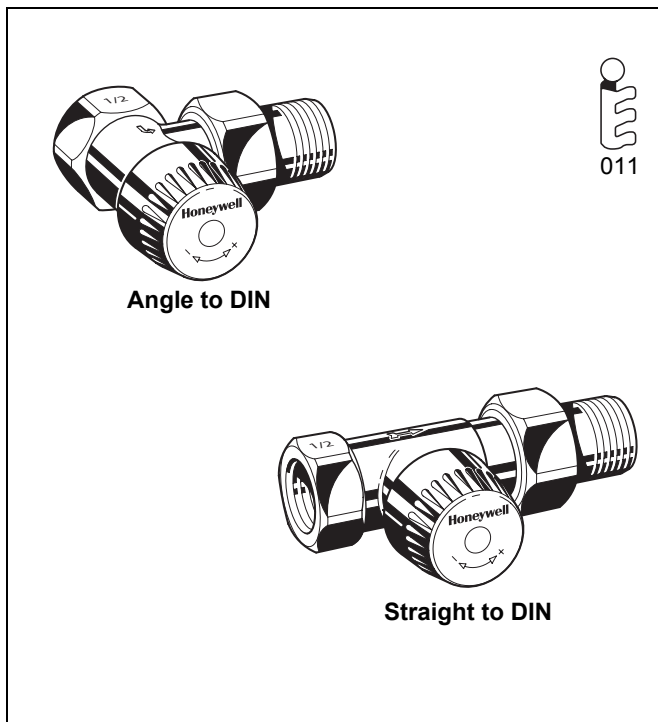


V2000SL SL type TRV Body

RADIATOR VALVE WITH STROKE LIMITED CARTRIDGE

PRODUCT DATA



Design

The thermostatic radiator valve body consists of:

- Valve housing PN10, DN10, 15 or 20 with
 - internal thread connection to DIN2999 (ISO7) for threaded, copper or precision steel pipe on inlet (compression ring fittings see 'Accessories')
 - external thread connection to DIN/ISO228 with union-nut and radiator tailpiece on outlet
 - angle to DIN and straight to DIN bodies with dimensions according to EN215, Appendix A, Series D
 - angle to NF and straight to NF bodies with dimensions according to EN215, Appendix A, Series F
- Valve insert with SL type stroke limited cartridge
- Protection cap
- Union-nut and radiator tailpiece

Materials

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

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 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, HR 90 and Roomtronic HR40 actuators

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

- **With adjustable stroke limitation**
- **Quiet operation**
- **Valve insert can be replaced while system is operating and without draining the system**
- **Standard M30 x 1.5 thermostat connection**

Specifications

Medium	Heating water, water quality to VDI2035	
Operating temperature	max. 130°C (266°F)	
Operating pressure	PN10	
Differential pressure	max. 100kPa (1 bar, 14.5 psi) – max. 20 kPa (0.2 bar, 2.9 psi) recommended for quiet operation	
k_{vs} (C_{vs})-value	DN10	1.70 (1.99)
	DN15	1.85 (2.16)
	DN20	1.95 (2.28)
Nominal flow	190 kg/h	
Body-head connection	M30 x 1.5	
Closing dimension	11.5 mm	
Stroke	2.5 mm	

Function

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

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.

Identification

- White protection cap
- Brass valve insert with black plastic scale on top

Installation Example

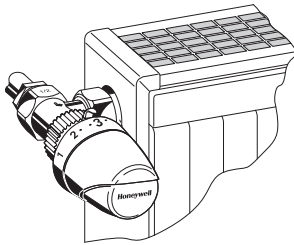


Fig. 1. Angle

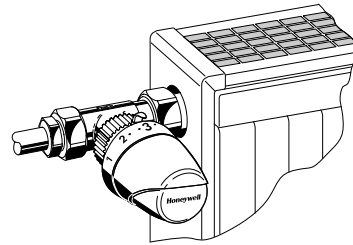


Fig. 2. Straight

Dimensions and Ordering Information

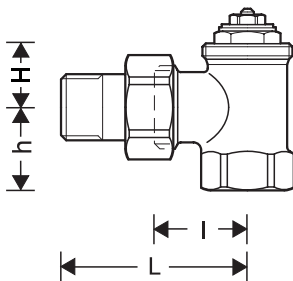


Fig. 3. Angle

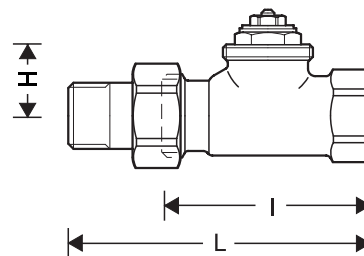


Fig. 4. Straight

Table 1. Dimensions and OS-Nos (OS=Ordering System)

