



V305

MARS Series TRV Body

TRV body with stroke limitation, external threads

APPLICATION

Thermostatic radiator valve bodies (TRV bodies) are fitted on the supply or return of radiators or heat exchangers.

Together with a radiator thermostat, for example the Thera-4, they control the room temperature by regulating the flow of hot water into the radiator or heat exchanger. The temperature of different rooms is controlled individually and energy is saved.

TRV bodies of this type have quiet operation and are fitted to the supply or return of radiators on two-pipe systems with medium flow rates.

The valve insert can be replaced while the system is running and without draining using the service tool (see 'Accessories').

TRV bodies of this type are suitable for

- Honeywell Home radiator thermostats with M30 x 1.5 connection
- Certain Honeywell Home MT4 actuators
- Honeywell Home Hometric HR80 and Roomtronic HR40 actuators

The MARS series is supplied with a protection cap. To convert the MARS series to thermostatic operation the protection cap needs to be replaced by a radiator thermostat, e.g. Honeywell Home Thera-4.

AT-CONCEPT

AT-Concept valves share the same valve housing design. The valve insert can be replaced by any other AT-Concept valve insert, i.e. BB, KV, UBG, SL, VS, FS, FV and SC.

FEATURES

- For heating systems with medium or high flow rates
- For 1- and 2-pipe systems
- NF type bodies with dimensions according to EN 215, Appendix A, Series F
- AT-Concept valve housing and insert
- Bi-directional flow
- Presettable by stroke limitation
- Valve insert can be replaced while system is operating and without draining the system
- Supplied with protection cap
- Standard M30 x 1.5 thermostat connection
- Tailpiece with integrated EPDM O-ring
- Wide range of pipework connections available
- Quiet operation



DESIGN

The premium manual valves consist of:

- Valve housing PN10, DN10 or DN15 with
 - external thread connection M22x1.5 to ISO 965-1 on inlet
 - external thread connection with union-nut and radiator tailpiece on outlet
- Presettable valve insert
- Protection cap
- Union-nut and radiator tailpiece

MATERIALS

- Valve housing made of nickel-plated brass
- Valve insert made of brass with EPDM O-rings, soft seals and stainless steel spindle
- Protection cap made of plastic
- Union-nut and tailpiece made of nickel plated brass with EPDM O-ring

SPECIFICATIONS

Medium:	Heating water, quality to VDI 2035	
pH-value:	8 - 9.5	
Max. operating temperature:	120°C (248°F)	
Operating pressure:	PN10	
Max. differential pressure:	0.2 bar (2.9 psi) recommended for quiet operation	
k _{vs} (cv)-values:	DN10	1.70 (1.99)
	DN15	1.85 (2.16)
Thermostat connection:	M30 x 1.5	
Closing dimension:	11.5 mm	
Stroke:	2.5	

FUNCTION

The TRV body is controlled by the radiator thermostat. Air from the room passing over the sensor of the radiator thermostat causes the sensor to expand when the temperature rises. The sensor acts onto the valve spindle and this causes the TRV body to close. When the temperature falls the sensor contracts and the spring-loaded valve spindle is opened. The TRV opens in proportion to the temperature of the sensor. Only the amount of water required to maintain the room temperature set on the radiator thermostat can flow into the radiator.

Thermostatic radiator valves enable individual control of room temperature and thus save energy.

PLEASE NOTE:

- To avoid stone deposit and corrosion the composition of the medium should conform with VDI-Guideline 2035
- Additives have to be suitable for EPDM sealings
- System has to be flushed thoroughly before initial operation with all valves fully open
- Any complaints or costs resulting from non-compliance with above rules will not be accepted by Honeywell Home
- Please contact us if you should have any special requirements or needs

PRESETTING

Presetting is done by first closing and then opening the black presetting ring on the topside of the valve to the number derived from the flow diagram. Presetting 10 is 1 complete turn of the presetting screw.

