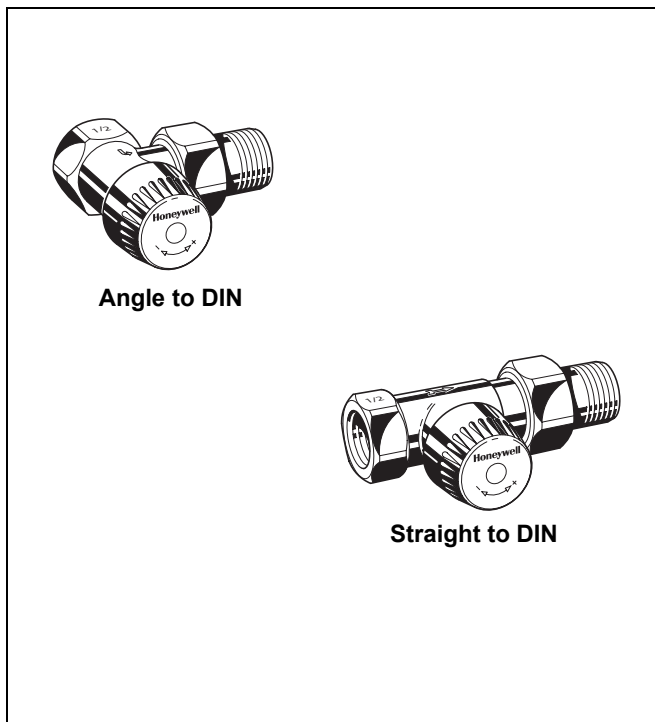




## V2000SL SL type TRV Body

### RADIATOR VALVE WITH STROKE LIMITED CARTRIDGE

#### PRODUCT DATA



Angle to DIN

Straight to DIN

#### 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

- Angle/straight to NF: valve housing made of nickel-plated hot-forged brass
- Angle/straight to DIN: valve housing made of nickel-plated red bronze
- 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

Honeywell • Subject to change

#### 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. 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 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

<b>Medium</b>	Heating water, water quality to VDI2035	
<b>Operating temperature</b>	max. 130°C (266°F)	
<b>Operating pressure</b>	PN10	
<b>Differential pressure</b>	max. 1 bar (14.5 psi) – max. 0.2 bar (2.9 psi) recommended for quiet operation	
<b><math>k_v</math>(cv)-value</b>	DN10	1.70 (1.99)
	DN15	1.85 (2.16)
	DN20	1.95 (2.28)
<b>Nominal flow</b>	190 kg/h	
<b>Thermostat connection</b>	M30 x 1.5	
<b>Closing dimension</b>	11.5 mm	
<b>Stroke</b>	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

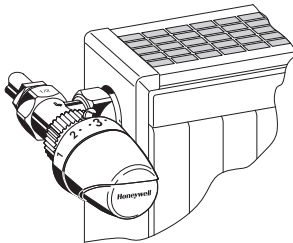


Fig. 1. Angle

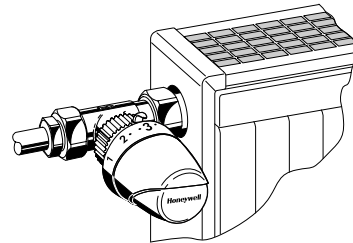


Fig. 2. Straight

## Dimensions and Ordering Information

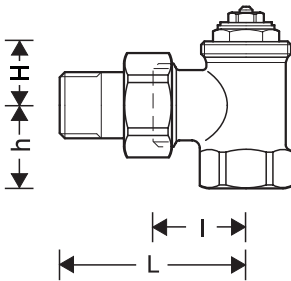


Fig. 3. Angle

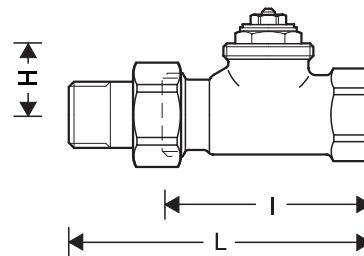


Fig. 4. Straight

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

Body type	DN	EN215 certified	k <sub>vs</sub> (cv)-value	Pipe connection	I	L	h	H	h <sub>2</sub>	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

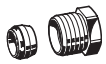
## Pre-setting

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

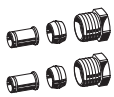
#### Compression ring and nut



3/8" x 10 mm	VA620A1010
3/8" x 12 mm	VA620A1012
1/2" x 10 mm	VA620A1510
1/2" x 12 mm	VA620A1512
1/2" x 14 mm	VA620A1514
1/2" x 15 mm	VA620A1515
1/2" x 16 mm	VA620A1516
3/4" x 18 mm	VA620A2018
3/4" x 22 mm	VA620A2022

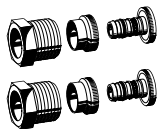
NOTE: Support inserts have to be used for copper or soft steel pipe with 1.0 mm wall thickness

#### Compression ring and nut with support insert (2 pcs each)



3/8" x 12 mm	VA621A1012
1/2" x 12 mm	VA621A1512
1/2" x 15 mm	VA621A1515
1/2" x 16 mm	VA621A1516
3/4" x 18 mm	VA621A2018

#### Compression ring and nut with support insert for composite pipe (2 pcs each)



1/2" x 14 mm	VA622B1514
1/2" x 16 mm	VA622B1516

#### 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



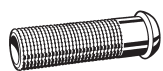
for valves DN10 (3/8")	VA5201A010
for valves DN15 (1/2")	VA5201A015
for valves DN20 (3/4")	VA5201A020

