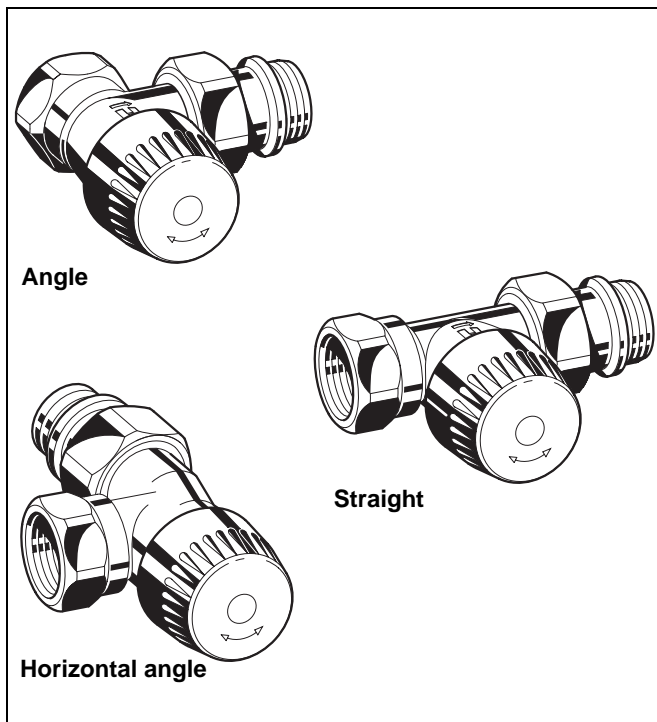


## V320 VENUS Series TRV Body

TRV BODY WITH STROKE LIMITATION, INTERNAL THREADS

### PRODUCT DATA



### Design

The thermostatic radiator valve bodies consist of:

- Valve housing PN10, DN10 or DN15 with
  - internal thread connection to ISO228 on inlet
  - external thread connection with union-nut and radiator tail-piece on outlet
  - angle and straight bodies with dimensions according to EN215, Appendix A, Series F
- Pre-settable valve insert
- Protection cap

### Materials

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

### 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 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 VENUS Series is supplied with a protection cap. To convert the VENUS Series to thermostatic operation the protection cap is replaced by a radiator thermostat, e.g. Honeywell Thera-4.

### Features

- Supplied with protection cap
- Bi-directional flow
- Pre-settable by stroke limitation
- For 1- and 2-pipe systems
- Standard M30 x 1.5 thermostat connection
- Connection to all types of pipework DN10 to DN15
- Quiet operation
- Tail piece with integrated O-ring

### Specifications

<b>Medium</b>	Heating water, water quality to VDI2035	
<b>ph-value</b>	8...9.5	
<b>Operating temperature</b>	max. 120°C (248°F)	
<b>Operating pressure</b>	PN10	
<b>Differential pressure</b>	max. 0.2 bar (2.9 psi) recommended for quiet operation	
<b>k<sub>vs</sub>(cv)-values</b>	DN10	1.70 (1.99)
	DN15	1.85 (2.16)
<b>Thermostat connection</b>	M30 x 1.5	
<b>Closing dimension</b>	11.5 mm	
<b>Stroke</b>	2.5	

## 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.

Please Note:

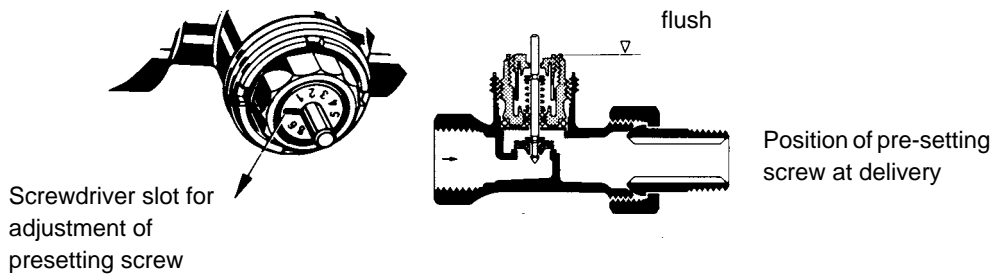
- To avoid stone deposit and corrosion the composition of the medium should conform with VDI-Guideline 2035
- Additives have to be suitable for EPDM sealings
- System has to be flushed thoroughly before initial operation with all valves fully open
- Any complaints or costs resulting from non-compliance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

## Setting procedure

Turn the pre-setting screw until stop. Mark position of screwdriver slot as reference point. Then turn anticlockwise according to reference figure obtained from the pressure drop chart.

Reference figure 10 corresponds to 1 turn.

Reference figure 20 corresponds to 2 turns.



