



V300

MARS Series Premium Manual Valve

Radiator valve with TRV insert, external threads

APPLICATION

The MARS Series is a thermostatic valve, supplied with a manual handwheel. Thermostatic radiator valves individually control room temperatures and thus save energy. MARS Series type thermostatic radiator valves have quiet operation and are fitted to the supply of radiators in 2-pipe systems with medium flow rates.

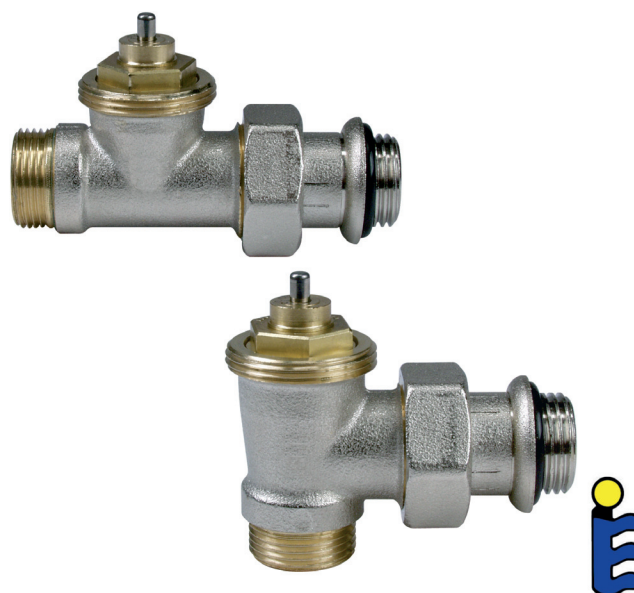
The MARS Series is supplied with a fully operational handwheel for manual operation of the valve. To convert the MARS Series to thermostatic operation the handwheel needs to be replaced by a radiator thermostat, e.g. Honeywell Home Thera-4.

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 flow rates
- For 2-pipe systems
- NF type bodies with dimensions according to EN 215, Appendix A, Series F
- AT-Concept valve housing and insert
- Valve insert can be replaced while system is operating and without draining the system
- Supplied with fully operational manual handwheel
- Standard M30 x 1.5 thermostat connection
- Easily upgradable to thermostatic operation by simply replacing the handwheel by a radiator thermostat
- Tail piece with integrated EPDM O-ring
- Wide range of pipework connections available
- Quiet operation



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} (C _{vs})-value:	0.62 (0.73)
Thermostat connection:	M30 x 1.5
Closing dimension:	11.5 mm
Stroke:	2.5

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
- Valve insert
- Handwheel
- Union-nut and radiator tailpiece

MATERIALS

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

FUNCTION

The orifice between valve seat and valve cartridge increases when the valve is opened by turning the handwheel anti-clockwise. More heating water can flow into the radiator or heat exchanger and the room temperature rises.

The orifice between valve seat and valve cartridge decreases when the valve is closed by turning the handwheel clockwise and the supply of heating water into the radiator or heat exchanger is throttled. At the right limit stop the valve is closed except for a possible leakage rate.

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

DIMENSIONS AND ORDERING INFORMATION

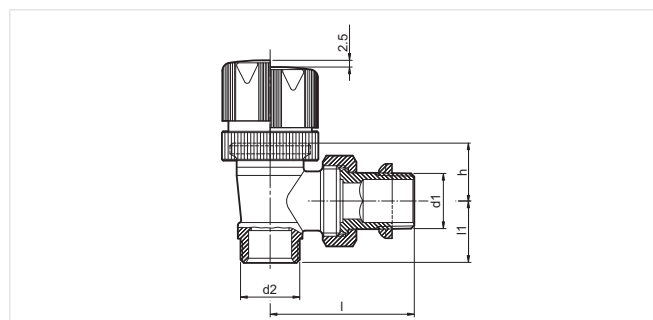


Fig. 5. Angle

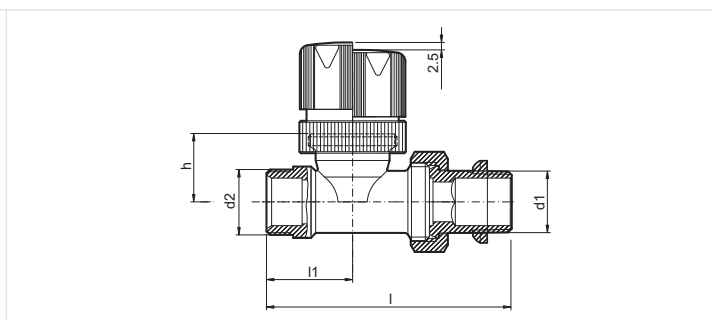



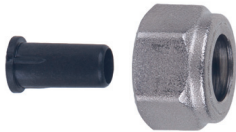
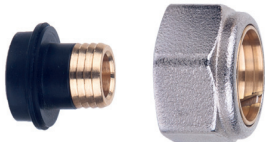
Fig. 6. Straight

Tab. 1 Available versions and OS-Nos (OS=Order Specification)




Versions	DN	EN215 certified	k _{vs} (c _{vs})-value	Dimensions					OS-No.
				d1	d2 pipe connection	l1	l	h	
Angle (Fig. 1)	10	•	1.62	G 3/8"	M22 x 1.5	20.0	50.0	21.5	V300EBB10
	15	•	1.62	G 1/2"	M22 x 1.5	23.0	53.5	21.5	V300EBB15
Straight (Fig. 2)	10	•	1.47	G 3/8"	M22 x 1.5	25.0	76.0	23.0	V300DBB10
	15	•	1.47	G 1/2"	M22 x 1.5	29.0	82.5	23.0	V300DBB15



Note: All dimensions in mm unless stated otherwise.

