

Standard

thermostatic valve body without presetting



HEIMEIER

Pressurisation & Water Quality › Balancing & Control › Thermostatic Control

ENGINEERING ADVANTAGE

The Standard thermostatic valve bodies are used in two-pipe pump heating systems with normal temperature spread. The double O-ring sealing and the the valve body made of corrosion-resistant gunmetal ensure a long-life and maintenance-free operation.

➤ **Double O-Ring seal**

for durable and maintenance free operation

➤ **Valve body in Gunmetal**

corrosion-resistant and safe

➤ **Thermostatic insert replaceable under pressure**

with DN 10 to DN 20

➤ **Also available in press version with Viega SC-Contur**

For a quick and secure connection



➤ Technical description

Applications:

Heating and cooling systems.

Function:

Control
Shut-off

Dimensions:

DN 10–32

Pressure class:

PN 10

Temperature:

Max. working temperature: 120°C, with protection cap or actuator 100°C, with press connection 110°C.

Min. working temperature: -10°C.

Materials:

Valve body: corrosion resistant Gunmetal

O-rings: EPDM rubber

Valve disc: EPDM rubber

Return spring: Stainless steel

Valve insert: Brass

The complete thermostatic insert can be replaced using the HEIMEIER fitting tool without draining the system.

Spindle: Niro-steel spindle with double O-ring sealing.

The outer O-ring can be replaced under pressure.

Surface treatment:

Valve body and fittings are nickel-plated.

Marking:

THE, country code, flow direction arrow, DN and KEYMARK-Designation. II-Designation. Black protection cap.

KEYMARK-certified thermostatic heads and thermostatic valve bodies see also technical leaflet "Thermostatic Heads".



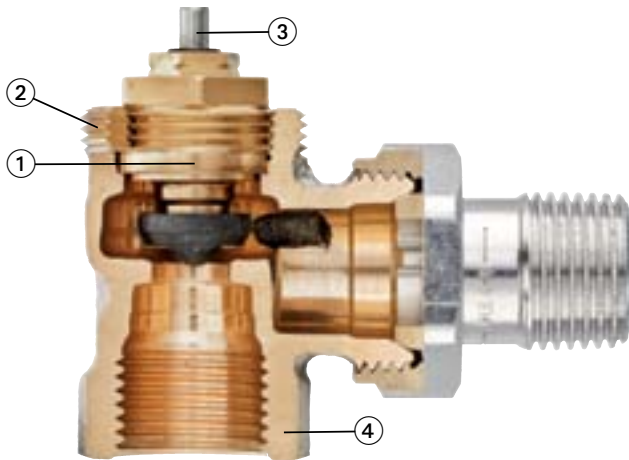
Pipe connection:

The female-threaded version is designed for connection to threaded pipe, or in conjunction with compression fittings, to copper precision steel or multi-layer pipe (only DN 15). The male-threaded version, in conjunction with the appropriate compression fittings, permits connection to plastic pipe. Versions with Viega press connection (15 mm) with SC-Contur are suitable for copper, Viega Sanpress stainless-steel, and Prestabo steel pipe.

Connection to thermostatic head and actuator:

M30x1,5

Assembly



1. The insert can be replaced without draining off the system with the HEIMEIER fitting tool
2. M30x1.5 HEIMEIER connection technology
3. Niro-steel spindle with long-life double O-ring sealing
4. Body made of corrosion-resistant gunmetal

Application

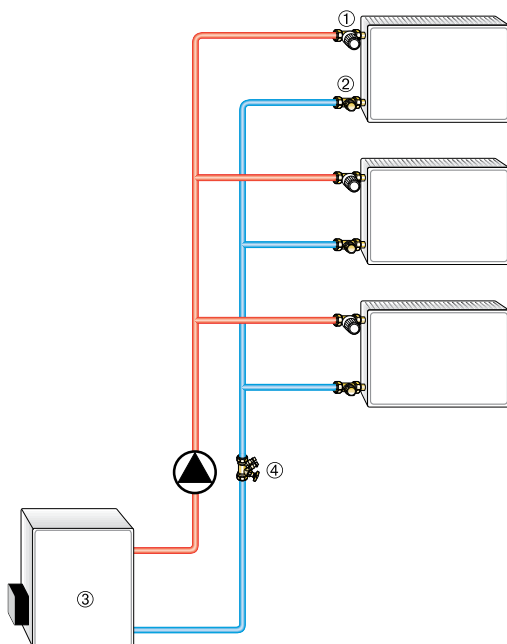
The HEIMEIER Standard thermostatic valve bodies are used in two-pipe pump heating systems with normal temperature spread. Corresponding to the standards EnEV and DIN V 4701-10, the valve bodies can be designed with a p-band from 1 K to 2 K thus enabling a broad flow spectrum. A hydraulic balance, which is an additional requirement, can be reached with the appropriate lockshields e. g. HEIMEIER Regulux.

