion vessels with membrane are used for lifted water systems and they represent a pressurised water lung that, if duly dimensioned, reduces pump cycling.
The peculiarity of this product is the physic separation between water and air made by the membrane.

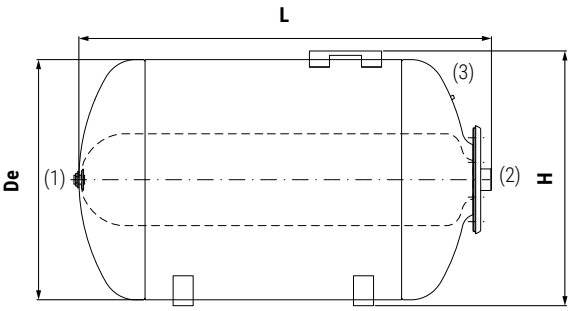
APPLICATION
Perfect to ensure water deliveries to the top floors of the building or to work in case of insufficient water supplied by waterworks, or to stabilize pressure in the domestic water supply by absorbing expansion when the water is heated.

MATERIAL
Galvanized mild steel

MEMBRANE
Elastic EPDM membrane suitable for drinking water.

CERTIFICATIONS
Z PED OR expansion vessels with membrane are produced in accordance with safety disposal of European Directive 2014/68/UE in terms of pressurized devices.
They are CE labelled with design data:
- pressurized fluid: water+air or nitrogen
- Fluid group: 2
- max. working pressure: 10bar

DOCUMENTS ATTACHED
• CE certification
• User Instructions

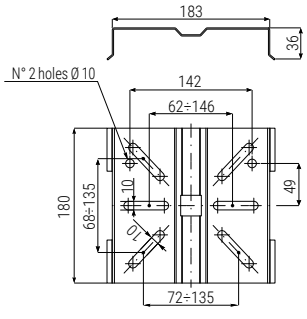


Model	De	H	L	1	2	3	WORKING CONDITIONS min/max Temp.	WORKING CONDITIONS max Press.
	[mm]			Connections G			[°C]	[bar]
50	400	424	583	Air inlet valve	1" M	Water in/out -	-10/+99	10
80	450	473	598	Air inlet valve	1" M	Water in/out -	-10/+99	10
100	450	473	783	1/2" Instrumentation	1" M	Water in/out Air inlet valve	-10/+99	10
200	550	583	1066	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+99	10

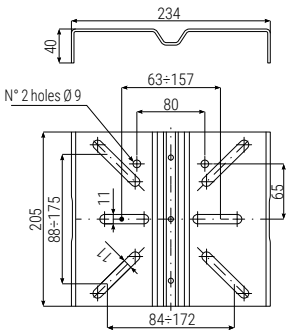
Model	De	H	L	1	2	3	Used as air cushion pressure vessel min/max Temp.	Used as air cushion pressure vessel max Press.	Used as expansion vessel min/max Temp.	Used as expansion vessel max Press.
	[mm]			Connections G			[°C]	[bar]	[°C]	[bar]
300	650	807	1080	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+50	10	-10/+99	10
500	750	900	1350	1/2" Instrumentation	1" 1/4 F	Water in/out Air inlet valve	-10/+50	10	-10/+99	10

MOTOR SUPPORT PLATE

MOTOR SUPPORT PLATE
50/80/100/200 liters



MOTOR SUPPORT PLATE
300/500 liters





COMPRESSED AIR



COMPRESSED AIR RECEIVERS **P.E.D.**

TESTED PRESSURIZED TANKS FOR COMPRESSED AIR
CE marked storage tanks for pressurized air in compliance with Directive 2014/68/UE P.E.D.
The range of tested pressurized tanks PED includes all the pressurized storages designed for accumulation of compressed air.
These products are manufactured according the European Directive for pressurized devices (2014/68/UE Pressure Equipment Device) and are designed to contain fluids at high pressure and/or temperature.





SIMPLE PRESSURE VESSEL DIRECTIVE (SPVD)
The SPVD Directive applies to pressure vessels for air or nitrogen made of steel or aluminium alloy, with a maximum working pressure higher than 0.5 bar and less than 30 bar and with the product of the maximum working pressure and the capacity of the vessel (PS x V) between 50 bar*l and 10,000 bar*l and with an operating temperaturebetween -50 °C and +300 °C for steel and max. 100 °C for aluminium.



THE PRESSURE EQUIPMENT DEVICE (P.E.D.) DIRECTIVE
Any device that overcomes the maximum working pressure limit of **0,5 BAR** is subject to design and manufacture indications according to the directive 2014/68/EU.

This directive establishes an index of hazardousness of the equipment (tanks in our case), determined according to the type of fluid contained, the maximum temperature admissible, the pressure and the capacity of the tank.

Fluids are categorized in 2 groups:
• **GROUP 1**, hazardous fluids (explosive, flammable, easily flammable, highly flammable, oxidizer, toxic and highly toxic)
• **GROUP 2**, not hazardous fluids (all fluids that are not included in **GROUP 1**)

Note: all the Cordivari products involved in the application of the **PED** directive are intended to contain fluids belonging to GROUP 2 (water, steam, compressed air).
The categorization of the equipment in accordance with the level of hazardousness is established in the Annex II of the directive that defines six classes:

Category	Application of the PED directive	CE Marking	Reference
PS ≤ 0,5 and specific exceptions	Not applicable	No	Art. 1.1 e 1.2
PS ≥ 0,5 in conditions of low hazard level	Applicable	No	Art. 4.3
Category I	Applicable	Yes	Table from 1 to 9 Annex II
Category II	Applicable	Yes	
Category III	Applicable	Yes	
Category IV	Applicable	Yes	

USE OF PRESSURE EQUIPMENT ACCORDING TO ITALIAN LAWS AND REGULATIONS
The use of pressure equipment is regulated in Italy by Ministerial Decree No. 329/2004.
This decree establishes requirements for the correct operation of pressure equipments both during installation and start-up and in terms of subsequent periodic checks. On this regard, following activities are defined:

- **DECLARATION OF COMMISSIONING:** Is intended the declaration to be submitted to National Labour Security Institute and to the competent for the territory Sanitary Office, containing the following annexes according to the provisions of art. 6.1 of Ministerial Decree no. 329/2004.
- **FIRST INSTALLATION COMMISSIONING:** control consisting in verifying by competent approved body (Labour or Medical Institute) that the tank has been correctly installed in compliance with user manual and maintenance issued by the manufacturer of the equipment and in compliance with the local laws in force.
- **PERIODICAL RE-QUALIFICATION:** compulsory periodic checks to be carried out by authorised bodies on pressure equipments in service under responisibility of user, in order to check the compliance for a continuous operation.
- **OPERATION CHECK:** performed to assess the compliance of the actual conditions of use of the equipment with what is reported in the declaration of commissioning and in manual. During this phase, the safety accessories are also subjected to a functional check.
- **INTEGRITY CHECK:** this is carried out through a visual examination both inside and outside the pressure equipment and through instrumental checks that determine whether the equipment is still within the limits set by the manufacturer, e.g. by checking the thickness.

DECREE 329 states exclusions cases (total or partial) from the operational checks, according to following scheme.

CAPACITY V [liters]	MAXIMUM OPERATING PRESSURE PS [bar]	PS x V [bar x liter]	POTENTIAL CORROSION INTERNAL OR EXTERNAL (*)	DECLARATION OF COMMISSIONING	COMMISSIONING CHECK	PERIODIC REQUALIFICATION
≤ 25	whatever	–	–	No	No	No (**)
25 < V ≤ 50	≤ 12	–	–	No	No	
> 50	≤ 12	≤ 8000	No	Yes	No	
	≤ 12	≤ 8000	Yes	Yes	No	Yes (***)
	≤ 12	≤ 12000	No	Yes	Yes	No (**)

(*) The absence of corrosive phenomena inside or outside the equipments can be declared by the designer in the declaration of commissioning only for fluid under Group 2 , except steam.

(**) The user must always follow the instructions in the operating and maintenance manual.

(***) Always to be carried out by an approved body.
Categories I and II Functional check Four-yearly - Integrity check Ten-yearly
Categories III and IV Operation check Every four years - Integrity check: Every ten years

We recommend always to check the national laws in force at place of installation for the use of pressure equipment.

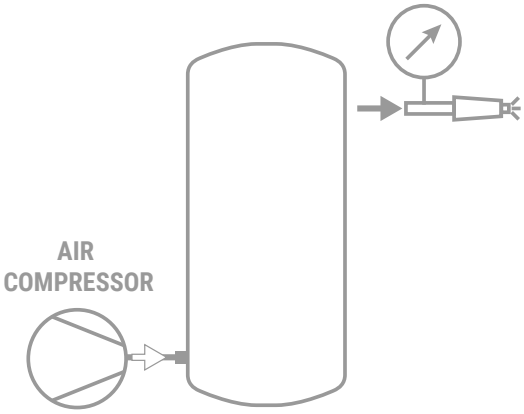
COMPRESSED AIR RECEIVERS **SPVS**

COMPRESSED AIR / NITROGEN RECEIVERS (DIRECTIVE 2014/29/CE)



CE

WORKING TEMPERATURE
Tmax
-10/+100 °C



TECHNICAL DESCRIPTION
Compressed air receivers allows to extract more air than the quantity produced by compressor, this without causing an under-pressure in the unit.
Built in mild steel, either painted, galvanized and painted with internal Polywarm® coating according to D.M. nr. 174 dated 06/04/2004.

APPLICATION
Storage and distribution of compressed air.

MATERIAL
- Painted mild steel (standard colour RAL 5002-Blue). Other colours on demand: RAL 5015 - Light Blue / RAL 3000 - Red / RAL 1021 - Yellow
- Galvanized mild steel.
- Painted mild steel version with internal Polywarm® coating.

DOCUMENTS ATTACHED
- CE certification - User Instructions

CERTIFICATIONS
Compressed air receivers are produced according to European Directive 2014/29/CE for items with a "volume x pressure" minor than 10.000 Bar x liter. These tanks are marked CE under the monitoring of an external control agency.
- Liquid in pressure: air
- Liquid group: 2
- Maximum working pressure: (See tab)
- Temperature: -10/+100°C

GALVANIZED / PAINTED



PROMPT AVAILABILITY



2014/29/CE **VERTICAL COMPRESSED AIR RECEIVER**

Model	Pressure [Bar]	Galvanized Art. Nr.	PAINTED - RAL 5002 BLUE (*) Art. Nr.
100	**11**	3053171990001	3053172240001
200		3053171990022	3053172240022
270		3053171990003	3053172240003
500		3053171990004	3053172240004
710		3053171990025	3053172240025
900		3053171990026	3053172240026
270	**15**	3053171990034	3053172240034
500		3053171990014	3053172240014

(*) Other colours on demand:
RAL 5015 Light Blue / RAL 3000 Red / RAL 1021 Yellow

FOOD INTERNAL COATING





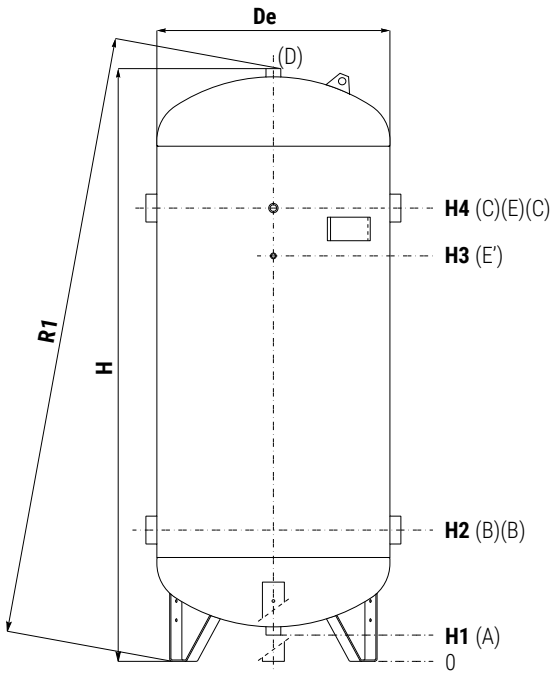
2014/29/CE **VERTICAL COMPRESSED AIR RECEIVER**

Model	Pressure [Bar]	PAINTED RAL 5002 BLUE (*) FOOD INTERNAL COATING
100	**11**	**on request**
200		
270		
500		
710		
900		
270	**15**	**on request**
500		

(*) Other colours on demand:
RAL 5015 Light Blue / RAL 3000 Red / RAL 1021 Yellow

COMPRESSED AIR RECEIVERS **SPVS**

COMPRESSED AIR / NITROGEN RECEIVERS (DIRECTIVE 2014/29/CE)



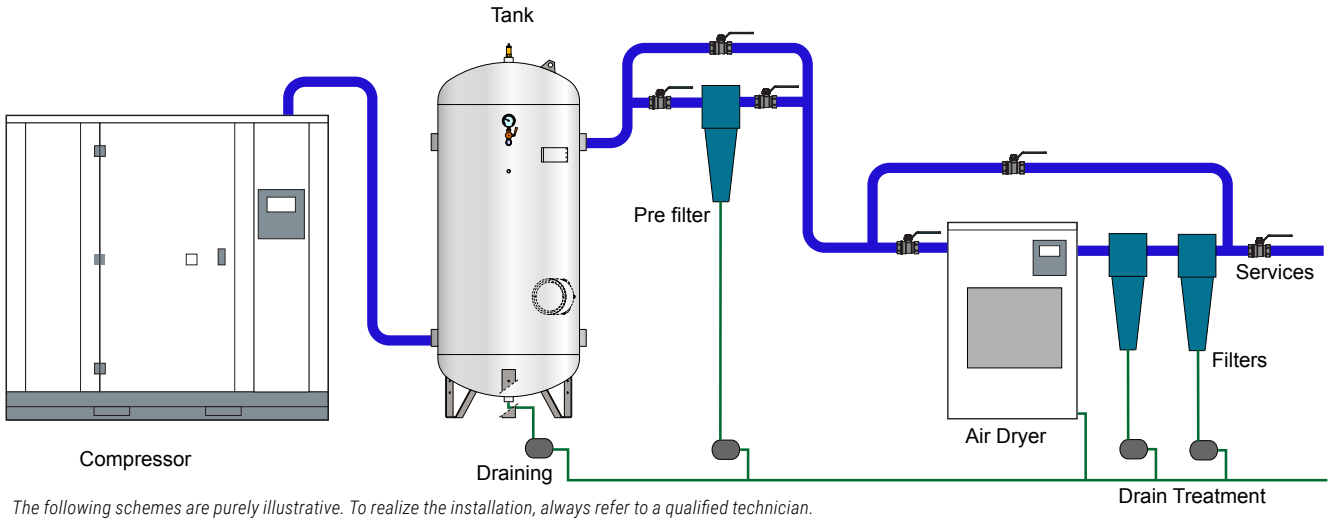
A	Drain
B	Air inlet
C	Air outlet
D	Safety Valve
E-E'	Instrumentation

Model	Working Pressure	De	H	R1	H1	H2	H3	H4	A-D	B-C	E	E'
	[bar]				[mm]						Connections F	
100	**11**	400	1105	1125	145	380	790	870	2"	1"	3/8"	3/8"
200		450	1470	1490	145	385	1125	1225	2"	1"	3/8"	3/8"
270		500	1760	1780	150	410	1330	1450	2"	1"	3/8"	3/8"
500		650	1850	1870	170	485	1285	1485	2"	2"	3/8"	3/4"
710		790	1900	1930	135	585	1360	1460	2"	2"	3/8"	3/4"
900		790	2130	2160	145	490	1390	1590	2"	2"	3/8"	3/4"
270	**15**	500	1760	1780	150	410	1330	1450	2"	1"	3/8"	3/8"
500		650	1850	1870	170	485	1285	1485	2"	2"	3/8"	3/4"

EXAMPLE OF INSTALLATION

In compressed air production and distribution systems, tanks are used in production plants for the following functions:
• to store compressed air in order to use it when needed
• to ensure network air flow and constant pressure by limiting interventions to adjust the flow;
• to favour the separation of condensation through the release of the flow coming from the compressor in the bottom of the tank and connecting delivery in the upper.

Furthermore, the tanks are located near uses characterised by highly variable air requirements in order to limit pressure fluctuations along the distribution lines.
Optimum tank volume in a production system depends on the type of compressor, environmental conditions of operation and type of use.
In systems characterised by max operating pressure of 10 bar and flow rates from 1 to 100 Nm^3/min, tank capacity is calculated, as a first approximation, with the following relationship:
V= 0.2 to 0.6 Q
V = theoretical volume of the tank in m^3
Q = intake flow rate from the compressor in m^3/min
0.2 = coefficient for large plants
0.6 = coefficient for small plants



The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

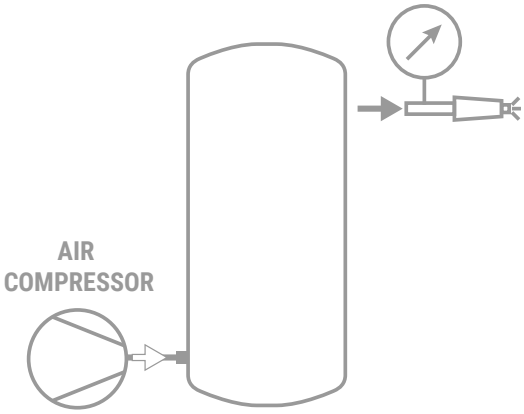
COMPRESSED AIR RECEIVERS **P.E.D. VT**

COMPRESSED AIR / NITROGEN RECEIVERS (DIRECTIVE 2014/68/UE - P.E.D.)



CE

WORKING TEMPERATURE
Tmax
-10/+100 °C



TECHNICAL DESCRIPTION
Compressed air receivers allows to extract more air than the quantity produced by compressor, this without causing an under-pressure in the unit.
Built in mild steel, either painted, galvanized and painted with internal Polywarm® coating according to D.M. nr. 174 dated 06/04/2004

APPLICATION
Storage and distribution of compressed air.

MATERIAL
- Painted mild steel (standard colour RAL 5002-Blue). Other colours on demand: RAL 5015 - Light Blue / RAL 3000 - Red / RAL 1021 - Yellow
- Galvanized mild steel.
- Painted mild steel version with internal Polywarm® coating.

DOCUMENTS ATTACHED
- CE certification - User Instructions

CERTIFICATIONS
Compressed air receivers are produced according to European Directive 2014/29/CE for items with a "volume x pressure" minor than 10.000 Bar x liter. These tanks are marked CE under the monitoring of an external control agency.
- Liquid in pressure: air
- Liquid group: 2
- Maximum working pressure: (See tab)
- Temperature: -10/+100°C

GALVANIZED / PAINTED



PROMPT AVAILABILITY



(*) Other colours on demand:
RAL 5015 Light Blue / RAL 3000 Red / RAL 1021 Yellow

2014/68/CE-P.E.D. **VERTICAL COMPRESSED AIR RECEIVER**

Model	Pressure [Bar]	Galvanized Art. Nr.	PAINTED - RAL 5002 BLUE (*) Art. Nr.
1500	**8**	3054171990001	3054172240001
2000		3054171990002	3054172240002
3000		3054171990054	3054172240054
4000		3054171990005	3054172240005
5000		3054171990006	3054172240006
8000		3054171990032	/
10000		3054171990033	/
1000	**12**	3054171990067	3054172240067
1500		3054171990011	3054172240011
2000		3054171990012	3054172240012
2500		3054171990013	3054172240013
3000		3054171990064	3054172240064
4000		3054171990015	3054172240015
5000		3054171990016	3054172240016
8000		3054171990030	/
10000		3054171990031	/
1000	**15**	3054171990167	3054172240151
1500		3054171990118	3054172240102
2000		3054171990168	3054172240152

FOOD INTERNAL COATING





(*) Other colours on demand:
RAL 5015 Light Blue / RAL 3000 Red / RAL 1021 Yellow

2014/68/CE-P.E.D. **VERTICAL COMPRESSED AIR RECEIVER + MANHOLE**

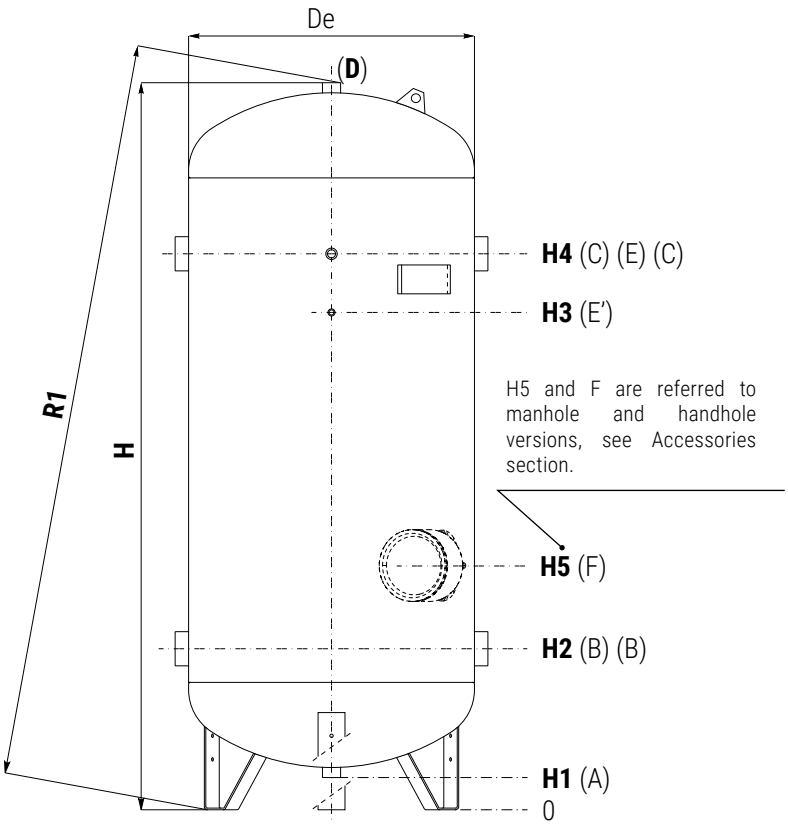
Model	Pressure [Bar]	Galvanized Art. Nr.	
8000	**8**	3054171990007	**on request**
10000		3054171990008	**on request**
8000	**12**	3054171990027	**on request**
10000		3054171990028	**on request**

VERTICAL COMPRESSED AIR RECEIVER - POLYWARM® (2014/68/CE-P.E.D.)

Pressure [Bar]	PAINTED RAL 5002 BLUE (*) - FOOD INTERNAL COATING
8	**(on request) from 1500 to 5000**
12	**(on request) from 1000 to 5000**
15	**(on request) from 1000 to 2000**

COMPRESSED AIR RECEIVERS **P.E.D. VT**

COMPRESSED AIR / NITROGEN RECEIVERS (DIRECTIVE 2014/68/UE - P.E.D.)



A	Drain
B	Air inlet
C	Air outlet
D	Safety Valve
E-E'	Instrumentation
F	Manhole / handhole (on request)

Model	Working Pressure	De	H	R1	H1	H2	H3	H4	H5	A-D	B-C	E	E'
	[bar]	[mm]								Connections F			
1500	**8**	950	2470	2510	115	520	1480	1680	860	2"	2"	3/8"	3/4"
2000		1100	2545	2600	100	595	1495	1695	890	2"	2"	3/8"	3/4"
3000		1200	2950	3075	140	680	1580	1780	985	2"	3"	3/8"	3/4"
4000		1450	3010	3100	115	710	1610	1810	1010	2"	3"	3/8"	3/4"
5000		1450	3510	3585	115	710	2100	2300	1010	2"	3"	3/8"	3/4"
8000		1650	4200	4280	200	905	3310	3510	1150	2"	4"	3/8"	3/4"
10000		1650	5200	5270	200	905	4310	4510	1150	2"	4"	3/8"	3/4"
1000	**12**	790	2440	2470	180	575	1625	1825	870	2"	2"	3/8"	3/4"
1500		950	2470	2510	115	520	1480	1680	860	2"	2"	3/8"	3/4"
2000		1100	2545	2600	100	595	1495	1695	890	2"	2"	3/8"	3/4"
2500		1200	2660	2760	140	680	1580	1780	985	2"	3"	3/8"	3/4"
3000		1200	2950	3075	140	680	1580	1780	985	2"	3"	3/8"	3/4"
4000		1450	3010	3100	115	710	1610	1810	1010	2"	3"	3/8"	3/4"
5000		1450	3510	3585	115	710	2100	2300	1010	2"	3"	3/8"	3/4"
8000		1650	4200	4280	200	905	3310	3510	1150	2"	4"	3/8"	3/4"
10000		1650	5200	5270	200	905	4310	4510	1150	2"	4"	3/8"	3/4"
1000	**15**	790	2440	2470	180	575	1625	1825	870	2"	2"	3/8"	3/4"
1500		950	2470	2510	115	520	1480	1680	860	2"	2"	3/8"	3/4"
2000		1100	2545	2600	100	595	1495	1695	890	2"	2"	3/8"	3/4"

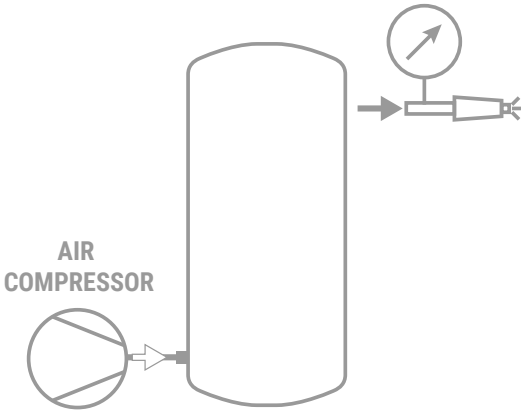
ARIA COMPRESSA **P.E.D. VT 11-15 BAR**

COMPRESSED AIR / NITROGEN RECEIVERS (DIRECTIVE 2014/68/UE - P.E.D.)



CE

WORKING TEMPERATURE
Tmax
-10/+100 °C



TECHNICAL DESCRIPTION
Compressed air receivers allows to extract more air than the quantity produced by compressor, this without causing an under-pressure in the unit.
Built in mild steel, either painted, galvanized and painted with internal Polywarm® coating according to D.M. nr. 174 dated 06/04/2004

APPLICATION
Storage and distribution of compressed air.

MATERIAL
- Painted mild steel (standard colour RAL 5002-Blue). Other colours on demand: RAL 5015 - Light Blue / RAL 3000 - Red / RAL 1021 - Yellow
- Galvanized mild steel.
- Painted mild steel version with internal Polywarm® coating.

DOCUMENTS ATTACHED
- CE certification - User Instructions

CERTIFICATIONS
Compressed air receivers are produced according to European Directive 2014/29/CE for items with a "volume x pressure" minor than 10.000 Bar x liter. These tanks are marked CE under the monitoring of an external control agency.
- Liquid in pressure: air
- Liquid group: 2
- Maximum working pressure: (See tab)
- Temperature: -10/+100°C

GALVANIZED / PAINTED



PROMPT AVAILABILITY



2014/68/CE-P.E.D. **VERTICAL COMPRESSED AIR RECEIVER**

Model	Pressure [Bar]	Galvanized Art. Nr.	PAINTED - RAL 5002 BLUE (*) Art. Nr.
100	**11**	3053171990101	3053172240110
200		3053171990102	3053172240111
270		3053171990103	3053172240112
500		3053171990104	3053172240113
710		3053171990105	3053172240114
900		3053171990106	3053172240115
200	**15**	3053171990107	3053172240116
270		3053171990108	3053172240117
500		3053171990109	3053172240118

(*) Other colours on demand:
RAL 5015 Light Blue / RAL 3000 Red / RAL 1021 Yellow

FOOD INTERNAL COATING





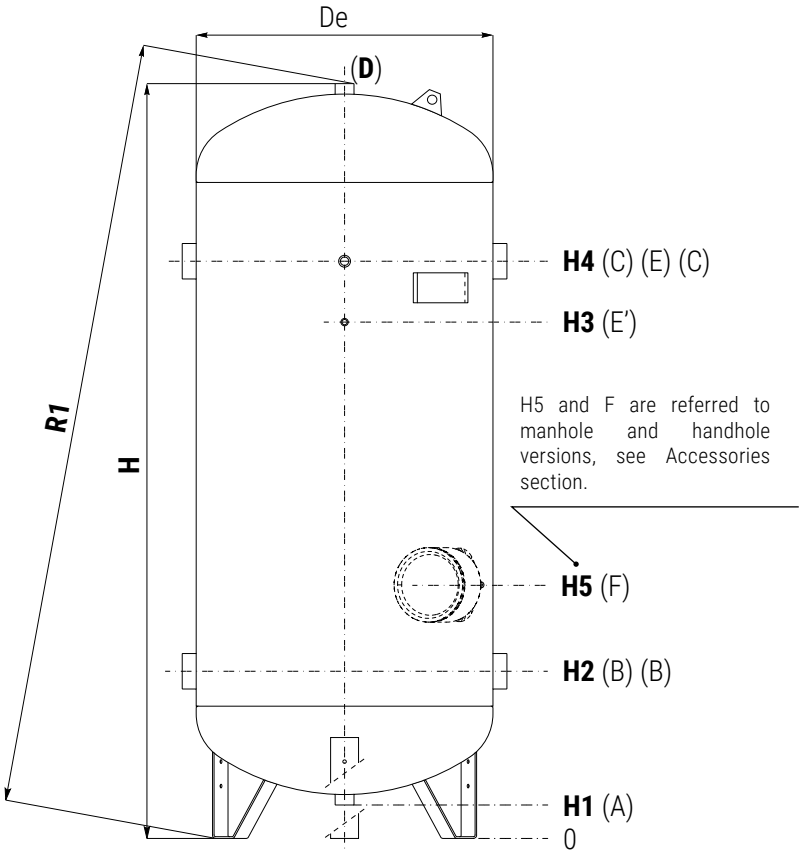
VERTICAL COMPRESSED AIR RECEIVER - POLYWARM® (2014/68/CE-P.E.D.)

Model	Pressure [Bar]	PAINTED RAL 5002 BLUE (*) FOOD INTERNAL COATING
100	**11**	**on request**
200		
270		
500		
710		
900		
270	**15**	**on request**
200		
500		

(*) Other colours on demand:
RAL 5015 Light Blue / RAL 3000 Red / RAL 1021 Yellow

ARIA COMPRESSA **P.E.D. VT 11-15 BAR**

COMPRESSED AIR / NITROGEN RECEIVERS (DIRECTIVE 2014/68/UE - P.E.D.)



A	Drain
B	Air inlet
C	Air outlet
D	Safety Valve
E-E'	Instrumentation
F	Manhole / handhole (on request)

Model	Working Pressure	De	H	R1	H1	H2	H3	H4	A-D	B-C	E	E'
	[bar]				[mm]					Connections F		
100	**11**	400	1105	1125	145	380	790	870	2"	1"	3/8"	3/8"
200		450	1470	1490	145	385	1125	1225	2"	1"	3/8"	3/8"
270		500	1760	1780	150	410	1330	1450	2"	1"	3/8"	3/8"
500		650	1850	1870	170	485	1285	1485	2"	2"	3/8"	3/4"
710		790	1900	1930	135	585	1360	1460	2"	2"	3/8"	3/4"
900		790	2130	2160	145	490	1390	1590	2"	2"	3/8"	3/4"
200	**15**	450	1470	1490	145	385	1125	1225	2"	1"	3/8"	3/8"
270		500	1760	1780	150	410	1330	1450	2"	1"	3/8"	3/8"
500		650	1850	1870	170	485	1285	1485	2"	2"	3/8"	3/4"

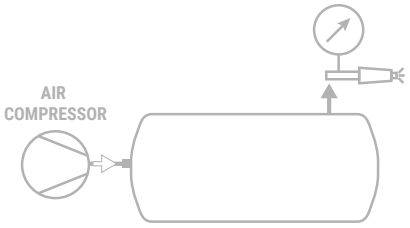
COMPRESSED AIR RECEIVERS **P.E.D. HORIZONTAL**

COMPRESSED AIR / NITROGEN RECEIVERS (DIRECTIVE 2014/68/UE - P.E.D.)



CE

WORKING TEMPERATURE
Tmax
-10/+100 °C



TECHNICAL DESCRIPTION
Compressed air receivers allows to extract more air than the quantity produced by compressor, this without causing an under-pressure in the unit.
Built in mild steel, either painted, galvanized and painted with internal Polywarm® coating according to D.M. nr. 174 dated 06/04/2004.

APPLICATION
Storage and distribution of compressed air.

MATERIAL
- Painted mild steel (standard colour RAL 5002-Blue). Other colours on demand: RAL 5015 - Light Blue / RAL 3000 - Red / RAL 1021 - Yellow
- Galvanized mild steel.
- Painted mild steel version with internal Polywarm® coating.

DOCUMENTS ATTACHED
- CE certification - User Instructions

CERTIFICATIONS
Compressed air receivers are produced according to European Directive 2014/29/CE for items with a "volume x pressure" minor than 10.000 Bar x liter. These tanks are marked CE under the monitoring of an external control agency.
- Liquid in pressure: air
- Liquid group: 2
- Maximum working pressure: (See tab)
- Temperature: -10/+100°C

GALVANIZED / PAINTED



(*) Other colours on demand:
RAL 5015 Light Blue / RAL 3000 Red / RAL 1021 Yellow

FOOD INTERNAL COATING



(*) Other colours on demand:
RAL 5015 Light Blue / RAL 3000 Red / RAL 1021 Yellow

2014/68/CE-P.E.D. **HORIZONTAL COMPRESSED AIR RECEIVER**

Model	Pressure [Bar]	Galvanized Art. Nr.	PAINTED - RAL 5002 BLUE (*) Art. Nr.
1500	**8**	3054170990001	3054171340001
2000		3054170990002	3054171340002
3000		3054170990004	3054171340054
4000		3054170990005	3054171340005
5000		3054170990006	3054171340006
8000		3054170990007	/
10000		3054170990008	/
100	**11**	3053170990101	3053171340110
200		3053170990102	3053171340111
270		3053170990103	3053171340112
500		3053170990104	3053171340113
710		3053170990105	3053171340114
900		3053170990106	3053171340115
1000	**12**	3054170990611	3054171340067
1500		3054170990011	3054171340011
2000		3054170990012	3054171340012
2500		3054170990013	3054171340013
3000		3054170990020	3054171340064
4000		3054170990015	3054171340015
5000		3054170990016	3054171340016
8000		3054170990017	/
10000		3054170990018	/
200	**15**	3053170990107	3053171340116
270		3053170990108	3053171340117
500		3053170990109	3053171340118

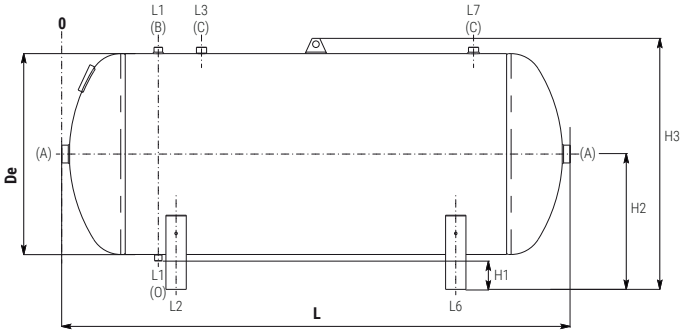
HORIZONTAL COMPRESSED AIR RECEIVER - POLYWARM® (2014/68/CE-P.E.D.)