DIMENSIONS AND ORDERING INFORMATION

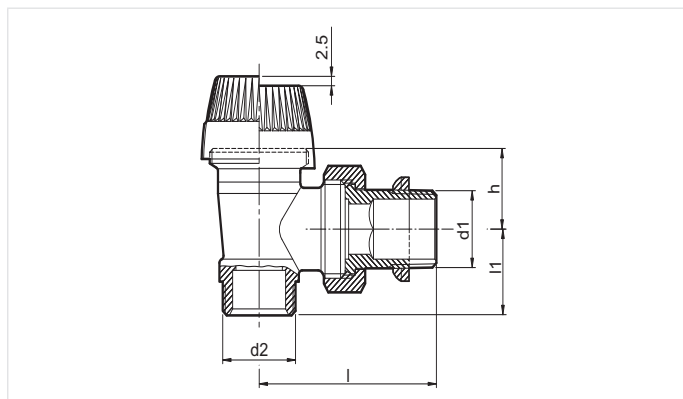


Fig. 1. Angle

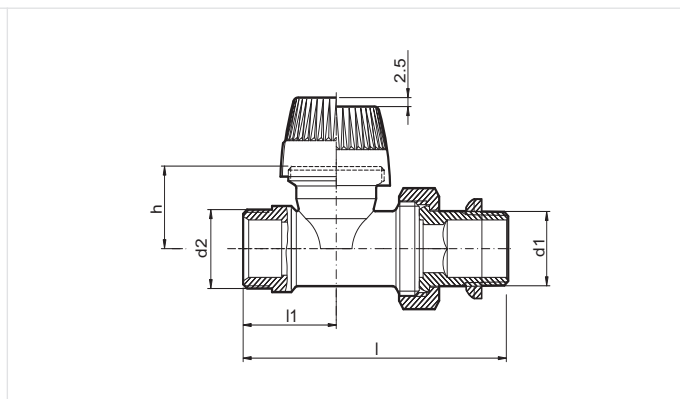


Fig. 2. Straight

Tab. 1 Available versions and OS-Nos (OS=Ordering System)

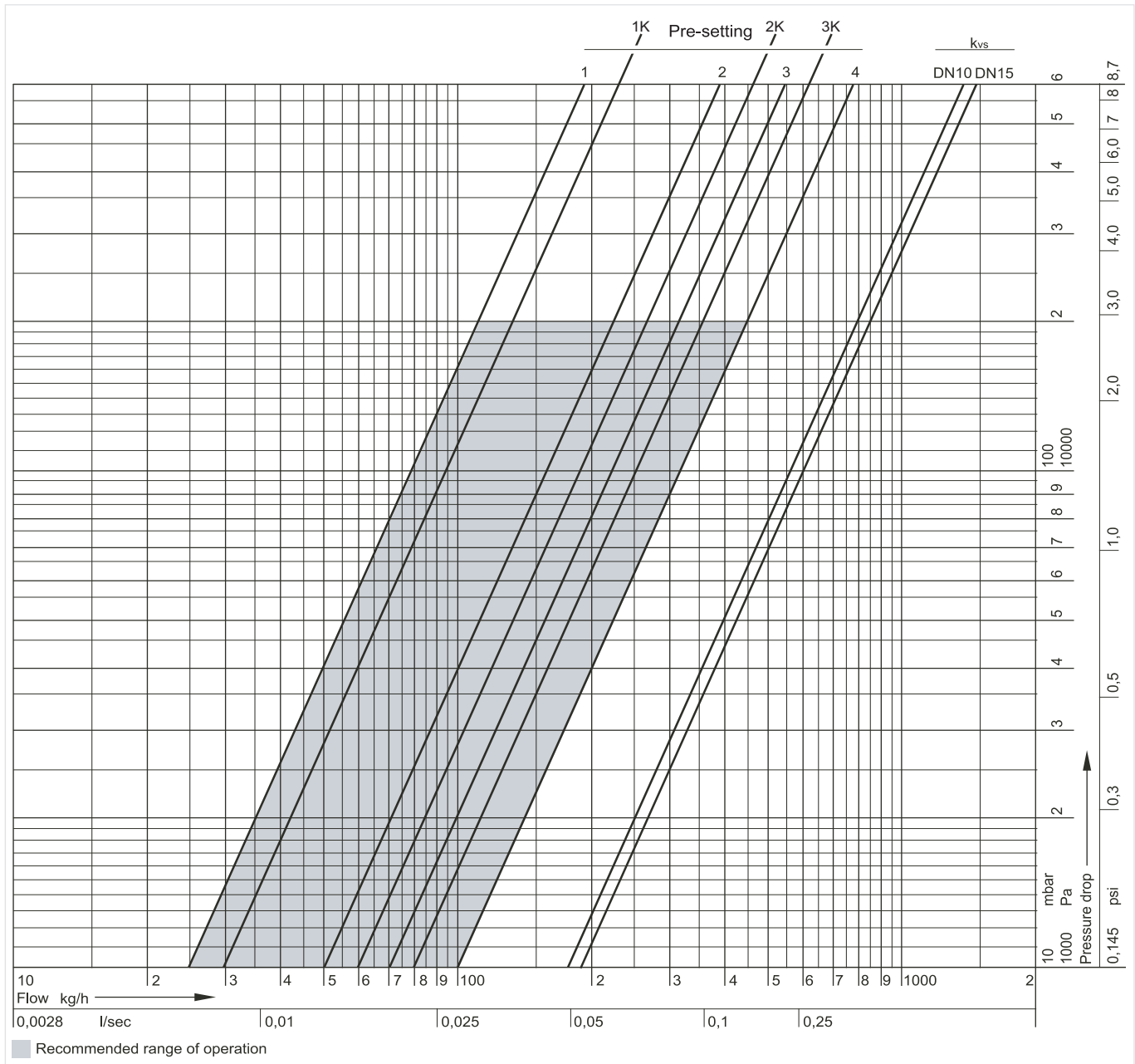
Versions	DN	EN215 certified	k _{vs} -values	Dimensions					OS-No.
				d1	d2 pipe connection	l1	l	h	
Angle (Fig. 1)	10	•	1.70	G 3/8"	M22x1.5	20.0	50.0	21.5	V305ESLGB10
	15	•	1.85	G 1/2"	M22x1.5	23.0	53.5	21.5	V305ESLGB15
Straight (Fig. 2)	10	•	1.70	G 3/8"	M22x1.5	25.0	76.0	23.0	V305DSLGB10
	15	•	1.85	G 1/2"	M22x1.5	29.0	82.5	23.0	V305DSLGB15