Body type	DN	EN215 certified	$k_{vs}(C_{vs})$ -value	Pipe connection	l	L	h	H	h ₂	OS-No.
Angle to EN215 (D) (Fig. 3)	15	•	1.85 (2.16)	Rp 1/2"	29	58	26	20	—	V2000ESL15
	20	•	1.95 (2.28)	Rp 3/4"	34	66	29	19	—	V2000ESL20
Straight to EN215 (D) (Fig. 4)	15	•	1.85 (2.16)	Rp 1/2"	66	95	—	25	—	V2000DSL15
	20	•	1.95 (2.28)	Rp 3/4"	74	106	—	25	—	V2000DSL20
Angle to EN215 (F) (Fig. 3)	10	•	1.70 (1.99)	Rp 3/8"	24	49	20	21	—	V2020ESL10
	15	•	1.85 (2.16)	Rp 1/2"	26	53	23	22	—	V2020ESL15
	20	•	1.95 (2.28)	Rp 3/4"	34	66	29	18	—	V2020ESL20
Straight to EN215 (F) (Fig. 4)	10	•	1.70 (1.99)	Rp 3/8"	50	75	—	26	—	V2020DSL10
	15	•	1.85 (2.16)	Rp 1/2"	55	82	—	26	—	V2020DSL15
	20	•	1.95 (2.28)	Rp 3/4"	74	106	—	24	—	V2020DSL20

NOTE: All dimensions in mm unless stated otherwise.

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.

Accessories

Pipe Connections


Compression fitting for **COPPER** and **STEEL** pipe.
Consisting of compression nut and compression ring.
For valves with internal thread.

	Valve size	Pipe dimension	Part number	Pcs/pack
	3/8" (DN10)	10 mm	FIG3/8CS10	1
	3/8" (DN10)	12 mm	FIG3/8CS12	1
	1/2" (DN15)	10 mm	FIG1/2CS10	1
	1/2" (DN15)	12 mm	FIG1/2CS12	1
	1/2" (DN15)	14 mm	FIG1/2CS14	1
	1/2" (DN15)	15 mm	FIG1/2CS15	1
	1/2" (DN15)	15 mm	FIG1/2CS15-10	10
	1/2" (DN15)	16 mm	FIG1/2CS16	1
	3/4" (DN20)	18 mm	FIG3/4CS18	1
	3/4" (DN20)	22 mm	FIG3/4CS22	1

NOTE: Support inserts have to be used for copper or soft steel pipe with 1.0 mm wall thickness. Max. operating temperature 120°C, max. operating pressure 10 bar.

Compression fitting for **COPPER** and **SOFT STEEL** pipe.
Consisting of compression nut, compression ring and support insert.

For valves with internal thread.

	Valve size	Pipe dimension	Part number	Pcs/pack
	3/8" (DN10)	12 mm	FIG3/8CSS12	1
	1/2" (DN15)	12 mm	FIG1/2CSS12	1
	1/2" (DN15)	14 mm	FIG1/2CSS14	1
	1/2" (DN15)	15 mm	FIG1/2CSS15	1
	1/2" (DN15)	16 mm	FIG1/2CSS16	1
	1/2" (DN15)	18 mm	FIG1/2CSS18	1
	3/4" (DN20)	18 mm	FIG3/4CSS18	1

NOTE: Support inserts have to be used for copper or soft steel pipe with 1.0 mm wall thickness. Max. operating temperature 120°C, max. operating pressure 10 bar.

Compression fitting for **MULTILAYER** pipe.

Consisting of compression nut, compression ring and support insert.

For valves with internal thread.

	Valve size	Pipe dimension	Part number	Pcs/pack
	1/2" (DN15)	16 mm	FIG1/2M16X2	1

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

Reduction piece



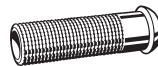
1" pipe > 1/2" valve	VA6290A260
1 1/4" pipe > 1/2" valve	VA6290A280
1" pipe > 3/4" valve	VA6290A285
1 1/4" pipe > 3/4" valve	VA6290A305

Radiator tailpiece with thread up to collar



for valves DN10 (3/8")	VA5201A010
for valves DN15 (1/2")	VA5201A015
for valves DN20 (3/4")	VA5201A020

Extended radiator tailpiece, nickel-plated, to be shortened as required



3/8" x 70 mm (for DN10) thread approx. 50 mm	VA5204B010
1/2" x 76 mm (for DN15) thread approx. 65 mm	VA5204B015
3/4" x 70 mm (for DN20) thread approx. 60 mm	VA5204B020

Valve Accessories

Manual handwheel cap



Pre-settable, with integrated locking device	VA2200D001
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Pressure cap – for shutting off valves on radiator outlet



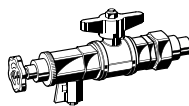
for valves DN10 (3/8")	VA2202A010
for valves DN15 (1/2")	VA2202A015
for valves DN20 (3/4")	VA2202A020