Pressure [Bar]	PAINTED RAL 5002 BLUE (*) - FOOD INTERNAL COATING
8	**(on request) from 1500 to 5000**
11	**(on request) from 100 to 900**
12	**(on request) from 1000 to 5000**
15	**(on request) from 200 to 500**

COMPRESSED AIR RECEIVERS **P.E.D. HORIZONTAL**

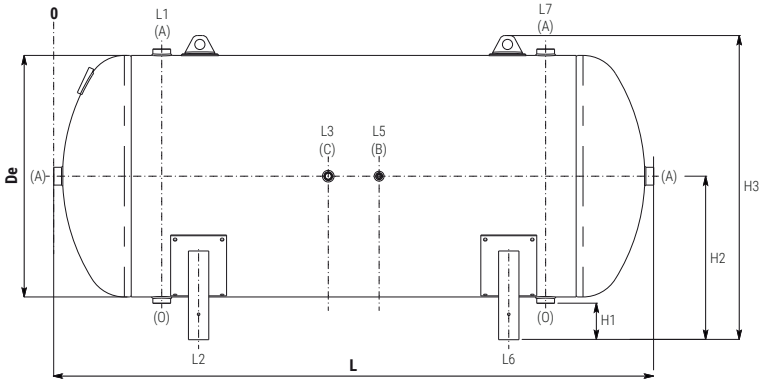
COMPRESSED AIR / NITROGEN RECEIVERS (DIRECTIVE 2014/68/UE - P.E.D.)

MODELS FROM 100 TO 900



A	Input - use
B	Safety Valve/Instrumentation
C	Safety Valve/Instrumentation
O	Instrumentation

MODELS FROM 1000 TO 5000



Model	Working Pressure	De	L	L1	L2	L3	L5	L6	L7	H1	H2	H3	A	B	C
	[bar]						[mm]						Connections F		
1500		950	2360	420	565	1080	1280	1795	1940	117	640	1196	2"	2"	3/8" 3/4"
2000		1100	2450	470	615	1125	1325	1835	1980	100	700	1330	2"	2"	3/8" 3/4"
3000		1200	2770	550	700	1285	1485	2070	2220	140	784	1480	2"	3"	3/8" 3/4"
4000	**8**	1450	2890	600	750	1345	1545	2140	2290	122	887	1670	2"	3"	3/8" 3/4"
5000		1450	3390	600	750	1595	1795	2640	2790	122	887	1670	2"	3"	3/8" 3/4"
8000		1650	3990	700	860	2495	2745	3130	3290	240	1100	2100	2"	4"	3/8" 3/4"
10000		1650	4990	700	860	3150	3400	4130	4290	240	1100	2100	2"	4"	3/8" 3/4"
100		400	950	225	310	340	-	640	725	80	305	566	2"	1/2"	3/8" 3/4"
200		450	1340	235	350	390	-	990	1105	80	330	615	2"	1/2"	3/8" 3/4"
270	**11**	500	1620	250	365	405	-	1255	1370	130	407	717	2"	1/2"	3/8" 3/4"
500		650	1700	295	400	440	-	1300	1405	130	480	870	2"	1/2"	3/8" 1"
710		790	1700	380	450	500	-	1250	1320	110	532	987	2"	1"	3/8" 1/2"
900		790	2000	380	450	550	-	1550	1620	110	532	987	2"	1"	3/8" 1/2"
1000		790	2250	350	570	1025	1225	1680	1900	110	532	987	2"	2"	3/8" 3/4"
1500		950	2360	420	565	2260	2460	1795	1940	117	640	1196	2"	2"	3/8" 3/4"
2000		1100	2450	470	615	2350	2550	1835	1980	100	700	1330	2"	2"	3/8" 3/4"
2500		1200	2520	510	655	2420	2620	1865	2010	140	800	1480	2"	3"	3/8" 3/4"
3000	**12**	1200	2770	550	700	2670	2870	2070	2220	140	784	1480	2"	3"	3/8" 3/4"
4000		1450	2890	600	750	2790	2990	2140	2290	122	887	1670	2"	3"	3/8" 3/4"
5000		1450	3390	600	750	3290	3490	2640	2790	122	887	1670	2"	3"	3/8" 3/4"
8000		1650	3990	700	860	2495	2745	3130	3290	240	1100	2100	2"	4"	3/8" 3/4"
10000		1650	4990	700	860	3150	3400	4130	4290	240	1100	2100	2"	4"	3/8" 3/4"
200		450	1340	235	350	390	-	990	1105	80	330	615	2"	1/2"	3/8" 3/4"
270	**15**	500	1620	250	365	405	-	1255	1370	130	407	717	2"	1/2"	3/8" 3/4"
500		650	1700	295	400	440	-	1300	1405	130	480	870	2"	1/2"	3/8" 1"

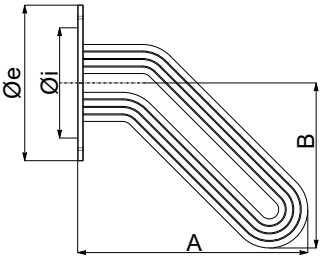


ACCESSORIES



ACCESSORIES AND SPARE PARTS
CALORIFIERS

LOWER HEAT EXCHANGER FOR EXTRA 1,2 AND 3 VT CALORIFIERS





The Antilegionella® coil, which is the heat exchanger with tubes bent to the bottom is an efficient innovation installed as a standard on every Cordivari's Extra calorifiers. This reduces the diffusion of legionellosis bacterium.
Advantages:
- The Antilegionella® curved heat exchanger can heat the complete quantity of water in an homogenous way. Even in the bottom area of the boiler which is impossible with traditional heat exchanger.
- Possibility of using lower capacity boilers for the same quantity of hot water needed.

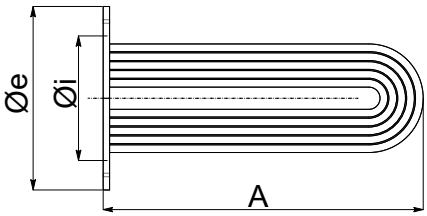
Kit including: exchanger, gaskets, bolts and insulated bushes.
MAX WORKING PRESSURE: 12 bar
MAX WORKING TEMPERATURE: 110 °C

STAINLESS STEEL 316L
ANTILEGIONELLA® HEAT EXCHANGER WITH SILICONE GASKET

Heat exchanger surface	Øi/Øe	A	B	Art. Nr.	AVAILABLE FOR
[m²]		[mm]			
0,5	Øi220/Øe300	350	240	5221000010100	• EXTRA1 WXC 200 - EXTRA1 XXC 200 • EXTRA2 WXC 200 - EXTRA2 XXC 200
0,75	Øi220/Øe300	350	240	5221000010101	• EXTRA1 WXC 300 - EXTRA1 XXC 300 • EXTRA2 WXC 300 - EXTRA2 XXC 300
1	Øi220/Øe300	371	261	5221000010102	• EXTRA1 WXC 500 - EXTRA1 XXC 500
1,5	Øi220/Øe300	561	311	5221000010113	• EXTRA2 WXC 500 - EXTRA2 XXC 500
1,5	Øi300/Øe380	496	336	5221000010103	• EXTRA1 WXC 800 - EXTRA 1 XXC 800
2	Øi300/Øe380	496	336	5221000010104	• EXTRA1 WXC 1000 - EXTRA1 XXC 1000 • EXTRA2 WXC 800 -EXTRA 2 XXC 800
3	Øi300/Øe380	607	452	5221000010105	• EXTRA1 WXC 1500 - EXTRA1 XXC 1500 • EXTRA 1 WXC 1500 COMPACT • EXTRA2 WXC 1000 - EXTRA2 WXC 1500 EXTRA2 XXC 1000 - EXTRA2 XXC 1500 • EXTRA3 WXC 1500
4	Øi350/Øe430	636	457	5221000010106	• EXTRA1 WXC 2000 - EXTRA1 XXC 2000 • EXTRA1 WXC 2000 COMPACT • EXTRA2 WXC 2000 - EXTRA2 XXC 2000 • EXTRA3 WXC 2000
5	Øi350/Øe430	678	498	5221000010107	• EXTRA1 WXC 2500 - EXTRA1 XXC 2500 • EXTRA1 WXC 2500 COMPACT • EXTRA2 WXC 2500 - EXTRA2 XXC 2500
6	Øi350/Øe430	828	585	5221000010123	• EXTRA1 WXC 3000 - EXTRA1 XXC 3000 • EXTRA1 WXC 3000 COMPACT • EXTRA2 WXC 3000 - EXTRA 3 WXC 3000 • EXTRA2 XXC 3000
8	Øi350/Øe430	1250	598	5221000010108	• EXTRA1 WXC 4000 - EXTRA1 XXC 4000 • EXTRA1 WXC 4000 COMPACT • EXTRA2 WXC 4000 - EXTRA2 XXC 4000
10	Øi350/Øe430	1550	538	5221000010109	• EXTRA1 WXC 5000 - EXTRA1 XXC 5000 • EXTRA2 WXC 5000 - EXTRA2 XXC 5000 • EXTRA3 WXC 5000

ACCESSORIES AND SPARE PARTS
CALORIFIERS

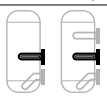
MIDDLE AND UPPER HEAT EXCHANGERS FOR CALORIFIERS EXTRA 2 AND 3 VT AND EXTRA 1 HOR





316L Stainless steel straight heat exchangers
Kit including: exchanger, gaskets, bolts and insulated bushes.
MAX WORKING PRESSURE: 12 bar
MAX WORKING TEMPERATURE: 110 °C

STRAIGHT EXCHANGER
STAINLESS STEEL 316L WITH SILICONE GASKET

Heat exchanger surface	Øi/Øe	A	Art. Nr.	AVAILABLE FOR		
						
[m²]	[mm]					
0,5	Øi220/Øe300	445	5221000010074	• EXTRA1 WXC OR 200 EXTRA1 XXC OR 200	• EXTRA2 WXC 200 EXTRA2 XXC 200	---
0,75	Øi220/Øe300	445	5221000010075	• EXTRA1 WXC OR 300 EXTRA1 XXC OR 300	• EXTRA2 WXC 300 EXTRA2 XXC 300	---
1	Øi220/Øe300	475	5221000010076	• EXTRA1 WXC OR 500 EXTRA1 XXC OR 500	---	---
1,5	Øi220/Øe300	690	5221000010077	---	• EXTRA2 WXC 500 EXTRA2 XXC 500	---
1,5	Øi300/Øe380	600	5221000010078	• EXTRA1 WXC OR 800 EXTRA1 XXC OR 800	---	• EXTRA3 WXC 1500
2	Øi300/Øe380	560	5221000010079	• EXTRA1 WXC OR 1000 EXTRA1 XXC OR 1000	• EXTRA2 WXC 800 EXTRA2 WXC 1000 EXTRA2 XXC 800-1000	• EXTRA3 WXC 2000
3	Øi300/Øe380	720	5221000010080	• EXTRA1 WXC OR 1500 EXTRA1 XXC OR 1500	• EXTRA2 WXC 1500 EXTRA2 XXC 1500 • EXTRA3 WXC 1500	• EXTRA3 WXC 3000
4	Øi350/Øe430	750	5221000010081	• EXTRA1 WXC OR 2000 EXTRA1 XXC OR 2000	• EXTRA2 WXC 2000 EXTRA2 XXC 2000 • EXTRA3 WXC 2000	---
5	Øi350/Øe430	780	5221000010082	• EXTRA1 WXC OR 3000 EXTRA1 XXC OR 3000	EXTRA2 WXC 2500 EXTRA2 XXC 2500	• EXTRA3 WXC 5000
6	Øi350/Øe430	890	5221000010122	---	EXTRA2 WXC 3000 EXTRA2 XXC 3000	---
8	Øi350/Øe430	1250	5221000010083	• EXTRA1 WXC OR 4000 EXTRA1 XXC OR 4000	EXTRA2 WXC 4000 EXTRA2 XXC 4000 EXTRA3 WXC 4000	---
10	Øi350/Øe430	1510	5221000010084	• EXTRA1 WXC OR 5000 EXTRA1 XXC OR 5000	EXTRA2 WXC 5000 EXTRA2 XXC 5000 EXTRA3 WXC 5000	---

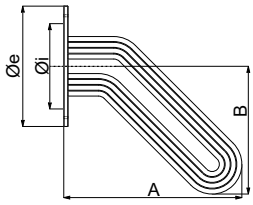
COMPATIBILITY TABLES VASO STORAGE/HEAT EXCHANGERS



(See next page)

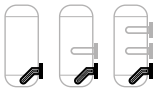
ACCESSORIES AND SPARE PARTS
CALORIFIERS

ANTILEGIONELLA® HEAT EXCHANGER KIT



Antilegionella® heat exchanger kit + gaskets + bolts and insulated bushes.

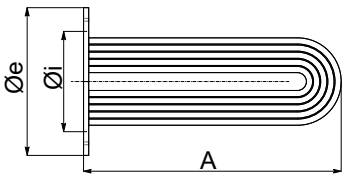
Antilegionella® 316L staninless steel curved heat exchanger kit + gaskets + bolts and insulated bushes.
Max working pressure: 12 bar
Max working temperature: 110 °C



ANTILEGIONELLA® HEAT EXCHANGER

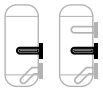
Heat exchanger surface	Øi / Øe flange	A	B	Art. Nr.	Storage 1 - 2		Storage 1-2-3	Storage 1-2	Storage 1-2-3	Storage 1 - 2 - 3	Storage 1 - 2 Storage COMPACT		Storage 1-2-3	Storage 1 - 2	Storage 1-2-3
					Model										
[m²]	[mm]				200	300	500	800	1000	1500	2000	2500	3000	4000	5000
0,5	Øi220/Øe300	350	240	5221000010100	✓	✓	✓								
0,75	Øi220/Øe300	350	240	5221000010101	✓	✓	✓								
1	Øi220/Øe300	371	261	5221000010102			✓								
1,5	Øi220/Øe300	561	311	5221000010113			✓								
1,5	Øi300/Øe380	496	336	5221000010103				✓	✓	✓					
2	Øi300/Øe380	496	336	5221000010104				✓	✓	✓					
3	Øi300/Øe380	607	452	5221000010105					✓	✓					
4	Øi350/Øe430	636	457	5221000010106							✓	✓	✓	✓	✓
5	Øi350/Øe430	678	498	5221000010107							✓	✓	✓	✓	✓
6	Øi350/Øe430	828	585	5221000010123									✓	✓	✓
8	Øi350/Øe430	1250	598	5221000010108										✓	✓
10	Øi350/Øe430	1550	538	5221000010109											✓

STRAIGHT HEAT EXCHANGER KIT



Straight heat exchanger kit + gaskets + bolts and insulated bushes.

Straight 316L staninless steel heat exchanger kit + gaskets + bolts and insulated bushes.
Max working pressure: 12 bar
Max working temperature: 110 °C





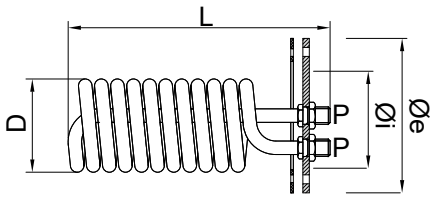
MIDDLE HEAT EXCHANGER

UPPER HEAT EXCHANGER

Heat exchanger surface	Øi / Øe flange	A	Art. Nr.	Storage 2-3												Storage 2-3					
				Model												Model					
[m²]		[mm]		200	300	500	800	1000	1500	2000	2500	3000	4000	5000		500	1000	1500	2000	3000	5000
0,5	Øi220/Øe300	445	5221000010074	✓	✓	✓										✓					
0,75	Øi220/Øe300	445	5221000010075	✓	✓	✓										✓					
1	Øi220/Øe300	475	5221000010076	✓	✓	✓										✓					
1,5	Øi220/Øe300	690	5221000010077			✓										✓					
1,5	Øi300/Øe380	600	5221000010078				✓	✓	✓								✓	✓	✓	✓	
2	Øi300/Øe380	560	5221000010079				✓	✓	✓								✓	✓	✓	✓	
3	Øi300/Øe380	720	5221000010080				✓	✓	✓								✓	✓	✓	✓	
4	Øi350/Øe430	750	5221000010081							✓	✓	✓	✓	✓							✓
5	Øi350/Øe430	780	5221000010082							✓	✓	✓	✓	✓							✓
6	Øi350/Øe430	890	5221000010122							✓	✓	✓	✓	✓							✓
8	Øi350/Øe430	1250	5221000010083								✓	✓	✓	✓							✓
10	Øi350/Øe430	1510	5221000010084											✓							✓

ACCESSORIES AND SPARE PARTS
CALORIFIERS

FINNED HEAT EXCHANGER KIT



Copper finned and tinned heat exchangers+ flange plate + gaskets + bolts and insulated bushes.
Max working pressure: 12 bar
Max working temperature: 110 °C

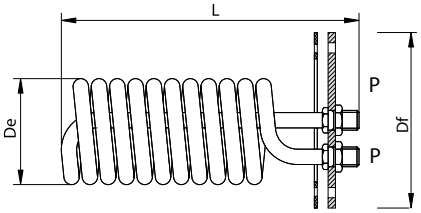
Finned heat exchanger kit + flange plate + gaskets + bolts and insulated bushes.

MIDDLE AND LOWER HEAT EXCHANGER — **UPPER** HEAT EXCHANGER

Heat exchanger surface	Øi / Øe flange	D	L	P	Capacity	Art. Nr.	Storage 1 - 1 COMPACT -2											Storage 3					
							Model											Model					
[m²]	[mm]				[lt]		200	300	500	800	1000	1500	2000	2500	3000	4000	5000	500	1000	1500	2000	3000	5000
0,76	Øi220/Øe300	142	400	1"	0,6	5221000061003	✓	✓	✓									✓					
0,94	Øi220/Øe300	142	410	1"	0,54	5221000061002	✓	✓	✓									✓					
1,58	Øi220/Øe300	170	440	1"	1,21	5221000061004	✓	✓	✓									✓					
0,94	Øi300/Øe380	142	410	1"	0,54	5221000061011				✓	✓	✓							✓	✓	✓	✓	
1,58	Øi300/Øe380	170	440	1"	1,21	5221000061012				✓	✓	✓							✓	✓	✓	✓	
2,63	Øi300/Øe380	190	570	1"	2,07	5221000061006				✓	✓	✓							✓	✓	✓	✓	
3,17	Øi300/Øe380	190	665	1"	2,51	5221000061007				✓	✓	✓							✓	✓	✓	✓	
4,54	Øi300/Øe380	190	750	1"1/4	3,6	5221000061008				✓	✓	✓							✓	✓	✓	✓	
3,17	Øi350/Øe430	190	665	1"	2,51	5221000061013							✓	✓	✓	✓	✓						✓
4,54	Øi350/Øe430	190	750	1"1/4	3,6	5221000061014							✓	✓	✓	✓	✓						✓
5,26	Øi350/Øe430	190	850	1"1/4	4,14	5221000061009							✓	✓	✓	✓	✓						✓
6,34	Øi350/Øe430	190	980	1"1/4	5,1	5221000061010							✓	✓	✓	✓	✓						✓

COPPER FINNED AND TINNED HEAT EXCHANGERS (SPARE PART WITH Ø 300 MM FLANGE)

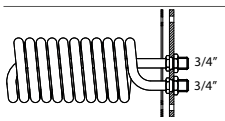
Including flangeplate, gaskets, bolts and user manual.
MAX WORKING PRESSURE: 12 bar
MAX WORKING TEMPERATURE: 110 °C



Heat exchanger surface	Copper finned and tinned heat exchangers	De	Flange plate diameter Df	L	P	Capacity
[m²]	Art. Nr.		[mm]		[G]	[lt]
2,27	5221000061021	170	300	570	1"	1,79
2,63	5221000061022	190	300	570	1"	2,07
3,17	5221000061023	190	300	665	1"	2,51
4,54	5221000061024	190	300	750	1" 1/4	3,60
5,26	5221000061025	190	300	850	1" 1/4	4,14
6,34	5221000061026	190	300	980	1" 1/4	5,10

Suitable for products produced before 05/2019

ADDITIONAL COPPER FINNED COIL (AVAILABLE ON BOLLY® ST FB 1 - 2, MODELS 800 AND 1000)



Art. Nr.	Description
5221000910001	Surface=0,94m² - De=145 mm - L=370 mm

Available on Bolly® ST FB 1 - 2 models 800 and 1000. Including flangeplate (Ø 240 mm), gaskets, bolts and user manual.
MAX WORKING PRESSURE: 12 bar
MAX WORKING TEMPERATURE: 110 °C

ACCESSORIES AND SPARE PARTS
CALORIFIERS - MULTIFUEL ENERGY CYLINDERS

HEAT MANAGER - SMART CONTROLLER WITH TEMPERATURE PROBE

Cordivari Heat Manager® is the new smart Wi-Fi controller for management remote from smartphone IOS or Android of the electric heaters.
Thanks to the application it is possible to manage, program and monitor, conveniently from your mobile phone, the operation of the electric heaters by setting their temperature and operating time bands.

Heat Manager® is practical and intuitive, it is in fact sufficient to install the application and connect the smart controller to your home Wi-Fi network.
The management application is also available in web application mode, so to allow access also via web browser from anywhere. With Cordivari Heat Manager® it is possible to manage electric heaters connected to any boiler or to a compact solar thermosyphon systems.





Get It on iTunes

GET IT ON Google Play

Main Features: Relay max 230V 16 A Wi-Fi 2,4 GHz; protection grade IP20.The measuring temperature range is from -55°C to + 125°, with temperature range adjustable -55°C +100°C.

	Art. Nr.
Kit HEAT MANAGER electric immersion heater + temperature probe with 3 mt cable	5240000000074
Kit HEAT MANAGER electric immersion heater + temperature probe with 3 mt cable	5240000000075
Kit HEAT MANAGER electric immersion heater + temperature probe with 3 mt cable	5240000000076
Kit HEAT MANAGER electric immersion heater + temperature probe with 3 mt cable (for **Interka**)	5240000000077

www.cordivariheatmanager.com

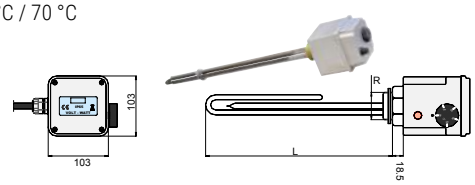
ACCESSORIES AND SPARE PARTS
CALORIFIERS - MULTIFUEL ENERGY CYLINDERS

ELECTRIC IMMERSION HEATERS KIT

ELECTRIC IMMERSION HEATERS from 1,5 to 3 kW

ELECTRIC IMMERSION HEATERS can be used as integration on calorifiers and tanks, stainless steel heaters, protection class min IP44, supplied with thermostat, safety thermostat reset user and 2 mt of electrical cable wired and without plug. Temperature range: 30 °C / 70 °C

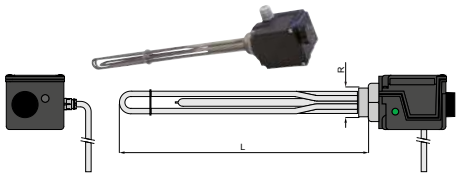
Art. Nr.	Tension	Output	Length L	Connection R
	Volt	[kW]	[mm]	M
5240000000051	230 V MONOPHASE	1,5	320	1"1/2
5240000000052		2	320	
5240000000053		3	320	



ELECTRIC IMMERSION HEATERS from 4 to 9 kW

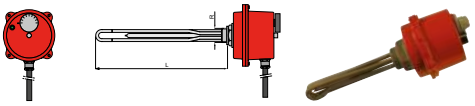
ELECTRIC IMMERSION HEATERS can be used as integration on calorifiers and tanks, heating elements compliant for use with drinking water, protection class min IP44 supplied with thermostat, safety thermostat manual reset and 2 mt of electrical cable wired and without plug.

Art. Nr.	Tension	Output	Length L	Connection R
	Volt	[kW]	[mm]	M
5240000000047	400 V THREEPHASE	4	415	1"1/2
5240000000048		5	500	
5240000000049		6	600	
5240000000050		9	750	



ELECTRIC IMMERSION HEATERS - 12 kW

Art. Nr.	Tension	Output	Length L	Connection R
	Volt	[kW]	[mm]	M
5240000000031	400 V THREEPHASE	12	750	2"



ELECTRIC IMMERSION HEATERS kit (available on BOLLYTERM® HP models)

Art. Nr.	Tension	Output	Length L	Connection Ø
	Volt	[kW]	[mm]	[mm]
5221000000103	230 V MONOPHASE	1,5	275	75-140
5221000000066		3	290	75-140
5221000000064		2	320	1" 1/2



5221000000103
5221000000066

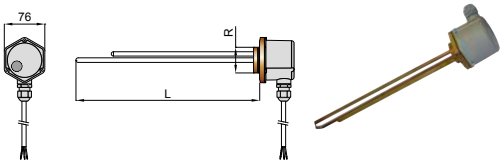


5221000000064

ELECTRIC IMMERSION HEATERS kit (available on INTERKA models)

ELECTRIC IMMERSION HEATERS can be used as integration on calorifiers and tanks, cooper heaters, protection class IP45 supplied with thermostat, safety thermostat reset user and 2 mt of electrical cable wired and without plug. Specifical for Interka model.

Art. Nr.	Tension	Output	Length L	Connection R
	Volt	[kW]	[mm]	M
5240000000042	230 V MONOPHASE	1,5	340	1"1/4



ACCESSORIES AND SPARE PARTS
CALORIFIERS

EXCHANGER HEAD FOR EXTRA 1,2,3 CALORIFIERS AND VASI STORAGE



Art. Nr.	Connection	Ø outer [mm]
5206000000001	1"	300
5206000000002	2"	380
5206000000003	2"	430

Includes 2 gaskets, bolts and bushes.
Version for pipes heat exchanger.

The Flange plate includes 2 sleeve collars for the connection to the operating system. This allows the circulation of the liquid within the heat exchanger's serpentine doing the real separation between the incoming liquid and the outgoing one. The flange plate is in mild steel. Blind flange for accumulation tank in Polywarm® available also with 1 connection. Including: gaskets, bolts and bushes

FLANGE PLATE FOR D.H.W. STORAGE TANKS POLYWARM® (VASI STORAGE)



Art. Nr.	Connection	Ø outer [mm]
5206000000051	1"1/2	300
5206000000054	1"1/2	380
5206000000056	1"1/2	430
5206000000053	2"	430

Includes 1 gasket and bolts
1 connection for electric immersion heater (available on storage tanks)



Art. Nr.	Ø outer [mm]
5206000000101	300
5206000000102	380
5206000000103	430

Includes 1 gasket and bolts
Blind flange available (available on storage tanks)

GASKET FOR FLANGE PLATE

PAIR OF GASKET FOR EXTRA CALORIFIERS- includes bolts and bushes.



Art. Nr.	Ø outer [mm]
5021220401001	300
5021220401002	380
5021220401003	430

One gasket with crosspiece and one without. Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C.

PAIR OF GASKET FOR EXTRA STEAM CALORIFIERS- includes bolts and bushes.



Art. Nr.	Ø outer [mm]
5021220460111	300
5021220460112	380
5021220460113	430

One gasket with crosspiece and one without.
Made in material for max. temperature up to 192°C

PAIR OF GASKET FOR EXTRA PLUS CALORIFIERS - VASI STORAGE



Art. Nr.	Units box	Ø outer [mm]
5021220401013	5 pcs	300
5021220401016	10 pcs	380
5021220401015	10 pcs	430

One gasket with crosspiece and one without. Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C.

PAIR OF GASKET FOR BOLLY® POLYWARM® (150÷500) / COMBI



Art. Nr.	Units box	Ø outer [mm]
5021220401011	5 pcs	190

One gasket with crosspiece and one without. Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C.

PAIR OF GASKET FOR BOLLY® POLYWARM® (800 - 1000) / VASI INERZIALI INOX AND POLYWARM® > 1000



Art. Nr.	Units box	Ø outer [mm]
5021220401012	5 pcs	240

One gasket with crosspiece and one without.
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C.

FLANGE PLATE WITH CONNECTION FOR ELECTRIC AVAILABLE ON BOLLY® 1 - 2 -VASO INERZIALE

Electric immersion heater flange plate - Kit includes bolts, bushes and user manual.



Art. Nr.	POLYWARM® VERSION
5212000910017	1" 1/2 Flange ø 190 mm-with connection for electrical immersion + flange plate (Bolly® 150÷500)
5212000910018	2" Flange ø 190 mm-with connection for electrical immersion + flange plate (Bolly® 150÷500)
5212000910020	1" 1/2 Flange ø 240 mm-with connection for electrical immersion + flange plate(Bolly® 800÷1000) (Vaso inerziale W >1000)
5212000910019	2" Flange ø 240 mm-with connection for electrical immersion + flange plate (Bolly® 800÷1000) (Vaso inerziale W >1000)
5206000000054	1" 1/2 Flange ø 380 mm-with connection for electrical immersion + flange plate (Bolly® 1500)
5206000000052	2" Flange ø 380 mm-with connection for electrical immersion + flange plate (Bolly® 1500)



Art. Nr.	STAINLESS STEEL 316L VERSION
5212000000004	1" 1/2 Flange ø 180mm with connection for electrical immersion + flange plate (Bolly® 150÷1000)
5212000000005	2" Flange ø 180mm with connection for electrical immersion + flange plate (Bolly® 150÷1000)
5212000000006	1" 1/2 Flange ø 240mm with connection for electrical immersion + flange plate (Bolly® 1500÷2000) (Vaso inerziale X >1000)
5212000000007	2" Flange ø 240mm with connection for electrical immersion + flange plate (Bolly® 1500÷2000) (Vaso inerziale X >1000)

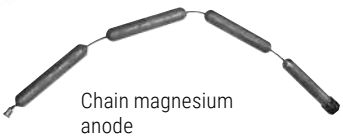
ACCESSORIES AND SPARE PARTS
CALORIFIERS

MAGNESIUM ANODES (FOR POLYWARM® COATED ONLY D.H.W. CALORIFIERS)

The calorifiers corrosion protection is guaranteed not only by the internal coating material but also by the anodes.



Anode with insulated cap



Chain magnesium anode

Art. Nr.	DESCRIPTION	Dimen. [mm]	Model - [nr. of anodes] Extra 1,2,3, Vasi Inerziali, Vasi Storage	Interka Solare	Interka, Bolly Murale	BOLLY (ST, AP, BC, PDC, CLASS A), Bollyterm HP	Bolly XL, Bolly HY	COMBI
5200000041007	N° 2 chain anodes + insulated cap + gasket - 3/4" M	22 x 631	–	–	–	–	–	800 **[x1]**, 1000 **[x1]**, 1500 **[x1]**, 2000 **[x1]**
5200000041016	N° 2 chain anodes + insulated cap + gasket - 3/4" M	22 x 450	–	–	–	–	–	500 **[x1]**, 600 **[x1]**
5200000041018	N° 1 chain anode + insulated cap + gasket - 1" 1/4 M	32 x 1900	–	–	–	–	Bolly 1 XL 400 **[x1]**, Bolly 1 XL 500 **[x1]**, 800**[x1]**, 1000**[x1]** Bolly HY 500 **[x1]**	–
5200000041008	N° 2 anodes M8	32 x 200	–	150 **[x1]**	–	–	–	–
5200000041011	N° 2 anodes + insulated cap 1" 1/4 M	32 x 450	–	–	–	300**[x1]**	Bolly XL 200 **[x1]**	–
5200000041012	N° 2 anodes + insulated cap 1" 1/4 M	32 x 650	800 **[x1]**, 1000 **[x1]**, 2000 **[x2]**	–	–	500**[x1]**, 800**[x1]** Bolly 2 1000 **[x2]**	Bolly HY 250 Bolly 1 XL 300**[x1]**, Bolly 2 XL 500**[x1]**	–
5200000041013	N° 2 anodes + insulated cap 1" 1/4 M	32 x 850	1300 **[x1]**, 1500**[x1]**, 2500**[x2]**, 3000**[x2]**, 4000**[x2]**, 5000**[x2]**	–	–	Bolly 1 1500 **[x1]**, Bolly 2 1500 **[x2]**, 2000 **[x2]**	Bolly 1 XL 400 **[x1]**, Bolly 1 XL 500 **[x1]** Bolly HY 500 **[x1]**	–
5200000041017	N° 2 anodes + insulated cap 1" 1/4 M	32 x 800	–	–	–	Bolly 1 1000 **[x1]**	–	–
5200000041014	N° 2 anodes + insulated cap 1" 1/4 M	32 x 520	500 **[x1]**	–	–	400 **[x1]**, Bolly 2 800 **[x2]**	Bolly 2 XL 300**[x1]**	–
5200000041015	N° 2 anodes + insulated cap 1" 1/4 M	32 x 200	–	150**[x1]**, 200**[x1]**	80 **[x1]**, 100 **[x1]**, 150 **[x1]**	–	–	–

Art. Nr.	Description	[mm]	Model - [nr. of anodes]
5200000041008	N° 2 anodes M8	32 x 200	150 **[x1]**
5200000041009	N° 2 anodes M8	32 x 400	200**[x1]**, 300**[x1]**

*Spare parts available only for **Interka Solar** models produced **before 2015***

MAGNESIUM ANODE + ELECTRIC IMMERSION HEATER KIT FOR BOLLYTERM® HOME

Magnesium anode + electric immersion heater kit for Bollyterm® HOME

Art. Nr.	Kit includes:	AVAILABLE ON
5200000041019	- N° 1 magnesium anode 1" 1/4 M - N° 1 electric immersion heater (1,5 kW - 230 V)	Bollyterm® Home range

ACCESSORIES AND SPARE PARTS
CALORIFIERS

ELECTRONIC ANODE WITH TITANIUM IMPRESSED ELECTRICITY (FOR POLYWARM® COATED ONLY)



Art. Nr.	Anode length [mm]	Conn. M	AVAILABLE FOR: Extra1,2,3 Vasi Inerz. e Storage Polywarm®	Interka, Interka Panarea, Bolly® Murale	BOLLY® RANGE (ST, AP, PDC, BC, CLASS A) Bollyterm® HP	Bolly® XL, Bolly® HY
5200000000008	200	1"1/4	200, 300	80, 100, 120, 150, 200, 300	150, 200, 300	200
5200000000009	500		500, 800	–	–	400, 500
5200000000011	400		1000, 1500	–	400, 500, 800, 1000.	300
5200000000012	2x 400		–	–	1500, Bolly® 2 800, 1000	–
5200000000013	2x 800		2000, 2500, 3000, 4000, 5000	–	Bolly® 2 1500	–

• Use
The Titanium electronic anode is, by opposite to the normal one, not subject to consumption and doesn't need any maintenance or replacement. The protection against corrosion is obtained ensuring the electrolyte power through the continuous energy produced by the titanium bar.