## Dimensions

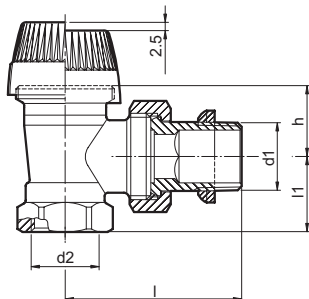


Fig. 1. Angle

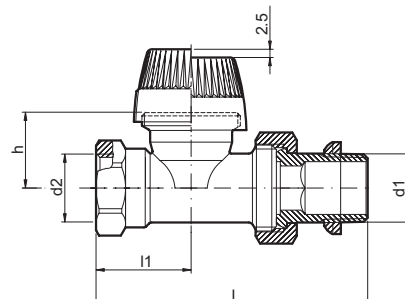


Fig. 2. Straight

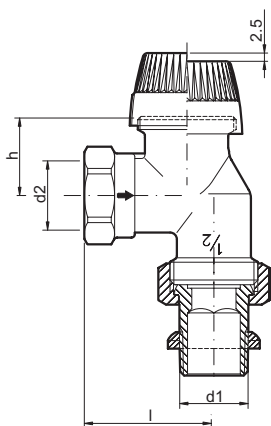


Fig. 3. Horizontal angle

## Ordering Information

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

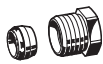
Versions	DN	k <sub>vs</sub> -values	Dimensions					OS-No.
			d1	d2	l1	l	h	
Angle (Fig. 1)	10	1.70	3/8"	3/8"	20	49	21.5	V320ESLGB10
	15	1.85	1/2"	1/2"	23	53	21.5	V320ESLGB15
Straight (Fig. 2)	10	1.70	3/8"	3/8"	25	75	23	V320DSLGB10
	15	1.85	1/2"	1/2"	29	82	23	V320DSLGB15
Horizontal angle (Fig. 3)	15	1.85	1/2"	1/2"	—	38.5	23.5	V320RSLGB15

NOTE: All dimensions in mm unless stated otherwise.

## Accessories

### Connections

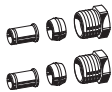
#### Compression ring and nut



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

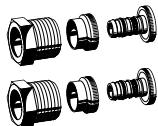
NOTE: Support inserts have to be used for copper or soft steel pipe with 1.0 mm wall thickness

#### 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

#### 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

### Service Parts

#### Valve insert



VS1200SLGB01

#### Handwheel



Pack of 10 pieces

H100-1/2D

#### 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

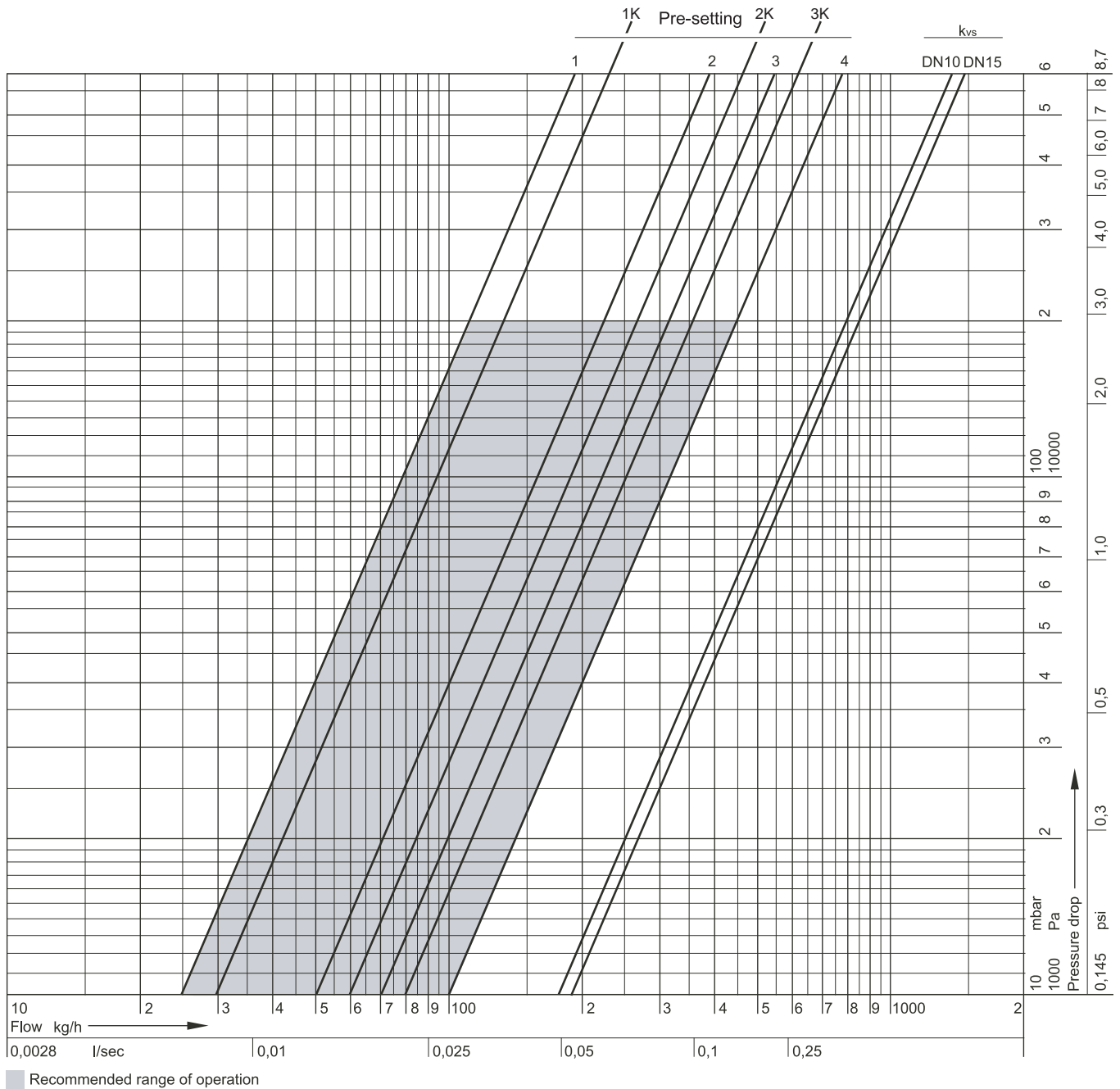
#### Service tool to replace valve insert



for all sizes

VA8200A001

## Flow Diagram



Pre-setting	1	2	3	4	5	7	17.5 = open = kvs
<b>kvs(cv)-values 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>kvs(cv)-values 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)

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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