

Samsung System Air Conditioner Eco Heating System

Powerful and eco-friendly air and water solutions for cooling and heating



Samsung system air conditioner

Adopt air conditioning solutions from a trusted brand

At Samsung, our focus is on providing smart solutions for better business and a higher quality of life. We imagine all sorts of innovative ways to improve how homes and businesses function and to help them run smoothly.

We're proud to say our Samsung brand is recognized as one of the world's leading intuitive product design companies, and one of the world's top electronics producers. Samsung system air conditioners have been designed with the same passion for innovation and quality that has helped make Samsung one of Interbrand's 2014 Best Global Brands.

As such, Samsung system air conditioners are held in high esteem around the world and have been selected for a multitude of applications, including shopping centers, airports, stadiums and hotels. And in constant pursuit of excellence, we continue to invest heavily in research and development, performance testing and quality control to deliver superior air conditioning systems to market.

Control the atmosphere with smart, efficient technology

Samsung system air conditioners provide the best in performance and efficiency to ensure residential and commercial environments are perfectly tempered, healthy and comfortable—all while conserving costs. Our intelligent, high-capacity air conditioning systems offer just the right solution for any application.

Energy-efficient, eco-friendly technology

Samsung is committed to providing eco-friendly air conditioners and air solutions that help prevent global warming and contribute to resolving energy shortages. Using components such as eco-friendly R-410A refrigerant and smart inverter technology, Samsung air conditioners reduce air pollution and provide comfortable cooling with minimal power consumption, saving the environment and costs.

Reliable performance

Reliability is a key factor when choosing an air conditioning system. With their robust design, Samsung system air conditioners offer the strength and reliability to ensure consistent performance at all times. Their perfectly synchronized parts offer balanced operation for improved durability and longevity. Furthermore, weather resistance keeps the units operating even in adverse temperatures.

Exceptional design and innovation

Samsung system air conditioners are lauded industry wide for their innovative technology and exquisitely beautiful, yet high-functioning design. From prestigious institutions and exhibitions across the globe, Samsung units have garnered copious awards, including the Galeria de Innovacion Award, iF Product Design Award, Comfort & Design Award, and Good Design Award.



Energy efficiency

Energy efficiency

Save primary energy, spend less money

'Energy efficiency plan' is aimed to reduce primary energy usage up to 20% by 2020. EU nations are trying to save money that is being wasted by unnecessary energy loss.



Eco-labels & Declaration

Samsung Electronics makes on-going efforts to develop environment-friendly products that minimize the negative impacts on the environment in every aspect of its products, from raw material procurement to production, transportation, usage and final disposal. Concerns for the environment are at the core of each product development.

Samsung's environment-friendly technologies and recycling programs have been highly recognized via various global approvals and awards worldwide.

Reason why we made Samsung EHS



Global Warming

Human activity has resulted in an increase in Greenhouse gas emissions (CO₂).



Oil is running out!

As the oil price is getting higher, we need renewable energy resources.



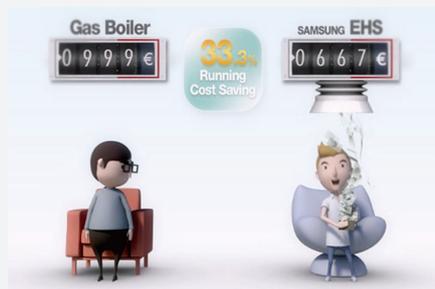
Un-Sustainable Resources

Rising oil prices have led to the associated operating costs of heating a home to increase.



Samsung EHS

Samsung's system can be integrated into your home and provide heating, hot water supply and air conditioning using only one system.



Save money

Samsung's EHS, can reduce your running costs by up to a 30% compared to a standard gas boiler system.



Keep our planet green

Using renewable energy efficiently instead of conventional boilers, will reduce CO₂ emissions and keep our planet green.

Lineup

		EHS mono		EHS split		EHS TDM	
							
CAPACITY		1P 220-240 V 50 Hz	3P 380-415 V 50 Hz	1P 220-240 V 50 Hz	3P 380-415 V 50 Hz	1P 220-240 V 50 Hz	
Outdoor Unit	POWER						
	4.0kW			●			
	5.0kW	●					
	6.0kW			●			●
	7.0kW						●
	8.0kW						●
	9.0kW	●	●	●	●		
	11.0kW						●
	12.0kW	●	●	●	●		
	14.0kW	●	●	●	●		●
	16.0kW	●	●	●	●		●
Hydro Unit	8.0kW						●
	9.0kW			●	●		
	16.0kW			●	●		●
Control Kit		●					
Indoor Unit	Model					Neo Forte	Slim Duct
	2.2kW					●	●
	2.8kW					●	●
	3.6kW					●	●
	4.5kW						●
	5.6kW					●	●
	7.1kW					●	
	10.0kW						
Key Features	<ul style="list-style-type: none"> Easy installation Compact and light outdoor unit Base plate heater (9~16kW) 		<ul style="list-style-type: none"> High reliability Newly designed fan Base plate heater (9~16kW) Flexibility 		<ul style="list-style-type: none"> Integrated heating and cooling system at a lower cost Perfect all-in-one system Quick heating by TDM technology Typical seasonal usage Flexibility Wall-mounted, Duct type indoor units Diverse installation 		

