



## V320

### VENUS Series TRV Body

TRV Body with stroke limitation, internal threads

#### 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 Home radiator thermostats with M30 x 1.5 connection
- Certain Honeywell Home MT4 actuators
- Honeywell Home 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 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 or high flow rates
- For 1- and 2-pipe systems
- NF type bodies with dimensions according to EN 215, Appendix A, Series F
- AT-Concept valve housing and insert
- Bi-directional flow
- Presettable 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
- Tailpiece with integrated EPDM O-ring
- Wide range of pipework connections available
- Quiet operation



#### DESIGN

The premium manual valves consist of:

- Valve housing PN10, DN10 or DN15 with
  - internal thread connection to ISO228-1 on inlet
  - external thread connection with union-nut and radiator tailpiece on outlet
- Presettable 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

## 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 <sub>vs</sub> (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

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.

## DIMENSIONS

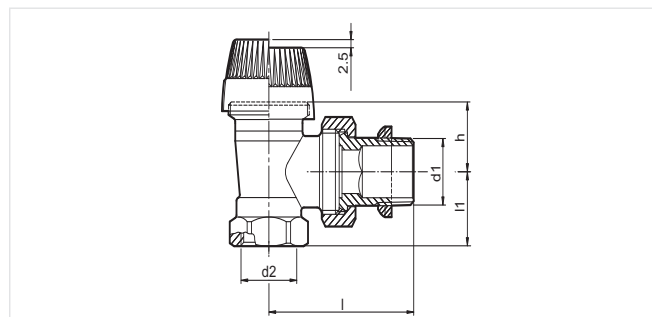


Fig. 1. Angle

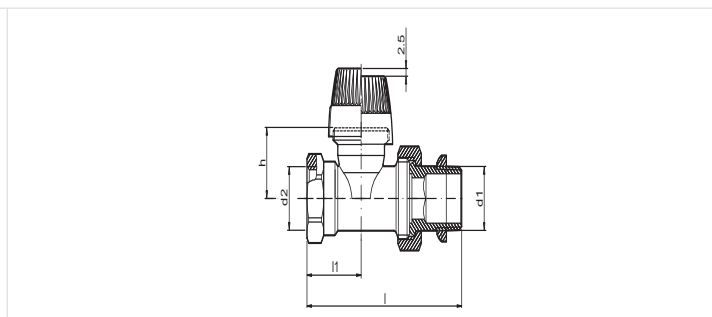


Fig. 2. Straight

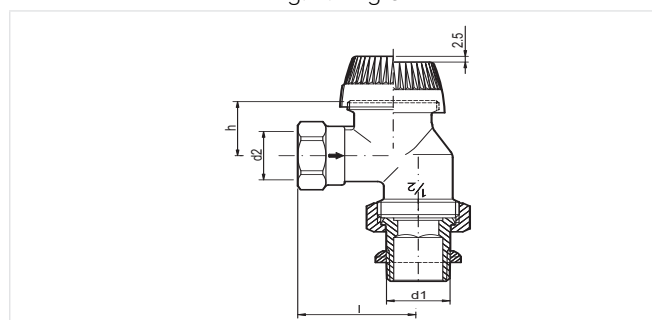


Fig. 3. Horizontal angle

## 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

## PRESETTING

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

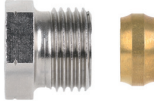
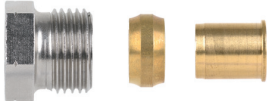


## ORDERING INFORMATION




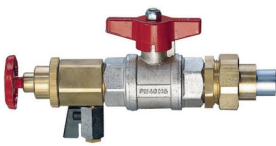
Tab. 1 Available versions and OS-Nos (OS=Ordering System)

Versions	DN	EN215 certified	k <sub>vs</sub> -values	Dimensions					OS-No.
				d1	d2 pipe connection	l1	l	h	
Angle to EN215 (F) (Fig. 1)	10	•	1.70	G 3/8"	Rp 3/8"	20.0	50.0	21.5	V320ESLGB10
	15	•	1.85	G 1/2"	Rp 1/2"	23.0	53.5	21.5	V320ESLGB15
Straight to EN215 (F) (Fig. 2)	10	•	1.70	G 3/8"	Rp 3/8"	25.0	76.0	23.0	V320DSLGB10
	15	•	1.85	G 1/2"	Rp 1/2"	29.0	82.5	23.0	V320DSLGB15
Horizontal angle (Fig. 3)	15		1.85	G 1/2"	Rp 1/2"	-	38.5	23.5	V320RSLGB15