• Material
The anode is composed by a Titanium rod, with its active final part, that has to be connected to the vessel.
This system ensures the good working and a long life both to the anode and the cilinder.

• Operating conditions
The input disposal is positioned in a insulated box and it's equipped with a light led, located on front side. Green light=working OK – Red light = Wrong working. In this last case it's necessary to take the electrical plug away and get in touch with an installer, that will provide to put everything in good order.

• Advantage
1. Active protection through the power given by the titanium anode.
2. High level working flexibility, in order to fit to the different internal coatings and to the water capacity, ensured by an automatic regulation of the working electricity
3. Definitive and easy protection. It is important anyway to check that the electricity is constantly working.
4. Cancelation of any worries and maintenance problems and costs.

ELECTRONIC ANODE WITH TITANIUM IMPRESSED ELECTRICITY (FOR STAINLESS STEEL CALORIFIERS)

In normal use conditions of drinking water (European directive 98 / 83 CE) the standard cathodic protection (using magnesium anode) of the tanks is adequately enough. However, depending on the place of installation, the drinking water conditions may differ significantly from the standard reference. In these cases, when the chloride content exceeds 150 mg/lt, it is advisable to install a permanent Correx UP cathodic system on the tank, which is maintenance-free.



Art. Nr.	Description / Anodes lenght [mm]	AVAILABLE ON: Vaso Inerziale - Vaso Inerz. Compact			Extra 1 - Extra 1 Compact- Extra 1 Vapore		Extra 2			Extra 2 Compact	
5200000000015	N.2 Anodes/ 1X800/1x400	1500	–	–	–	–	–	–	–	–	–
5200000000016	N.3 Anodes/800	2000	2500	3000	1500	2000	–	–	–	–	–
5200000000017	N.4 Anodes/800	4000	5000	–	2500	3000	1500	2000	2500	2500	3000
5200000000018	N.5 Anodes/800	–	–	–	4000	5000	3000	4000	5000	4000	–

ACCESSORIES AND SPARE PARTS
CALORIFIERS

MAGNESIUM ANODES KIT AVAILABLE ON ANODEN TESTER



Anode with insulated cap

The calorifiers corrosion protection is guaranteed not only by the internal coating material but also by the anodes.

Art. Nr.	Description	Dimensions [mm]	AVAILABLE ON Extra 1,2,3, Vasi Inerziali, Vasi Storage	AVAILABLE ON GAMMA BOLLY (ST,BC,PDC Class A) Bollyterm® HP	AVAILABLE ON Bolly XL, Bolly HY
5200000041001	N° 3 anodes + insulated cap + gasket - 1"1/4	32x 350	200 (1) , 300 (1)	150 (1), 200 (1)	
5200000041002	N° 3 anodes + insulated cap + gasket - 1"1/4	32 x 450	–	300(1)	200 (1)
5200000041003	N° 3 anodes + insulated cap + gasket - 1"1/4	32 x 520	500 (1)	400 (1), Bolly® 2 800 (2)	Bolly®2 XL 300(1)
5200000041004	N° 3 anodes + insulated cap + gasket - 1"1/4	32 x 650	1000 (1), 800 (1), 2000(2)	500(1), 800(1) Bolly® 2 1000 (2)	Bolly® 1 300(1), Bolly®2 XL 500(1)
5200000041005	N° 2 anodes + insulated cap + gasket - 1"1/4	32 x 800	1300 (1), 3000(2)	Bolly® 1000 (1), Bolly® 2 1500 (2)	
5200000041006	N° 2 anodes + insulated cap + gasket - 3/4"	32 x 900	1500(1), 2500(2), 4000(2), 5000(2)	Bolly® 1 1500 (1), 2000 (2).	Bolly® 1 500(1) Bolly® 1XL 800(1) Bolly® 1XL 1000(1)

ANODEN-TESTER



Art. Nr.	Description
5221000000031	Anoden Tester (2 units box)

ANODEN TESTER KIT
It is the new system to keep easily under control by seeing the consumption of the magnesium anode. You have just to push the button to check if the anode has to be replaced. Included with the anoden-tester, cap and boss.

ACCESSORIES AND SPARE PARTS
CALORIFIERS - MULTIFUEL ENERGY CYLINDERS

RECIRCULATION KIT FOR CALORIFIERS AND BUFFER TANKS



The use of Cordivari's recirculation kit allows to improve the comfort of the user and to reduce the waste and produce DHW immediately at the right temperature.
In particular, the Cordivari electronic recirculation kit allows to:
- Maximize the energy saving by programming the recirculation temperature on basis of our own habits.
- Daily and weekly scheduling to manage until 8 time slots for each day of the week
- Constantly monitoring the working and the efficiency of the recirculation thanks to the self-diagnostics of the system
- Works also without the temperature's probe into system where the probe is not foreseen, through programmable temporary actions.

ART. NR.	
5221000000038	Control display + pump (for D.H.W.)

VALVES KIT

RECYCLE KIT - ECO COMBI



Art. Nr.
5221000000019
Connection 3/4"

RECYCLE KIT AND MIXER - ECO COMBI



Art. Nr.
5221000000020
Connection 3/4" M

SAFETY VALVE PRIMARY CIRCUIT



Art. Nr.	calibration
5302000000021	2,5 bar
1/2" M x 1/2" F Connection Interka Panarea	

See catalogue INTEGRATED SOLAR THERMAL SYSTEM

TEMPERATURE AND PRESSURE SAFETY VALVE



Art. Nr.	calibration
5302000000020	90°C/6bar
1/2" M x 1/2" F. Connection (Avoiding over temperature when there is no withdrawing of DHW.)	

See catalogue INTEGRATED SOLAR THERMAL SYSTEM

BUFFER TANKS CONNECTING KIT

Stainless steel extensible connecting hose

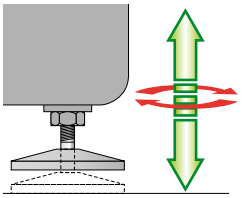


Art. Nr.	Connection	Length
5006170001001	1" 1/2	200 ÷ 400 mm

ACCESSORIES AND SPARE PARTS
CALORIFIERS - MULTIFUEL ENERGY CYLINDERS

ADJUSTABLE SUPPORTING FEET

3 adjustable supporting feet, allowing a correct positioning of the tanks at not in-level floor. Suitable only for the models with feet.



Art. Nr.	Description
5221000000029	Kit 3 adjustable supporting feet

BOLLY® PRIMO WALL FIXING KIT

Fixing kit for wall mounting (vertical or horizontal) for Bolly® PRIMO, including galvanized steel brackets and PVC bottom caps.



ART. NR.	Bolly® Primo Model
5221000000069	100
5221000000070	150
5221000000071	200
5221000000072	300





HYDRAULIC SAFETY GROUP

This accessory includes, a 8 bar safety valve, nonreturn valve, 2 on-off valves.
Its function is to protect tha sanitary circuit from overpressure (according to italian national regulation), fully covered inside the carter.



Art. Nr.	Connection	Pressure
5760000001001	1"	8 bar
5760000001002	3/4"	8 bar

THERMOMETER

1/2" connection Thermometer- - from 0°-120°C



Art. Nr.	Description	Diameter [mm]
5032240000107	5 units box	60

ACCESSORIES AND SPARE PARTS
HYDRONIC SYSTEMS

RECIRCULATION KIT FOR MACS® ELECTRONIC MODULE



ART. NR.
5221000000073

DHW recirculation group

The recirculation kit for Electronic MACS® module allows the implementation of a sanitary recirculation ring on the system where modules are installed.
The main advantage of such sanitary recirculation ring is to improve comfort and speed in achieving and enjoying the desired DHW temperature, reducing energy waste.
The control unit included as standard with electronic MACS® modules allow the complete management of all settings of the recirculation ring, such as temperature, setting etc…

RECIRCULATION KIT FOR PUFFERMAS® DOMUS



ART. NR.
5221000000102

DHW recirculation group

The use of Cordivari's recirculation kit allows to manage on the system a link of the DHW recirculation.
The benefit is to improve the comfort of the user and to reduce the waste and produce DHW immediately at the right temperature.

THERMOSTATIC SWITCH VALVE



ART. NR.	Connections
5046000000007	3/4"
5046000000008	1"

Auto-operated thermostatic switch valve, calibrated at 45°C. It can easily integrate solar thermal systems for DHW production with a boiler.
See catalogue INTEGRATED SOLAR THERMAL SYSTEM

PHC - STAINLESS STEEL 316L PLATES SPARE PARTS



Description	Suitable for	Art. Nr.
N° 2 plates in Stainless steel 316L	**PHC 2030**	5250400000020
N° 2 plates in Stainless steel 316L	**PHC 2045**	5250400000021
N° 2 plates in Stainless steel 316L	**PHC 2075**	5250400000022
N° 2 plates in Stainless steel 316L - "**H**" model	**PHC 3080**	5250400000023
N° 2 plates in Stainless steel 316L - "**L**" model	**PHC 3080**	5250400000024
N° 2 plates in Stainless steel 316L - "**H**" model	**PHC 30120**	5250400000025
N° 2 plates in Stainless steel 316L - "**L**" model	**PHC 30120**	5250400000026
N° 2 plates in Stainless steel 316L - "**H**" model	**PHC 4060**	5250400000027
N° 2 plates in Stainless steel 316L - "**L**" model	**PHC 4060**	5250400000028
N° 2 plates in Stainless steel 316L - "**H**" model	**PHC 4090**	5250400000029
N° 2 plates in Stainless steel 316L - "**L**" model	**PHC 4090**	5250400000030
N° 2 plates in Stainless steel 316L - "**H**" model	**PHC 40125**	5250400000031
N° 2 plates in Stainless steel 316L - "**L**" model	**PHC 40125**	5250400000032
N° 2 plates in Stainless steel 316L - "**H**" model	**PHC 40120**	5250400000033
N° 2 plates in Stainless steel 316L - "**L**" model	**PHC 40120**	5250400000034

PHC - SUPPORTING FEET



For model	Art. Nr.
PHC 2030	5601000030002

Supporting feet for PHC exchanger

ACCESSORIES AND SPARE PARTS
HYDRONIC SYSTEMS

PHC - INSULATION KIT

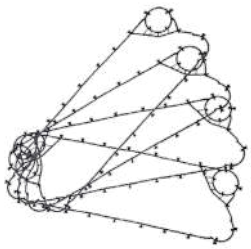


INSULATION:
with practical velcro closure for quick and easy assembly / disassembly; made in closed cell expanded cross-linked polymeric material with low thermal conductivity.
Fire reaction class B2 (DIN 4102)

Description	Suitable for	N° plates	Art. Nr.
Kit coib. PHC	**PHC 2030**	up to 31	5655000610028
Kit coib. PHC	**PHC 2030**	from 33 to 67	5655000610029
Kit coib. PHC	**PHC 2045**	up to 31	5655000610030
Kit coib. PHC	**PHC 2045**	from 33 to 67	5655000610031
Kit coib. PHC	**PHC 2075**	up to 31	5655000610032
Kit coib. PHC	**PHC 2075**	from 33 to 67	5655000610033
Kit coib. PHC	**PHC 3080**	up to 51	5655000610034
Kit coib. PHC	**PHC 3080**	from 53 to 155	5655000610035
Kit coib. PHC	**PHC 3080**	from 157 to 205	5655000610027
Kit coib. PHC	**PHC 30120**	up to 103	5655000610019

Description	Suitable for	N° plates	Art. Nr.
Kit coib. PHC	**PHC 30120**	from 105 to 205	5655000610020
Kit coib. PHC	**PHC 4060**	up to 103	5655000610021
Kit coib. PHC	**PHC 4060**	from 105 to 205	5655000610022
Kit coib. PHC	**PHC 4090**	up to 103	5655000610023
Kit coib. PHC	**PHC 4090**	from 105 to 205	5655000610024
Kit coib. PHC	**PHC 40125**	up to 103	5655000610025
Kit coib. PHC	**PHC 40125**	from 105 to 205	5655000610026
Kit coib. PHC	**PHC 45120**	up to 69	5655000610036
Kit coib. PHC	**PHC 45120**	from 71 to 115	5655000610037

PHC - GASKETS



Description	Suitable for	Art. Nr.
NBR gaskets - 10 units box	**PHC 2030**	5019220401023
EPDM gaskets - 10 units box	**PHC 2030**	5019220401024
NBR gaskets - 10 units box	**PHC 2045**	5019220401025
EPDM gaskets - 10 units box	**PHC 2045**	5019220401026
NBR gaskets - 10 units box	**PHC 2075**	5019220401027
EPDM gaskets - 10 units box	**PHC 2075**	5019220401028
NBR gaskets - 14 units box	**PHC 3080**	5019220401029
EPDM gaskets - 14 units box	**PHC 3080**	5019220401030
NBR gaskets - 14 units box	**PHC 30120**	5019220401031
EPDM gaskets - 14 units box	**PHC 30120**	5019220401032

Description	Suitable for	Art. Nr.
NBR gaskets - 14 units box	**PHC 4060**	5019220401033
EPDM gaskets - 14 units box	**PHC 4060**	5019220401034
NBR gaskets - 14 units box	**PHC 4090**	5019220401035
EPDM gaskets - 14 units box	**PHC 4090**	5019220401036
NBR gaskets - 14 units box	**PHC 40125**	5019220401037
EPDM gaskets - 14 units box	**PHC 40125**	5019220401038
NBR gaskets - 14 units box	**PHC 40120**	5019220401039
EPDM gaskets - 14 units box	**PHC 40120**	5019220401040

ACCESSORIES AND SPARE PARTS
WATER PRESSURE TANKS

PRESSURE VESSELS VISUAL LEVEL INDICATOR



The level indicator includes: transparent tube, two brass faucets and gaskets.

Art. Nr.	Pressure vessel model	Tube length [m]
5303000000040	From 100 to 2500 (stainless steel 1000 and 2000 excluded)	1
5303000000041	From 3000 to 5000 (stainless steel 1000 and 2000 included)	2
5303000000042	>5000 on request	3

SAFETY VALVES FOR COMPRESSED AIR RECEIVERS

Applied to compressed air and liquid lift tanks prevent the maximum working pressure from being exceeding the limits of designed conditions. The choice of the safety valve should be assessed, in addition to the maximum pressure, in relation to the discharge flow rate and is therefore closely linked to the origin of the system of which the tank is part of and the causes which may lead to the intervention of such devices For these reasons, the choice of the safety valve to be used is the responsibility of the system designer. All safety valves supplied are accompanied by an EC certificate of conformity issued by a notified body and their installation is regulated by the national regulations on pressure equipment in force.



Safety valve

Art. Nr.	Units box	Connection	Calibration [Bar]
5302000001001	5 pcs	3/8"	4,6
5302000001002		3/8"	5,6
5302000001003		3/8"	7,4
5302000001004		3/8"	9,3
5302000001005		3/8"	10,4
5302000001006		3/8"	11,2
5302000001010	3 pcs	3/4"	4,6
5302000001011		3/4"	5,6
5302000001012		3/4"	7,4
5302000001013		3/4"	10,4
5302000001014		3/4"	11,2
5302000000012	1 pcs	1"	5,6
5302000000007		1"	7,4
5302000000016		1"	10,4
5302000000008		1"	11,2

PRESSURE GAUGE



Bottom connection

Instruments installed on pressure equipment to indicate at any time the pressure which the vessel is subjected.
All pressure gauges are supplied with an adjustable indicator for maximum pressure.

Art. Nr.	Units box	Connection	[Bar]
5300000001001	5 pezzi	1/4"	0/10
5300000001002	5 pezzi	1/4"	0/16

ELASTIC EPDM MEMBRANE

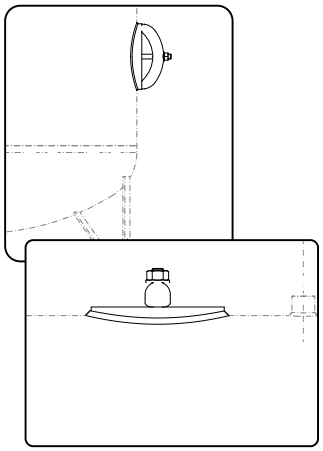
The elastic membrane in EPDM use are mounted on expansion vessels in order to divide the liquid from the gaseous phase. Doing so the circulating water is pure giving to the system the warranty to be suitable for drinking.



Art. Nr.	Description
5700000410106	for vessel of 24 lt - 10 units box
5700000410107	for vessels 100 lt with flange Ø137 mm - 5 units box
5700000410003	for vessels 200-300 liters and 100 liters with flange Ø 254 mm
5700000410004	for vessels 500 liters
5700000410108	for vessel from 50-60 liters - produced up to 2003 - 5 units box
5700000410109	for vessel from 80 liters - produced up to 2003 - 5 units box

ACCESSORIES AND SPARE PARTS
COMPRESSED AIR RECEIVERS

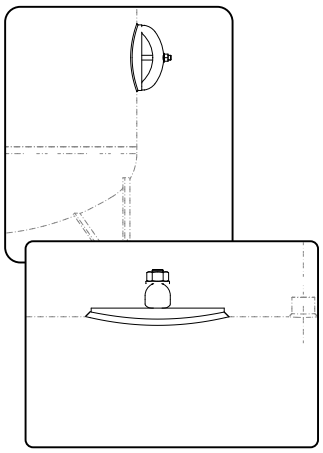
SURCHARGE FOR MANHOLE AND HANDHOLE *(FOR COMPRESSED AIR RECEIVERS P.E.D. 2014/68/UE)*



Model	Working Pressure [bar]	Manhole (elliptical) H5 [mm]	Manhole (elliptical) 9 [mm]	Handole (elliptical) H5 [mm]	Handole (elliptical) 9 [mm]
1500	**8**	860	400x300	818	150x100
2000		890	400x300	845	150x100
3000		985	400x300	985	150x100
4000 (*)		1010	400x300	1010	150x100
5000 (*)		1010	400x300	1010	150x100
8000		//	//	1150	150x100
10000		//	//	1150	150x100
1000	**12**	870	400x300	840	150x100
1500		860	400x300	818	150x100
2000		890	400x300	845	150x100
2500		985	400x300	985	150x100
3000		985	400x300	985	150x100
4000 (*)		1010	400x300	1010	150x100
5000 (*)		1010	400x300	1010	150x100
8000		//	//	1150	150x100
10000		//	//	1150	150x100
1000	**15**	870		840	150x100
1500		860	400x300	818	150x100
2000		890	400x300	845	150x100

(*) Manhole standard on 4000 - 5000 lt Polywarm® version

SURCHARGE FOR MANHOLE AND HANDHOLE *(FOR AIR RECEIVERS P.E.D. 2014/68/UE)*



Model	Working Pressure [bar]	Manhole (elliptical) H6 [mm]	Manhole (elliptical) E [mm]	Manhole (elliptical) H6 [mm]	Manhole (elliptical) E [mm]
1500	**8**	860	400x300	818	150x100
2000		890	400x300	845	150x100
3000		985	400x300	985	150x100
4000		1010	400x300	1010	150x100
1000	**12**	870	400x300	840	150x100
1500		860	400x300	818	150x100
2000		890	400x300	845	150x100
2500		985	400x300	978	150x100
3000		985	400x300	985	150x100

AIR COMPRESSOR RECEIVERS KIT

Includes a safety valve , a gauge (manometer) and its tap-tray.

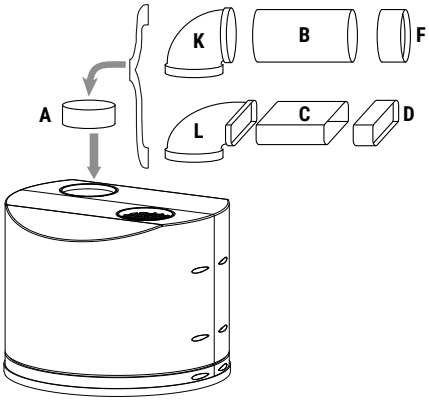


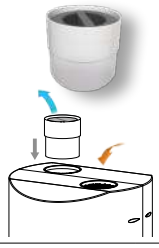
Right-side connection

Art. Nr.	Description
5303000000001	Kit for 200 up to 710 lt compressed air receivers (11 bar), with security valve of 7.000 l./min P calibration 10,4 bar
5303000000002	Kit for 900 lt compressed air receivers (11 bar), with security valve of 30.000 l./min P calibration 10,4 bar
5303000000003	Kit for 1.000 up to 10.000 lt compressed air receivers (12 bar), with security valve of 32.000 l./min P calibration 11,2 bar
5303000000004	Kit for 1.000 up to 10.000 lt compressed air receivers (8 bar), with security valve of 22.000 l./min P calibration 7,4 bar
5303000000005	Kit for 270 up to 2.000 lt compressed air receivers (15 bar), with security valve of 9.000 l./min P calibration 13,5 bar

CANALIZATION FOR BOLLYTERM® HOME

PLASTIC ELEMENTS FOR CANALIZATION

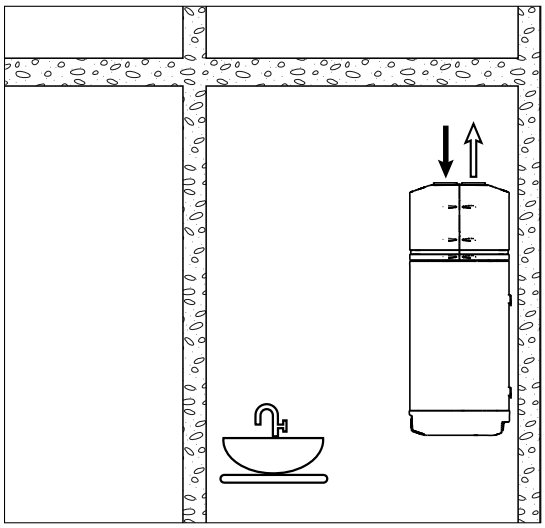


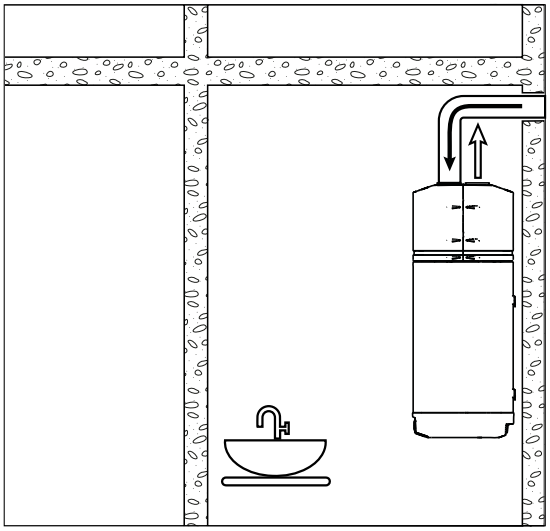
	Art. Nr.	DESCRIPTION
	A 5221000000085	Stub pipe of Ø 125 mm Length 75 mm
	B 5221000000086	Tube of Ø 125 Mm Length 1200 mm
	C 5221000000087	Rectangular tube of Ø 150x70 mm Length 1200 mm
	D 5221000000088	Rectangular plastic joint Ø 150x70 mm
	5221000000089	Horizontal joint from round pipe of Ø125 mm Rectangular Ø 150x70 mm
	F 5221000000090	Round joint Ø 125 mm
	5221000000091	Flexible tube Ø 125 mm Length 1000 mm
	5221000000092	Flexible rectangular tube Ø 150x70 mm Length 1000 mm
	5221000000093	Rectangular curve Ø 150x70 mm horizontal
	5221000000107	**NEW** **Sound pressure reduction** Ø 125 L 120 mm Acoustic silencer to reduce by 6dbA the declared values (55 dBA). Tested according to UNI EN 12102-2 and UNI EN ISO 3741 standards.

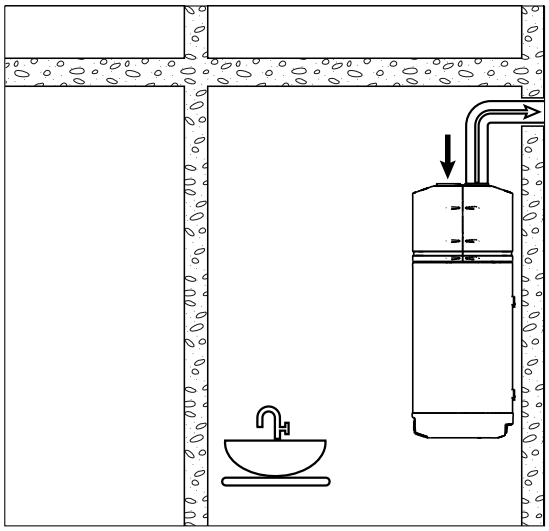
	Art. Nr.	DESCRIPTION
	5221000000094	Rectangular curve Ø 150x70 mm vertical
	K 5221000000095	Round elbow curve Ø125 mm
	L 5221000000096	Vertical curve from round Ø 125 mm to rectangular Ø 150x70 mm
	5221000000097	Pair of pipe clamps Ø 150 mm
	5221000000098	Pair of brackets for rectangular tubes Ø 150x70 mm
	5221000000099	Plastic grid with fixed fins for tubes of Ø 125 mm
	5221000000100	Roll of adhesive white tape for tubes, width 50 x length 10 mt
	5221000000101	Plastic pipe flange for tubes of Ø 125 mm

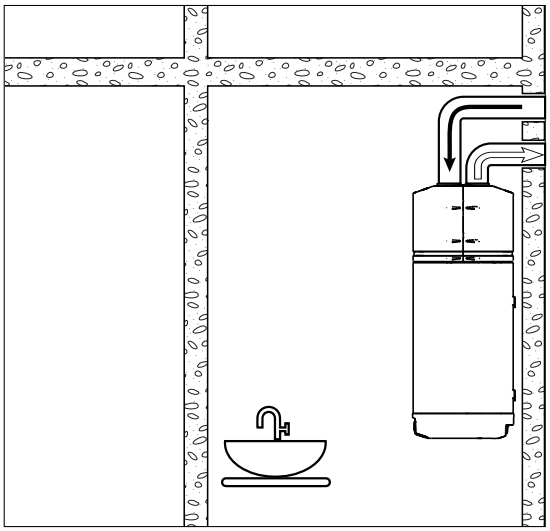
CANALIZATION FOR BOLLYTERM® HOME

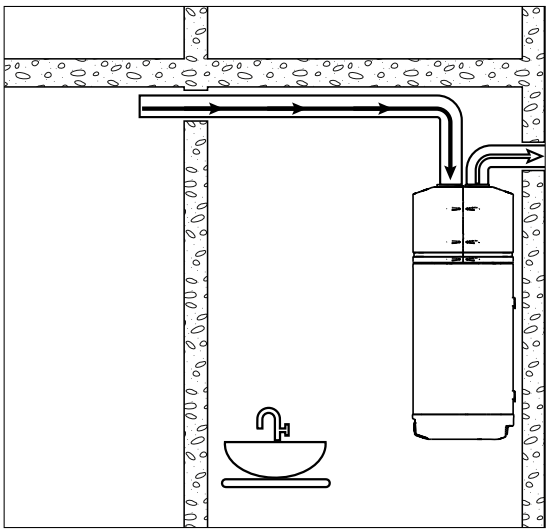
CANALIZATION EXAMPLES

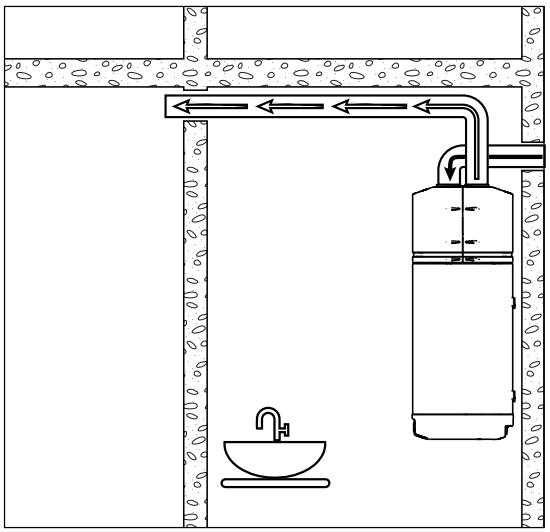


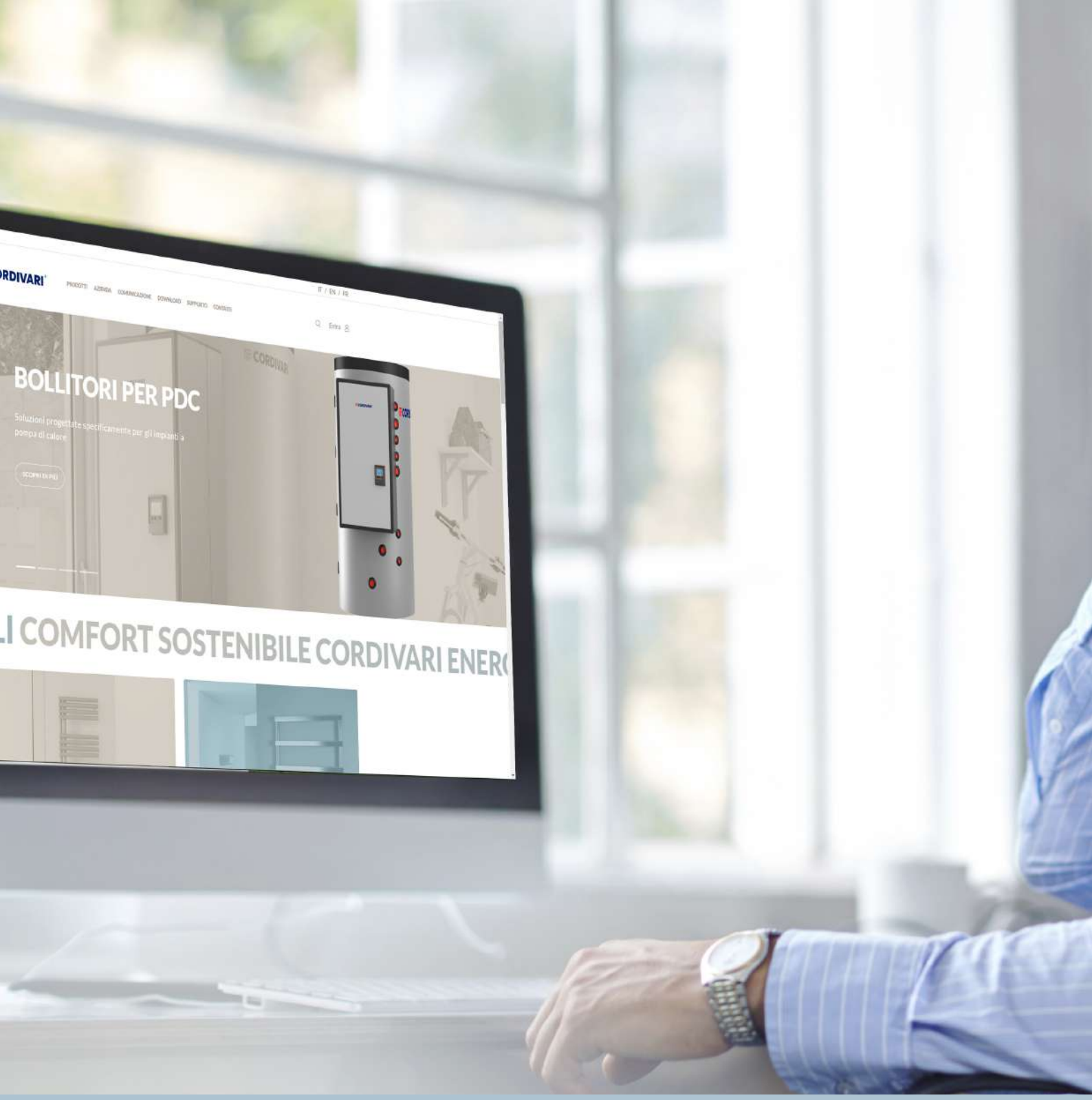












TECHNICAL SUPPORT



INSULATIONS

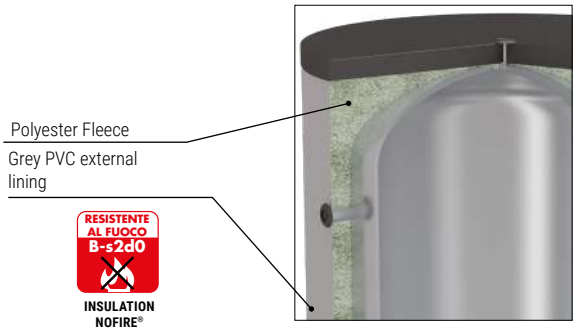
THERMAL INSULATION

Thermal efficiency of calorifiers and buffer tanks Cordivari is optimized with special insulations, that are essential components for every hot water storage, keeping the temperature stable with low heat loss.
Cordivari insulations reduce at minimum level temperature losses, with consequently energy savings.
Insulation on calorifiers and buffer tanks are manufactured using the best available materials.



NOFIRE® POLYESTER FLEECE

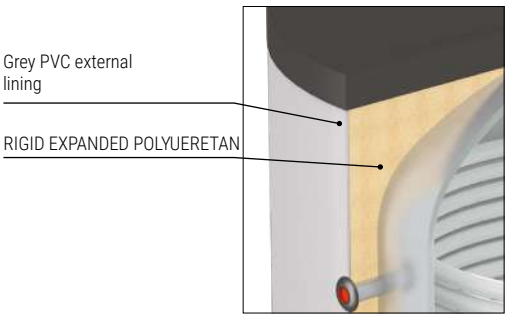
Material with low thermal conductivity. From an energetical and ecological point of view, the polyester fleece is one of the best perfomer, obtained using recycled and environmental friendly material.
The polyester fleece is unalterable at high temperatures, flexible, durable, non-toxic, insensitive to chemicals, it doesn't rot, hygienic and transpiring.
High insulation capacity with a thermal conductivity λ of 0.039 W/mk and a fire resistance class of B-s2d0, according to european standard EN 13501.





RIGID EXPANDED POLYUERETAN

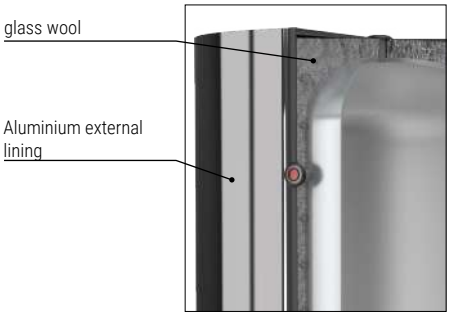
The term polyurethane refers to a vast family of polymers, which are used for different purposes. In thermo-hydraulics the use of expanded polyurethane as thermal insulation is widespread, since it has excellent insulating properties.
The Cordivari tanks have a thermal insulation of rigid polyurethane foam based on the models that differ from each other for different purposes. This layer is foamed directly on the body of the tank, whose surface is treated with a special release agent which facilitates its removal at the end of this technical life. This insulating layer has a high insulating capacity and high polymer density.