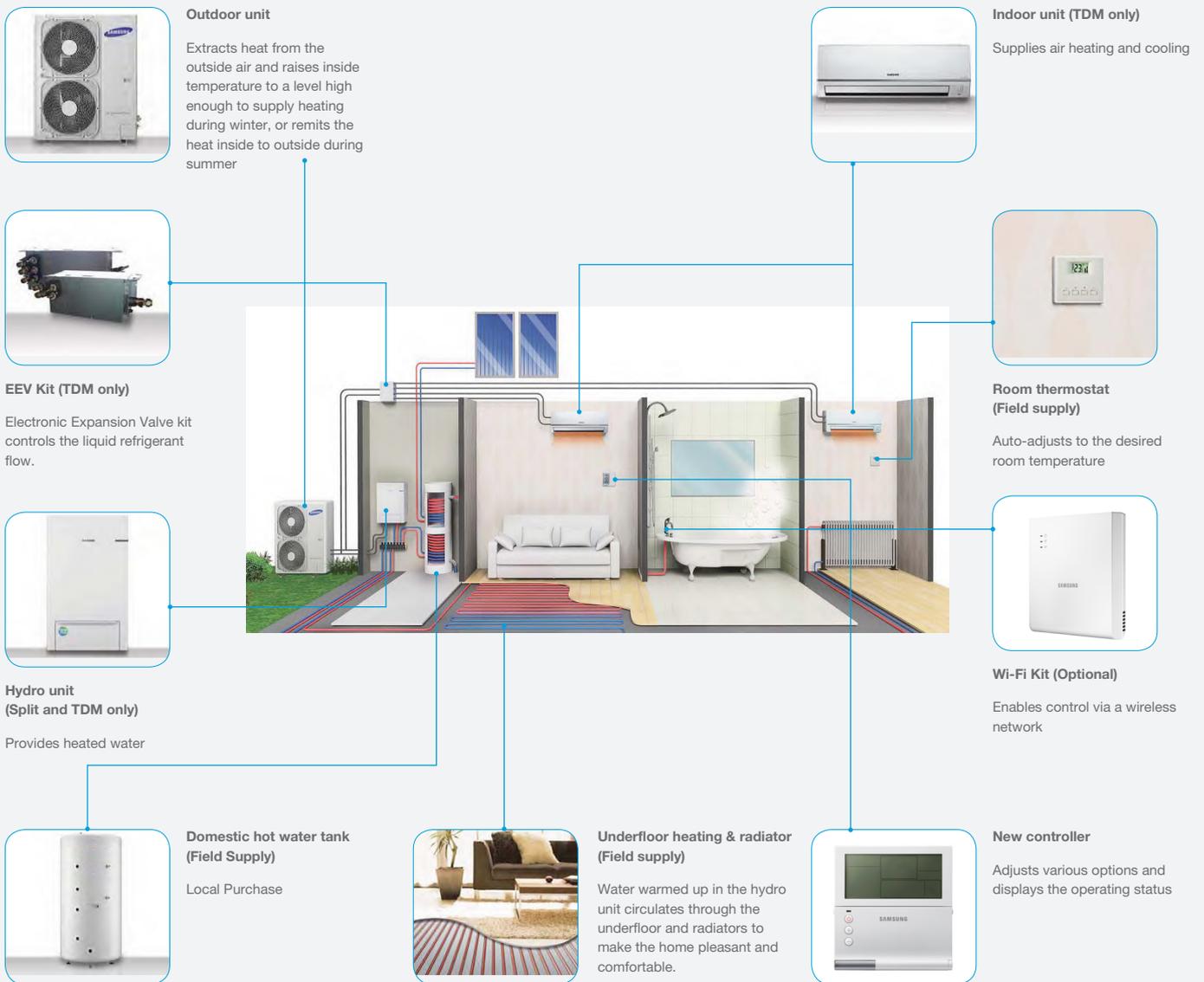
Eco Heating System

Experience eco-smart temperature control with efficiency and economy in mind

In the wake of rising greenhouse emissions and oil costs, Samsung offers an energy-smart, all-in-one heating, hot water and air conditioning unit for today's residences.

The Samsung Eco Heating System (EHS) uses highly efficient heat pump technology to deliver supreme comfort and low operating costs year-round.

This economical and ecological air conditioning system uses significantly less energy than conventional boiler systems, thereby lowering power costs and CO₂ emissions. Plus, it provides various combinations of air and water solutions for heating and cooling that satisfy varied users' needs throughout all four seasons.

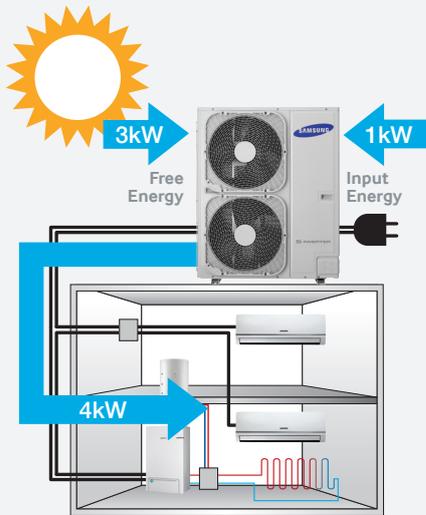


Eco Heating System

Smart heat pump technology

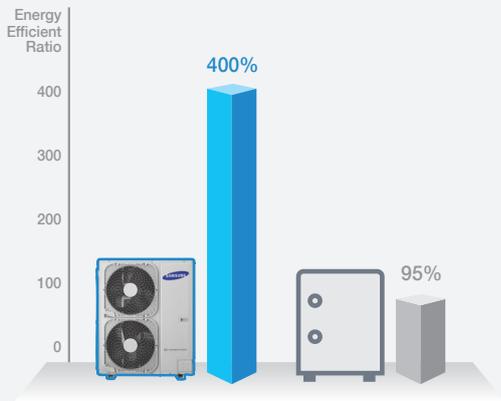
The technology

A heat pump is an energy-efficient system that uses the heat from the ambient air for heating and hot water. By using the ambient air and transferring this heat into the house through a hydronic system, such as underfloor heating, a heat pump requires less power input and offers greater power output than conventional boilers.



How it works

For every 1 kWh of energy input, a heat pump can deliver up to more than 4 kWh in energy output. This is an energy efficiency ratio of more than 400 percent, which is superior to high energy efficiency boiler systems. Since conventional boiler systems can only reach an efficiency ratio of up to 95 percent, they consume more energy than they can ever deliver.



The benefits

Integrating a heat pump system for basic heating and hot water in the home is an energy-efficient and environmentally friendly solution. The most noticeable advantage of the heat pump's energy efficiency is a sizeable reduction in energy bills. The EU has defined heat pump systems as renewable products. Under this classification, end users can apply for government subsidies or tax refunds when installing heat pump systems.

Samsung EHS for smarter heating and cooling

The Samsung EHS suite offers a complete range of systems designed to meet individual heating and cooling needs, while supporting energy efficiency:

- **EHS Mono uses** features an integrated design that includes the hydronic components, which simplifies installation and saves space.
- **EHS Split**, the newest in the lineup, is an air-to-water heating system designed for high-performance heating.
- **EHS TDM** delivers ultimate, all-season comfort with both air-to-air and air-to-water heating and cooling.