Note: All dimensions in mm unless stated otherwise.

ACCESSORIES

	Description	Dimension	Part No.
	FEM22CS Compression fitting for COPPER and STEEL pipe Consisting of one-piece (preassembled) nut. Soft sealing connection. For valves with external thread M22x1.5 to ISO 965-1. Note: Reinforcing insert for copper or soft steel pipe with 1.0 mm wall thickness not required. Max. operating temperature 90 °C, max. operating pressure 10 bar.		
	M22 x 1.5, 1 pcs.	10 mm	FEM22CS10
	M22 x 1.5, 1 pcs.	12 mm	FEM22CS12
	M22 x 1.5, 10 pcs.	12 mm	FEM22CS12-10
	M22 x 1.5, 1 pcs.	14 mm	FEM22CS14
	M22 x 1.5, 10 pcs.	14 mm	FEM22CS14-10
	M22 x 1.5, 1 pcs.	15 mm	FEM22CS15
	M22 x 1.5, 10 pcs.	15 mm	FEM22CS15-10
	FEM22P Compression fitting for PEX pipe. Consisting of one-piece (preassembled) nut and reinforcing insert. Soft sealing connection. For valves with external thread M22x1.5 to ISO 965-1. Note: Max. operating temperature 90 °C, max. operating pressure 10 bar.		
	M22x1.5, 1 pcs.	12 x 1.1 mm	FEM22P12X1.1
	M22x1.5, 1 pcs.	16 x 1.5 mm	FEM22P16X1.5
	FEM22PM Compression fitting for PEX and MULTILAYER pipe. Consisting of one-piece nut with preassembled compression ring and one-piece reinforcing insert. For valves with external thread M22x1.5 to ISO 965-1. Note: Max. operating temperature 90°C, max. operating pressure 10 bar.		
	M22x1.5, 1 pcs.	14 x 2 mm	FEM22PM14X2
	M22x1.5, 1 pcs.	16 x 2 mm	FEM22PM16X2
	M22x1.5, 10 pcs.	16 x 2 mm	FEM22PM16X2-10
	VS1200 Valve insert		VS1200SLGB11
	H100 Handwheel		
	Pack of 10 pieces		H100-1/2A
	VA2202Axxx Pressure cap – for shutting off valves on radiator outlet		
	for valves DN10 (3/8") for valves DN15 (1/2")		VA2202A010 VA2202A015
	VA5090 Sealing ring for pressure cap		
	for valves DN10 (3/8") for valves DN15 (1/2")		VA5090A010 VA5090A015
	VA8200A Service tool to replace valve insert		
		for all sizes	VA8200A001

FLOW DIAGRAM



Presetting	1	2	3	4	5	7	17.5 = open = k_{vs}
$k_{vs}(cv)$-values for DN10	0.25(0.29)	0.50(0.59)	0.70(0.82)	1.00(1.17)	1.25(1.46)	1.50(1.76)	1.70 (1.95)
$k_{vs}(cv)$-values for DN15	0.25(0.29)	0.50(0.59)	0.70(0.82)	1.00(1.17)	1.25(1.46)	1.50(1.76)	1.85 (2.16)

Note: Presettings above 4 are unsuitable for operation with radiator thermostats and should only be used with actuators (open/close operation).

For more information

homecomfort.resideo.com/europe



Ademco 1 GmbH
 Hardhofweg 40
 74821 MOSBACH
 GERMANY
 Phone: +49 6261 810
 Fax: +49 6261 81309

Manufactured for and on behalf of the
 Pittway Sàrl, La Pièce 4, 1180 Rolle, Switzerland
 by its Authorised Representative Ademco 1 GmbH
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