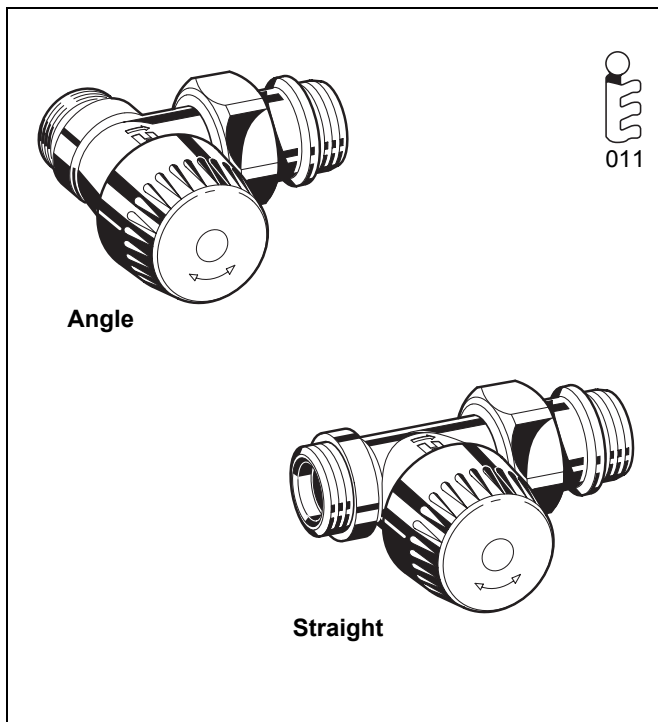


V305

MARS Series TRV Body

TRV BODY WITH STROKE LIMITATION, EXTERNAL THREADS

PRODUCT DATA



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 radiator thermostats with M30 x 1.5 connection
- Certain Honeywell MT4 actuators
- Honeywell Hometronic 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 Thera-4.

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 tail-piece on outlet
- Pre-settable 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

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 EN215, Appendix A, Series F
- AT-Concept valve housing and insert
- Bi-directional flow
- Pre-settable 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
- Tail piece with integrated EPDM O-ring
- Wide range of pipework connections available
- Quiet operation

Specifications

Medium	Heating water, water quality to VDI2035	
ph-value	8...9.5	
Operating temperature	max. 120°C (248°F)	
Operating pressure	PN10	
Differential pressure	max. 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
- Please contact us if you should have any special requirements or needs

Pre-setting

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

Dimensions and Ordering Information

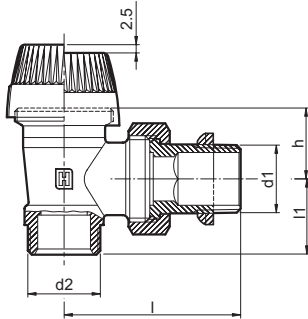


Fig. 1. Angle

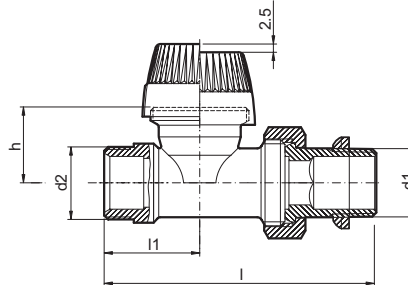


Fig. 2. Straight

Table 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

Connections

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.



Connection	Pipe dimension	Part number	Pcs/ pack
M22x1.5	10 mm	FEM22CS10	1
M22x1.5	12 mm	FEM22CS12	1
M22x1.5	12 mm	FEM22CS12-10	10
M22x1.5	14 mm	FEM22CS14	1
M22x1.5	14 mm	FEM22CS14-10	10
M22x1.5	15 mm	FEM22CS15	1
M22x1.5	15 mm	FEM22CS15-10	10
M22x1.5	16 mm	FEM22CS16	1

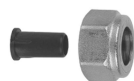
NOTE: Reinforcing insert for copper or soft steel pipe with 1,0 mm wall thickness not required. Max. operating temperature 90°C, max. operating pressure 10 bar.

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.



Connection	Pipe dimension	Part number	Pcs/ pack
M22x1.5	12x1.1 mm	FEM22P12X1.1	1
M22x1.5	16x1.5 mm	FEM22P16X1.5	1

NOTE: Max. operating temperature 90°C, max. operating pressure 10 bar.

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.



Connection	Pipe dimension	Part number	Pcs/ pack
M22x1.5	14x2 mm	FEM22PM14X2	1
M22x1.5	16x2 mm	FEM22PM16X2	1
M22x1.5	16x2 mm	FEM22PM16X2-10	10
M22x1.5	16x2.25 mm	FEM22PM16X2.25	1

NOTE: Max. operating temperature 90°C, max. operating pressure 10 bar.