Eco Heating System

High performance, efficient control

Set the atmosphere seamlessly with eco-efficient temperature control

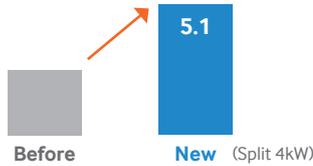
Samsung EHS combines the best of efficiency, powerful performance and manageability in an all-in-one heating and cooling system. Residents can easily create a restful, comfortable environment with a full range of operation and the convenience of wireless control.

- **World-class efficiency.** Achieve superior-grade efficiency with eco-friendly heat pump technology, saving significant energy and costs.
- **Powerful heating.** Weather cold climates perfectly with advanced heating performance at low ambient temperature, featuring a heating capacity of approximately 90% at -10°C.

- **Low noise level.** Rest soundly through the night with a noise level as low as 47 dB.
- **Wide range of operation.** Create an environment that suits individual comfort with a wide range of temperature control—even down to -25°C.
- **Smart Wi-Fi.** Manage temperatures anywhere, anytime with wireless control with
- **Full range.** Select from a full spectrum of high-performance heating and cooling systems to meet every need, including all-new 4 kW EHS Split and 5 kW EHS Mono.

World-class Efficiency

The Highest Grade



Before New (Split 4kW)

Powerful Heating

90% at the Low Ambient



* 90% of heating performance at -10°C of ambient Temp.

Low Noise Level

47dB(SPL) for 6kW

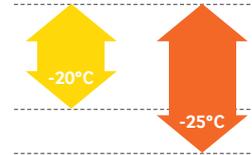


* Competitor D = 48dB (6kW)
3-step Silent Mode at Night



Wide Range of Operation

Down to -25°C



* at winter season

Smart Wi-Fi

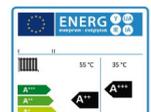
Control Anywhere, Anytime



* Optional Kit

Full Range

The New 4kW Split & 5kW Mono

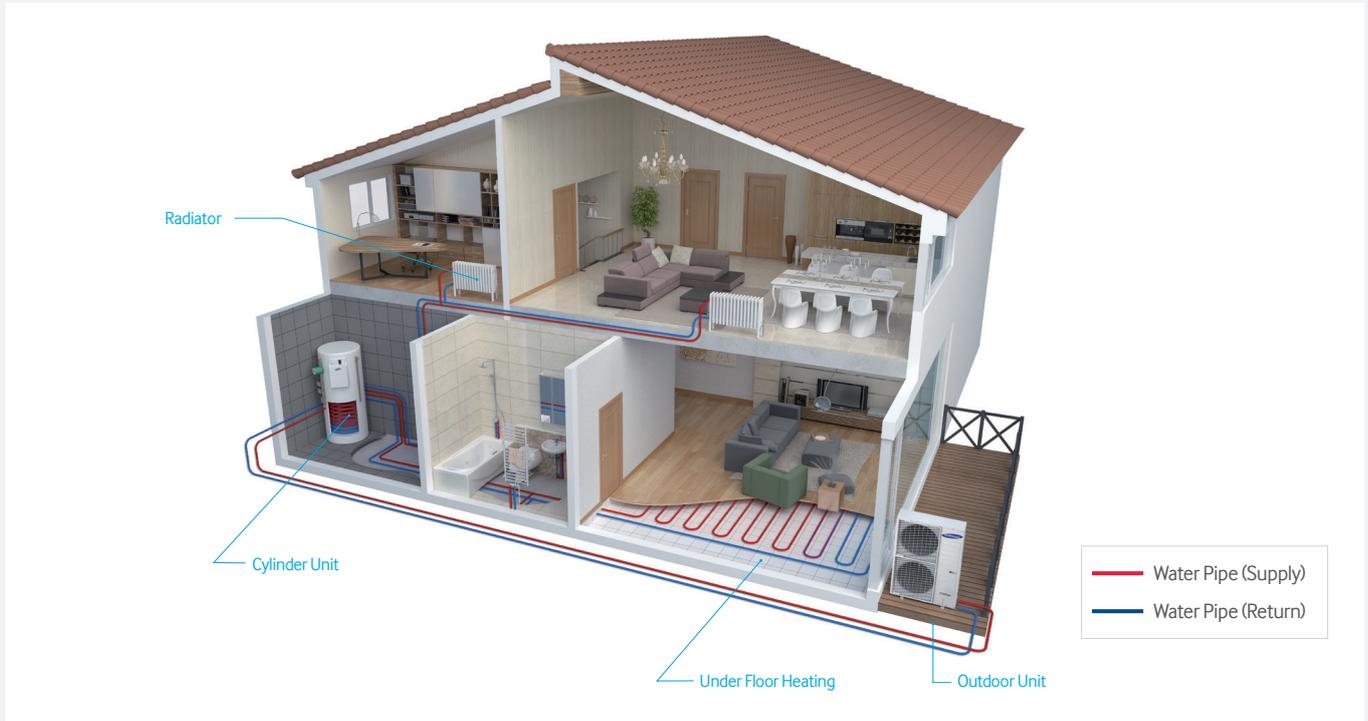


* Designed for the EPBD (Energy Performance of Buildings Directive)