GLASS WOOL INSULATION AND ALUMINIUM EXTERNAL LINING

The D.H.W. Storage Tanks with insulation A1 represents the most advanced solution in terms of preventing fire risks on thermal power plants or technical rooms.
With glass wool and an external lining completely made in Aluminium material, this insulation combines the high thermal insulations properties with a fire proofing resistance class A1, according to european standard EN 13501.



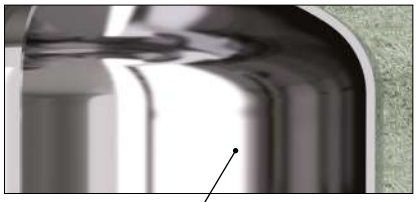
INSULATIONS - FIRE REACTION CLASS (EN 13501)

<table>
<tr><th colspan="3">Fire Reaction</th><th colspan="3">Smoke release</th><th colspan="3">(drops)</th></tr>
<tr><td>A1</td><td colspan="2">FIRE PROOF</td><td colspan="3">NO TEST REQUIRED</td><td colspan="3">NO TEST REQUIRED</td></tr>
<tr><td>A2</td><td></td><td>Fireproof</td><td>s1</td><td></td><td>None</td><td>d0</td><td></td><td>No in the first 10 minutes</td></tr>
<tr><td>B</td><td></td><td>Limited</td><td>s2</td><td></td><td>Limited</td><td rowspan="2">d1</td><td rowspan="2"></td><td rowspan="2">Limited Dripping of incandescent materials in the last 10 seconds</td></tr>
<tr><td>C</td><td></td><td rowspan="3">Decreasing performance levels from C to E reaction class</td><td rowspan="2">s3</td><td rowspan="2"></td><td rowspan="2">High</td></tr>
<tr><td>D</td><td></td><td>d2</td><td></td><td>High</td></tr>
<tr><td>E</td><td></td><td>E</td><td colspan="2">NO TEST</td><td>E</td><td colspan="2">NO INDICATION or d2</td></tr>
<tr><td>F</td><td colspan="8">No performance declared</td></tr>
</table>

MATERIALS

All Cordivari Products are manufactured using high level quality of raw materials and internal finishes:

STAINLESS STEEL 316L

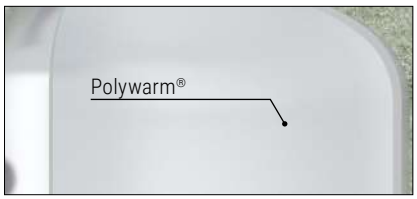






The choice of stainless steel material on calorifiers aims for an absolute quality result.
Material with high performances, entirely hygienic and atossic, suitable for Domestic Hot Water, resistant to low and high temperatures, 100% recyclable.
Cordivari is leader in the production of Stainless steel 316L (EN 1.4404) calorifiers with high quality standard levels.

POLYWARM®



WATER HYGIENE AND PROTECTION

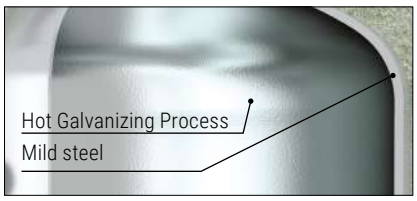
- **Drinkability and Hygiene at 100%;**
- **Elasticity E>20%;**
- **Capacities up to 6000 lt;**
- **Temperature resistance till 130°C;**
- **Thickness >200 µm for a total protection to corrosion.**



Our customer oriented approach and our long tradition as cylinder manufacturer allow us to offer cutting edge solutions for production and storage of Domestic Hot Water Cylinders.
Polywarm® properties have passed the adherence tests according to BS3900-E6 and DIN 53151, hardness tests according to ASTM D 3363-74 (matite), Impact resistance test (2 Joule) according to BS3900-E6 and at 10 kg x cm (UNI 8901).
Polywarm® has excelled in chemical and durability testing (>1000 hours) in salt spray testing according to UNI 5687-73 and Humidity cycle according to UNI 8744.
Drinkability and Hygiene at 100%, elasticity E>20%, capacities up to 6000 litres, temperature resistance till 130°C. Thickness >200 µm for a total protection to corrosion.
Polywarm® Hygienic Certifications:

- Certificate of conformity for Domestic Hot Water of organic coating for food uses Polywarm® granted by IPL (Institut Pasteur de Lille - France).
- Test report of internal treatment for food use Polywarm® in accordance with D.M. nr. 174 del 06/04/2004 granted by SSICA Laboratory of Parma - Italy.
- Certificate OFI - Vienna , Austria, according to DVGW W270.
- WRAS - Water Regulation Advisory Scheme certificate

HOT GALVANIZING PROCESS





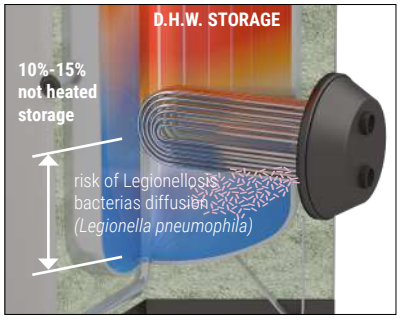


The galvanizing process protects the steel from corrosion, granting a long life product.
Thank to the high temperatures of the treatment, the galvanizing process helps to get better performances.
Cordivari premises are equipped with a high-tech hot galvanizing system.
The tank is dipped in a melted zinc bath (99,99% pure) according to European standard UNI EN 1179, lead percentage 100 times less than the maximal value permitted by D.M. n.174 dated 06/04/2004. Cordivari galvanizing process does not contain dangerous material, so to be certified for D.H.W. use.

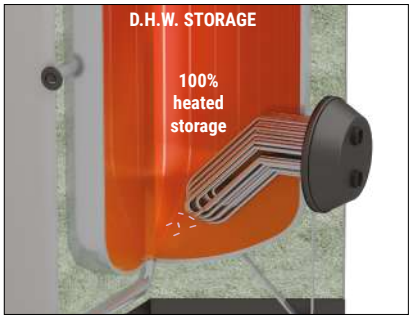
HIGH PERFORMANCES ANTI-LEGIONELLA® HEAT EXCHANGER

D.H.W. OPTIMIZED ACCUMULATION

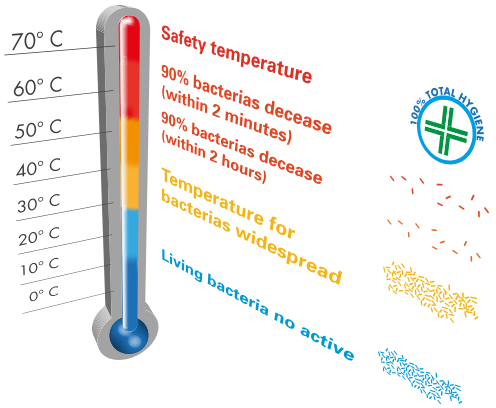
Cordivari Heat Exchanger , with tubes bent to the bottom, are able to heat the complete quantity of water in an homogenous way, also in the lower part of the calorifier. This will ensure total production of the storage of D.H.W. in the calorifier. (10%-15% more than standard heat exchangers). Maximal hygiene will be guaranteed.



STRAIGHT HEAT EXCHANGER: between 10% - 15% of storage volume is not heated with relevant thermal inefficiencies and risk of Legionellosis bacterias diffusion.



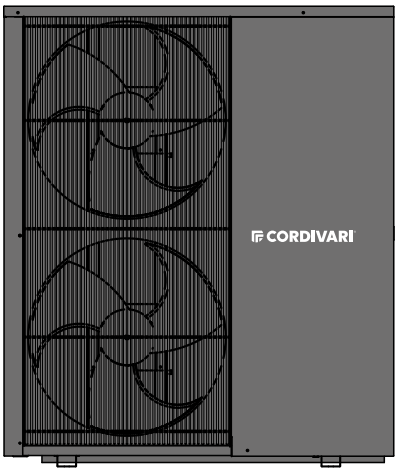
BENDED HEAT EXCHANGER: 100% volume will be heated with relevant thermal efficiency and D.H.W. healthiness increase.



DIMENSIONING OF BUFFER TANKS

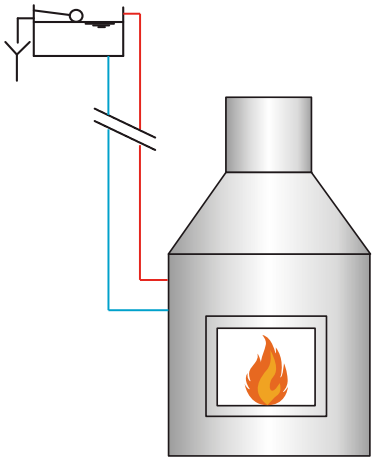
The calculation of a buffer tank's volume depends on the type and on the potential of the heat generators. The installation of a buffer tank has a double function, as it allows the generator to work regularly by limiting the number of interruptions, and it also constituts a thermal flywheel for the heating system, improving the overall comfort of the installation. Cordivari offers a wide range of buffer tanks, providing besides the mainstream version also combined solutions ideal for production of domestic hot water. The wide spectrum of products available is characterized by advanced technology that allows a strong thermal stratification, to consistently reduce the energy consumption.
For calculation purposes we give an indication of the volumetric ratios according to the thermal potential of various sources with non-continuous operation. These suggestions and merely indicative and cannot substitute a closer evaluation made by a qualified technician.

HEAT PUMP



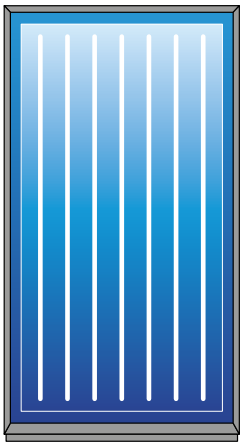
1 kWt~5÷6 LITERS

FIREPLACE STOVE



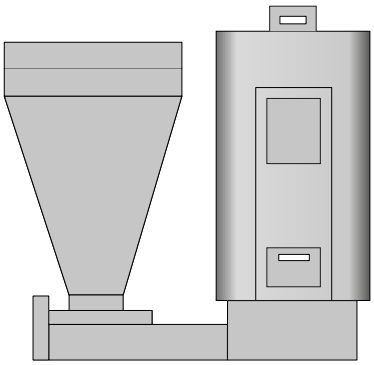
1kWt~30 LITERS

FLAT SOLAR COLLECTOR



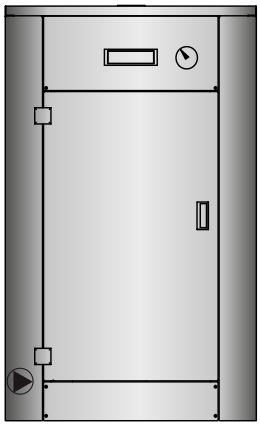
1 mq~60÷70 LITERS

POLYCOMBUSTIBLE BOILER



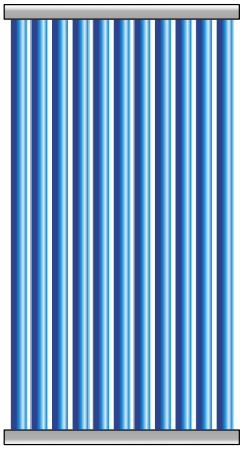
1 kWt~20 LITERS

PELLET STOVE



1 kWt~20 LITERS

VACUUM SOLAR COLLECTOR



1 mq~60÷70 LITERS

DIMENSIONING OF THE EXPANSION VESSEL FORCED CIRCULATION SYSTEMS

The expansion vessel has a key function for the primary circuit of a solar thermal system with forced circulation (generally speaking, expansion vessels are important in any heating system). To calculate the nominal volume of the vessel refer to the following formula:

Vn = (Vu*(Pf+1)) / (Pf-Pi)

Where :
VN = nominal volume of the Expansion vessel [lt]
VU = useful volume of the Expansion vessel = Vu = (ΔV + Vc) * 1,1 [lt]
PF = maximum working pressure of the solar thermal system: to be considered in the designing phase of the project according to the characteristics of the materials used and the safety devices installed = 5,5 [bar]
PI = loading pressure of the solar thermal system: linked to the difference in level between solar collectors and expansion vessel (approximately 1 bar each 10 meters) plus a safety coefficient; in domestic systems the cold water loading pressure is about 2,5 [bar]

With:

ΔV = variation of the volume of the fluid = e * Vf [lt]
VC = fluid contained in the solar collectors [lt]
In which:
E = heat transfer fluid coefficient of cubic expansion = 0,07
VF = heat transfer fluid contained in the system

The heat transfer fluid contained in the system is given by the sum of:



fluid content in solar collectors	**VC +**
fluid content in pipes	**VT +**
fluid content in heat exchangers	**VS +**
fluid content in other components	**VA =**
	VF

The preload value of the expansion vessel will be 0,3-0,5 bar less than pressure Pi.

EXAMPLE

SOLAR THERMAL SYSTEM 500B2-10 TF

- 4 SOLAR COLLECTORS 2,5 MQ
- 1 CALORIFIER BOLLY® 2 500 LT
- 1 BASIC CIRCULATION GROUP
- 30 MT COPPER PIPE (SUPPLY + RETURN) D. 22 MM

To determine the necessary volume of the expansion vessel

VF = (VC +VT+VS+VA) ~ 31 LT

ΔV = EXVF= (0,07*31) = 2,17 LITERS

VU = (ΔV+VC)X1.1= (2,17+3,8)X1,1= 10,75 LITERS

VN = VUX(PF+1)/(PF-PI) = 6,56X(5,5+1)/(5,5-2,5) = 23,30 LITERS **24 LITERS EXPANSION VESSEL**

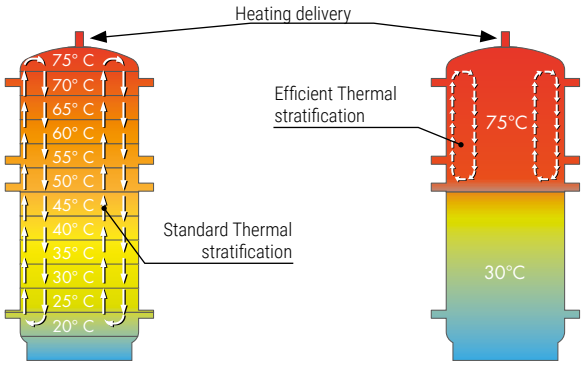


THERMAL STRATIFICATION

Thermal stratification is a physical process in which an hot fluid naturally tends to position itself higher than the cold one.

The fluid (water) is always moving, and tends to remix, therefore the natural process of stratification must be supported to maintain an increasing temperature gradient from bottom to upper part and avoid the mixing of liquid at different temperatures.

To allow stratification into the tanks means to create a remarkable difference in temperature storaging volume from upper to lower part. With important positive effects in terms of efficiency.
A proper stratificated storaging means to have quantities of hot water available in short time.
Example of stratification:
Heat received during the day is accumulated in the higher part of the tank, reaching a suitable temperature for end user, while in the lower part temperature remains cold and even when solar collectors have a temperature below the one needed (afternoon-evening), the heat exchanger continues and tanks is storaging further energy.

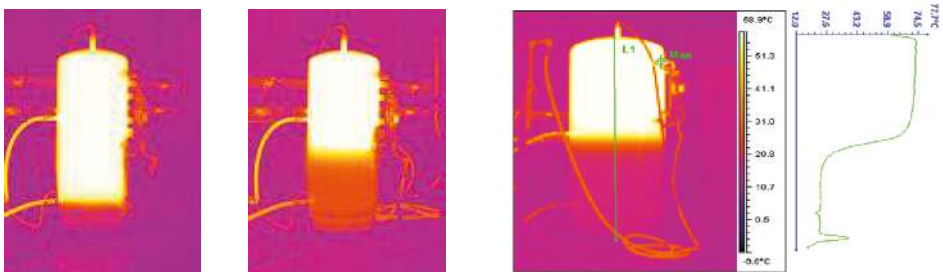


THE TECHNICAL SOLUTIONS FOR THE OPTIMIZATION OF THERMAL STRATIFICATION

"LABYRINTH SPREADER" (CORDIVARI PATENT)



Performances are optimized thanks to the "Labyrinth Spreader" (Cordivari Patent). Its spread shape allows a perfect stratification of the water that returns back from the plate exchange to the tank.
Heating installation efficiency is guaranteed.

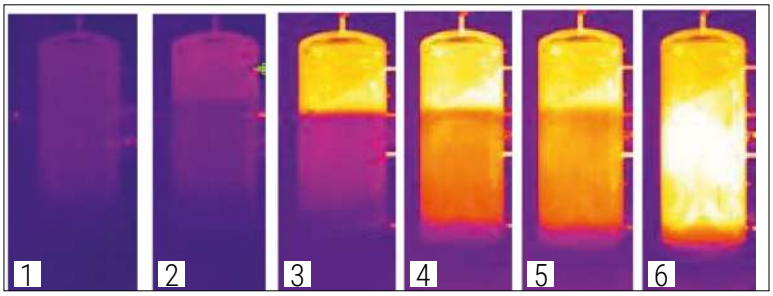


Sequence of thermographic images that show how Labyrinth Spreader works.

EASY STRATIFICATION BUFFERS (CORDIVARI PATENT)

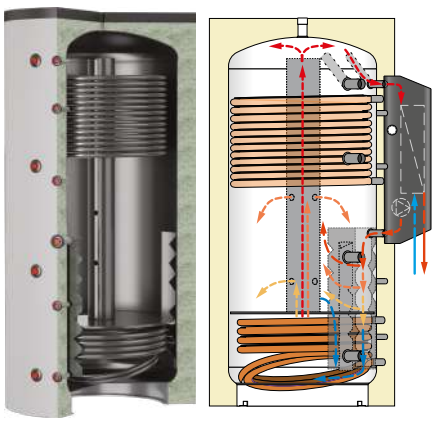


The heating return stratification system (Cordivari patent), avoid any turbolences, that would affect the thermal stratification inside the buffer tank. Thanks to this optimized solution, efficiency and energy savings are continuosly improved.



Sequence of thermographic images that show how a system works with the easy stratification Buffer.

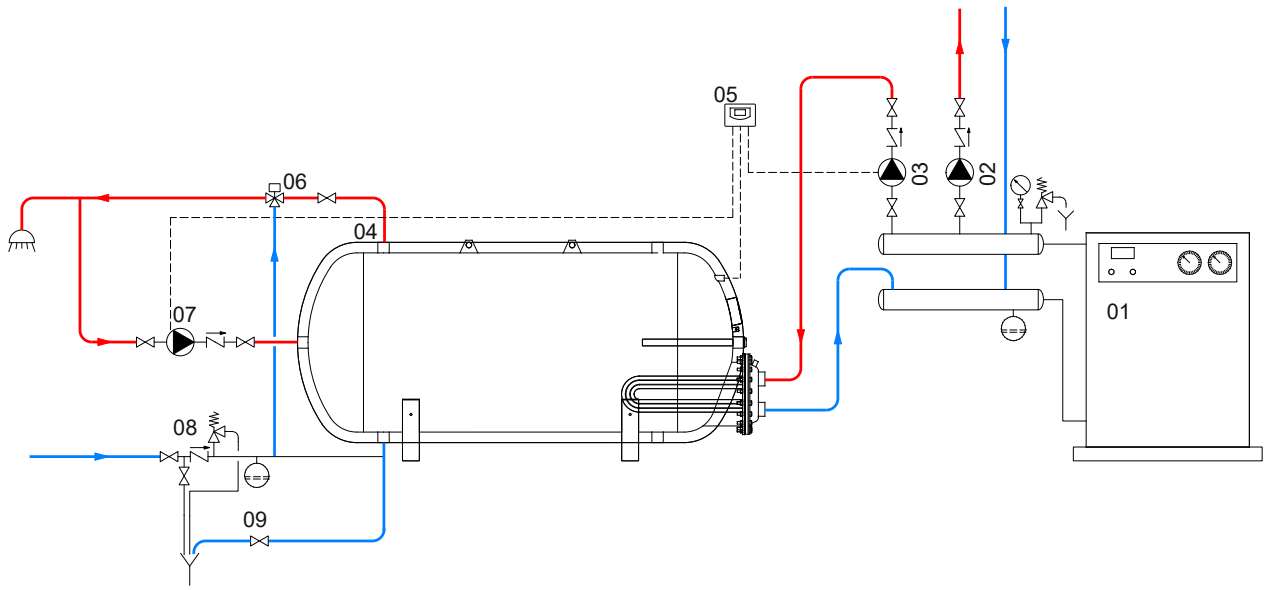
NEW BUFFER TANKS CTS®



The new range of Buffer Tanks CTS® are Cordivari's last innovative storage tanks designed for Solar Thermal Systems.
The exclusive Stratification device CTS® allows to have a prompt delivery of energy suitable for the production of hot water.
The energy absorbed from the Solar Collectors is efficiently stratified in the upper part of the tank through the CTS® stratification device and separation plate already assembled in Buffer CTS®.
The thermal stratification inside the Buffer tanks will be then improved naturally, without any external valves thanks to the mixed combination of:

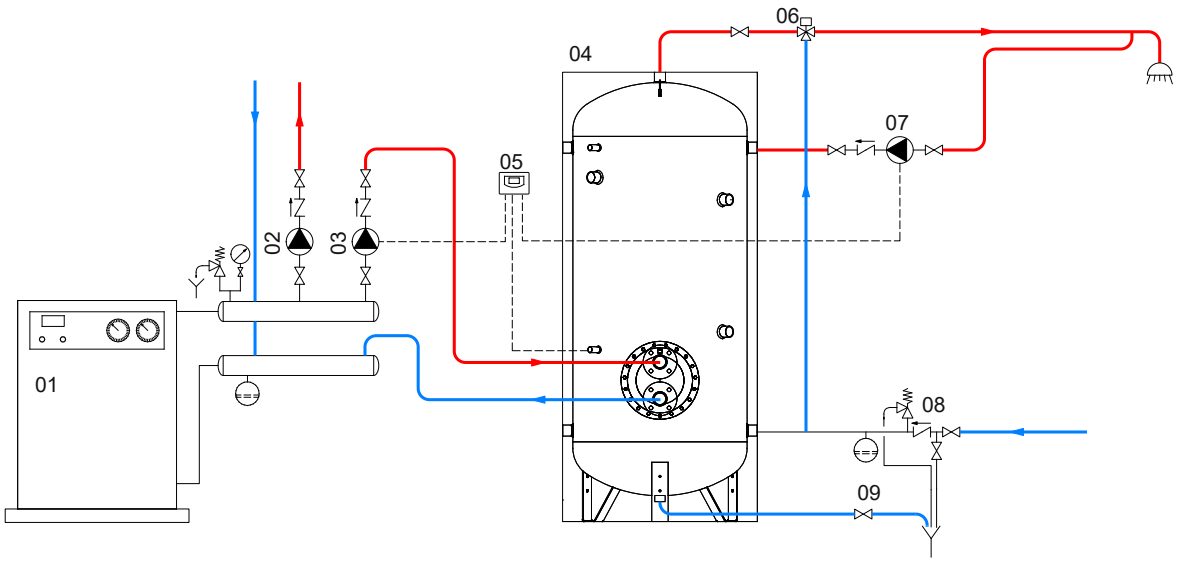
1. Labyrinth Spreader that allows a perfect stratification of the water that returns back from user thanks to its spread shape avoiding mixes of temperatures of storaged water
2. Upper thermal loading systems that concentrates in the upper part of the tank hot water produced by the lower solar fixed coil in short time and high temperature.
3. Lower fixed Heat Exchanger designed for an optimal relation between space and efficiency.

EXAMPLE OF INSTALLATION WITH **EXTRA HORIZONTAL**



01	Generator	04	EXTRA HORIZONTAL	07	D.H.W. recirculation group
02	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group
03	D.H.W. circulation group	06	Thermostatic mixing valve	09	Blowdown valve

EXAMPLE OF INSTALLATION WITH **EXTRA 1 STEAM**

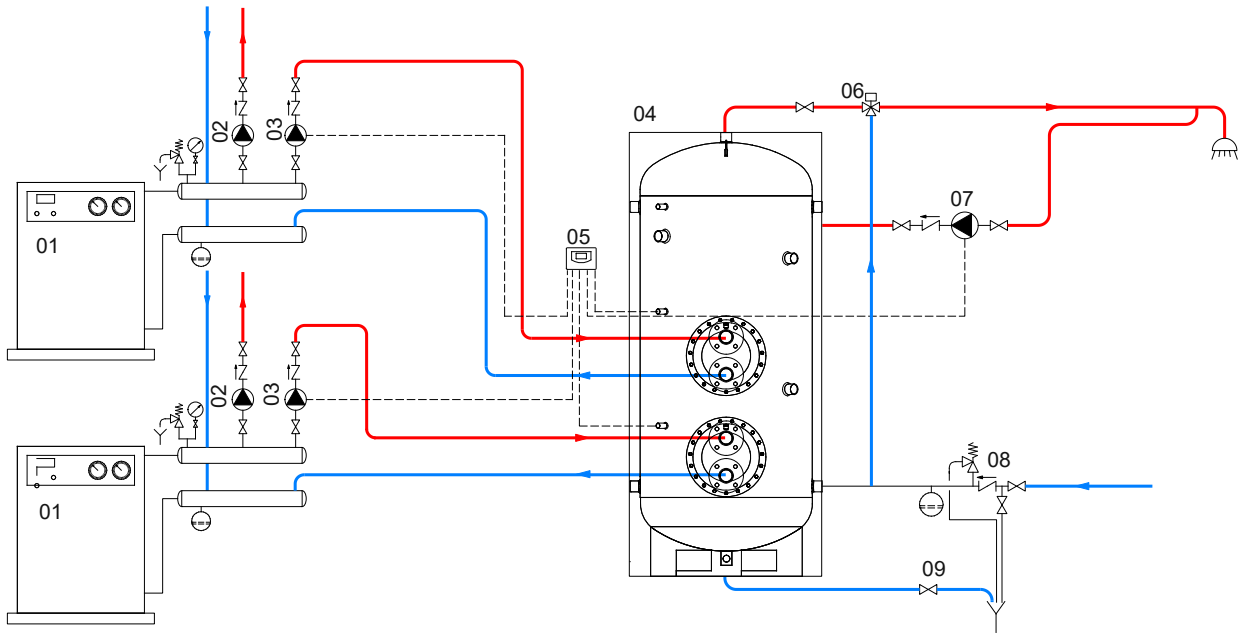


01	Generator	04	EXTRA 1 STEAM	07	D.H.W. recirculation group
02	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group
03	D.H.W. circulation group	06	Thermostatic mixing valve	09	Blowdown valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

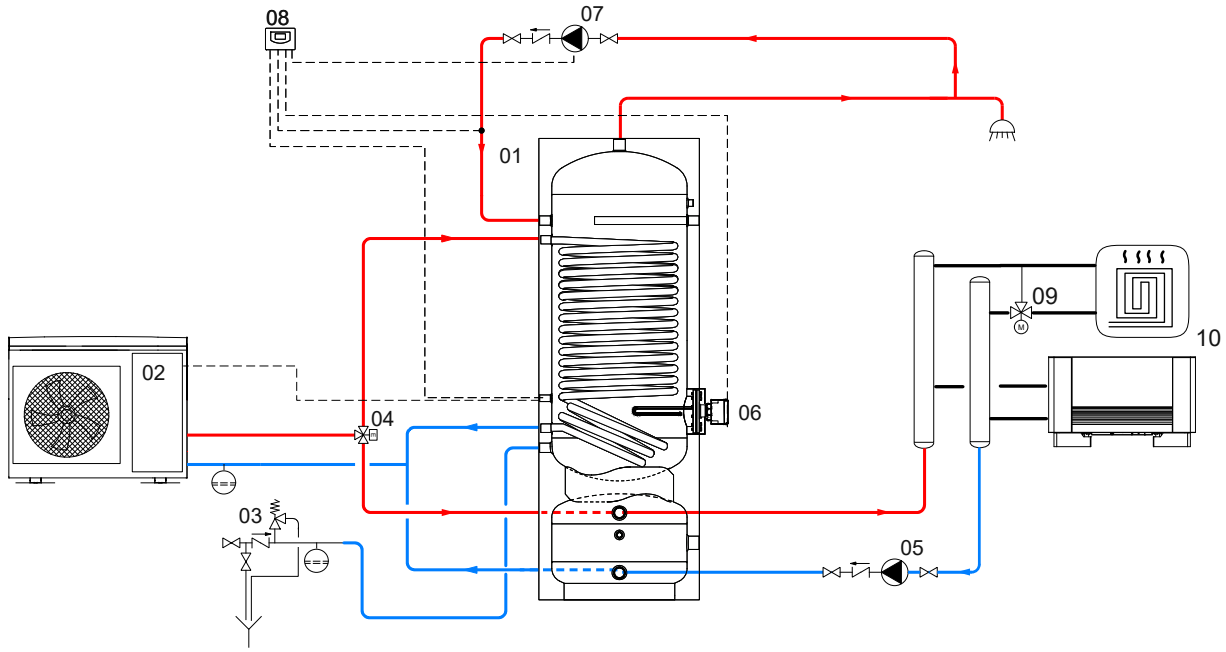
EXAMPLES OF INSTALLATION

EXAMPLE OF INSTALLATION WITH **EXTRA 2 STEAM**



01	Generator	04	EXTRA 2 STEAM	07	D.H.W. recirculation group
02	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group
03	D.H.W. circulation group	06	Thermostatic mixing valve	09	Blowdown valve

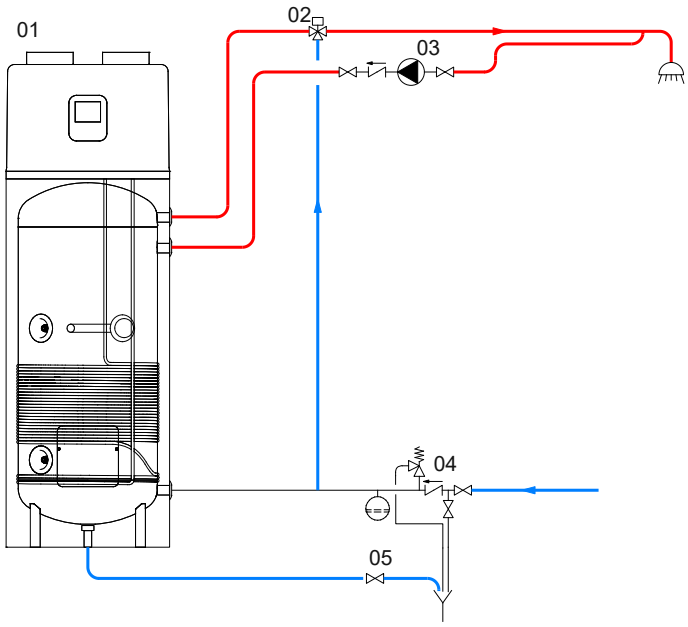
EXAMPLE OF INSTALLATION WITH **BOLLY® 1 HY INOX**



01	Bolly HY	04	Motorized 3-way valve	07	D.H.W. recirculation group	10	Heating units
02	Generator (Heat pump)	05	Circulation group for heating/cooling system	08	Electronic Control/thermostat		
03	Hydraulic safety group	06	Electric immersion heater	09	Thermostatic mixing valve		

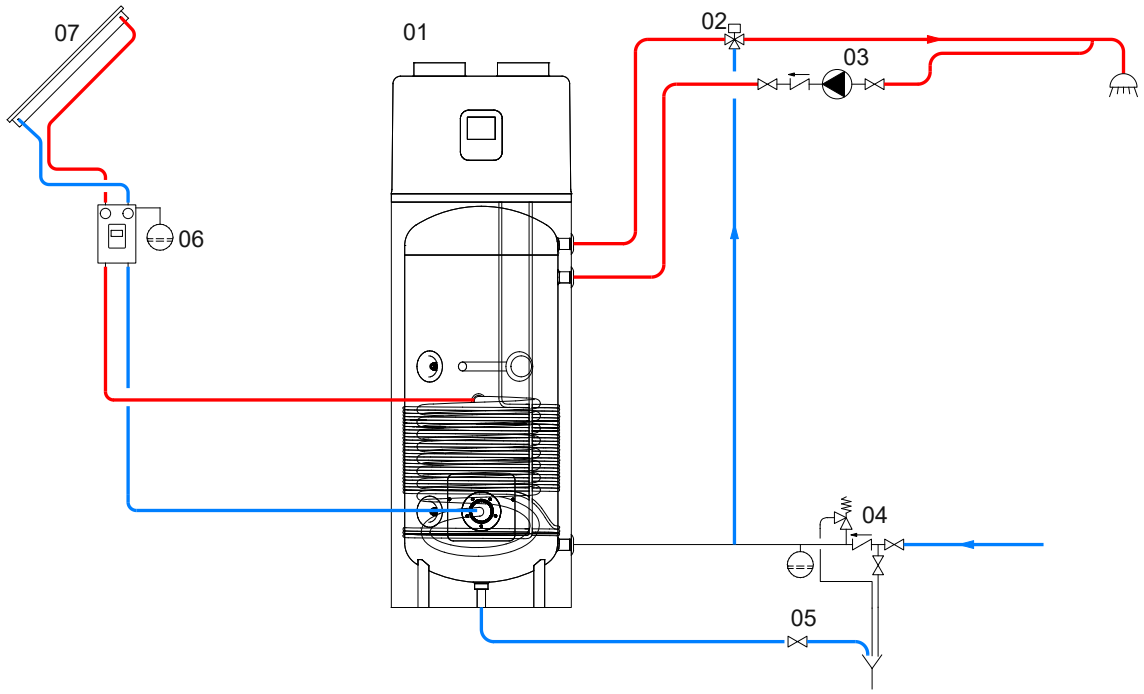
The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXAMPLE OF INSTALLATION WITH **BOLLYTERM® HP**