Noise behaviour

To ensure low-noise performance, the following conditions must be met:

- On the basis of experience, the differential pressure over the thermostatic valves should not exceed about 20 kPa = 200 mbar = 0.2 bar. If in designing the system, higher transient differentials might be experienced in the part-load flow range, differential pressure control equipment such as a STAP Differential Pressure Controller or Hydrolux bypass valves can be used (see diagram for noise characteristic curve).
- Mass-flow must be correctly adjusted.
- The system must be completely deaerated.

Sample application



1. Standard thermostatic valve body
2. Regulux lockshield
3. Boiler
4. TA STAD balancing valve

Notes

– To avoid damage and the formation of scale deposit in the hot water heating system, the composition of the heat transfer medium should be in accordance with the VDI guideline 2035.

For industrial and long-distance energy systems, see the applicable codes VdTÜV and 1466/AGFW FW 510. A heat transfer medium containing mineral oils, or any type of lubricant containing mineral oil can have extremely negative effects on the source apparatus and usually lead to the disintegration of EPDM seals.

When using nitrite-free frost and corrosion resistance solutions with an ethylene glycol base, pay close attention to the details outlined in the manufacturers' documentation, particularly concerning concentration and specific additives.

– The thermostatic valve bodies can be used with all TA Hydronics thermostatic heads and thermal or motorized actuators. The optimal tuning of the components guarantees maximum safety. When using actuators from other manufacturers, make sure that the pressure power is appropriate for thermostatic valve bodies with soft sealing valve discs.

Press-Line Connection with Viega SC-Contur

Thermostatic valve bodies with 15 mm Viega press connection are suitable for copper pipes conforming to EN 1057 as well as Viega Sanpress stainless steel and Prestabo steel pipes. All press connections as well as the valve bodies are made of corrosion-resistant, dezincification-free gunmetal.

Since this is a Viega press connection, all suitable Viega press-fitting jaws can be used. This means there is no need to purchase costly press-fitting tools and jaws. The pressing action is produced by a formed hexagon recess before and after the beading of the connector and gives the press-fitted joint the necessary strength. In addition, the press-fitting beading is specifically formed such as to give the highgrade EPDM sealing element its defined shape.

In the interest of safety, the press connections are equipped with SC-Contur (SC = safety connection) which makes it possible to detect non-pressed joints by visible leaks when filling the system. During the press-fitting operation, the SC-Contur is practically reformed and loses its effect in the process, thus producing a permanent, tight and positive joint connection.

Initially, press-fitting joints that do not feature SC-Contur can appear to be tight in the non-pressed state, however, they can slide apart during subsequent operation of the system.

The hexagon on the valve bodies is a particularly practical feature for holding the fittings while tightening the union nut.

The following press-fitting tools can be used, e.g.

- Viega: Type 2, PT3-H, PT3-EH, PT3-AH, battery-powered Presshandy, Pressgun 4E/4B
- Geberit: PWH 75
- Geberit / Novopress: Type N 230V, Type N battery-powered
- Mapress/Novopress: EFP 2, ACO 1 / ECO 1
- Klauke: UAP 2

The suitability of other press-fitting tools should be verified with the respective manufacturer.

We recommend using only Viega press-fitting jaws to make Viega press connections.