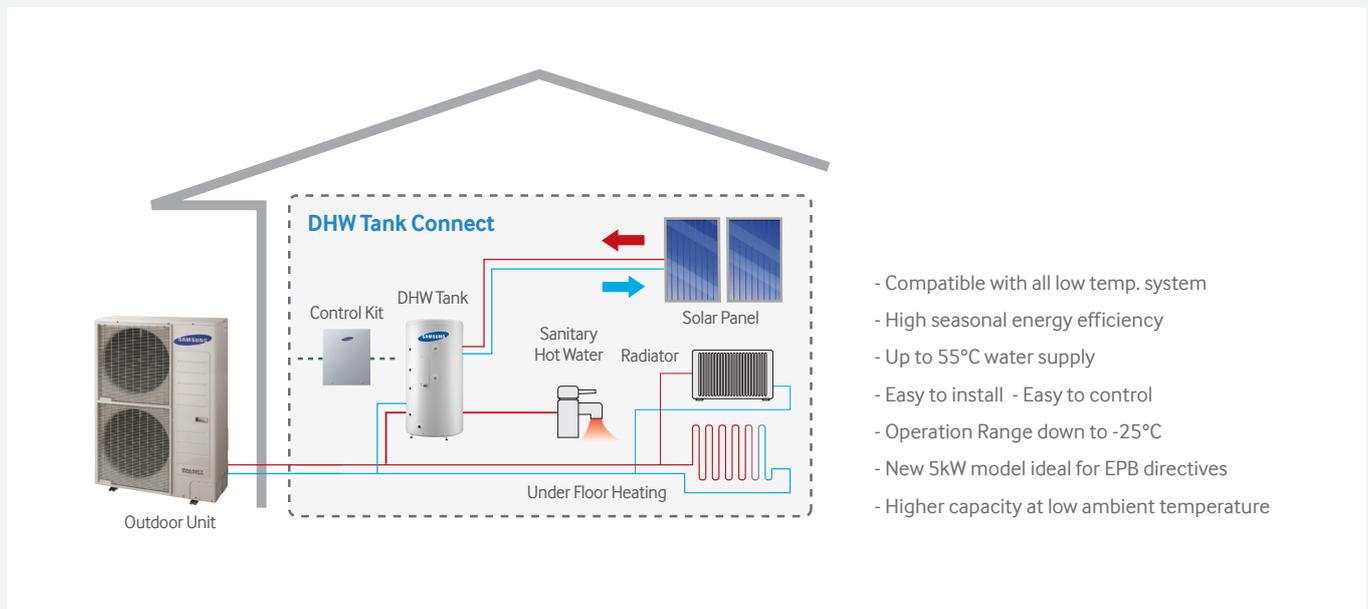
EHS Mono

Maintain optimal comfort and convenience with energy- and cost-efficient units

Samsung EHS Mono integrates an outdoor unit that includes the hydronic parts. Therefore, EHS Mono does not require space or an installation process for hydronic units and the refrigerant pipes.



EHS Mono process overview (air-to-water)



EHS Mono

Simplified units for maximum convenience

Enjoy a pleasant environment with streamlined, energy-efficient heating and cooling

The EHS Mono offers a host of features that deliver energy-smart performance, while supporting simplified usability.

High performance at low temperature

Samsung EHS Mono is made up of an inverter compressor optimally operated according to the outdoor temperature, offering heating capacity of 90% at -10°C and reliable antifreezing protection at -25°C.



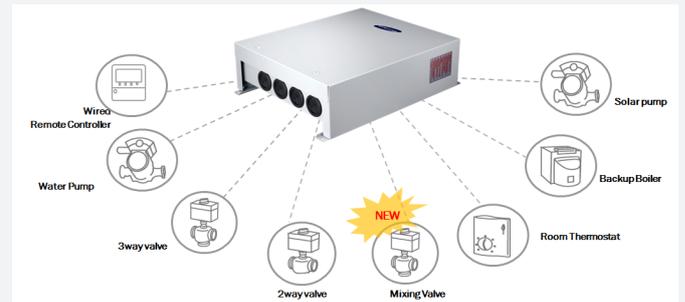
Compact, lightweight units for easy installation

Samsung EHS Mono features a compact, lightweight outdoor unit. Its unique frame considerably saves installation labor and costs, satisfying both installers and customers.

EHS Mono System	Competitor Mono System				
<p>40%</p> <p>Space 0.310m³ 40% Smaller Volume 0.440m³ 40% More Compact Weight 103kg 40% Less Weight</p>	<table border="1"> <thead> <tr> <th>Company A</th> <th>Company B</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> W x H x D (mm): 1,435 x 1,418 x 382 Space 0.584m³ Volume 0.777m³ Weight 180kg </td> <td> <ul style="list-style-type: none"> W x H x D (mm): 1,020 x 1,350 x 330 Space 0.337m³ Volume 0.454m³ Weight 148kg </td> </tr> </tbody> </table>	Company A	Company B	<ul style="list-style-type: none"> W x H x D (mm): 1,435 x 1,418 x 382 Space 0.584m³ Volume 0.777m³ Weight 180kg 	<ul style="list-style-type: none"> W x H x D (mm): 1,020 x 1,350 x 330 Space 0.337m³ Volume 0.454m³ Weight 148kg
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Control kit

Control kit is an interface to allow connection to other auxiliary hydronic and heating equipment. Samsung Mono outdoor units can be used with this interface box, creating an ideal solution when a hydronic and heating equipment is required.



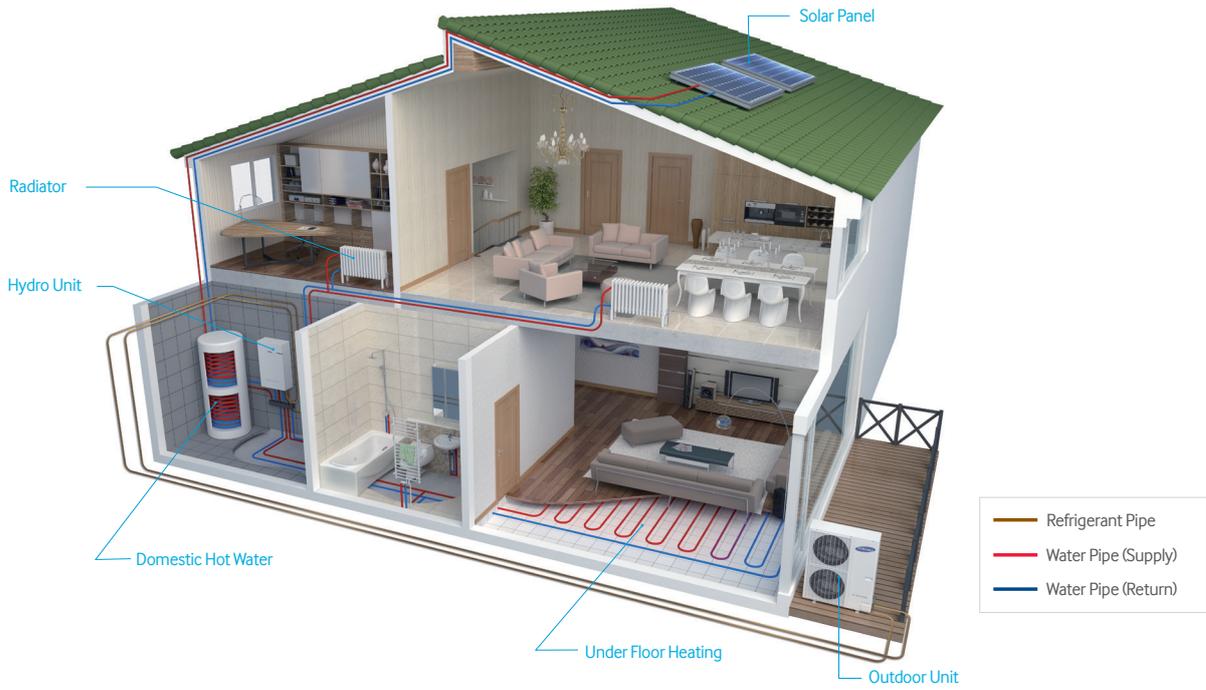
Efficiency (EHS MONO)