01	Bollyterm® HP	03	D.H.W. recirculation group	05	Blowdown valve
02	Thermostatic mixing valve	04	Hydraulic safety group		

EXAMPLE OF INSTALLATION WITH **BOLLYTERM® HP 1**

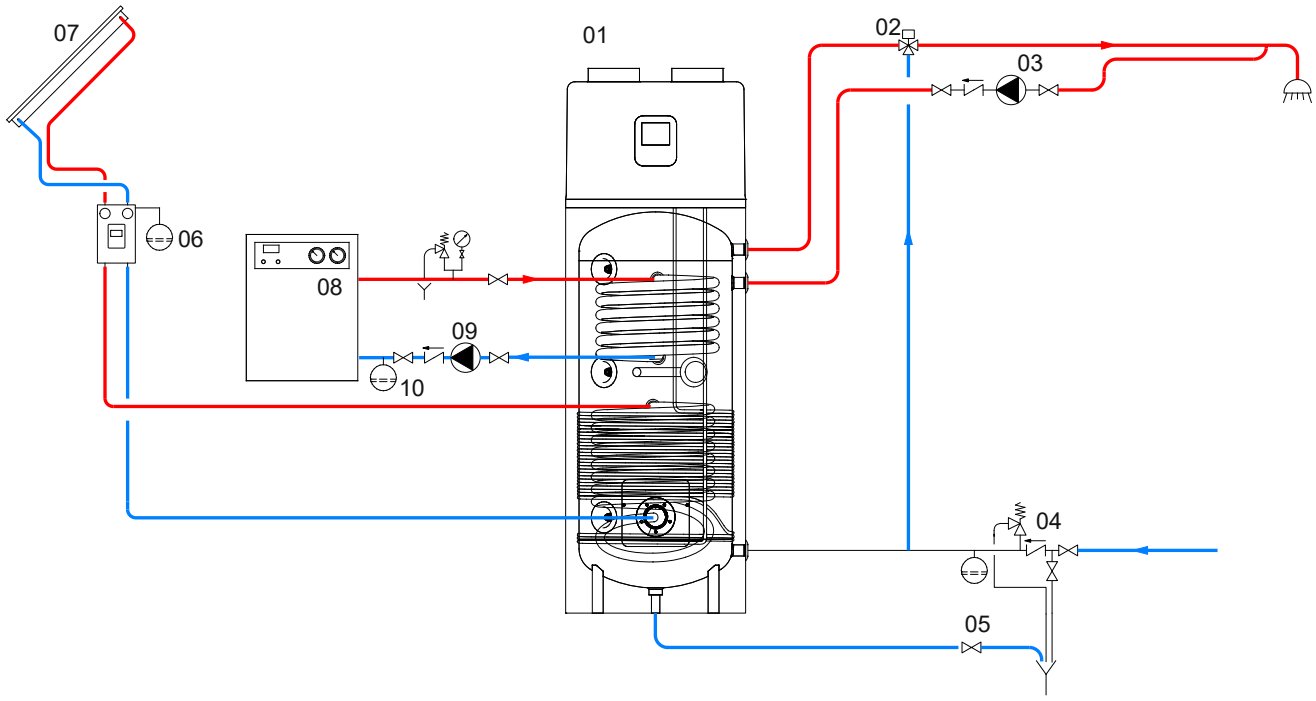


01	Bollyterm® HP 1	03	D.H.W. recirculation group	05	Blowdown valve	07	Solar panels
02	Thermostatic mixing valve	04	Hydraulic safety group	06	Solar system circulation group		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

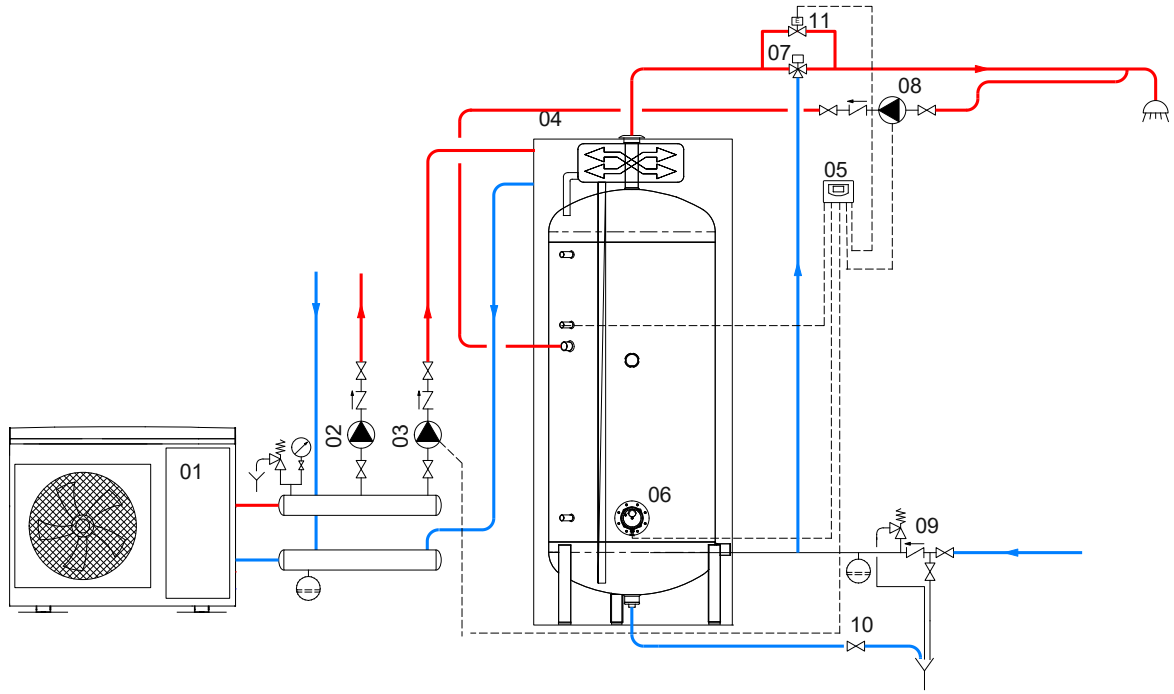
EXAMPLES OF INSTALLATION

EXAMPLE OF INSTALLATION WITH **BOLLYTERM® HP 2**



01	Bollyterm HP 2	04	Hydraulic safety group	07	Solar panels	10	Expansion vessel
02	Thermostatic mixing valve	05	Blowdown valve	08	Generator		
03	D.H.W. recirculation group	06	Solar system circulation group	09	Circulation group		

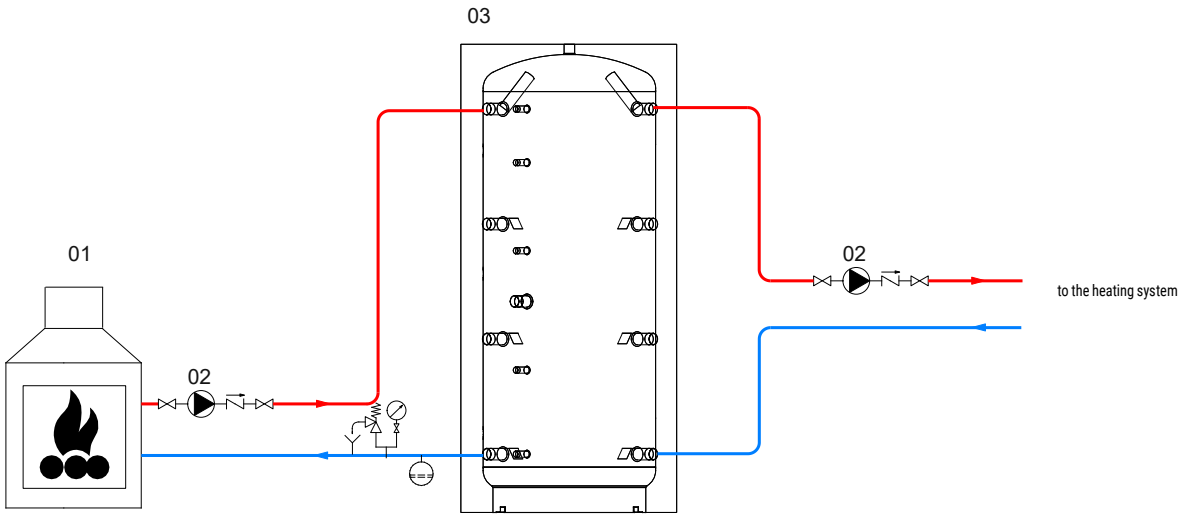
EXAMPLE OF INSTALLATION WITH **BOLLY® 1 PDC**



01	Generator (Heat pump)	04	Bolly PDC	07	Thermostatic mixing valve	10	Blowdown valve
02	Heating system circulation group	05	Electronic Control/thermostat	08	D.H.W. recirculation group	11	By-pass solenoid valve
03	D.H.W. circulation group	06	Electric immersion heater (optional)	09	Hydraulic safety group		

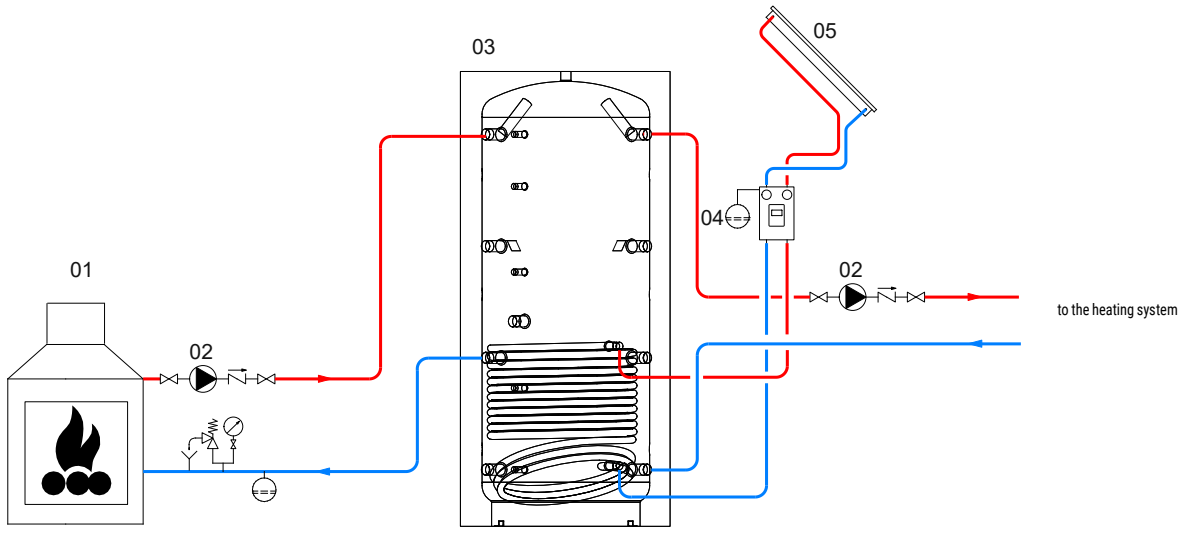
The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXAMPLE OF INSTALLATION WITH **PUFFER**



01	Generator	03	Puffer
02	Heating system circulation group		

EXAMPLE OF INSTALLATION WITH **PUFFER 1**

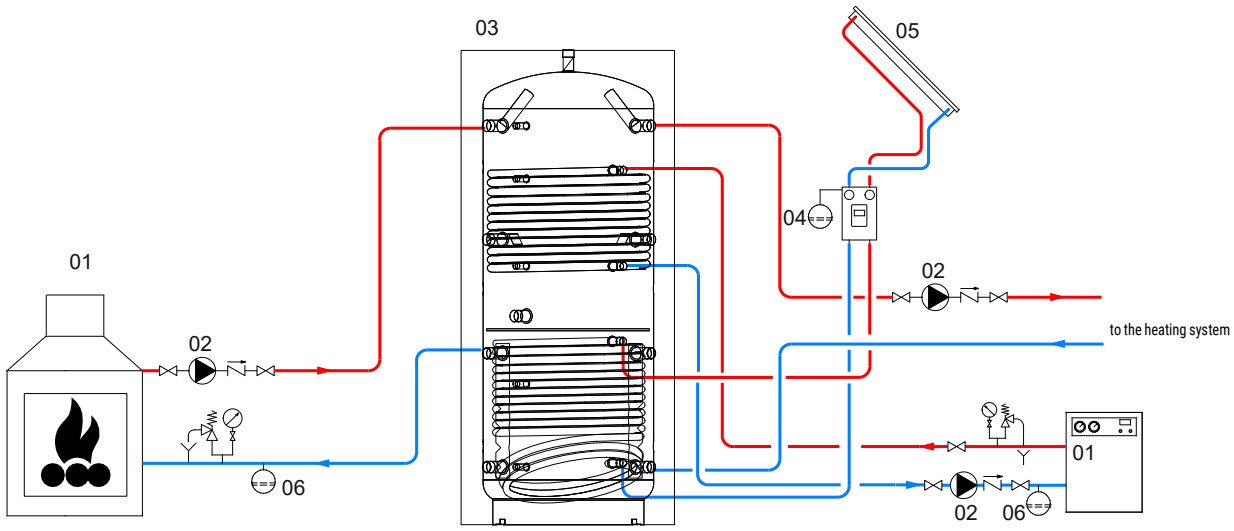


01	Generator	03	Puffer 1	05	Solar panels
02	Heating system circulation group	04	Solar system circulation group		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

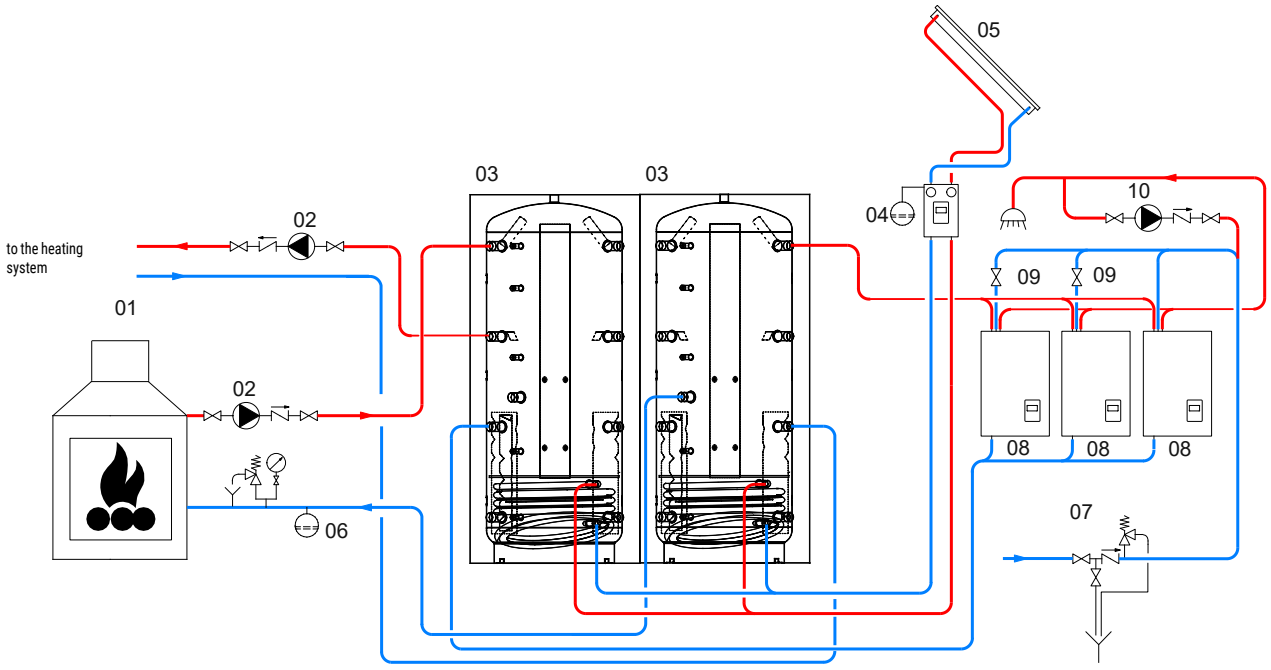
EXAMPLES OF INSTALLATION

EXAMPLE OF INSTALLATION WITH **PUFFER 2**



01	Generator	03	Puffer 2	05	Solar panels
02	Heating system circulation group	04	Solar system circulation group	06	Expansion vessel

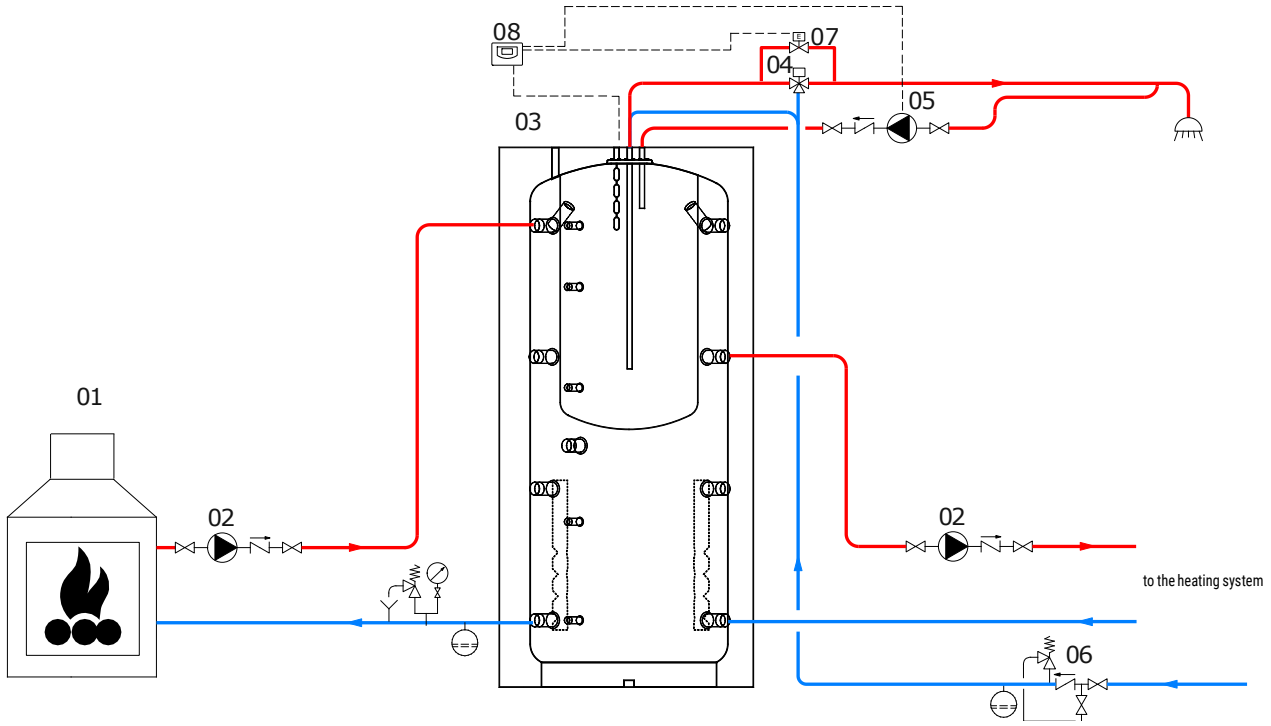
EXAMPLE OF INSTALLATION WITH CONNECTED **PUFFER 1 CTS® AND CASCADE MACS® MODULES**



01	Generator	04	Solar system circulation group	07	Hydraulic safety group	10	D.H.W. recirculation group
02	Heating system circulation group	05	Solar panels	08	CASCADE MACS® modules		
03	Puffer® 1 CTS	06	Expansion vessel	09	Solenoid valve		

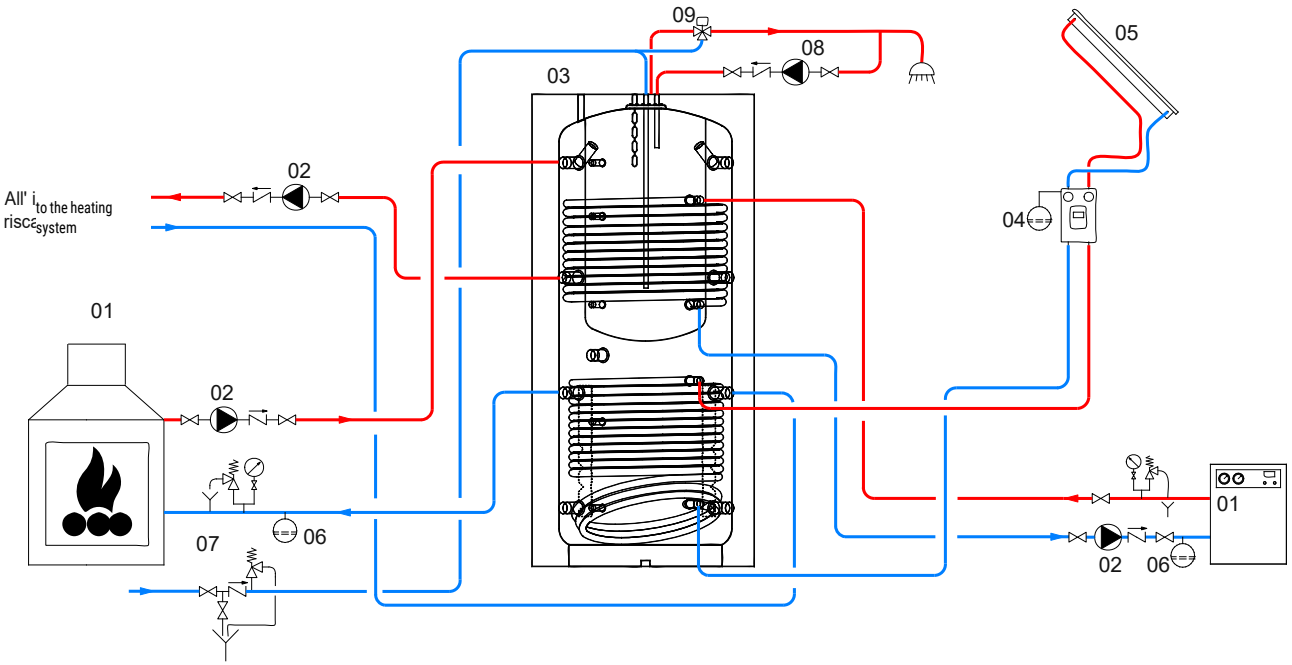
The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXAMPLE OF INSTALLATION WITH **COMBI 1**



01	Generator	03	Combi 1	05	D.H.W. recirculation group
02	Heating system circulation group	04	Thermostatic mixing valve	06	Hydraulic safety group

EXAMPLE OF INSTALLATION WITH **COMBI 3**

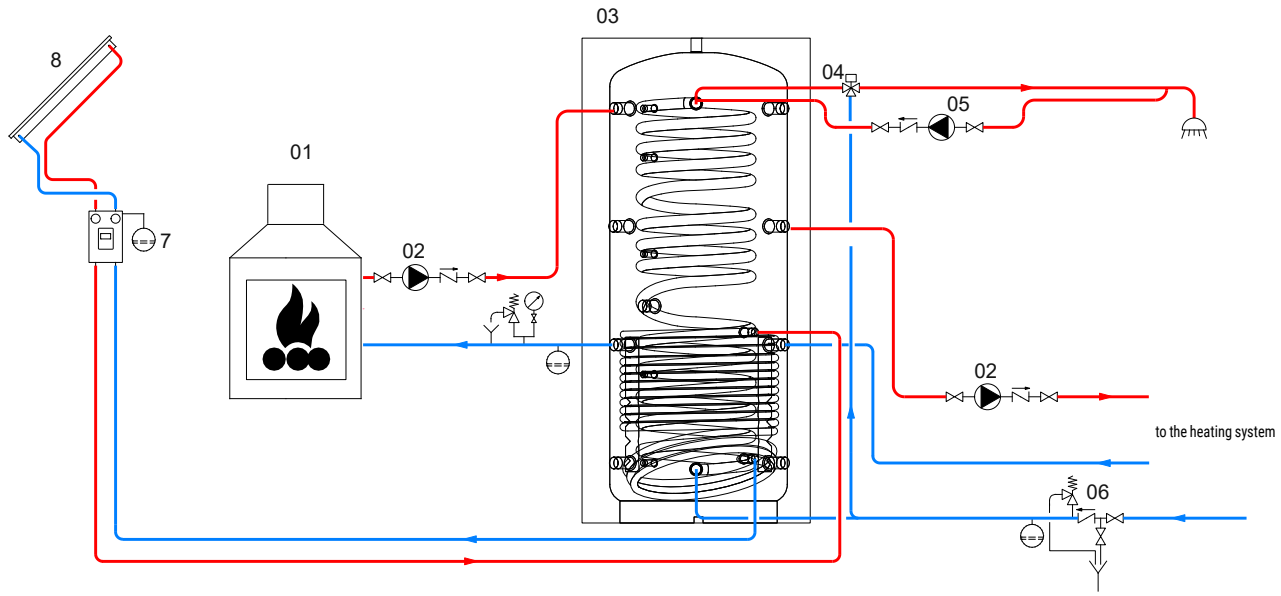


01	Generator	04	Solar system circulation group	07	Hydraulic safety group
02	Heating system circulation group	05	Solar panels	08	D.H.W. recirculation group
03	Combi 3	06	Expansion vessel	09	Thermostatic mixing valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

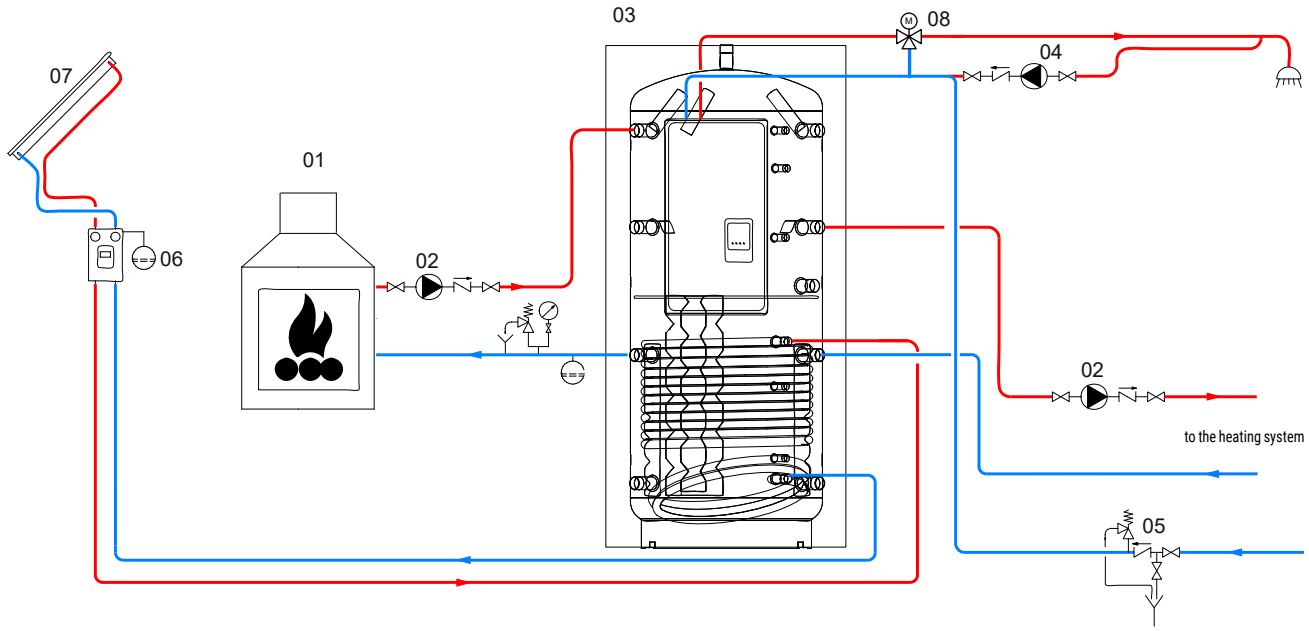
EXAMPLES OF INSTALLATION

EXAMPLE OF INSTALLATION WITH **ECO-COMBI 2**



01	Generator	03	Eco Combi 2	05	D.H.W. recirculation group	07	Solar system circulation group
02	Heating system circulation group	04	Thermostatic mixing valve	06	Hydraulic safety group	08	Solar panels

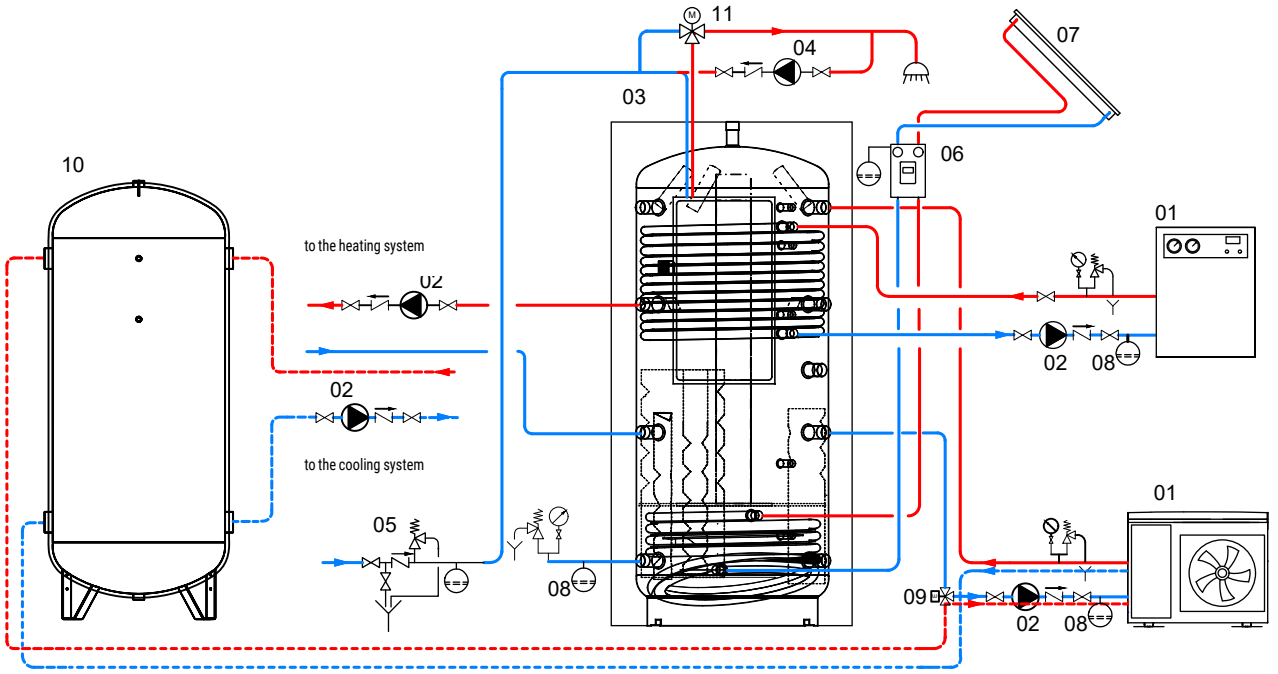
EXAMPLE OF INSTALLATION WITH **PUFFERMAS® 2**



01	Generator	03	PUFFERMAS® 2	05	Hydraulic safety group	07	Solar panels
02	Heating system circulation group	04	D.H.W. recirculation group	06	Solar system circulation group	08	Thermostatic mixing valve

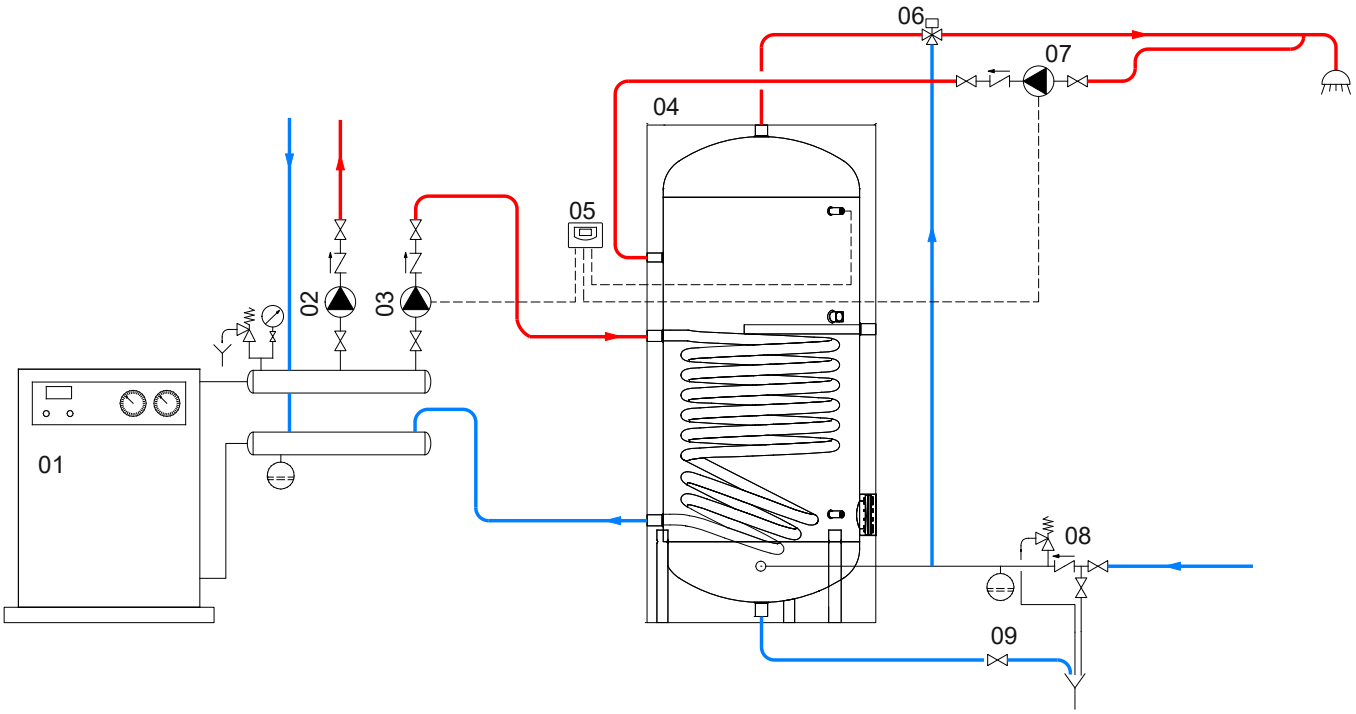
The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXAMPLE OF INSTALLATION WITH **PUFFERMAS® 3 CTS** AND **CHILLED WATER TANK**



01	Generator	04	D.H.W. recirculation group	07	Solar panels	10	Chilled water tank
02	Heating system circulation group	05	Hydraulic safety group	08	Expansion vessel	11	Thermostatic mixing valve
03	Puffermas® 3	06	Solar system circulation group	09	Solenoid valve		