Technical data

Diagram DN 10 (3/8") to DN 25 (1"),
valve body with thermostatic head

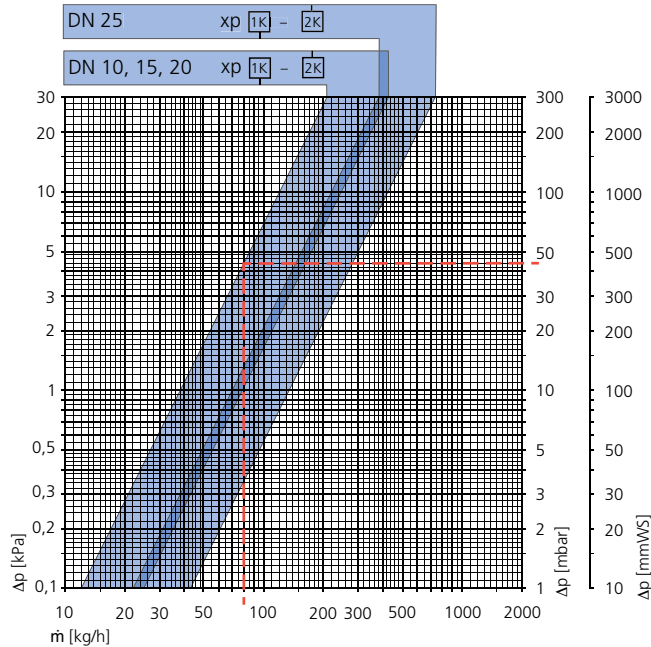
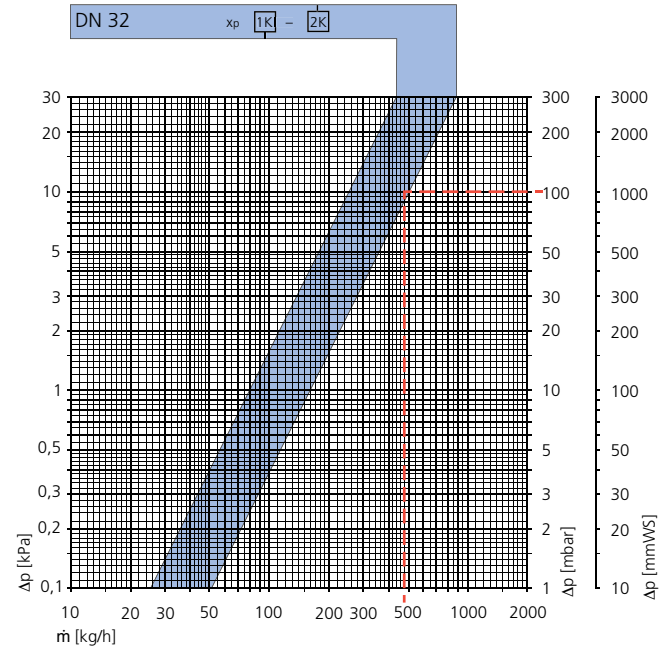


Diagram DN 32 (1 1/4"),
valve body with thermostatic head



Valve body with thermostatic head	kv-value P-band x_p [K]			kvs				Permitted differential pressure, during which the valve is kept closed Δp [bar]		
	1,0	1,5	2,0	Angle	Straight	Axial	Double angle	Th.- head	EMO T-TM/ NC EMOtec/NC EMO 1/3 EMO EIB/LON	EMO T/NO EMOtec/NO
DN 10 (3/8")	0,38	0,59	0,79	2,00	1,50	1,50	1,30	1,00	3,50	3,50
DN 15 (1/2")	0,38	0,59	0,79	2,00	2,00	1,50	1,50	1,00	3,50	3,50
DN 20 (3/4")	0,38	0,59	0,79	2,50	2,50	-	-	1,00	3,50	3,50
DN 25 (1")	0,70	1,04	1,35	5,70	5,70	-	-	0,25	0,80	1,60
DN 32 (1 1/4")	0,80	1,10	1,60	6,70	6,70	-	-	0,25	0,50	1,00

Sample calculation 1

Target:

Pressure loss of Standard thermostatic valve body DN 15 with a p-band of 1 K

Given:

Heat flow $Q = 1395 \text{ W}$

Temperature spread $\Delta t = 15 \text{ K (65/50°C)}$

Solution:

Mass flow $m = Q / (c \cdot \Delta t) = 1395 / (1,163 \cdot 15) = 80 \text{ kg/h}$

Pressure loss from diagram $\Delta p_v = 44 \text{ mbar}$

Sample calculation 2

Target:

Appropriate Standard thermostatic valve body

Given:

Heat flow $Q = 8375 \text{ W}$

Temperature spread $\Delta t = 15 \text{ K (70/55°C)}$

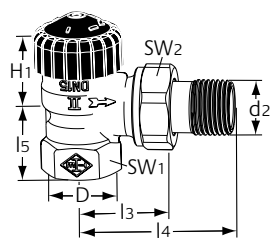
Pressure loss, thermostatic valve $\Delta p_v = 100 \text{ mbar}$

Solution:

Mass flow $m = Q / (c \cdot \Delta t) = 8375 / (1,163 \cdot 15) = 480 \text{ kg/h}$