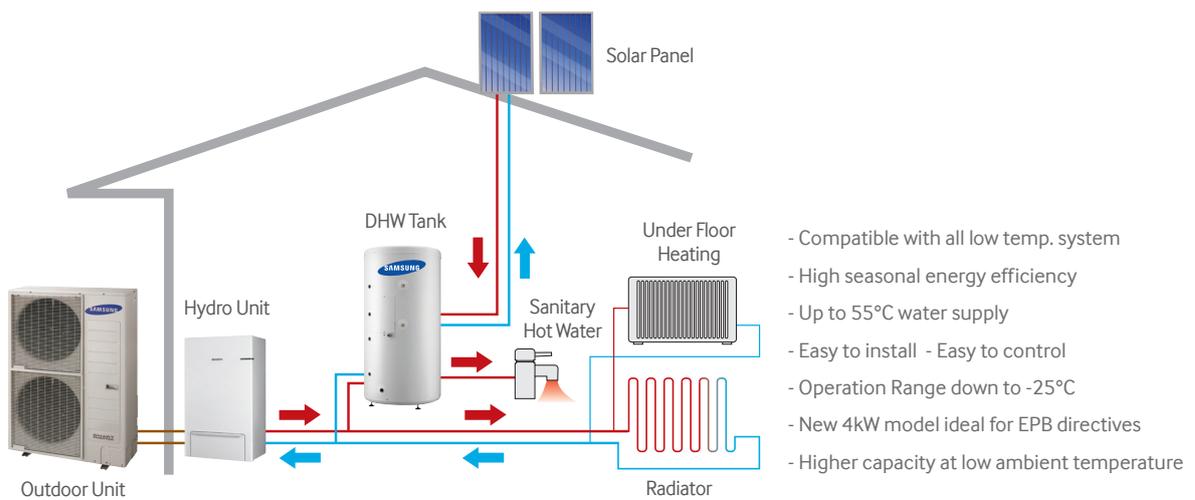
EHS Split

Temper every room perfectly in any climate

Samsung EHS Split is the newest system designed to meet the up-to-date heating demands of today's households. Built especially for optimized heating, this air-to-water heating system delivers superior comfort even in extreme temperatures.



EHS Split process overview (air-to-water)



EHS Split

Ultimate heating performance

Enjoy consistent comfort even in frigid weather conditions

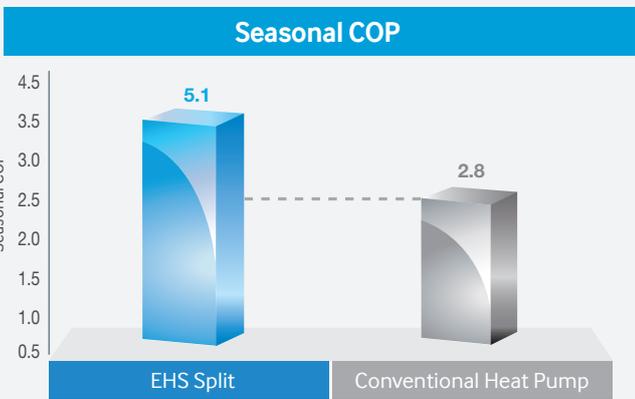
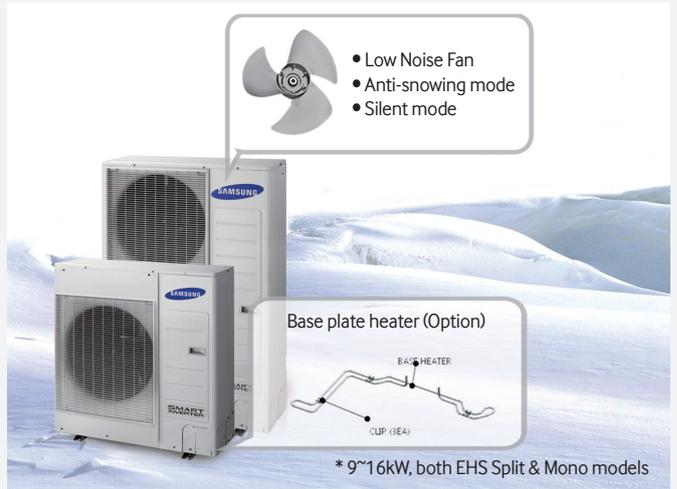
Samsung EHS Split features enhanced efficiency, flexibility and performance to ensure a comfortable home atmosphere year-round.

Optimized seasonal efficiency

EHS Split provides consistently efficient performance all season long. It optimizes heating performances at the actual operating temperature, -2°C to 2°C, while providing outstanding SCOP in compliance with eco-design directives.

Maximum reliability

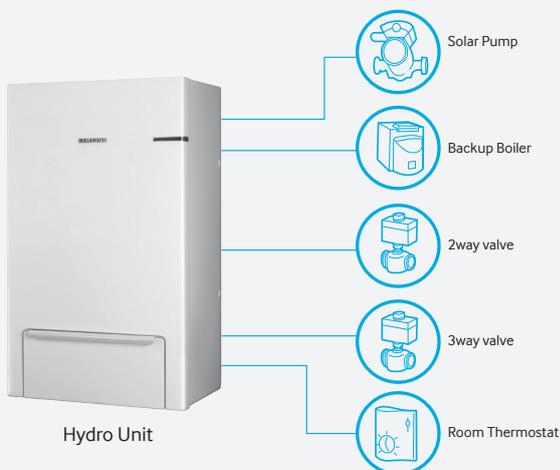
Samsung has added subtle improvements that deliver a noticeable difference. EHS Split has been optimized to meet up-to-date heating and cooling demands with features such as low noise fan, anti-snowing and silent mode at night.