EXAMPLE OF INSTALLATION WITH **BOLLY® 1 ST / 1 ST FB**

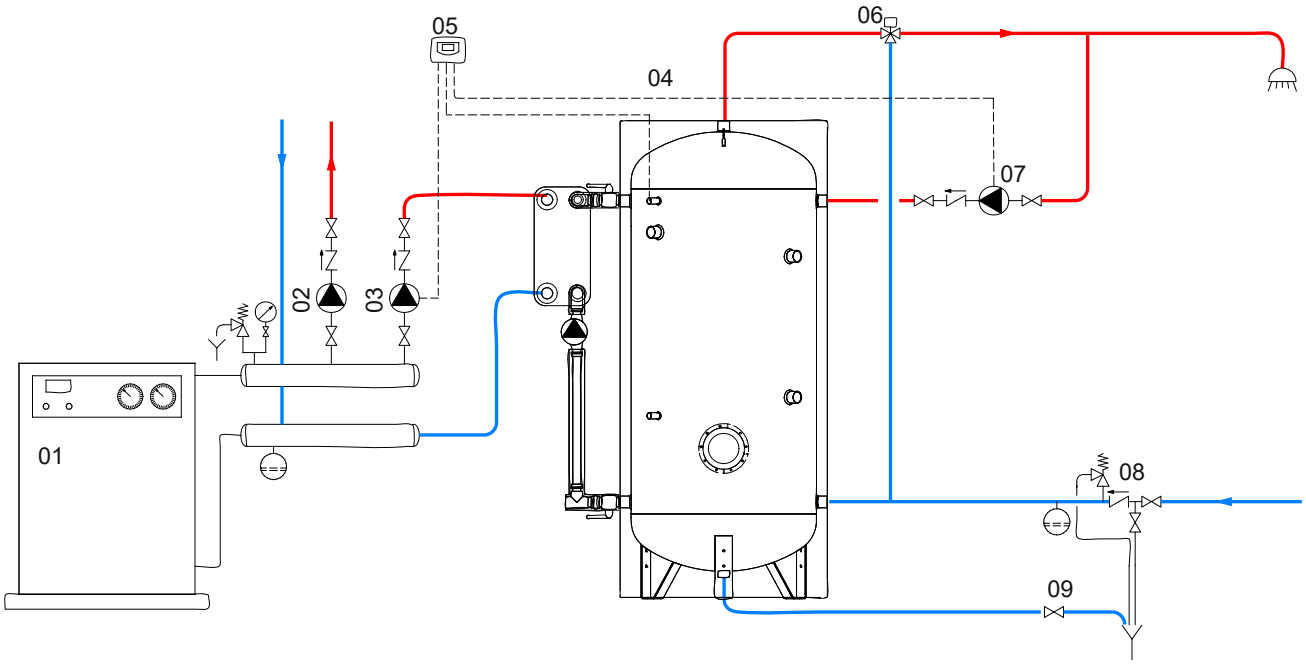


01	Generator	04	BOLLY® 1 ST FB	07	D.H.W. recirculation group
02	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group
03	D.H.W. circulation group	06	Thermostatic mixing valve	09	Blowdown valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

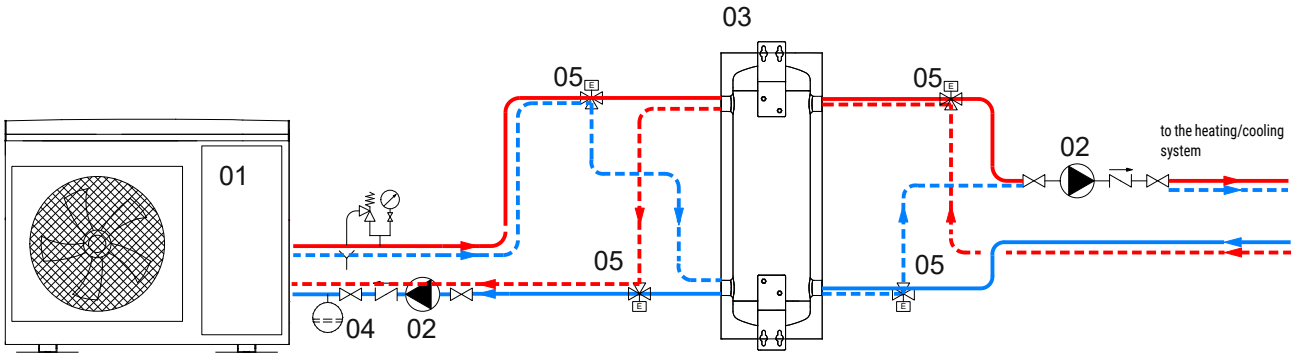
EXAMPLES OF INSTALLATION

EXAMPLE OF INSTALLATION WITH **PIASTRATERM®**



01	Generator	04	PIASTRATERM®	07	D.H.W. recirculation group
02	Heating system circulation group	05	Electronic Control/thermostat	08	Hydraulic safety group
03	D.H.W. recirculation group	06	Thermostatic mixing valve	09	Blowdown valve

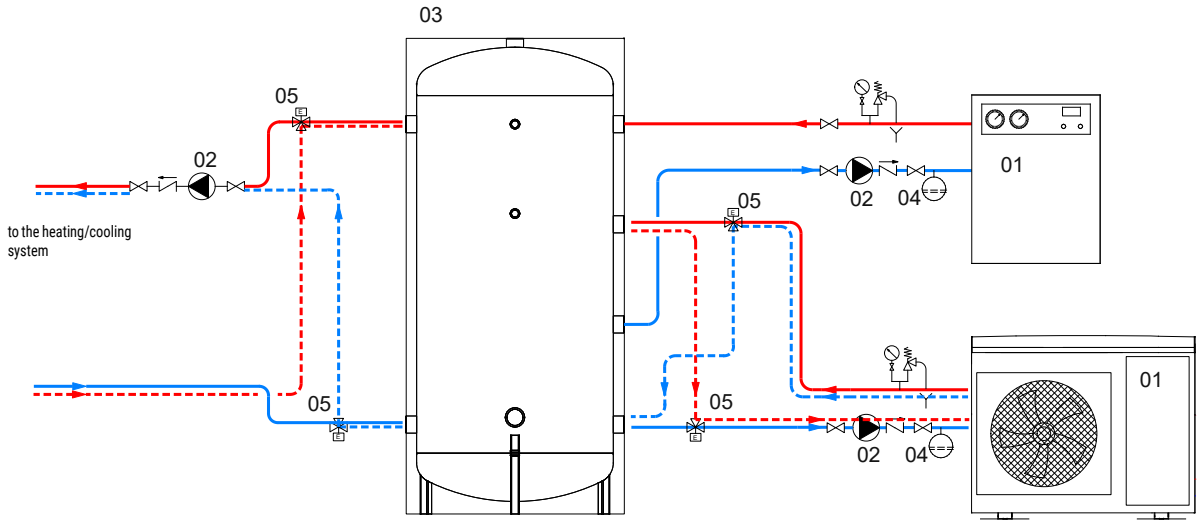
EXAMPLE OF INSTALLATION WITH **BUFFER TANK PDC PENSILE (WALL HANGING)**



01	Generator	03	Buffer tank PDC wall hanging	05	3-way valve
02	Circulation group for heating/cooling system	04	Expansion vessel		

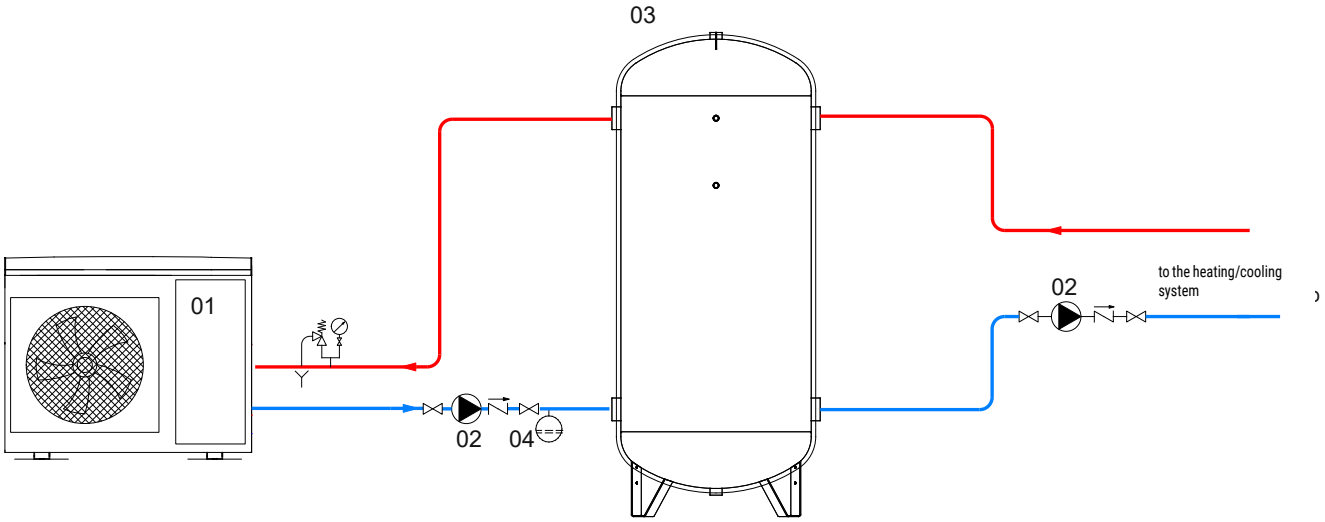
The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXAMPLE OF INSTALLATION WITH **BUFFER TANK PDC**



01	Generator	03	Buffer tank PDC	05	3-way valve
02	Circulation group	04	Expansion vessel		

EXAMPLE OF INSTALLATION WITH **CHILLED WATER**

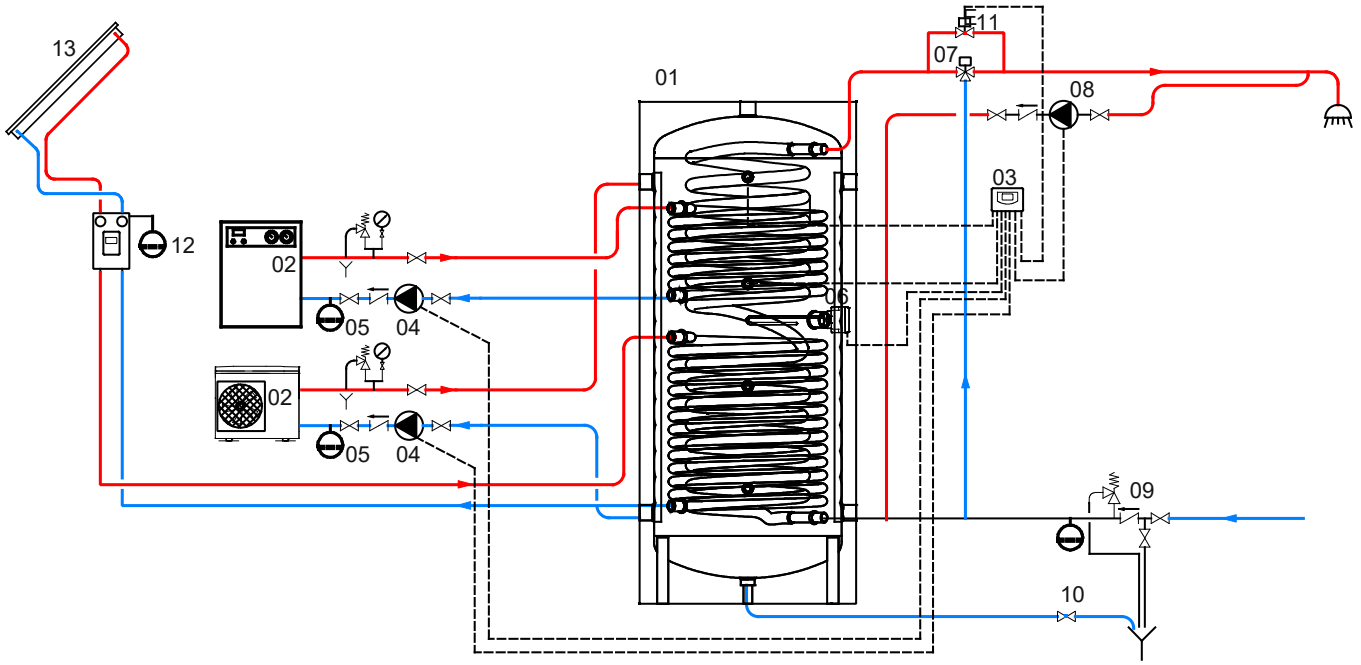


01	Generator	02	Air conditioning system circulation group	03	Chilled water tank	04	Expansion vessel

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

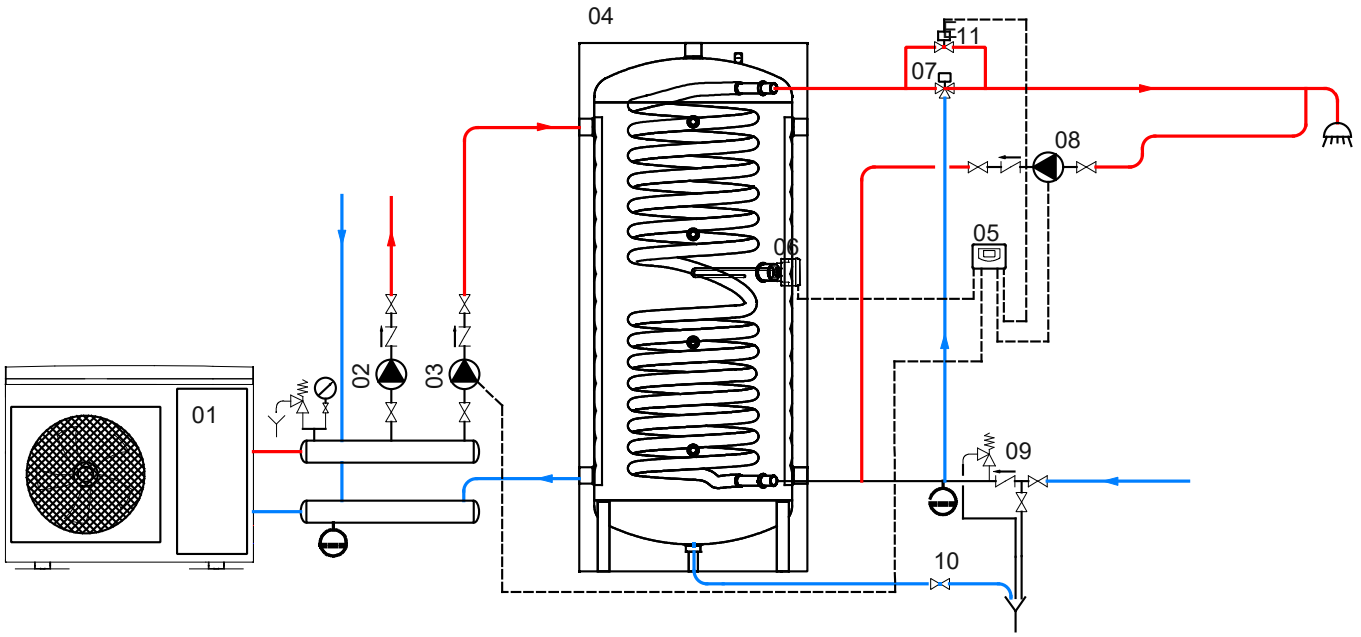
EXAMPLES OF INSTALLATION

EXAMPLE OF INSTALLATION WITH **ECO-COMBI 3 PDC**



01	Eco Combi 3 PDC	05	Expansion vessel	09	Hydraulic safety group	13	Solar panels
02	Generator	06	Electric immersion heater (optional)	10	Blowdown valve		
03	Electronic Control/thermostat	07	Thermostatic mixing valve	11	By-pass solenoid valve		
04	Circulation group	08	D.H.W. recirculation group	12	Solar system circulation group		

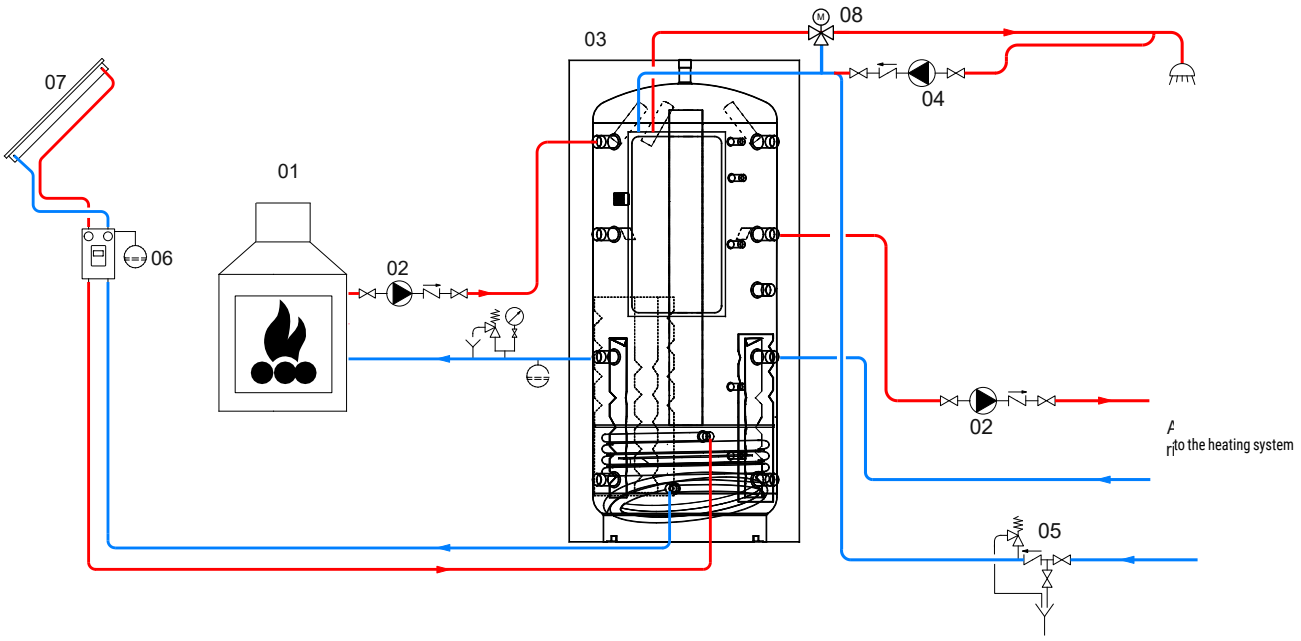
EXAMPLE OF INSTALLATION WITH **ECO-COMBI 1 PDC**



01	Generator (Heat pump)	04	Eco Combi 1 PDC	07	Thermostatic mixing valve	10	Blowdown valve
02	Heating system circulation group	05	Electronic Control/thermostat	08	D.H.W. recirculation group	11	By-pass solenoid valve
03	D.H.W. circulation group	06	Electric immersion heater (optional)	09	Hydraulic safety group		

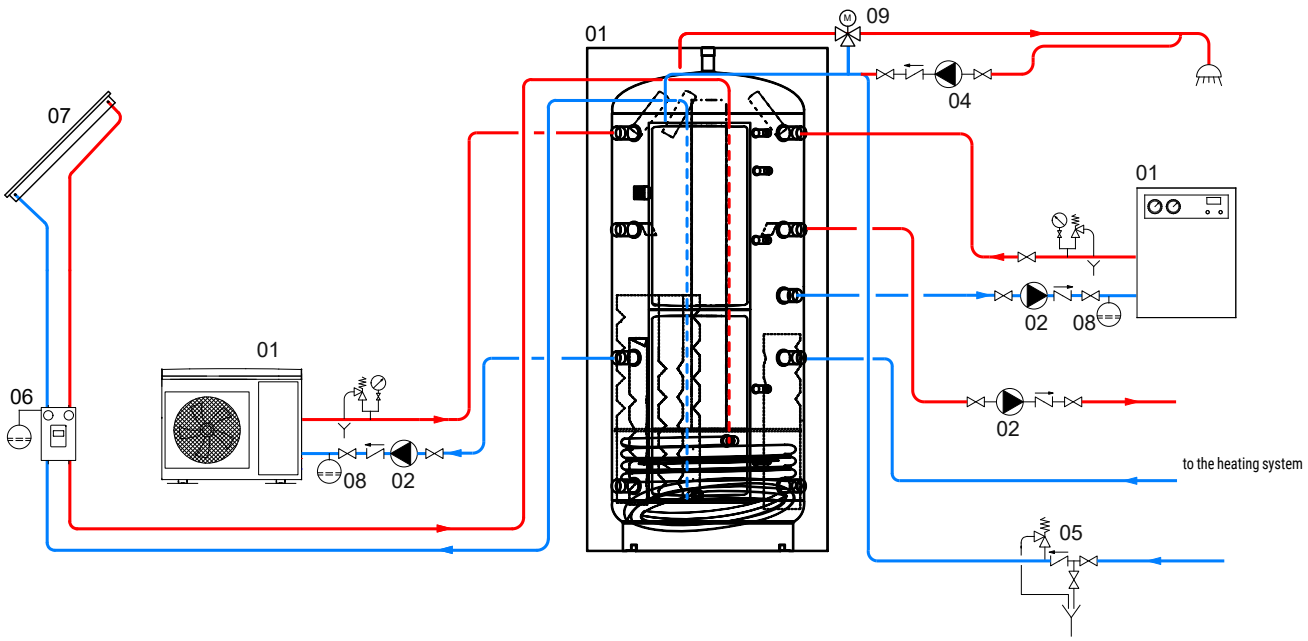
The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXAMPLE OF INSTALLATION WITH **PUFFERMAS® 2 CTS**



01	Generator	03	Puffermas 2 CTS	05	Hydraulic safety group	07	Solar panels
02	Heating system circulation group	04	D.H.W. recirculation group	06	Solar system circulation group	08	Thermostatic mixing valve

EXAMPLE OF INSTALLATION WITH **PUFFERMAS® 2 CTS POWER**

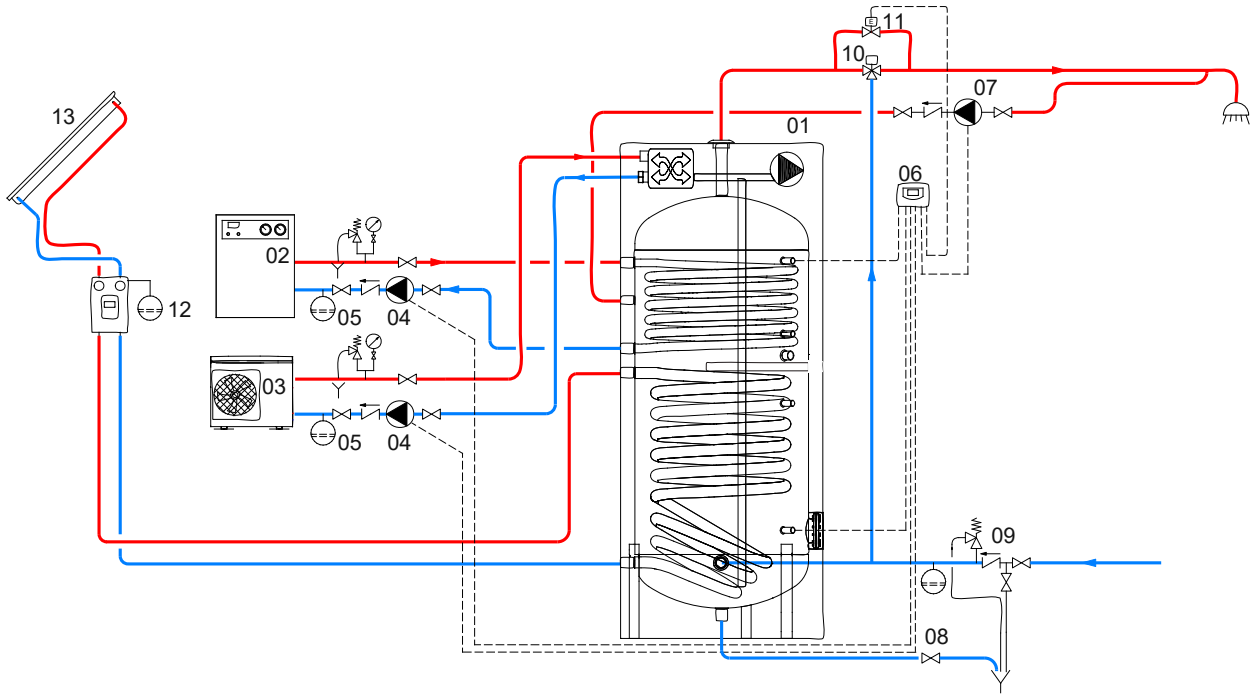


01	Generator	04	D.H.W. recirculation group	07	Solar panels
02	Heating system circulation group	05	Hydraulic safety group	08	Expansion vessel
03	Puffermas 2 CTS POWER	06	Solar system circulation group	09	Thermostatic mixing valve

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

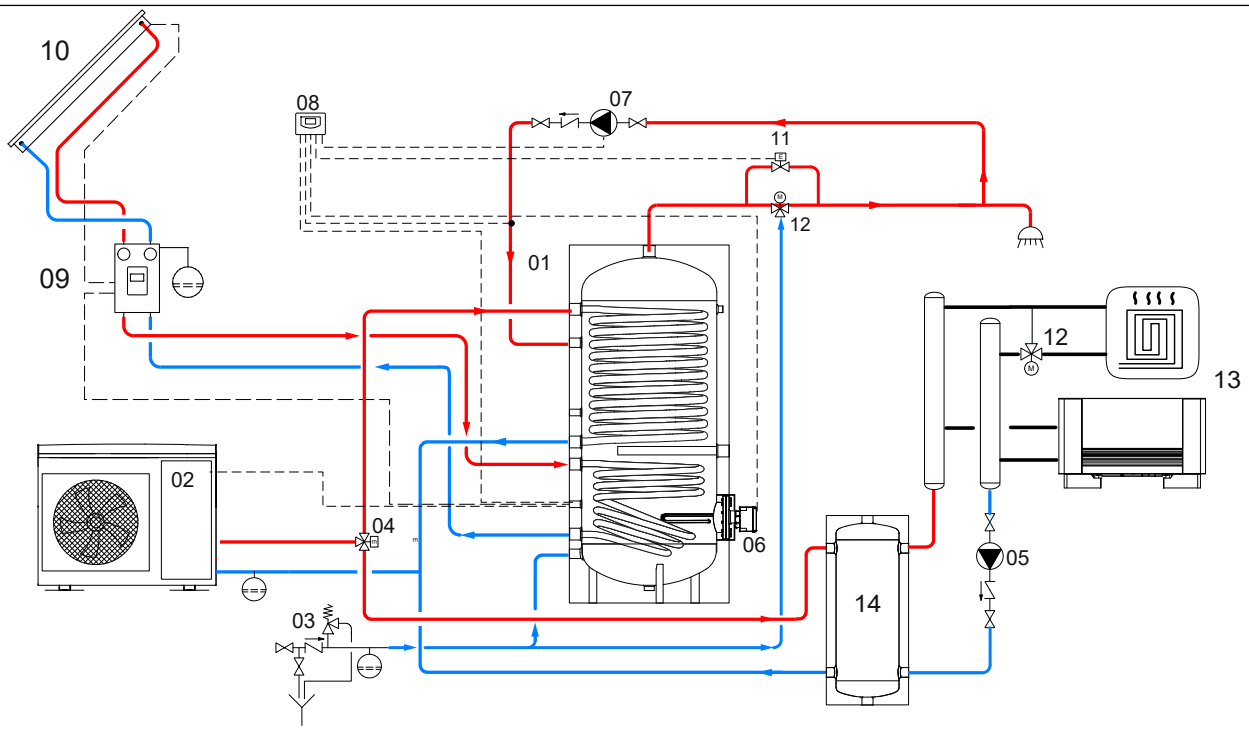
EXAMPLES OF INSTALLATION

EXAMPLE OF INSTALLATION WITH **BOLLY® 3 PDC**



01	BOLLY® 3 PDC	05	Expansion vessel	09	Hydraulic safety group	13	Solar panels
02	Generator	06	Electronic Control/thermostat	10	Thermostatic mixing valve		
03	Heat pump	07	D.H.W. recirculation group	11	By-pass solenoid valve		
04	Circulation group	08	Blowdown valve	12	Solar system circulation group		

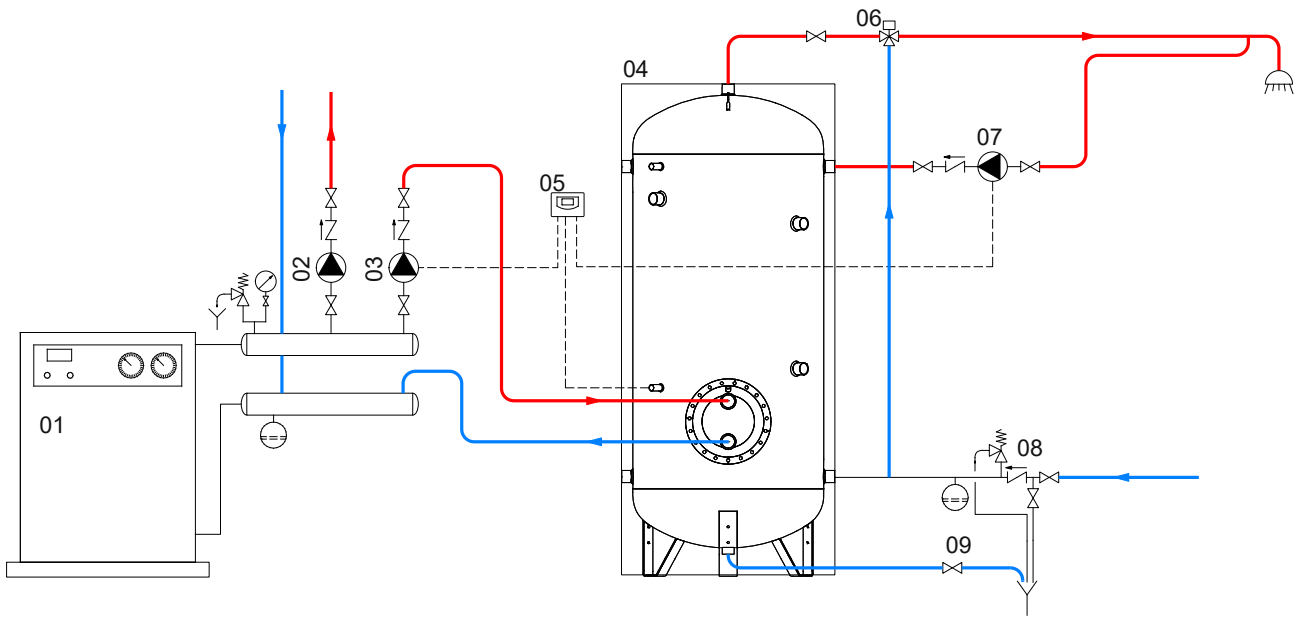
EXAMPLE OF INSTALLATION WITH **BOLLY® 2 XL INOX**



01	Bolly 2 XL	05	Circulation group for heating/cooling system	09	Solar system circulation group	13	Heating units
02	Generator (Heat pump)	06	Electric immersion heater	10	Solar panels	14	Buffer tank
03	Hydraulic safety group	07	D.H.W. recirculation group	11	By-pass solenoid valve		
04	Motorized 3-way valve	08	Electronic Control/thermostat	12	Mixing valve		

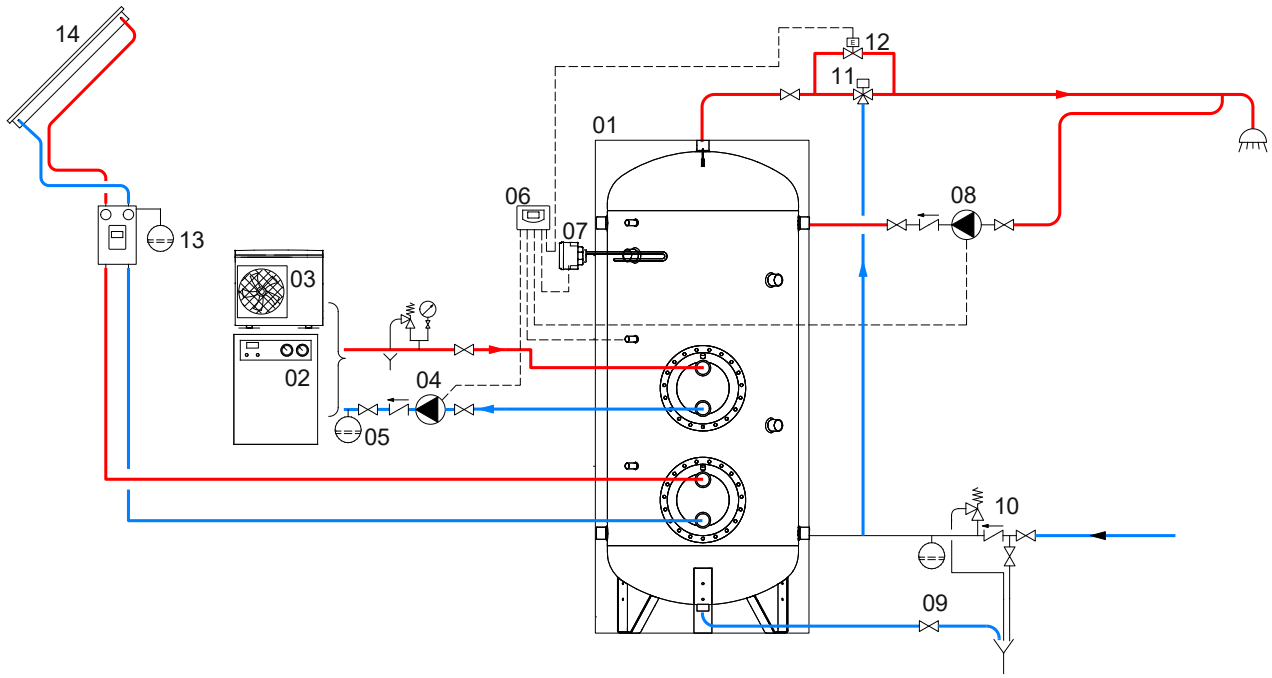
The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXAMPLE OF INSTALLATION WITH **EXTRA 1**



1	Generator	4	EXTRA 1	7	D.H.W. recirculation group
2	Heating system circulation group	5	Electronic control /thermostat	8	Hydraulic safety group
3	D.H.W. circulation group	6	Thermostatic mixing valve	9	Blowdown valve