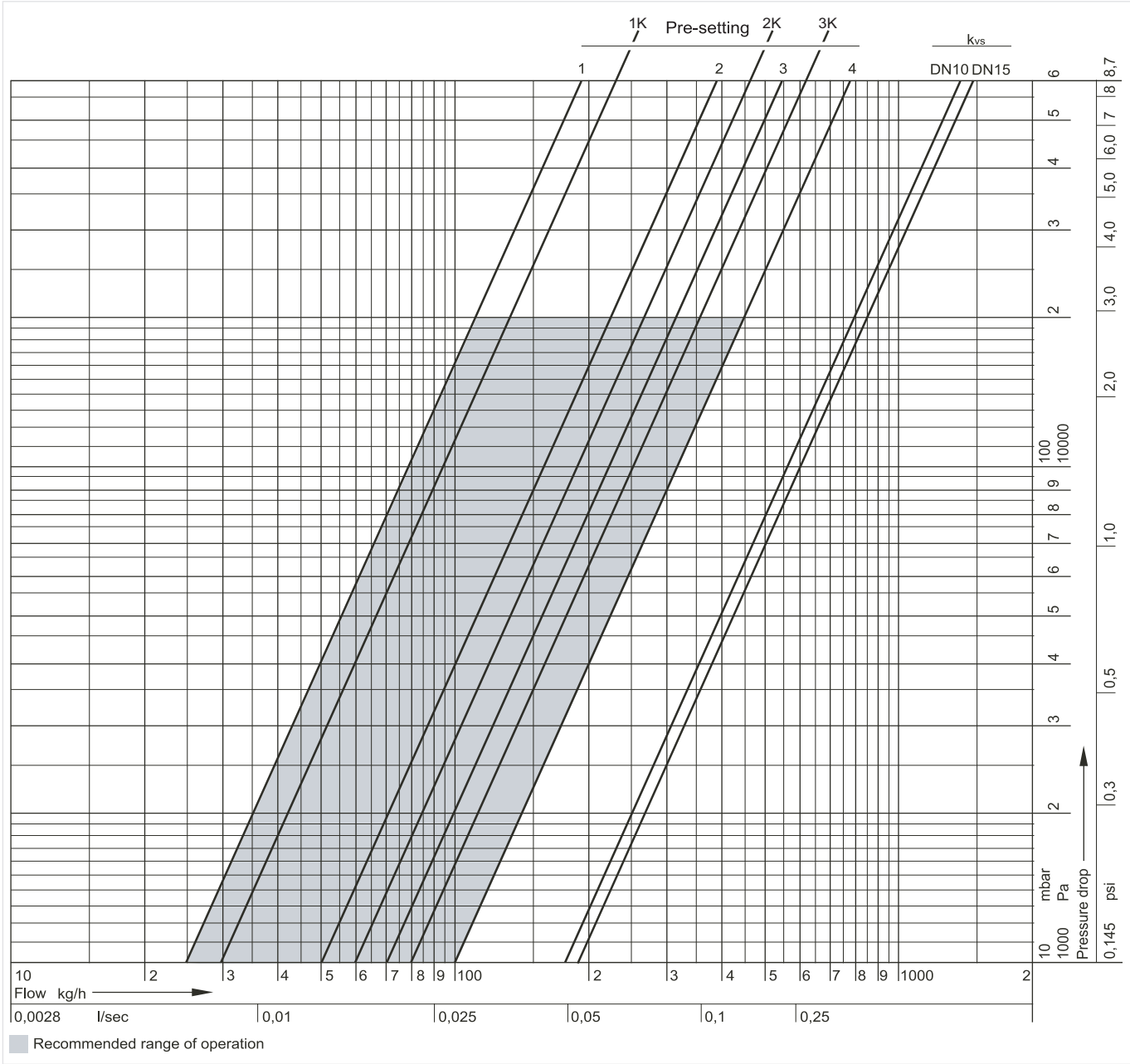
Note: All dimensions in mm unless stated otherwise.

## ACCESSORIES

	Description	Dimension	Part No.
	<b>FIG3/8CS</b> <b>Compression fitting for COPPER and STEEL pipe</b> Consisting of compression nut and compression ring. For valves with internal thread. 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.		
	3/8", DN10	10 mm	FIG3/8CS10
	3/8", DN10	12 mm	FIG3/8CS12
	1/2", DN15	10 mm	FIG1/2CS10
	1/2", DN15	12 mm	FIG1/2CS12
	1/2", DN15	14 mm	FIG1/2CS14
	1/2", DN15	15 mm	FIG1/2CS15
	1/2", DN15	15 mm	FIG1/2CS15-10
	1/2", DN15	16 mm	FIG1/2CS16
	3/4", DN18	18 mm	FIG3/4CS18
	3/4", DN22	22 mm	FIG3/4CS22
	<b>FIG3/8CSS</b> <b>Compression fitting for COPPER and STEEL pipe</b> Consisting of compression nut and compression ring and support insert. For valves with internal thread. 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.		
	3/8", DN10	12 mm	FIG3/8CSS12
	1/2", DN15	12 mm	FIG1/2CSS12
	1/2", DN15	14 mm	FIG1/2CSS14
	1/2", DN15	15 mm	FIG1/2CSS15
	1/2", DN15	16 mm	FIG1/2CSS16
	1/2", DN15	18 mm	FIG1/2CSS18
	3/4", DN20	18 mm	FIG3/4CSS18
	<b>FIG1/2M</b> <b>Compression fitting for MULTILAYER pipe. Consisting of compression nut, compression ring and support insert. For valves with internal thread.</b> Note: Max. operating temperature 90°C, max. operating pressure 10 bar		
	1/2", DN15	16 mm	FIG1/2M16X2
	<b>VS1200</b> <b>Valve insert</b>		
			VS1200SLGB11

	<b>H100</b>	<b>Handwheel</b>		
		Pack of 10 pieces		H100-1/2A
	<b>VA2202Axxx</b>	<b>Pressure cap – for shutting off valves on radiator outlet</b>		
		for valves DN10 ( $\frac{3}{8}$ " )		VA2202A010
		for valves DN15 ( $\frac{1}{2}$ " )		VA2202A015
	<b>VA5090</b>	<b>Sealing ring for pressure cap</b>		
		for valves DN10 ( $\frac{3}{8}$ " )		VA5090A010
		for valves DN15 ( $\frac{1}{2}$ " )		VA5090A015
	<b>VA8200A</b>	<b>Service tool to replace valve insert</b>		
			for all sizes	VA8200A001

FLOW DIAGRAM



Presetting	1	2	3	4	5	7	17.5 = open = $k_{vs}$
$k_{vs}(cv)$ -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: Presettings above 4 are unsuitable for operation with radiator thermostats and should only be used with actuators (open/close operation).

For more information

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