Sealing ring for pressure cap



for valves DN10 (3/8")	VA5090A010
for valves DN15 (1/2")	VA5090A015
for valves DN20 (3/4")	VA5090A020

Service tool to replace valve insert



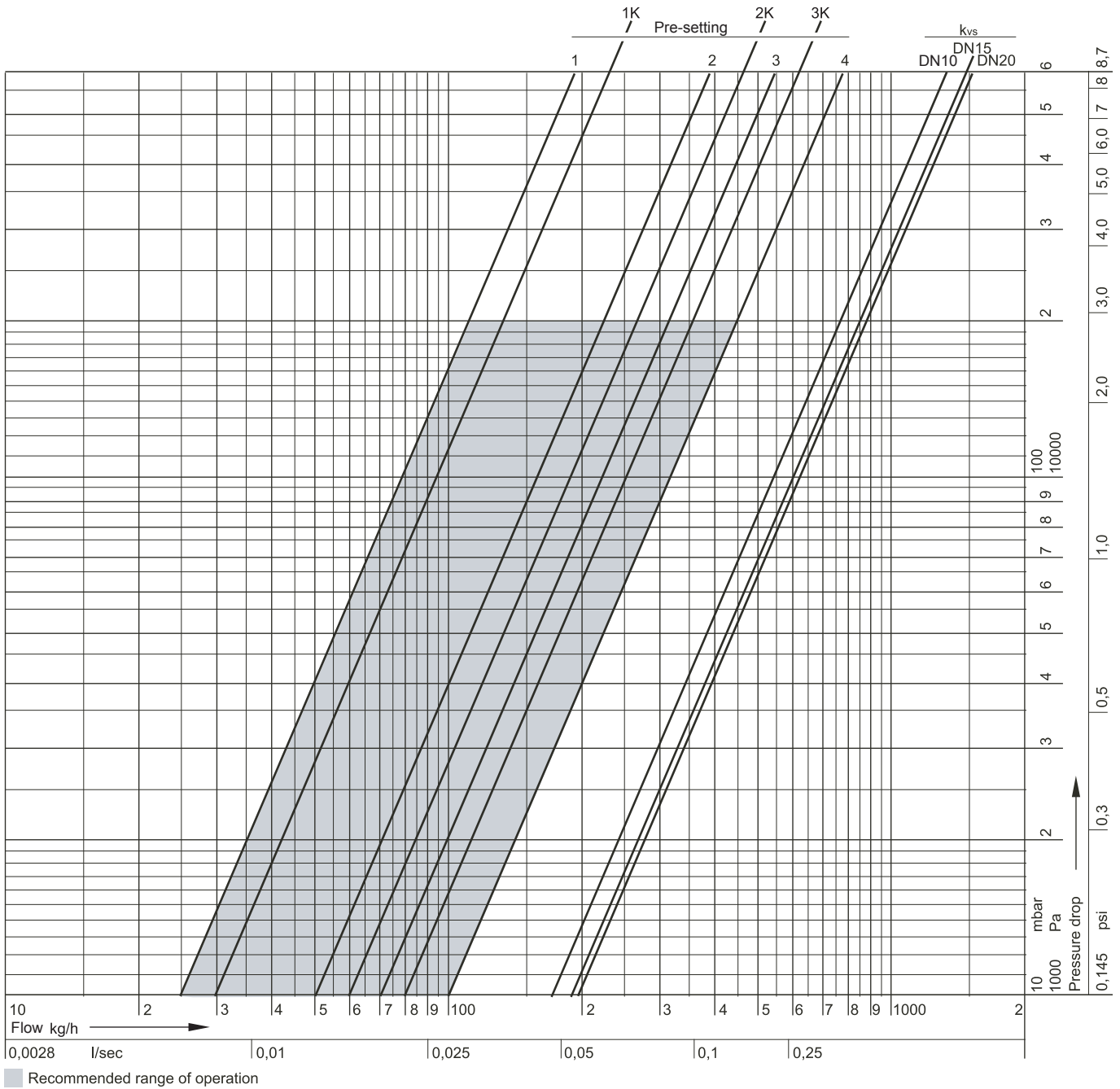
for all sizes	VA8200A001
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Replacement valve insert



SL type	VS1200SL11
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Flow Diagram



Pre-setting	1	2	3	4	5	7	17.5 = open = kvs
k_{vs} (c_{vs})-value for DN10	0.25	0.50	0.70	1.00	1.25	1.50	1.70
k_{vs} (c_{vs})-value for DN15	0.25	0.50	0.70	1.00	1.25	1.50	1.85
k_{vs} (c_{vs})-value for DN20	0.25	0.50	0.70	1.00	1.25	1.50	1.95

NOTE: Pre-settings above 4 are unsuitable for operation with radiator thermostats and should only be used with actuators (open/close operation).

P-Band	1K	2K	3K
k_v-value	0.3	0.6	0.8

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