EXAMPLE OF INSTALLATION WITH **EXTRA 2**

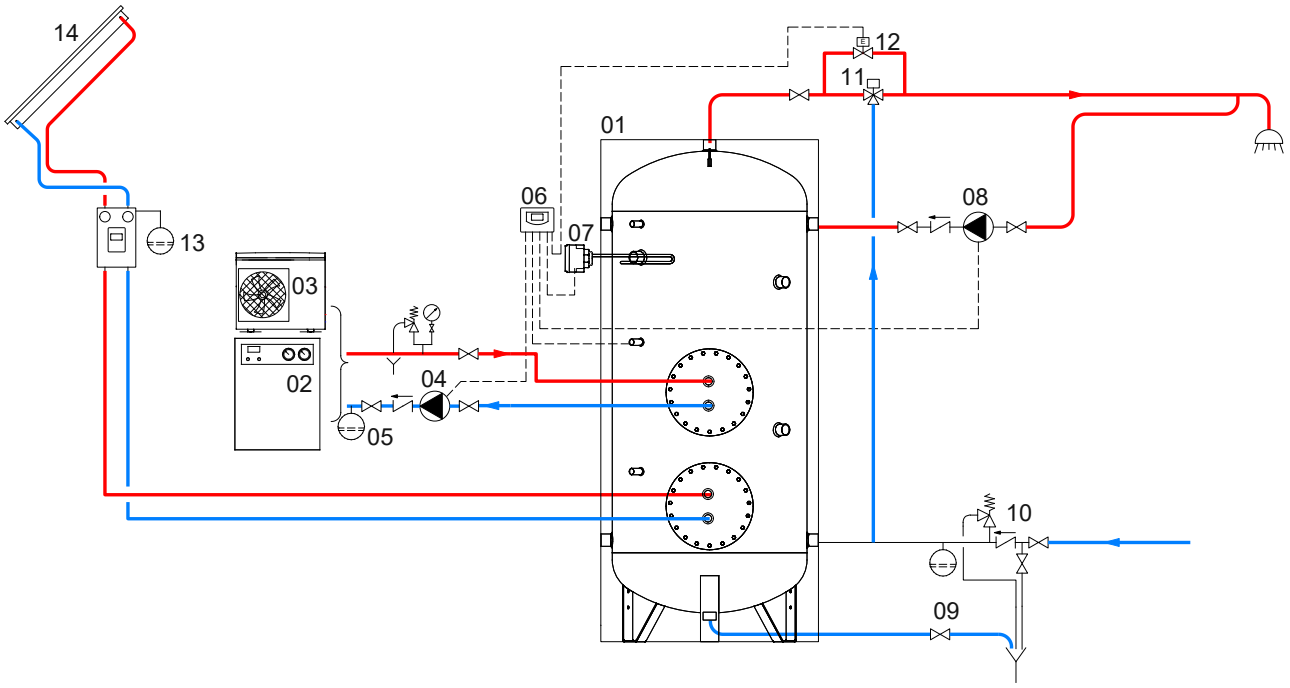


1	EXTRA 2	5	Expansion vessel	9	Blowdown valve	13	Solar system circulation group
2	Generator	6	Electronic control /thermostat	10	Hydraulic safety group	14	Solar panels
3	Heat pump generator	7	Electric immersion heater (optional)	11	Thermostatic mixing valve		
4	Circulation group	8	D.H.W. recirculation group	12	By-pass solenoid valve		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

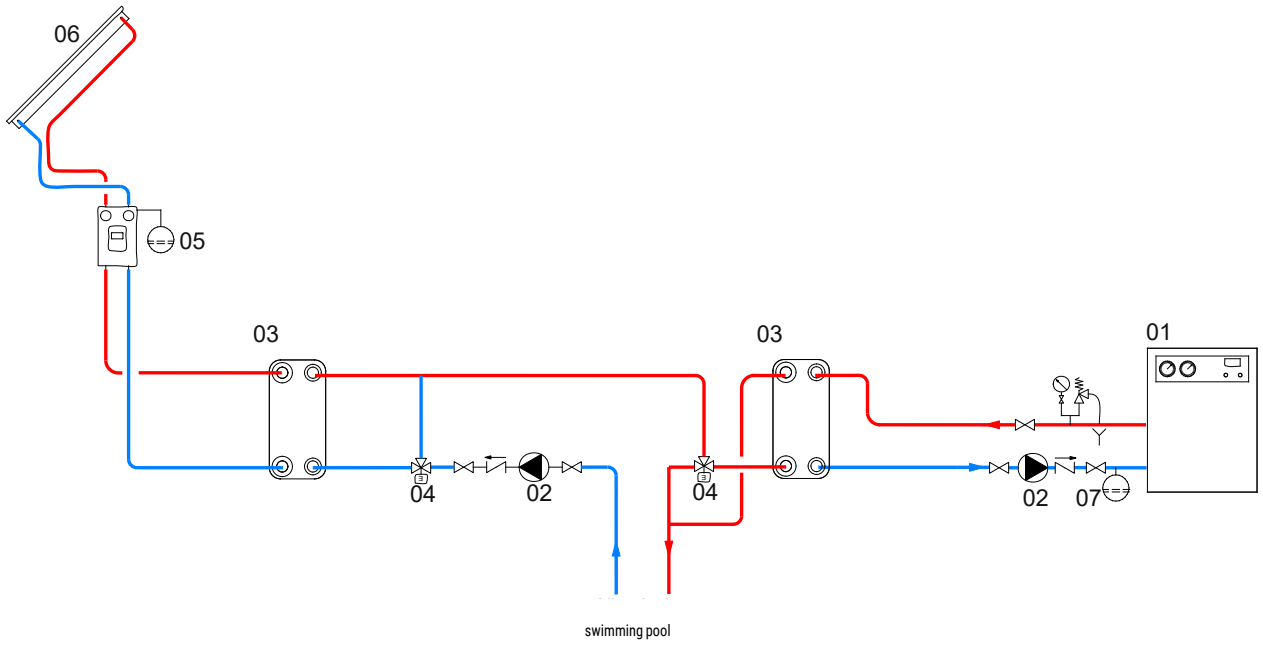
EXAMPLES OF INSTALLATION

EXAMPLE OF INSTALLATION WITH **EXTRA 2 PLUS**



1	Extra 2 Plus	5	Expansion vessel	9	Blowdown valve	13	Solar system circulation group
2	Generator	6	Electronic control /thermostat	10	Hydraulic safety group	14	Solar panels
3	Heat pump generator	7	Electric immersion heater (optional)	11	Thermostatic mixing valve		
4	Circulation group	8	D.H.W. recirculation group	12	By-pass solenoid valve		

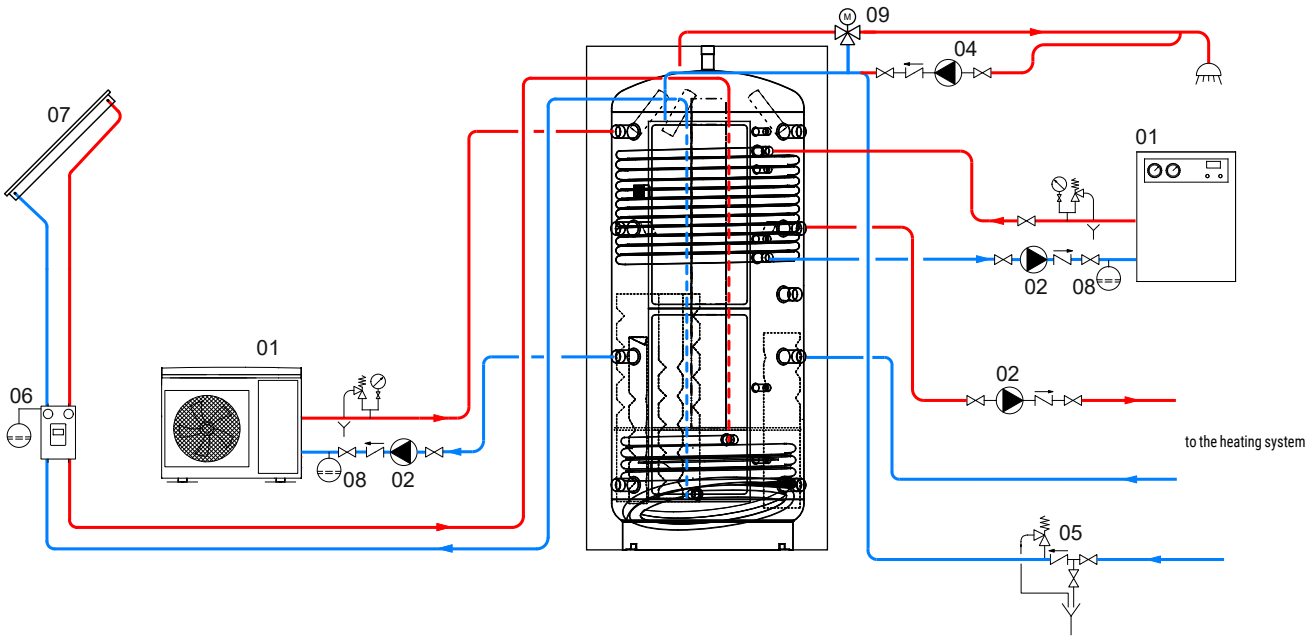
EXAMPLE OF INSTALLATION WITH **PHC EXCHANGERS AND SOLAR THERMAL SYSTEM FOR SWIMMING POOL HEATING**



01	Generator	03	PHC exchanger	05	D.H.W. recirculation group	07	Expansion vessel
02	Heating system circulation group	04	Motorized 3-way valve	06	Solar panels		

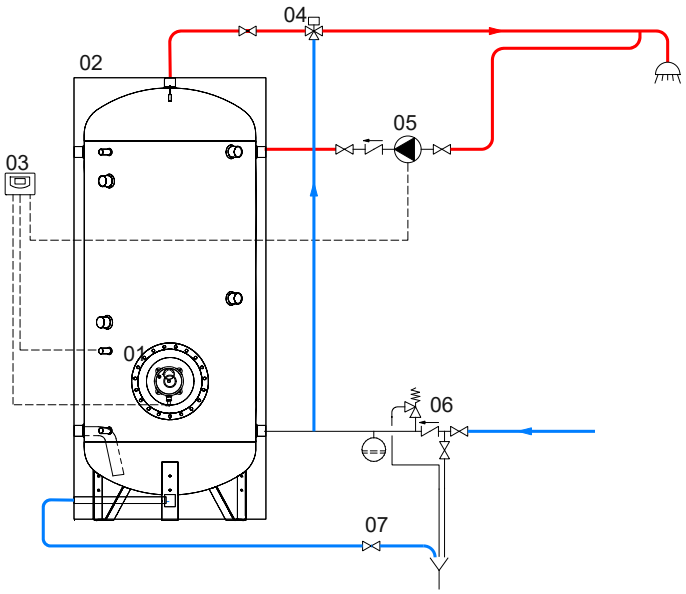
The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXAMPLE OF INSTALLATION WITH **PUFFERMAS® 3 CTS POWER**



01	Generator	04	D.H.W. recirculation group	07	Solar panels
02	Heating system circulation group	05	Hydraulic safety group	08	Expansion vessel
03	Puffermas 3 CTS POWER	06	Solar system circulation group	09	Thermostatic mixing valve

EXAMPLE OF INSTALLATION WITH **VASO INERZIALE A1**

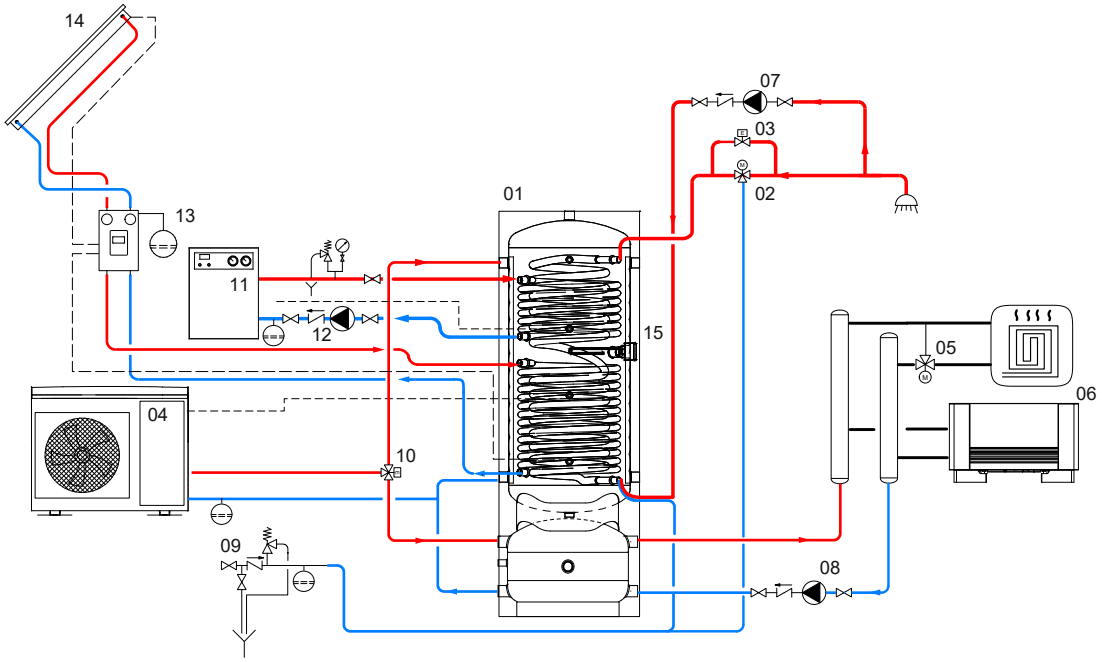


01	Electric immersion heater ad immersione	03	Electronic Control/thermostat	05	D.H.W. recirculation group	07	Blowdown valve
02	VASO INERZIALE A1	04	Thermostatic mixing valve	06	Hydraulic safety group		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

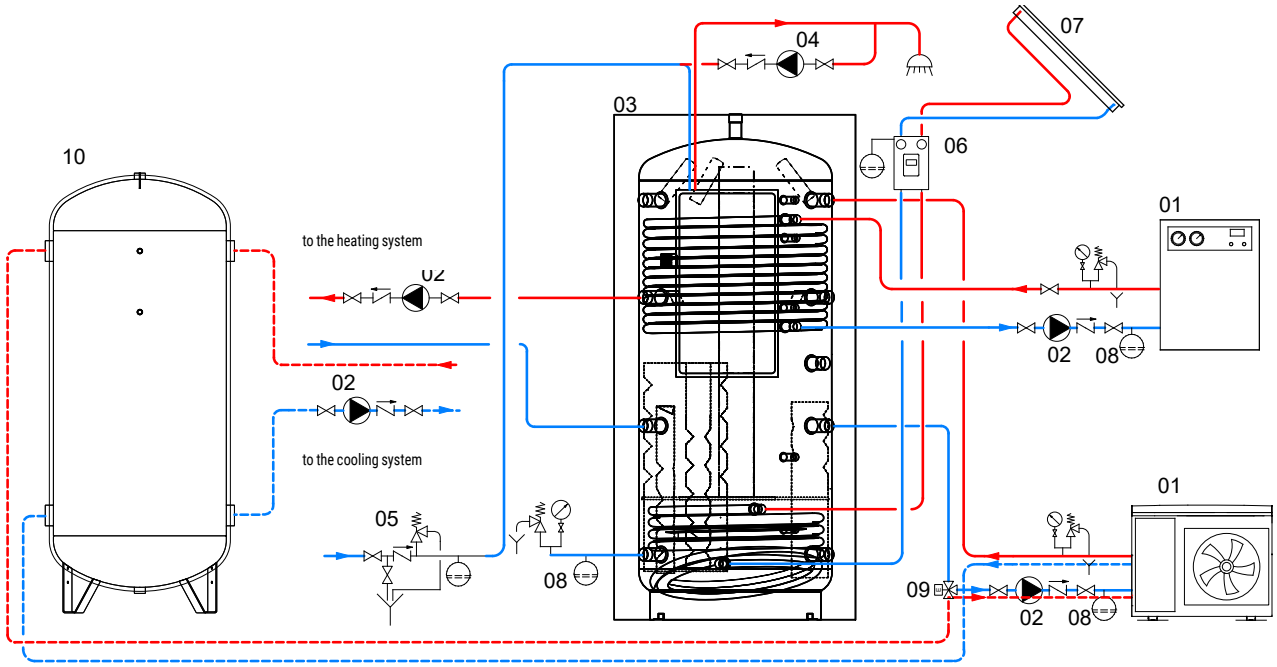
EXAMPLES OF INSTALLATION

EXAMPLE OF INSTALLATION WITH **ECO COMBI 3 PDC HY**



01	ECO COMBI 3 PDC HY	05	Thermostatic mixing valve	09	Hydraulic safety group	13	Solar system circulation group
02	Thermostatic mixing valve	06	Heating units	10	Motorized 3-way valve	14	Solar panels
03	By-pass solenoid valve	07	D.H.W. recirculation group	11	Generator	15	Electric immersion heater
04	Generator (Heat pump)	08	Circulation group for heating/cooling system	12	Circulation group		

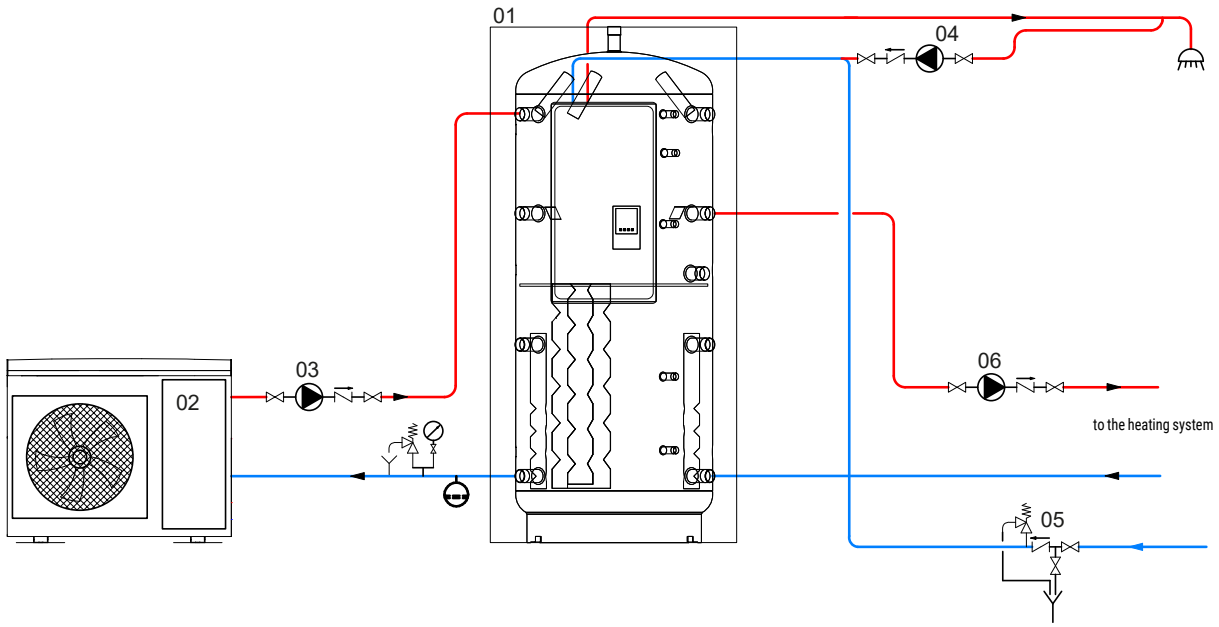
EXAMPLE OF INSTALLATION WITH **PUFFERMAS® 3 CTS** AND **CHILLED WATER TANK**



01	Generator	04	D.H.W. recirculation group	07	Solar panels	10	Chilled water tank
02	Circulation group	05	Hydraulic safety group	08	Expansion vessel		
03	PUFFERMAS 3 CTS PDC	06	Solar system circulation group	09	Electronic valve		

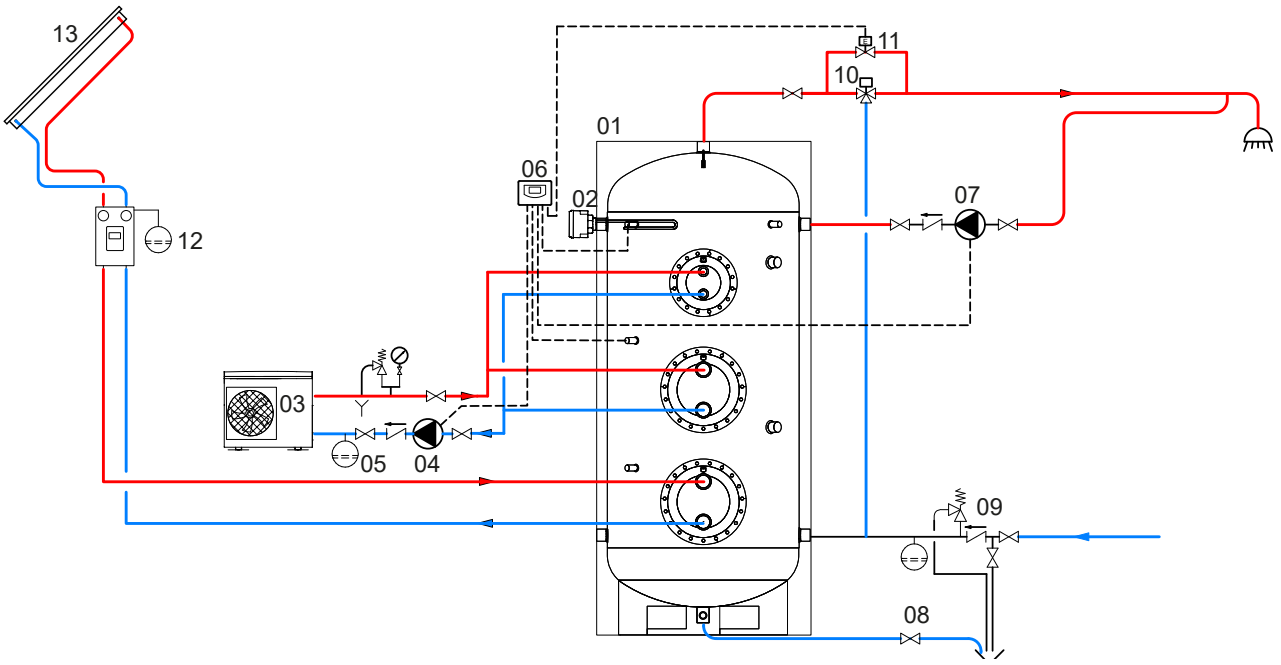
The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.

EXAMPLE OF INSTALLATION WITH **PUFFERMAS 1 PDC**



01	PUFFERMAS 1 PDC	03	Circulation group	05	Hydraulic safety group
02	Generator (Heat pump)	04	D.H.W. recirculation group	06	Heating system circulation group

EXAMPLE OF INSTALLATION WITH **EXTRA 3**



01	EXTRA 3	04	Circulation group	07	D.H.W. recirculation group	10	Thermostatic mixing valve
02	Electric immersion heater	05	Expansion vessel	08	Blowdown valve	11	By-pass solenoid valve
03	Generator (Heat pump)	06	Electronic Control/thermostat	09	Hydraulic safety group		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.



DNV

CERTIFICATO DI SISTEMA DI GESTIONE

Si certifica che il sistema di gestione di
CORDIVARI S.r.l.
Zona Industriale Pagliare snc - 64020 Morro D'Oro (TE) - Italia
e i siti come elencati nell'Appendix che accompagna questo certificato

È conforme allo Standard:
ISO 9001:2015

Questa certificazione è valida per il seguente campo applicativo:
Progettazione e fabbricazione di radiatori, canne fumarie, bollitori, termoaccumulatori, recipienti in pressione, sistemi termici solari, serbatoi a pressione atmosferica, contenitori per alimenti.
(IAF 17)

ACCREDIA

Claudia Baroncini
Management Representative

Quality Certificate UNI EN ISO 9001



DNV

CERTIFICATO DI SISTEMA DI GESTIONE

Si certifica che il sistema di gestione di
CORDIVARI S.r.l.
Zona Industriale Pagliare snc - 64020 Morro D'Oro (TE) - Italia

È conforme allo Standard:
ISO 14001:2015

Questa certificazione è valida per il seguente campo applicativo:
Progettazione e fabbricazione di radiatori, bollitori, recipienti a pressione attraverso i processi di stampaggio, zincatura a caldo anche conto terzi, verniciatura a polvere, con coibentazione tramite schiumatura in poliuretano o isolamento in fibra di poliestere per i bollitori e termo accumulatori, serbatoi in polietilene attraverso lo stampaggio, sistemi termici solari, canne fumarie attraverso la saldatura e taglio al plasma. Trattamento rifiuti liquidi provenienti dalle acque di collaudo dei recipienti e radiatori dalle altre sedi Cordivari
(IAF 17, 18, 39)
Valutato secondo le prescrizioni del Regolamento Tecnico RT-09

ACCREDIA

Claudia Baroncini
Management Representative

Environmental managing System Certificate UNI EN ISO 14001:2004

Cordivari has always placed among its main goals:
The continuous improvement of the products manufactured;
The commitment to use low environmental impact materials that can be almost 100% recycled;
The achievement of the total quality
According to that, Cordivari has worked to obtain the most significant certifications that attest the commitment of the Company on the inside and outwards.

ITALIAN AND EUROPEAN LAWS AND REGULATIONS

Main laws and regulations concerning production and installation of pressurised tanks:

ErP Energy Related Products – Ecodesign Directive 2009/125/CE

UNI EN 12897:2016 - technical details for storage of sanitary hot water and indirect heating systems.

Disposals 2014/68/UE for pressurized equipment

DGLS 15 february 2016, n. 26 - Application of Directive 2014/68/UE Pressure Equipement.

Decrete 1/12/2004 n. 329 - Installation of equipment and pressurized ensemble.

Law January 9th 1991, n. 10 – National energy plan, for energy saving and energy development for renewable energy source

D.P.R. 26-8-1993 n. 412 – applying regulation law 10/91

D.L. 25/01/1992, n.108 – application of disposal n. 89/109/CEE concerning material and object destinated to get in touch with food products.

DPR 777 del 23/08/1982 - application of European Directive 76/893

D.M. 21/03/1973 – Decrete Law concening water for human consumption

D.M. 174 del 06/04/2004 Decrete Law concening water for human consumption

Disposals 2014/29/CE – air compressor tanks planning and production.

UNI CTI 8065 - Water Treatment

"Raccolta R ed. 2009 cap. R.1.A." - Expansion System



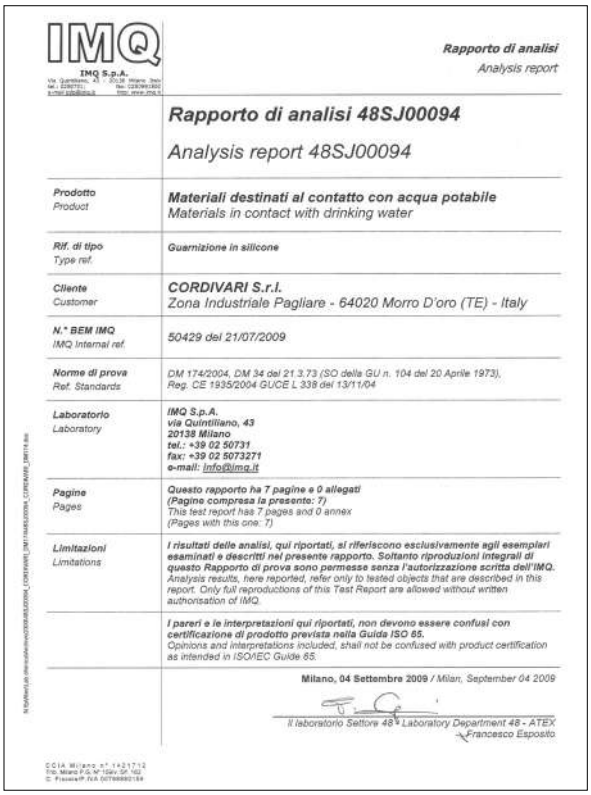
CE certification in accordance with 2014/68/UE Pressure Equipement regulations relevant to pressure vessels



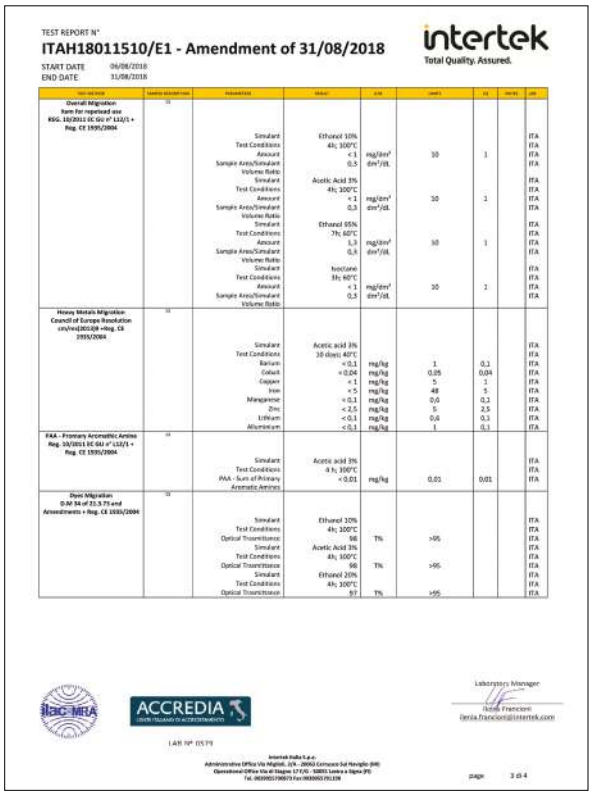
CE certification in accordance with requirements of 2014/68/UE Pressure Equipement regulations for pressurized tanks (equipped pressure vessel)



CE certification in accordance with requirements of 2014/68/UE Pressure Equipement regulations for pressurized tanks (exchanging diaphragm pressure vessels).



Test certification of the silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C.



TEST REPORT N°

ITAH18011510/E1 - Amendment of 31/08/2018

intertek
Total Quality. Assured.

START DATE 06/08/2018
END DATE 31/08/2018

Overall Migration **Item for repeated use** **REG. 10/2011 EC GU n° 132/1 + Reg. CE 1935/2004**	02							
		Simulant	Ethanol 10%					ITA
		Test Conditions	4h; 100°C					ITA
		Amount	< 1	mg/dm²	10	1		ITA
		Sample Area/Simulant Volume Ratio	0,3	dm²/dL				ITA
		Simulant	Acetic Acid 3%					ITA
		Test Conditions	4h; 100°C					ITA
		Amount	< 1	mg/dm²	10	1		ITA
		Sample Area/Simulant Volume Ratio	0,3	dm²/dL				ITA
		Simulant	Ethanol 95%					ITA
		Test Conditions	7h; 60°C					ITA
		Amount	1,3	mg/dm²	10	1		ITA
		Sample Area/Simulant Volume Ratio	0,3	dm²/dL				ITA
		Simulant	Isooctane					ITA
		Test Conditions	1h; 60°C					ITA
		Amount	< 1	mg/dm²	10	1		ITA
		Sample Area/Simulant Volume Ratio	0,3	dm²/dL				ITA
Heavy Metals Migration **Council of Europe Resolution cm/res(2013)9 +Reg. CE 1935/2004**	02							
		Simulant	Acetic acid 3%					ITA
		Test Conditions	10 days; 40°C					ITA
		Barium	< 0,1	mg/kg	1	0,1		ITA
		Cobalt	< 0,04	mg/kg	0,05	0,04		ITA
		Copper	< 1	mg/kg	5	1		ITA
		Iron	< 5	mg/kg	48	5		ITA
		Manganese	< 0,1	mg/kg	0,6	0,1		ITA
		Zinc	< 2,5	mg/kg	5	2,5		ITA
		Lithium	< 0,1	mg/kg	0,6	0,1		ITA
		Aluminium	< 0,1	mg/kg	1	0,1		ITA
PAA - Primary Aromatic Amine **Reg. 10/2011 EC GU n° 132/1 + Reg. CE 1935/2004**	02							
		Simulant	Acetic acid 3%					ITA
		Test Conditions	4 h; 100°C					ITA
		PAA - Sum of Primary Aromatic Amines	< 0,01	mg/kg	0,01	0,01		ITA
Dyes Migration **D.M 84 of 21.3.73 and Amendments + Reg. CE 1935/2004**	02							
		Simulant	Ethanol 10%					ITA
		Test Conditions	4h; 100°C					ITA
		Optical Transmittance	98	T%	>95			ITA
		Simulant	Acetic Acid 3%					ITA
		Test Conditions	4h; 100°C					ITA
		Optical Transmittance	96	T%	>95			ITA
		Simulant	Ethanol 20%					ITA
		Test Conditions	4h; 100°C					ITA
		Optical Transmittance	97	T%	>95			ITA

ACCREDIA
LAB N° 0179

Laboratory Manager
Ilenia Francioni
ilenia.francioni@intertek.com

page 3 di 4

Test report of internal treatment for food use Polywarm® in accordance with D.M. nr. 174 del 06/04/04



WRAS
APPROVED MATERIAL

Approval Number: 1805517
Test Report: MA6274/K

Water Regulations Advisory Scheme Ltd.
Unit 13,
Willow Road,
Pen y Fan Industrial Estate,
Crumlin,
Gwent,
NP11 4EG

23rd May 2018

Cordivari Srl.
Zi Pagliare - 64020 Morro D'oro (Teramo),
Italy

WATER REGULATIONS ADVISORY SCHEME LTD. (WRAS)
MATERIAL APPROVAL

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6920-1:2000 and/or 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

COATINGS, PAINTS & LININGS - FACTORY APPLIED PIPE & FITTINGS COATINGS. **5030**

'Polywarm'. Factory applied, brown coloured enamel powder coating. Apply as per manufacturer's instructions '1024'. Cure for 20 minutes@240°C. For use with water up to 85°C.

APPROVAL NUMBER: 1805517
APPROVAL HOLDER: CORDIVARI SRL.

The Scheme reserves the right to review approval.
Approval 1805517 is valid between May 2018 and May 2023

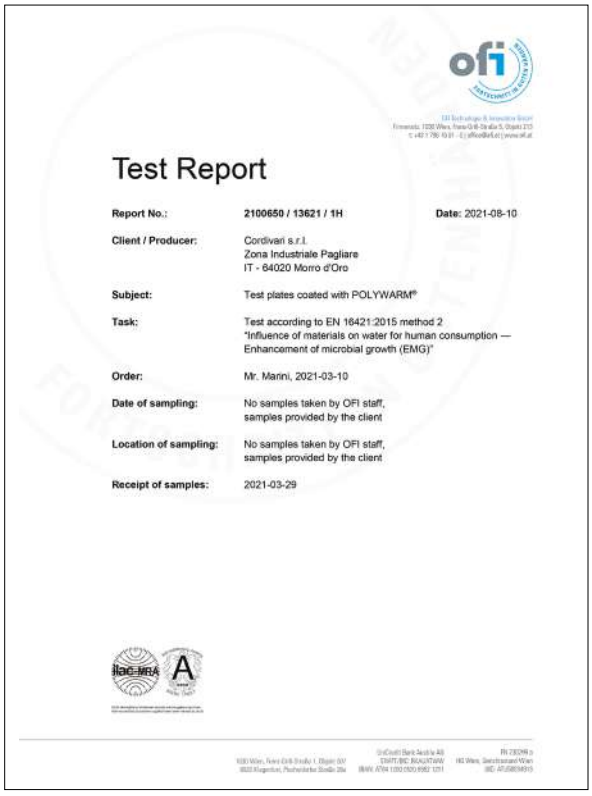
An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: www.wras.co.uk/directory

Yours faithfully

Jason Furnival
Approvals & Enquiries Manager
Water Regulations Advisory Scheme

The Water Regulations Advisory Scheme Ltd. Registered in England No. 8069390 Registered office: 80 Lowick Close, Hazel Grove, Stockport, SK7 5ED
Tel: +44(0)333 207 8090 Fax: +44(0)845 345 540 Email:info@wras.co.uk website:www.wras.co.uk



ofi

Test Report

Report No.: 2100650 / 13621 / 1H **Date:** 2021-08-10

Client / Producer: Cordivari s.r.l.
Zona Industriale Pagliare
IT - 64020 Morro d'Oro

Subject: Test plates coated with POLYWARM®

Task: Test according to EN 16421:2015 method 2
"Influence of materials on water for human consumption — Enhancement of microbial growth (EMG)"

Order: Mr. Marini, 2021-03-10

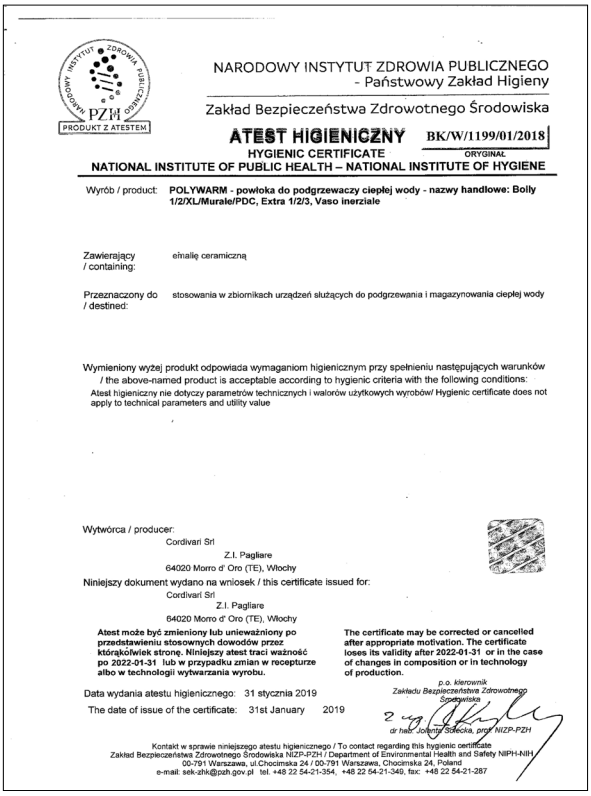
Date of sampling: No samples taken by OFI staff, samples provided by the client

Location of sampling: No samples taken by OFI staff, samples provided by the client

Receipt of samples: 2021-03-29

ilac-MRA A

Certificate of Conformity for Polywarm® according to EN 16421.