Standard thermostatic valve body from diagram: DN 32 (1 1/4")

Articles

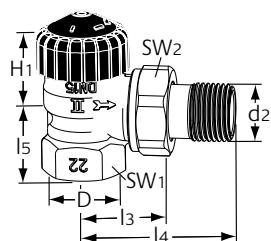


Angle

DN	D	d2	I3	I4	I5	H1	SW1	SW2	kv [xp] 1 K / 2 K	kvs	Article No
10	Rp3/8	R3/8	26	52	22	21,5	22	27	0,38 / 0,79	2,00	2201-01.000
15	Rp1/2	R1/2	29	58	26	21,5	27	30	0,38 / 0,79	2,00	2201-02.000
20	Rp3/4	R3/4	34	66	29	21,5	32	37	0,38 / 0,79	2,50	2201-03.000
25	Rp1	R1	40	75	32,5	23	41	47	0,70 / 1,35	5,70	2201-04.000
32	Rp1 1/4	R1 1/4	46	85	39	23	49	52	0,80 / 1,60	6,70	2201-05.000

Angle

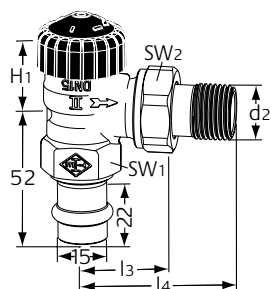
with reduced lengths



DN	D	d2	I3	I4	I5	H1	SW1	SW2	kv [xp] 1 K / 2 K	kvs	Article No
10	Rp3/8	R3/8	24	49	20	21,5	22	27	0,38 / 0,79	2,00	2215-01.000
15	Rp1/2	R1/2	26	53	23	21,5	27	30	0,38 / 0,79	2,00	2215-02.000
20	Rp3/4	R3/4	30	63	26	21,5	32	37	0,38 / 0,79	2,50	2215-03.000

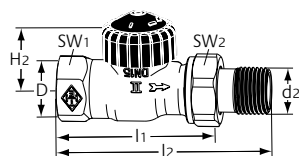
Angle

with Viega press connection 15 mm



DN	d2	I3	I4	H1	SW1	SW2	kv [xp] 1 K / 2 K	kvs	Article No
15	R1/2	29	58	21,5	27	30	0,38 / 0,79	2,00	2291-15.000

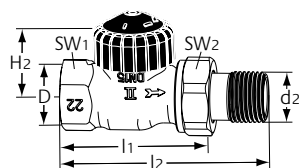
Straight



DN	D	d2	I1	I2	H2	SW1	SW2	kv [xp] 1 K / 2 K	kvs	Article No
10	Rp3/8	R3/8	59	85	21,5	22	27	0,38 / 0,79	1,50	2202-01.000
15	Rp1/2	R1/2	66	95	21,5	27	30	0,38 / 0,79	2,00	2202-02.000
20	Rp3/4	R3/4	74	106	23,5	32	37	0,38 / 0,79	2,50	2202-03.000
25	Rp1	R1	84	118	30,5	41	47	0,70 / 1,35	5,70	2202-04.000
32	Rp1 1/4	R1 1/4	95	135	30,5	49	52	0,80 / 1,60	6,70	2202-05.000

Straight

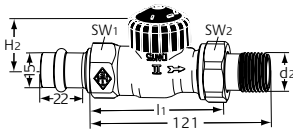
with reduced lengths



DN	D	d2	I1	I2	H2	SW1	SW2	kv [xp] 1 K / 2 K	kvs	Article No
10	Rp3/8	R3/8	50	75	21,5	22	27	0,38 / 0,79	1,50	2216-01.000
15	Rp1/2	R1/2	55	82	21,5	27	30	0,38 / 0,79	2,00	2216-02.000
20	Rp3/4	R3/4	65	98	23,5	32	37	0,38 / 0,79	2,50	2216-03.000

Straight

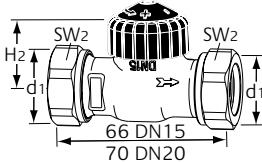
with Viega press connection 15 mm



DN	d2	l1	H2	SW1	SW2	kv [xp] 1 K / 2 K	kvs	Article No
15	R1/2	66	21,5	27	30	0,38 / 0,79	2,00	2292-15.000