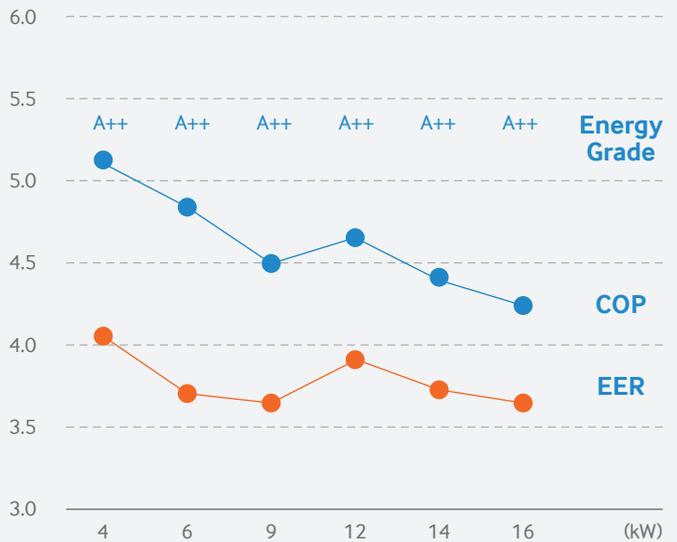
(Split 4kW)

Flexibility for increased control

Samsung EHS Split offers broad compatibility for easier control. The unit can be implemented with a domestic hot water tank, thermostat, pump, solar panel or back-up boiler, making it exceptionally versatile.



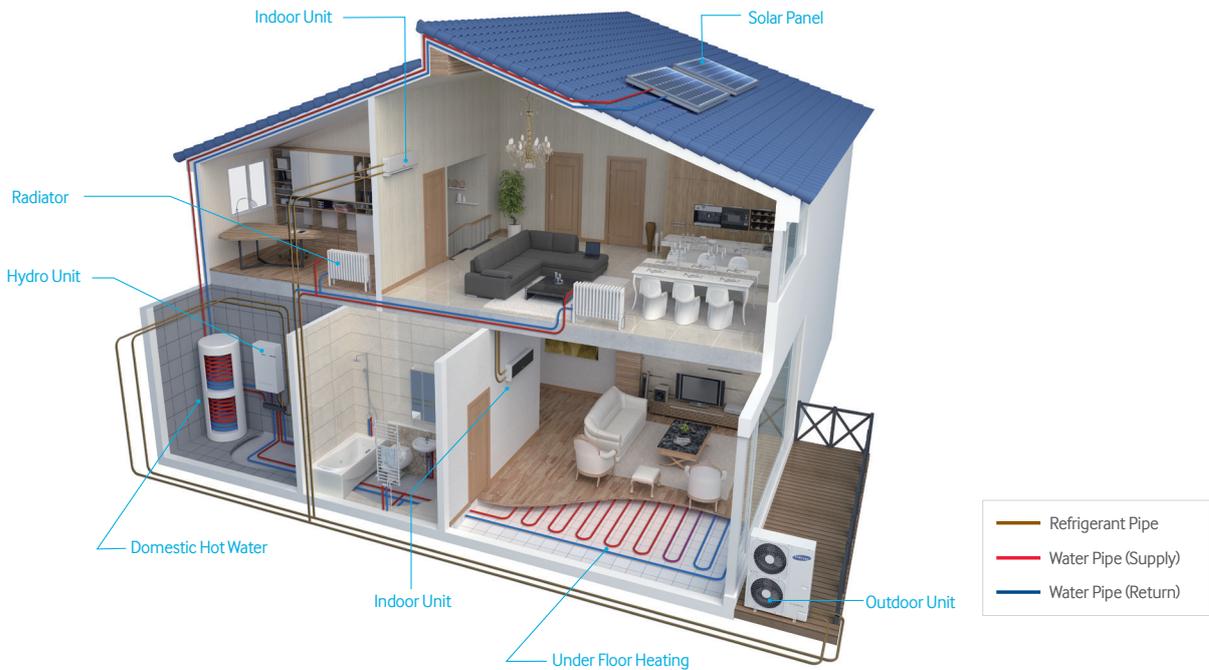
Efficiency (EHS SPLIT)



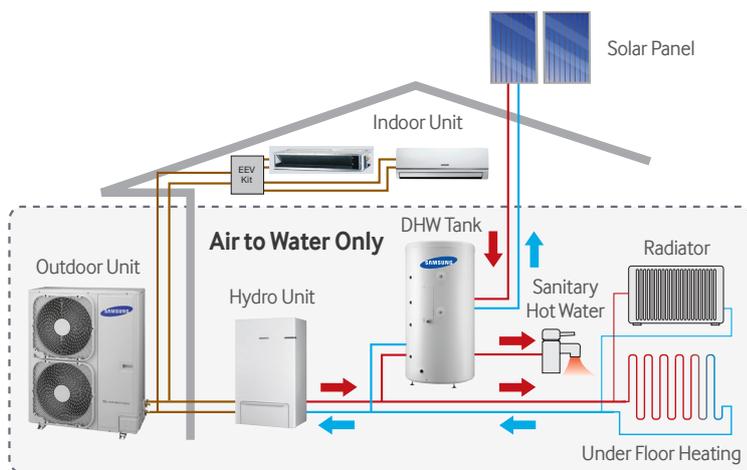
EHS TDM

Stabilize the atmosphere with all-season heating and cooling

The all-in-one Samsung EHS TDM (Time Division Multi) supports both air-to-air and air-to-water heating and cooling, providing the ultimate indoor climate solution for every season.



EHS TDM process (Air-to-Air and Air-to-Water)



Air to Air + Air to Water

- A2W+A2A Space heating and sanitary hot water
- A2W+A2A Space cooling (by reversing heating cycle)
- Consist of Outdoor unit, hydro unit, DHW tank (optional) and indoor units (Wall mounted and slim duct type)
- Compatible with 2 hybrid energy sources (field supply): Solar panel/ Back-up boiler

Air to Water Only

- A2W Space heating and sanitary hot water
- A2W Space cooling (by reversing heating cycle)
- Consist of Outdoor unit, hydro unit, DHW tank (optional)
- Compatible with 2 hybrid energy sources (field supply): Solar panel/ Back-up boiler

EHS TDM

All-season comfort

Enjoy smart temperature control throughout the year

Samsung EHS TDM offers an integrated solution to residents' heating and cooling needs in every season. Its all-in-one design, innovative TDM technology and broad flexibility only enhance its performance, delivering unparalleled comfort for any household.