NARODOWY INSTYTUT ZDROWIA PUBLICZNEGO
- Państwowy Zakład Higieny

Zakład Bezpieczeństwa Zdrowotnego Środowiska

PZH PRODUKT Z ATESTEM

ATEST HIGIENICZNY **BK/W/1199/01/2018**

HYGIENIC CERTIFICATE ORYGINAL

NATIONAL INSTITUTE OF PUBLIC HEALTH – NATIONAL INSTITUTE OF HYGIENE

Wyrób / product: **POLYWARM - powłoka do podgrzewaczy ciepłej wody - nazwy handlowe: Bolly 1/2/XL/Murale/PDC, Extra 1/2/3, Vaso inerziale**

Zawierający / containing: emalię ceramiczną

Przeznaczony do / destined: stosowania w zbiornikach urządzeń służących do podgrzewania i magazynowania ciepłej wody

Wymieniony wyżej produkt odpowiada wymaganiom higienicznym przy spełnieniu następujących warunków / the above-named product is acceptable according to hygienic criteria with the following conditions:
Atest higieniczny nie dotyczy parametrów technicznych i walorów użytkowych wyrobów/ Hygienic certificate does not apply to technical parameters and utility value

Wytwórca / producer:
Cordivari Srl
Z.I. Pagliare
64020 Morro d' Oro (TE), Włochy

Niniejszy dokument wydano na wniosek / this certificate issued for:
Cordivari Srl
Z.I. Pagliare
64020 Morro d' Oro (TE), Włochy

Atest może być zmieniony lub unieważniony po przedstawieniu stosownych dowodów przez którąkolwiek stronę. Niniejszy atest traci ważność po 2022-01-31 lub w przypadku zmian w recepturze albo w technologii wytwarzania wyrobu.

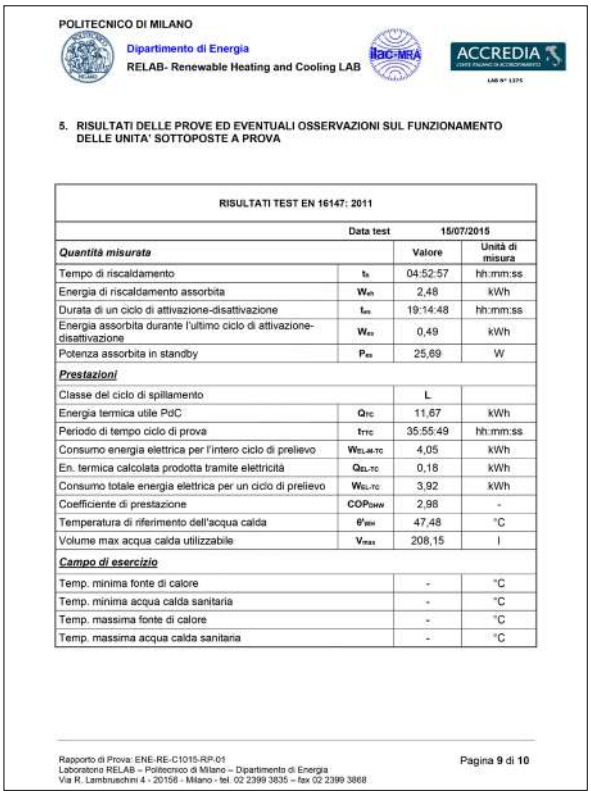
The certificate may be corrected or cancelled after appropriate motivation. The certificate loses its validity after 2022-01-31 or in the case of changes in composition or in technology of production.

Data wydania atestu higienicznego: 31 stycznia 2019
The date of issue of the certificate: 31st January 2019

p.o. kierownik
Zakładu Bezpieczeństwa Zdrowotnego
Środowiska
dr hab. Jolanta Sztecka, prof. NIZP-PZH

Kontakt w sprawie niniejszego atestu higienicznego / To contact regarding this hygienic certificate
Zakład Bezpieczeństwa Zdrowotnego Środowiska NIZP-PZH / Department of Environmental Health and Safety NIPH-NIH
00-791 Warszawa, ul.Chocimska 24 / 00-791 Warszawa, Chocimska 24, Poland
e-mail: sek-zhk@pzh.gov.pl tel. +48 22 54-21-354, +48 22 54-21-349, fax: +48 22 54-21-287

Certificate of Conformity for Polywarm® according to NIZP - National Institute of Public Healt - Poland.



POLITECNICO DI MILANO

Dipartimento di Energia

RELAB- Renewable Heating and Cooling LAB

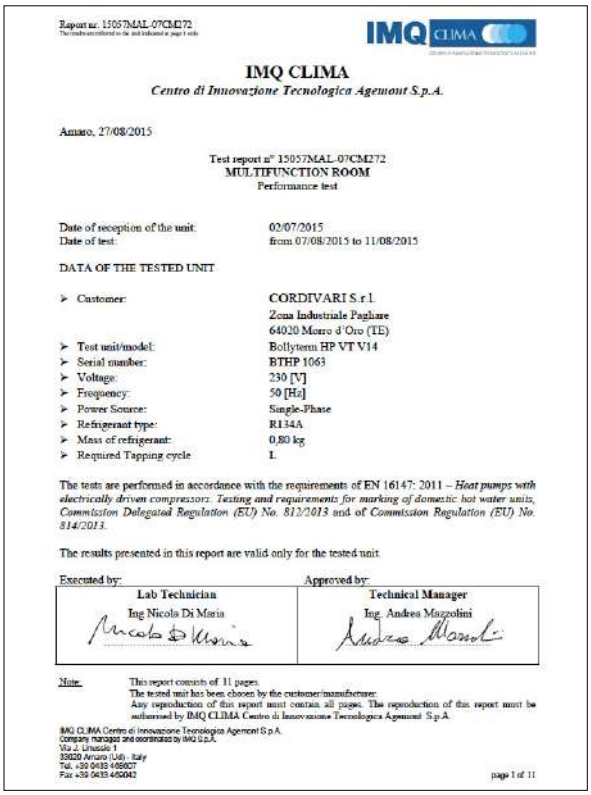
5. RISULTATI DELLE PROVE ED EVENTUALI OSSERVAZIONI SUL FUNZIONAMENTO DELLE UNITA' SOTTOPOSTE A PROVA

RISULTATI TEST EN 16147: 2011			
	Data test	15/07/2015	
Quantità misurata		Valore	Unità di misura
Tempo di riscaldamento	t_h	04:52:57	hh:mm:ss
Energia di riscaldamento assorbita	W_{eh}	2,48	kWh
Durata di un ciclo di attivazione-disattivazione	t_{on}	19:14:48	hh:mm:ss
Energia assorbita durante l'ultimo ciclo di attivazione-disattivazione	W_{on}	0,49	kWh
Potenza assorbita in standby	P_{es}	25,89	W
Prestazioni			
Classe del ciclo di spillamento		L	
Energia termica utile PdC	Q_{TC}	11,67	kWh
Periodo di tempo ciclo di prova	t_{TC}	35:55:49	hh:mm:ss
Consumo energia elettrica per l'intero ciclo di prelievo	$W_{EL-M-TC}$	4,05	kWh
En. termica calcolata prodotta tramite elettricità	Q_{EL-TC}	0,18	kWh
Consumo totale energia elettrica per un ciclo di prelievo	W_{EL-TC}	3,92	kWh
Coefficiente di prestazione	COP_{DHW}	2,98	-
Temperatura di riferimento dell'acqua calda	θ'_{ww}	47,48	°C
Volume max acqua calda utilizzabile	V_{max}	208,15	l
Campo di esercizio			
Temp. minima fonte di calore		-	°C
Temp. minima acqua calda sanitaria		-	°C
Temp. massima fonte di calore		-	°C
Temp. massima acqua calda sanitaria		-	°C

Rapporto di Prova: ENE-RE-C1015-RP-01
Laboratorio RELAB – Politecnico di Milano – Dipartimento di Energia
Via R. Lambruschini 4 - 20156 - Milano - tel. 02 2399 3835 – fax 02 2399 3868

Pagina 9 di 10

BOLLYTERM® HP calorifier with heat pump performance test granted by RELAB Energy Department (Politecnico of Milan) according to EN-16147 related to Ecodesign ErP Directive 2009/125/CE – EU Regulation 812/2013-814/2013.



Report nr. 15057MAL-07CM272

IMQ CLIMA

Centro di Innovazione Tecnologica Agemont S.p.A.

Amaro, 27/08/2015

Test report n° 15057MAL-07CM272
MULTIFUNCTION ROOM
Performance test

Date of reception of the unit: 02/07/2015
Date of test: from 07/08/2015 to 11/08/2015

DATA OF THE TESTED UNIT

- Customer: CORDIVARI S.r.l. Zona Industriale Pagliare 64020 Morro d'Oro (TE)
- Test unit/model: Bollytemi HP VT V14
- Serial number: BTHP 1063
- Voltage: 230 [V]
- Frequency: 50 [Hz]
- Power Source: Single-Phase
- Refrigerant type: R134A
- Mass of refrigerant: 0,80 kg
- Required Tapping cycle L

The tests are performed in accordance with the requirements of EN 16147: 2011 – *Heat pumps with electrically driven compressors. Testing and requirements for marking of domestic hot water units, Commission Delegated Regulation (EU) No. 812/2013* and of *Commission Regulation (EU) No. 814/2013.*

The results presented in this report are valid only for the tested unit.

Executed by:	Approved by:
Lab Technician	Technical Manager
Ing Nicola Di Maria	Ing. Andrea Mazzolini

Note: This report consists of 11 pages.
The tested unit has been chosen by the customer/manufacturer.
Any reproduction of this report must contain all pages. The reproduction of this report must be authorised by IMQ CLIMA Centro di Innovazione Tecnologica Agemont S.p.A.

IMQ CLIMA Centro di Innovazione Tecnologica Agemont S.p.A.
Company managed and coordinated by IMQ S.p.A.
Via J. Linussio 1
33020 Amaro (Ud) - Italy
Tel. +39 0433 485007
Fax +39 0433 480042

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BOLLYTHERM® HP calorifier with heat pump performance test granted by IMQ CLIMA (Centro di Innovazione Tecnologica Agemont) according to EN-16147 related to Ecodesign ErP Directive 2009/125/CE – EU Regulation 812/2013-814/2013.



CORDIVARI Lab

CORDIVARI S.r.l.
Zona Industriale Pagliare – 64020 MORRO D'ORO (TE) Italia
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C.F. - P. IVA - REG. IMPRESE TE N. IT 00735570673 - R.E.A. TE N. 92310 - CAP. SOC. € 4.000.000,00 i.v.
www.cordivari.it - info@cordivari.it

RAPPORTO DI PROVA

VERIFICA DISPERSIONE TERMICA AI FINI DELL'ETICHETTATURA ENERGETICA PREVISTA DAL REGOLAMENTO (UE) N. 814/2013 DELLA COMMISSIONE DEL 2 AGOSTO 2013 RECANTE MODALITÀ DI APPLICAZIONE DELLA DIRETTIVA 2009/125/CE DEL PARLAMENTO EUROPEO E DEL CONSIGLIO IN MERITO ALLE SPECIFICHE PER LA PROGETTAZIONE ECOCOMPATIBILE DEGLI SCALDACQUA E DEI SERBATOI PER L'ACQUA CALDA.

Rapporto di prova n°	**BO-CLEN 02.15**
Data di emissione	**21/08/2015**
N° di pagine totale	**7**
Laboratorio di prova	**Cordivari LAB**
Nome del richiedente	Cordivari srl
Specifiche di prova	EN15332:2007 5.4
Scopo della prova	Determinare la dispersione termica nelle condizioni previste dalla norma al fine di caratterizzare il prodotto oggetto della prova nell'ambito delle classi energetiche previste dal Regolamento UE 814/2013
Descrizione dell'oggetto in prova	Bollitore (preparatore di acqua calda ad uso igienico sanitario) ad accumulo con scambiatore di calore interno fisso. Materiale del corpo e dello scambiatore: acciaio al carbonio. Esecuzione cilindrico verticale, trattamento anticorrosivo delle membrature a contatto con l'acqua sanitaria e coibentazione in schiuma di poliuretano espanso realizzata " di corpo" sul bollitore.
Marchio	CORDIVARI
Costruttore	Cordivari SRL
Indirizzo costruttore	Zona Industriale Pagliare 64020 Morro D'Oro (TE) Italia
Modello	BOLLY 1 ST 200
Data del ricevimento oggetto in prova	06/08/2015
Periodo di prova	Dal 19 al 21 AGOSTO 2015

Questo rapporto non può essere riprodotto, se non integralmente, senza l'autorizzazione del laboratorio di prova che lo rilascia. I risultati esposti in questo rapporto di prova si riferiscono esclusivamente all'oggetto testato. Cordivari LAB non assume nessuna responsabilità per danni derivanti dall'interpretazione dei dati del presente documento riprodotto al di fuori del suo contesto.

0 Revisione	P.I. Giovanni D'Egidio Esecuzione Test	Ing. Ivan Baldini Direzione Tecnica

BOLLY® test report granted by "CORDIVARI LAB" according to EN-15332 related to Ecodesign ErP Directive 2009/125/CE.

OVERPRESSURE PROTECTION:
If the sanitary water installation exceeds the admissible values of pressure of the calorifier, a pressure regulator as far away as possible from the calorifier has to be installed.
• Calorifier with primary circuits fluid with temperature below 110°C
To avoid damages on products due to sudden changes of pressure, it is always necessary to provide an expansion system, according to local regulations.

Although some local standards and regulations state that this expansion system can simply consist of a safety valve with appropriate dimensions, the installation of a closed type expansion tank with non-toxic diaphragm is recommended to avoid frequent openings of the safety valve and to avoid any unnecessary overload of the DHW tank.
Cordivari heat exchangers are manufactured in accordance with 2014/68/EU directive and in reference to art. n. 4.3 of this directive they do not have to be marked CE.

• Calorifiers with primary circuit supplied by fluid with temperature exceeding 110°C (steam or hot water)
Water Heaters with primary circuit temperature above to boiling secondary fluid at 0.5 bar pressure must have safety devices (thermostat, pressure switch, level/min. pressure protection).
The provision on pressure working equipment shall be applied to primary circuit on Heat exchangers.

• Calorifiers for solar thermal systems
For calorifiers that not have to be marked CE, make sure that:
- Primary Circuit Temperature never exceeds 140°C (that can be reached only for limited periods of time).
- Maximum working pressure meets following restrictions: the result Pressure x Volume of exchanger must not exceed 50bar/liter:

$$P \times V \leq 50 \text{ [bar x liter]}$$

given the volume of fluid in the heat exchanger, is then possible to calculate with the above formula, the maximum permissible operating pressure for each heat exchanger
- surface of collectors does not exceed 50m² and the potentiality is lower than the total usable at 35Kw
Above these limits, the exchanger (as well as the installation) is subject to requirements so as stated in provisions for in pressure working equipments (design, and plant testing also when in operation, periodic restructuring) it is therefore necessary to use designed and tested exchangers according to 2014/68/UE Pressure Equipement.

CORROSION PROTECTION
To avoid electro-chemical corrosion - and in order to comply with the warranty's conditions too - the cylinder has to be installed always with its cathode protection. Cordivari Srl gives according to the tank version:
• Anoden-tester magnesium bar, which allows to check the real consumption of the magnesium bar just pushing on the "tester button".
• Standard anode, where it is necessary the visual checking of the magnesium bar.
As accessory is also available the electronic anode which do not need to be replaced and need only an uninterrupted electricity. It is also necessary, for warranty purposes, that the water never exceeds the values of chemical and chemical-physical parameters recommended by regulations on subject. To avoid any galvanic currents tank grounding have to be done.

LEGIONELLOSIS PROTECTION
Legionellosis can widespread with temperatures between 30°C and 45°C. To avoid any risk water tank has to be accumulated at 60°C and never reach temperature lower than 50°C.

CALORIFIERS & BUFFER TANKS
Must always be installed protected from atmospheric agents on a base of proper solidity, checking before making the connections that there is sufficient space for extracting the heat exchanger, magnesium anode, eventual electric heater and other technical components specific to the various products, and for an easy opening of any inspection flange.

Make sure that the premises, or technical rooms intended to contain the tanks are provided with sufficient openings to facilitate the passage of the tanks by considering overall dimensions and avoiding therefore any demolition both when installing and removing the tanks.

For all cylinders with plate heat exchangers the hardness of the sanitary water inlet must be less than 30 ° f (French degrees).
It is necessary to install the storage tank / buffer tank providing appropriate and adequate drainage for any water leaks.

CHILLED WATER AND INERTIAL TANKS
Make sure that the premises, or technical rooms intended to contain the tanks are provided with sufficient openings to facilitate the passage of the tanks by considering overall dimensions and avoiding therefore any demolition both when installing and removing the tanks.

CORDIVARI®

DATE:	
REFERENCE PERSON:	

TYPE OF PRODUCT	☐ DHW TANK	☐ COMPRESSED AIR	☐ CHILLED WATER	☐ COMBI
	☐ AUTOCLAVE	☐ VASO INERZIALE	☐ VOLANO TERMICO	☐ PUFFER
	☐ ECOCOMBI	☐ VASO STORAGE	☐ PRESSURE TANK S/C	☐ INTERKA

PRODUCT DESCRIPTION	

SPACE FOR DRAWING IN ABSENCE OF TECHNICAL SCHEME

☐ PLEASE ENCLOSE TECHNICAL DRAWING/LAYOUT

TECHNICAL DETAILS	
VOLUME (lt)	
DIAMETER (mm)	
HEIGHT (mm)	
VERTICAL	
HORIZONTAL	
GALVANIZED	
POLYWARM	
PAINTED	
STAINLESS STEEL 304	
STAINLESS STEEL 316	
WORKING PRESSURE	TEMPERATURE
PRIMARY CIRCUIT FLUID PRESSURE	
SECONDARY CIRCUIT FLUID PRESSURE	

QUANTITY

INSULATION

NOTE

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SEND TO THE ATTENTION OF SALES DEPARTMENT

GENERAL SALES CONDITIONS AND WARRANTY

Sales of Cordivari products are made in accordance with the General Conditions of Sale and Warranty listed below. Any exception to these conditions is subject to written acceptance by Cordivari Srl.

1. SHIPPING

The goods travel at the Customer's risk and peril, even if they are shipped carriage paid. The goods must be checked upon delivery in the presence of the carrier, checking the integrity of the packaging, missing items, or replacements. Any dispute must be reported immediately to the carrier / courier by signing the transport document with reserve and communicate any discrepancy by registered letter or certified email within eight days from receipt of the goods.

2. TERMS OF DELIVERY

The delivery terms are purely indicative and, in any case, if the delivery deadline could not be met for any reason, the Client will not be entitled to claim any compensation, payment of penalties, cancellation or modification of the order given to us. In the case of extraordinary events such as natural disasters, strikes, lack of raw materials, and causes of force majeure, Cordivari Srl reserves the right to choose the measures to be adopted. If the ordered goods are not collected within the agreed period, they will be invoiced and stored with costs, risk and danger borne by the Customer.

3. WEIGHTS, MEASURES, SURFACES

Weights, measurements, surfaces, shapes, dimensions, images and other data are indicative and not binding and may be subject to modifications or variations that Cordivari Srl reserves the right to make to its products without prior notice.

4. CANCELLATION OR ORDER CHANGES

Without the written consent of Cordivari Srl, the orders placed cannot be canceled or modified neither partially nor totally. No variations or modifications are possible when the order has already been processed. Any costs arising from the cancellation or modification of the order will be invoiced to the Client.

5. WARRANTY

- Cordivari Srl warrants 5 years for all tanks in stainless steel 316 L.
- Cordivari warrants 2 years for the Bolly® PRIMO calorifiers.
- Cordivari Srl warrants 5 years for all calorifiers with internal anti-corrosion treatment in Polywarm®.
- Cordivari Srl warrants 2 years for all containers with anti-corrosive hot galvanizing treatment.
- For all removable and plate heat exchangers (inspectable and brazed), both mounted on the calorifiers and sold individually, Cordivari Srl warrants 2 years.
- Cordivari Srl warrants 5 years for all PUFFER and COMBINED THERMAL STORAGE.
- Cordivari Srl warrants 2 years for accessories and residual items in this catalog not covered by the general conditions of sale, with the exception of technical, electrical and electronic components, where the warranty is 12 months.
- For all non-standard items, special products made to customer specifications, Cordivari Srl warrants 2 years.
- The products and systems in this catalog are designed and manufactured in compliance with the reference directives CE-EN-UNI-and PED.
- The warranty and conformity of said products and systems are valid only in those countries where such standards are recognized and implemented. In non-European countries or in any case in countries that do not implement these regulations, Cordivari assumes no responsibility for warranty and compliance.
- The warranty covers manufacturing defects, if all the points of Article 5 are respected. It must be proven that the installation of the products has complied with the criteria of protection from overpressure, corrosion, legionella and installation and use rules and requirements described in this catalog and any applicable plant engineering standards. In domestic hot water production systems, as well as in heating ones, for the purposes of the warranty, comply with the provisions of the UNI CTI 8065 standard which provides for various types of water treatments according to its characteristics. The warranty does not cover damage deriving from non-compliance with the requirements of the UNI CTI 8065 standard.

The commitment to lend the warranty exists provided that:

- The product has been stored in good condition and protected from bad weather before installation;
- The product has not been damaged during transport, handling or installation;;
- No tampering or repairs have been carried out by persons not authorized by Cordivari Srl;
- The installation has been carried out by authorized personnel, in compliance with the instructions and standards indicated on the technical documentation provided by Cordivari Srl, and in compliance with all provisions of laws and prescriptions contained in this catalog;
- The accessories used are those regularly supplied by Cordivari Srl;
- The buyer has settled the balance of the payments within the established terms;
- No aggressive chemicals have been added to the water;
- The operating pressure and temperature indicated in the catalog correspond to the operating pressure and temperature limit of use.

Those parts subject to natural wear and tear are always excluded from any warranty (eg anodes, gaskets, bolts, etc.).

The warranty starts from the date of the sales invoice of Cordivari Srl and is not renewed in any case in the event of a replacement of the product.

The warranty does not cover costs due to demolitions, works for the passage of products both inbound and outbound, and labor for any product replacements.

Cordivari Srl undertakes during the warranty period to replace the returned product recognized as defective due to ascertained production defects, in addition to this, the Customer cannot claim any other compensation - deriving from said defects - for direct or indirect damage costs of any kind to people and / or things.

6. PAYMENTS

The payments of the invoices relating to the supplies must be settled within the established deadlines. The delay in the payment of invoices, even if partial, gives rise to the start of interest on arrears at the current rate, in addition to the immediate suspension of shipments in progress and the processing of any orders.

7. RESERVE OF OWNERSHIP

The products remain the property of Cordivari Srl until the payment of the last installment of the price of the goods delivered. In the event of even partial non-fulfillment by the buyer, Cordivari Srl may request the immediate return of the goods while retaining the installments paid by way of indemnity, except for greater damage.

8. PRICES

Prices are not binding and can be changed without notice. Prices can be revised according to the changes that may occur up to the time of delivery.

The prices are intended ex works in Morro D'Oro (TE), unless otherwise agreed.

Prices are always shown in the price list net of VAT.

For bulky models, Cordivari Srl reserves the right to ask for a share in the costs of packaging and transport.

9. ORDERS / DELIVERY

The orders given definitively bind the Client who must declare to know and accept all the conditions of sale. In the event that the Client draws up the order by name or on behalf of others, signing the order undertakes jointly and severally to fulfill what it has been agreed. Delivery is intended exclusively at the headquarters / warehouse of the Customer. Particular requests of the Client such as: express deliveries, delivery other than the headquarters / warehouse, etc. will have additional costs that will be communicated from time to time to our sales department.

10. COURT AUTHORITY AND APPLICABLE LAW

For the following Catalogue and conditions only the provisions of Italian law will be used. For controversy, the Court of Teramo (Italy) shall have exclusive competence. Essential and trial law shall be exclusively Italian.

11. ORIGINAL VERSION

Translation of Cordivari General Sales Conditions and Warranty Terms, reported in this page, derives from the Italian version. In case of possible controversy, the official Cordivari General Sales Conditions and Warranty Terms are the one reported in the Italian language, stated at the back of the Italian catalogs.

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CONDIZIONI GENERALI DI VENDITA E GARANZIA

Le vendite dei prodotti della Cordivari Srl sono effettuate conformemente alle sotto elencate Condizioni Generali di Vendita e Garanzia. Ogni deroga a queste condizioni è subordinata all'accettazione scritta da parte della Cordivari Srl.

1. SPEDIZIONE
La merce viaggia a rischio e pericolo del Committente, anche se viene spedita franco destino. La merce deve essere verificata all'atto della ROTAZIONE, controllando l'integrità dell'imballo, articoli mancanti o sostituzioni in presenza del trasportatore. Ogni contestazione dovrà essere segnalata immediatamente al trasportatore/corriere firmando con riserva il DDT e confermando tale riserva a mezzo lettera raccomandata o posta certificata entro otto giorni dal ricevimento merce.

2. TERMINI DI ROTAZIONE
I termini di consegna si intendono puramente indicativi e comunque se il termine di consegna non potesse essere rispettato per qualsiasi motivo, il Committente non avrà diritto a esigere alcun indennizzo, pagamento di penali, annullamento o modifica all'ordine conferitoci. In caso di eventi straordinari quali calamità naturali, scioperi, mancanza di materie prime, e cause di forza maggiore, la Cordivari Srl si riserva la scelta delle misure da adottare. Se la merce ordinata non viene ritirata nel periodo concordato, questa verrà fatturata e immagazzinata con costi, rischio e pericolo a carico del Committente.

3. PESI, MISURE, SUPERFICI
Pesi, misure, superfici, forme, dimensioni, immagini e altri dati sono indicativi e non impegnativi e possono subire delle modifiche o variazioni che la Cordivari Srl si riserva di apportare ai suoi prodotti senza preavviso.

4. ANNULLAMENTO O MODIFICHE ORDINE
Senza il consenso scritto della Cordivari Srl, le ordinazioni conferite non possono essere né parzialmente né totalmente annullate o modificate. Non si accordano variazioni o modifiche quando è già stata intrapresa la lavorazione. Eventuali spese derivanti dall'annullamento o modifica dell'ordine saranno fatturate al Committente

5. GARANZIA
- Per tutti i bollitori in acciaio inox 316 L la Cordivari Srl garantisce anni 5.
- Per i bollitori della serie Bolly PRIMO la Cordivari garantisce 2 anni.
- Per tutti i bollitori con trattamento anticorrosivo interno in Polywarm® la Cordivari Srl garantisce anni 5.
- Per tutti recipienti con trattamento anticorrosivo di zincatura a caldo la Cordivari Srl garantisce anni 2.
- Per tutti gli scambiatori di calore estraibili e a piastre (ispezionabili e saldobrasati), sia montati sui bollitori sia venduti singolarmente la Cordivari Srl garantisce anni 2.
- Per tutti i termoaccumulatori PUFFER e TERMOACCUMULATORI COMBINATI la Cordivari Srl garantisce anni 5 .
- Per gli accessori e per gli articoli residuali del presente catalogo non contemplati nelle condizioni generali di vendita la Cordivari Srl garantisce anni 2 ad eccezione di componenti tecnici, elettrici ed elettronici, dove la garanzia è di 12 mesi.
- Per tutti gli articoli fuori standard, i prodotti speciali realizzati su specifica del Cliente, la Cordivari Srl garantisce anni 2.
- I prodotti ed i sistemi presenti in questo catalogo sono progettati e realizzati in conformità alle direttive di riferimento CE-EN-UNI-e PED.
- La garanzia e la conformità di detti prodotti e sistemi hanno valenza esclusivamente in quei paesi dove tali norme sono riconosciute e recepite. In paesi extra-europei o comunque in paesi che non recepiscono tali norme la Cordivari non assume responsabilità per garanzia e conformità.
- La garanzia copre i difetti di fabbricazione. Essa decade se non vengono rispettati i punti dell'art.5. Sussiste a condizione che l'installazione dei prodotti abbia rispettato i criteri della protezione dalla sovrappressione, corrosione, legionella e norme e prescrizioni di installazione e utilizzo descritte nel presente catalogo e tutte le eventuali norme in materia impiantistica. Negli impianti di produzione di acqua calda sanitaria, così come in quelli di riscaldamento, attenersi, ai fini della garanzia, a quanto disposto dalla norma UNI CTI 8065 che prevede vari tipi di trattamenti dell'acqua in funzione delle sue caratteristiche. La garanzia non copre danni derivanti da inadempienze alle prescrizioni della norma UNI CTI 8065.

L'impegno di prestare la garanzia sussiste a condizione che:
- Il prodotto sia stato immagazzinato in buone condizioni e al riparo dalle intemperie prima dell'installazione;
- Il prodotto non abbia subito danneggiamenti durante il trasporto, le movimentazioni o l'installazione;
- Non siano state compiute manomissioni o riparazioni da persone non autorizzate dalla Cordivari Srl;
- L'installazione sia stata realizzata da personale autorizzato, in conformità alle istruzioni e alle norme indicate sulla documentazione tecnica fornita dalla Cordivari Srl e alle norme e prescrizioni di installazione e utilizzo riportate nel presente catalogo e che siano state rispettate eventuali disposizioni di leggi o norme tecniche specifiche;
- Gli accessori utilizzati siano quelli regolarmente forniti dalla Cordivari Srl;
- Il compratore abbia effettuato il saldo dei pagamenti nei termini prestabiliti;
- Non siano state eseguite aggiunte di sostanze chimiche aggressive all'acqua;
- La pressione e la temperatura di esercizio indicate sul catalogo corrispondano alla pressione e alla temperatura limite di utilizzo.

Sono esclusi sempre da qualsiasi garanzia quei particolari soggetti a naturale usura (es. anodi, guarnizioni, bulloni ecc.).
La garanzia decorre dalla data della fattura di vendita della Cordivari Srl e non si rinnova in alcun caso nell'eventualità di una sostituzione del prodotto.
La garanzia non copre costi dovuti a demolizioni, lavori per il passaggio dei prodotti sia in ingresso che in uscita e la manodopera per eventuali sostituzioni di prodotto.
Cordivari Srl si impegna durante il periodo di garanzia alla sostituzione del prodotto reso riconosciuto difettoso per accertati difetti di produzione, oltre a ciò il Committente non potrà vantare alcun altro risarcimento per spese di danno, diretti o indiretti di qualsiasi natura a persone e/o a cose derivanti da detti difetti.

6. PAGAMENTI
I pagamenti delle fatture relative alle forniture dovranno essere effettuati entro i termini di scadenza stabiliti. Il ritardo nel pagamento delle fatture, anche se parziale, dà luogo alla decorrenza degli interessi di mora nella misura del tasso corrente, oltre alla sospensione immediata delle spedizioni in corso e del processamento di eventuali ordini.

7. RISERVA DI PROPRIETÀ
I prodotti restano di proprietà della Cordivari Srl fino al pagamento dell'l'ultima rata di Price di merce consegnata. In caso di inadempimento anche parziale del compratore la Cordivari Srl potrà chiedere l'immediata restituzione della merce trattenendo comunque le rate pagate a titolo di indennità salvo il maggior danno.

8. PREZZI
I prezzi non sono impegnativi e possono essere modificati senza preavviso. I prezzi sono revisionabili in funzione delle variazioni che dovessero intervenire fino al momento della consegna.
I prezzi si intendono resa franco stabilimento di Morro D'Oro (TE), salvo diversi accordi.
I prezzi sono sempre riportati nel listino al netto di IVA.
Per modelli ingombranti la Cordivari Srl si riserva di chiedere una partecipazione alle spese di imballaggio e trasporto.

9. ORDINI/CONSEGNA
Per gli ordini con consegna unica con valore imponibile di minimo Euro 1000, la spedizione è esente da contribuiti di trasporto; per ordini di valore inferiori alla somma di Euro 1.000, e/o richiesta di spedizione parziale il cui valore è inferiore alla somma di Euro 1000, il contributo è del 6% con addebito minimo di Euro 25,00 per ogni singola spedizione. Gli ordini impartiti impegnano definitivamente il Committente che deve dichiarare di conoscere e accettare tutte le condizioni di vendita. Nel caso in cui il Committente rediga l'ordine per nome e per conto e in nome di altri, con la firma dell'ordine si impegna in solido all'adempimento di quanto da egli convenuto. La consegna si intende esclusivamente presso la sede/magazzino del Committente. Richieste particolari del Committente come: consegne espresso, consegna diversa dalla sede/magazzino, etc. avranno costi addizionali che verranno comunicati di volta in volta al nostro ufficio commerciale.

10. FORO COMPETENTE E LEGGE APPLICABILI
Per qualsiasi controversia relativa al presente Catalogo e Condizioni di Vendita e Garanzia verranno applicate esclusivamente le leggi italiane. Per qualsiasi controversia sarà competente in via esclusiva il Foro di Teramo (Italia), e saranno applicate esclusivamente le leggi sostanziali e quelle processuali italiane.

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