Straight

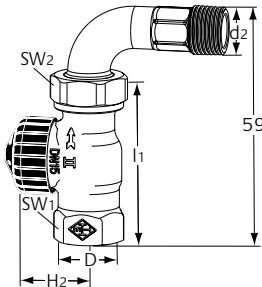
flat sealing



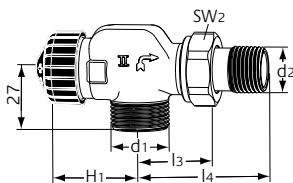
DN	d1	H2	SW2	kv [xp] 1 K / 2 K	kvs	Article No
15	G3/4	21,5	30	0,38 / 0,79	2,00	2274-02.000
20	G1	23,5	37	0,38 / 0,79	2,50	2272-03.000

Straight

with bended nipple



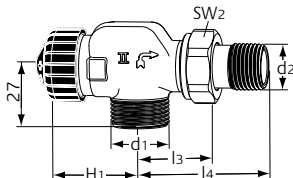
DN	D	d2	H2	SW1	SW2	kv [xp] 1 K / 2 K	kvs	Article No
15	Rp1/2	R1/2	21,5	27	30	0,38 / 0,79	2,00	2206-02.000

Axial

DN	D	d2	l3	l4	H1	SW1	SW2	kv [xp] 1 K / 2 K	kvs	Article No
10	Rp3/8	R3/8	26	52	31,5	22	27	0,38 / 0,79	1,50	2225-01.000
15	Rp1/2	R1/2	29	58	31,5	27	30	0,38 / 0,79	1,50	2225-02.000

Axial

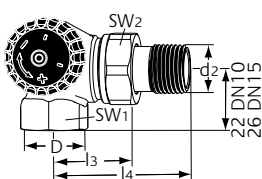
with male thread G3/4



DN	d1	d2	l3	l4	H1	SW1	SW2	kv [xp] 1 K / 2 K	kvs	Article No
15	G3/4	R1/2	29	58	31,5	27	30	0,38 / 0,79	1,50	2235-02.000

Double angle

Connection to radiator left

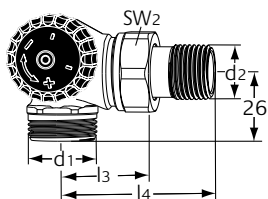


DN	D	d2	l3	l4	SW1	SW2	kv [xp] 1 K / 2 K	kvs	Article No
10	Rp3/8	R3/8	26	52	22	27	0,38 / 0,79	1,30	2311-01.000
15	Rp1/2	R1/2	29	58	27	30	0,38 / 0,79	1,50	2311-02.000

Double angle

with male thread G 3/4

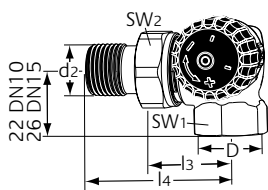
Connection to radiator left



DN	d1	d2	l3	l4	SW2	kv [xp] 1 K / 2 K	kvs	Article No
15	G3/4	R1/2	29	58	30	0,38 / 0,79	1,50	2313-02.000

Double angle

Connection to radiator right

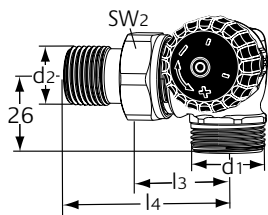


DN	D	d2	l3	l4	SW1	SW2	kv [xp] 1 K / 2 K	kvs	Article No
10	Rp3/8	R3/8	26	52	22	27	0,38 / 0,79	1,30	2310-01.000
15	Rp1/2	R1/2	29	58	27	30	0,38 / 0,79	1,50	2310-02.000

Double angle

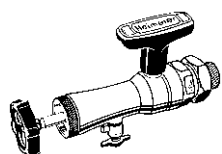
with male thread G 3/4

Connection to radiator right



DN	d1	d2	l3	l4	SW2	kv [xp] 1 K / 2 K	kvs	Article No
15	G3/4	R1/2	29	58	30	0,38 / 0,79	1,50	2312-02.000

Accessories

**Fitting tool**

complete with case, box spanner and replacement seals, for replacing thermostatic inserts without draining off the heating system (for DN 10 to DN 20).

Article No

Fitting tool

9721-00.000

Replacement seals

9721-00.514

Compression fittings and other accessories, see catalogue leaflet „Accessories for thermostatic radiator valves“.

The products, texts, photographs, graphics and diagrams in this document may be subject to alteration by TA Hydronics without prior notice or reasons being given.

For the most up to date information about our products and specifications, please visit www.tahydronics.com.

1211-18.483 01.2012