ACCESSORIES

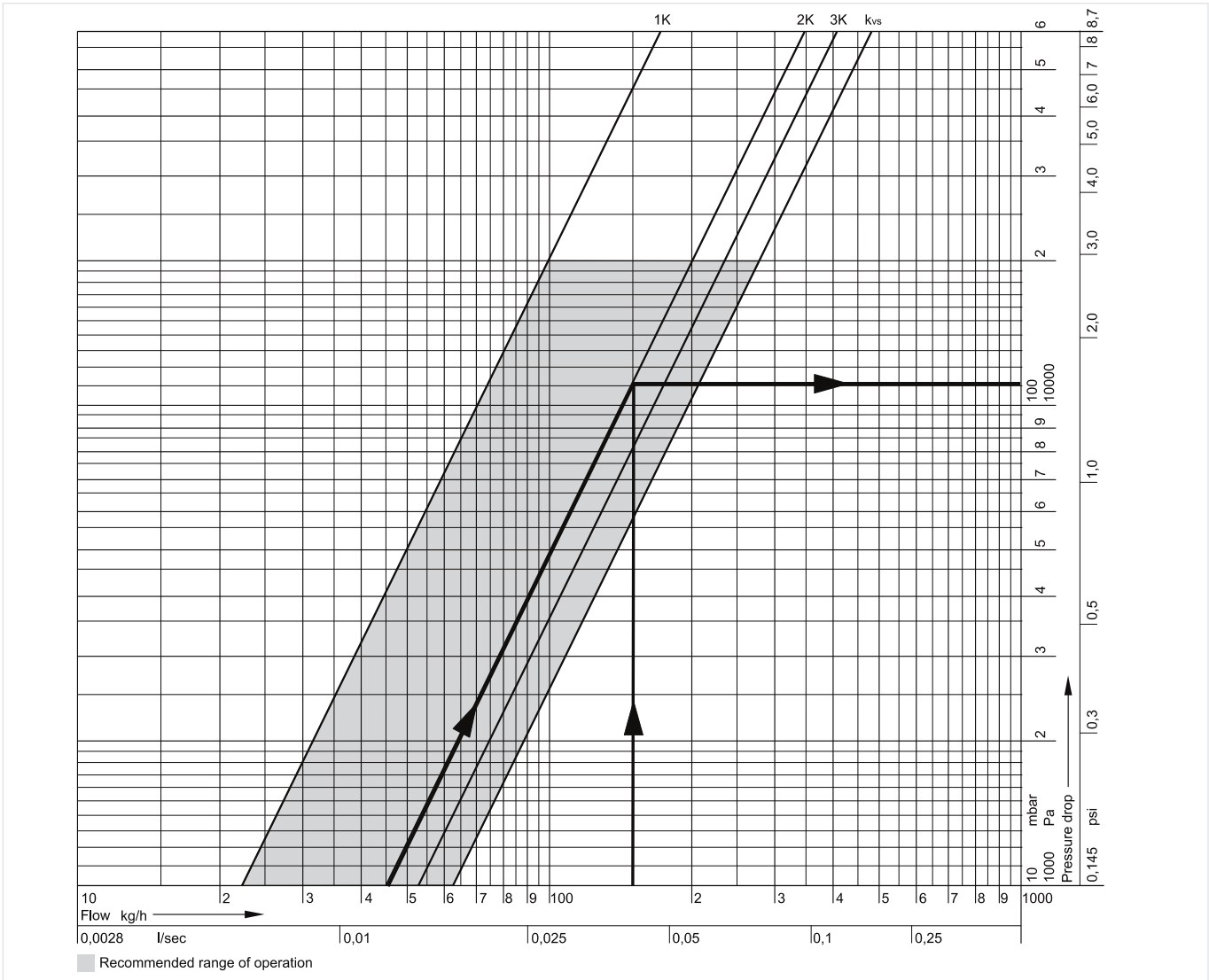
	Description	Dimension	Part No.
	FEM22CS Compression fitting for COPPER and STEEL pipe Consisting of one-piece (preassembled) nut. Soft sealing connection. For valves with external thread M22x1.5 to ISO 965-1. Note: Reinforcing insert for copper or soft steel pipe with 1.0 mm wall thickness not required. 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
	M22 x 1.5, 1 pcs.	16 mm	FEM22CS16
	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
	M22x1.5, 1 pcs.	16 x 2.25 mm	FEM22PM16X2.25

SERVICE PARTS

	Replacement valve insert	
	BB type	VS1200BB01
	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 for replacing valve insert without draining system	
	for all sizes	VA8200A002

FLOW DIAGRAM



P-Band	1K	2K	3K	open = kvs
k _v -value	0.22	0.45	0.52	0.62
cv-value	0.26	0.53	0.61	0.73

Design example

Given: Flow rate 150 kg/h
Required: Pressure loss (Δp) with a P-band of 2K
Solution: The required pressure loss is found at the intersection of the flow line with the line for the chosen valve performance P=2K
Result: $\Delta p = 110 \text{ mbar} = 11\,000 \text{ Pa}$

For more information

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