Service Parts

Valve insert



VS1200SLGB11

Handwheel



Pack of 10 pieces

H100-1/2A

Pressure cap – for shutting off valves on radiator outlet



for valves DN10 (3/8")

VA2202A010

for valves DN15 (1/2")

VA2202A015

Sealing ring for pressure cap



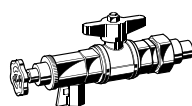
for valves DN10 (3/8")

VA5090A010

for valves DN15 (1/2")

VA5090A015

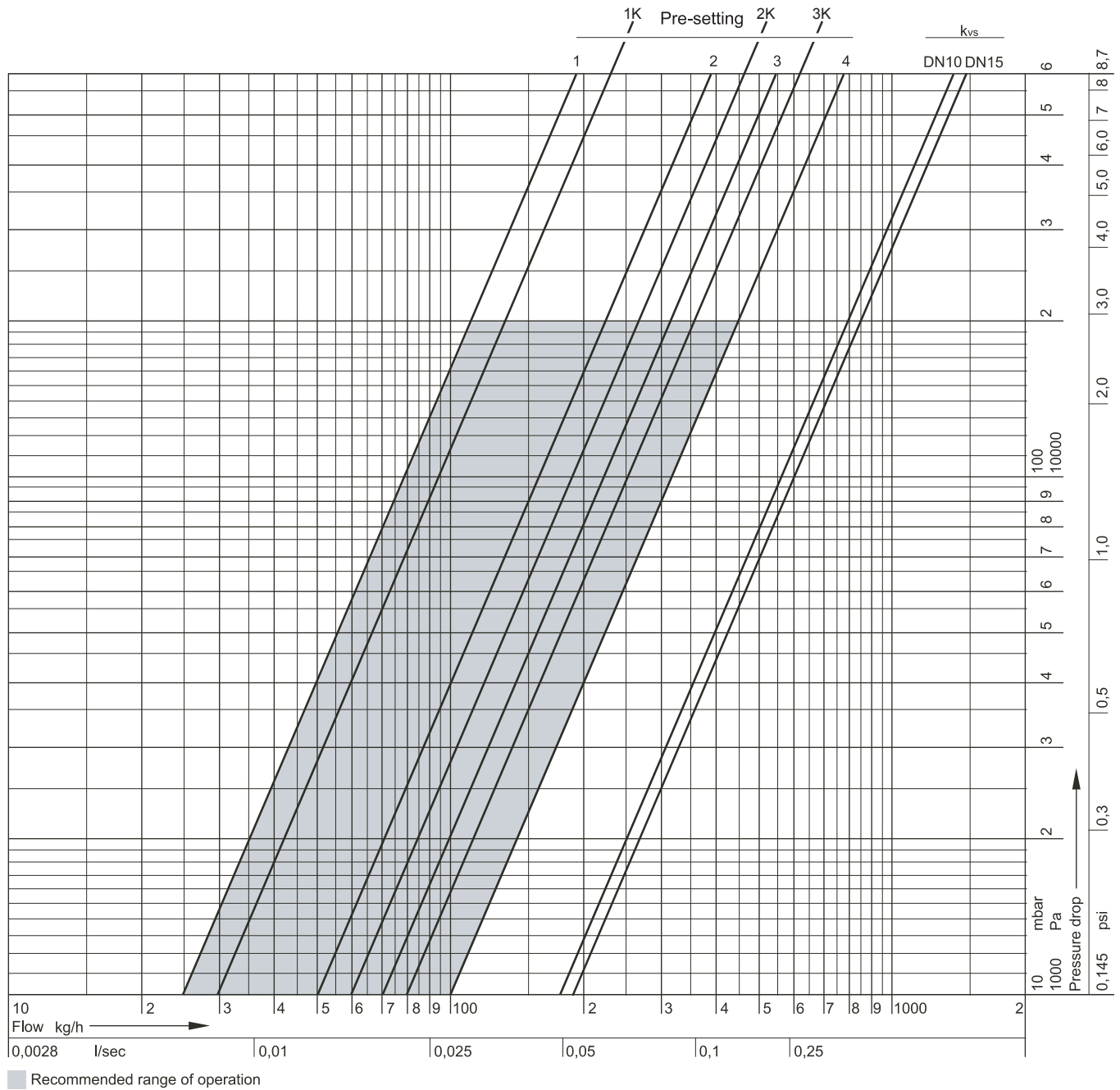
Service tool to replace valve insert



for all sizes

VA8200A001

Flow Diagram



Pre-setting	1	2	3	4	5	7	17.5 = open = kvs
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: Pre-settings above 4 are unsuitable for operation with radiator thermostats and should only be used with actuators (open/close operation).

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