Low-cost integrated heating and cooling

With EHS TDM, both water and air are heated by a single outdoor unit.

Air-to-air

Air-to-air heating and cooling brings comfort to the home while rapidly achieving a stable temperature. EHS TDM can also be used for cooling in the summer and heating in the winter.



Air Cooling



Air Heating

Air-to-water

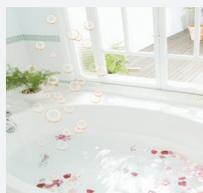
Air-to-water heating and cooling tempers the atmosphere perfectly and cost effectively. The efficient system uses energy from the outside air to heat the radiator, under-floor and sanitary water supply.



Under Floor Heating



Radiator

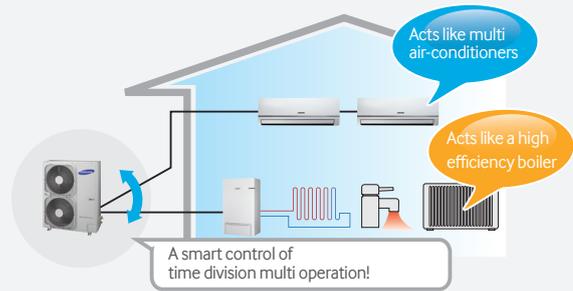


Hot Water

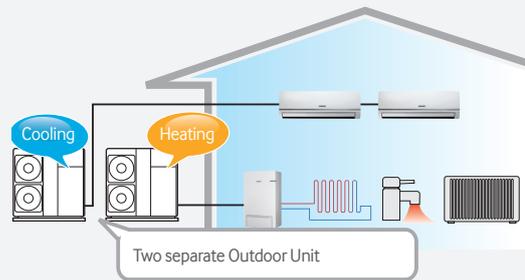
Perfect all-in-one system

EHS TDM requires installation of only one outdoor unit. Smart control of TDM operation between air-to-water and air-to-air enables one outdoor unit to operate for both functionalities, resulting in lower product cost and space saving.

SAMSUNG EHS TDM System



Company A



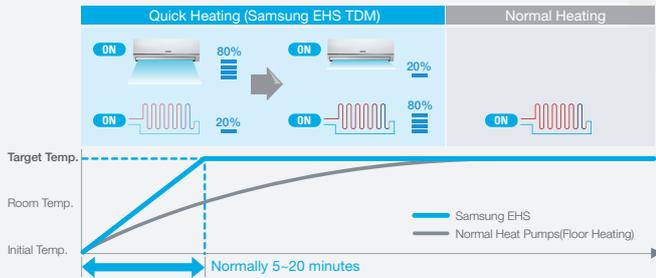
EHS TDM

Fast heating with TDM technology

Quick heating with TDM technology

Floor heating is well recognized as the optimal heating option for indoor thermal comfort. However, it takes 4 ~ 8 hours to heat up the room after turning on the floor heating. Samsung TDM technology, the first of its kind in Europe, quickens the warmup with double the heating source. EHS TDM distributes hot air and provides floor heating to rapidly warm up the room.

Samsung TDM technology, the first of its kind in Europe, quickens the warmup with double the heating source.



Typical seasonal usage

Typically, a different heating solution is needed for each season's particular climate. Samsung EHS can be used all year long—regardless of the climate—because a single outdoor unit can be used for both air-to-water or air-to-air cooling and heating.



Wide compatibility and flexibility

Samsung EHS TDM offers broad compatibility for easier control. The unit can be implemented with a domestic hot water tank, thermostat, pump, solar panel or back-up boiler, making it exceptionally versatile.



EHS TDM

Versatile, cost-effective installation

Selection of indoor units

Homeowners can choose the most appropriate indoor unit according to their interior design taste or functional needs.



Neo Forte. This unit's clean panel design with a unique silver accent adds a touch of class to the interior space.

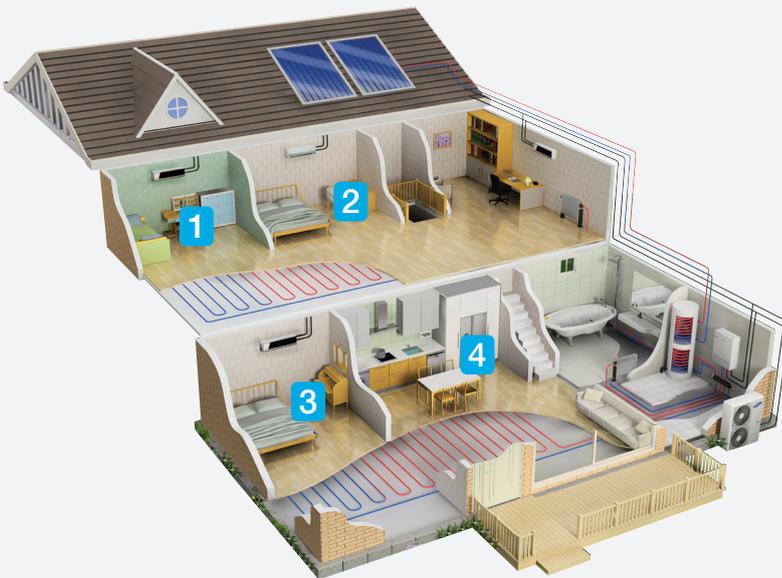


Slim Duct. Concealed behind ceilings, Slim Duct enhances the luxurious ambience of indoor spaces while providing fresh and powerful cool air.

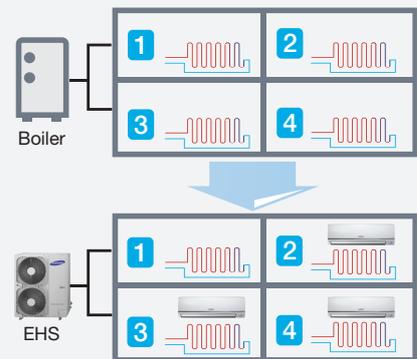
Diverse installations

Samsung EHS TDM supports diverse installation applications. Homeowners looking for an economical heating system for either new homes or renovation projects may find Samsung EHS TDM an attractive option. This single solution can replace the existing boiler and provide several installation options to meet homeowners' budgetary needs.