#### Soldering tailpiece



3/8" x 12 mm (for DN10)	VA5230A010
1/2" x 15 mm (for DN15)	VA5230A015
3/4" x 22 mm (for DN20)	VA5230A020

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



3/8" x 70 mm (for DN10) thread approx. 50 mm	VA5204A010
1/2" x 76 mm (for DN15) thread approx. 65 mm	VA5204A015
3/4" x 70 mm (for DN20) thread approx. 60 mm	VA5204A020

### Valve Accessories

#### Manual handwheel cap



Pre-settable, with integrated locking device VA2200D001

#### Pressure cap – for shutting off valves on radiator outlet



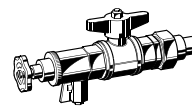
for valves DN10 (3/8") VA2202A010  
for valves DN15 (1/2") VA2202A015  
for valves DN20 (3/4") VA2202A020

#### 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



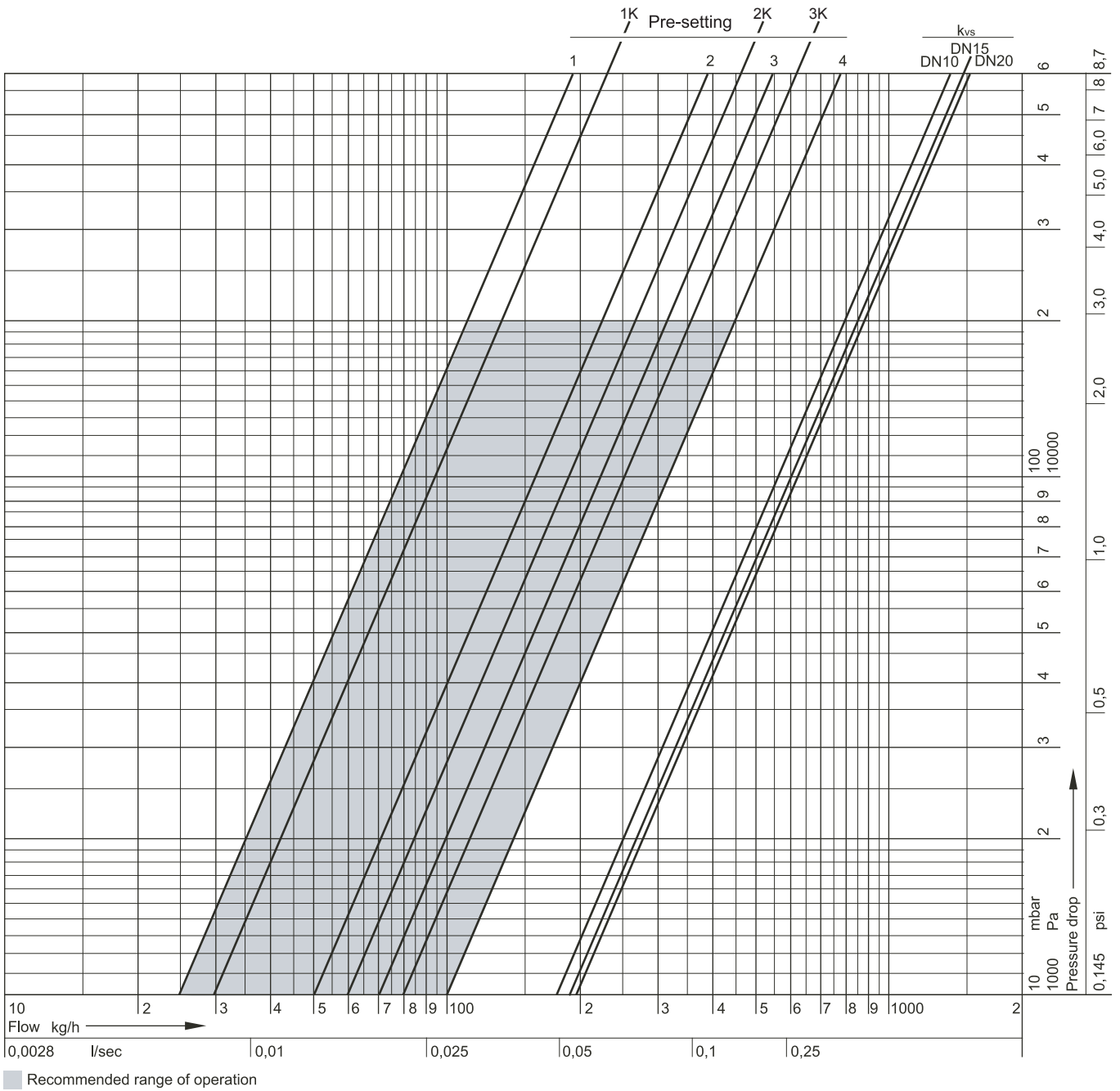
for all sizes VA8200A001

#### Replacement valve insert



SL type VS1200SL01

# Flow Diagram



Pre-setting	1	2	3	4	5	7	17.5 = open = kvs
<b>k<sub>v</sub>(cv)-value for DN10</b>	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)
<b>k<sub>v</sub>(cv)-value for DN15</b>	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)
<b>k<sub>v</sub>(cv)-value for DN20</b>	0.25 (0.29)	0.50 (0.59)	0.70 (0.82)	1.00 (1.17)	1.25 (1.46)	1.50 (1.76)	1.95 (2.28)

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
<b>k<sub>v</sub>-value</b>	0.3	0.6	0.8
<b>cv-value</b>	0.35	0.70	0.94

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