- Bed Room / Study
1 2 3
- Living Room / Kitchen
4



For Existing Houses with Boilers



Replace the boiler with Samsung Eco Heating System(EHS) and add air-conditioners where cooling is needed.

For New or Renovated Houses

More Choices in installation!



Floor heating or radiators are ONLY OPTIONAL!
Air-conditioners do both heating and cooling!

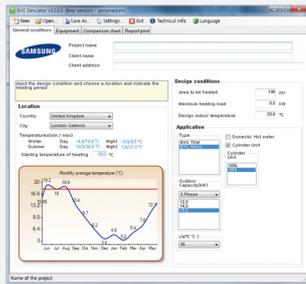
Saving Installation Cost!

EHS Simulator

Through EHS simulation program, you can select devices and simulate heating load, energy consumption, cost, CO2 emission and LCC (Life cycle cost) analysis according to national/regional temperature and architectural conditions. Furthermore, simulation report can be submitted to the client in saved file or printed format.

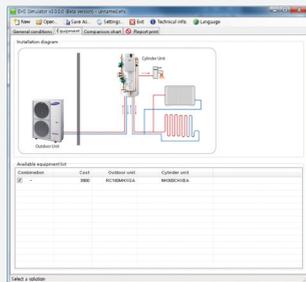
General conditions

- Location / Design Conditions / Application Setting



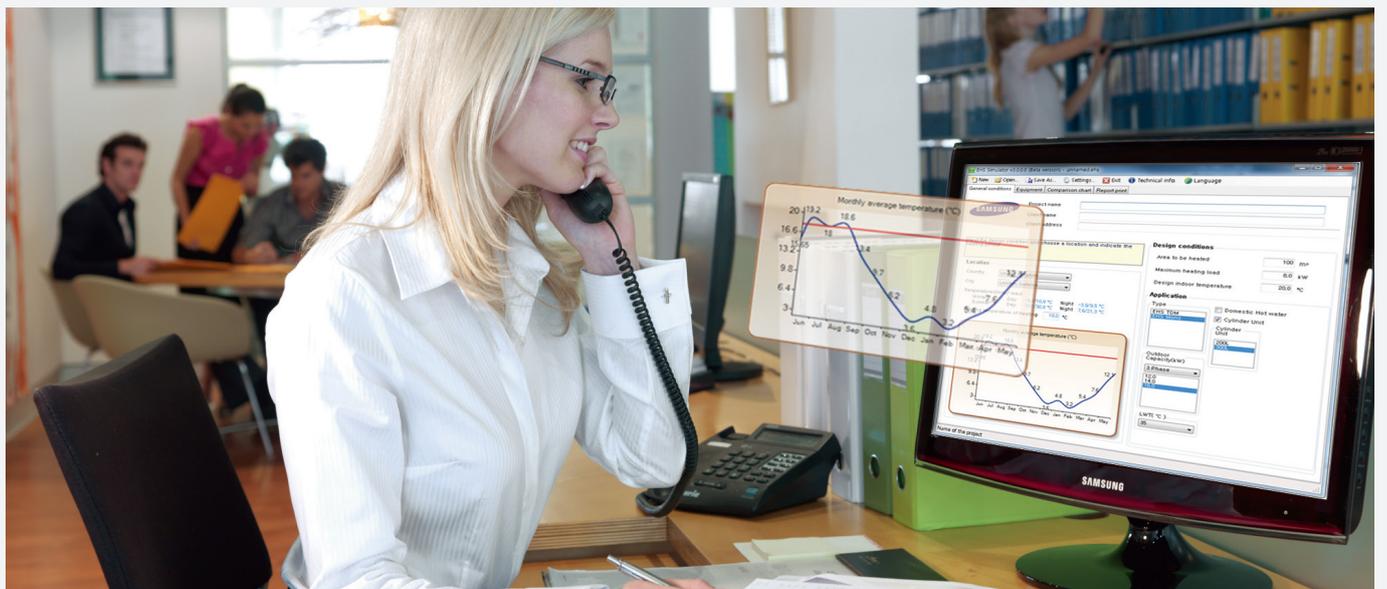
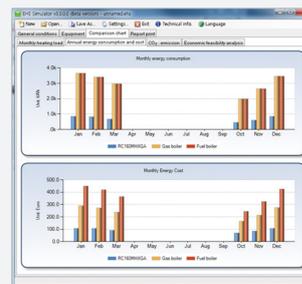
Equipment

- Installation Diagram / Available Equipment List Check



Comparisons chart

- Monthly Heating Load / Annual Energy Consumption & Cost / CO₂ Emission / GHG Benefit / LCC Analysis



Samsung Eco Heating System

Power Source	kW	Residential Solution			Commercial Solution		
		EHS Split	EHS Mono	EHS TDM	DVM HE	DVM HT	
Outdoor Unit	1P, 220-240V 50Hz	4.0 – 5.0	AE040JXEDEH	AE050JXYDEH			
		6.0	AE060JXEDEH		RD060PHXEA		
		7.0			RD070PHXEA		
		8.0			RD080PHXEA		
		9.0	AE090JXEDEH	AE090JXYDEH			
		11.0			RD110PHXEA		
		12.0	AE120JXEDEH	AE120JXYDEH			
		14.0	AE140JXEDEH	AE140JXYDEH	RD140PHXEA		
	3P, 380-415V 50Hz	16.0	AE160JXEDEH	AE160JXYDEH	RD160PHXEA		
		9.0	AE090JXEDGH	AE090JXYDGH			
		12.0	AE120JXEDGH	AE120JXYDGH			
		14.0	AE140JXEDGH	AE140JXYDGH			
	DVM Outdoor	3P, 380-415V 50Hz	-			DVM S series	DVM S series
DVM EHS Hydro	1P, 220-240V 50Hz	9.0	AE090JNYDEH		NH080PHXEA		
		16.0	AE160JNYDEH		NH160PHXEA	AM160FNBDEH	AM160FNBFEH
		32.0				AM320FNBDEH	AM250FNBFEH
		50.0				AM500FNBDEH	
	3P, 380-415V 50Hz	9.0	AE090JNYDGH				AM160FNBFGH
		16.0	AE160JNYDGH				AM250FNBFGH

Legal and additional information

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