V2420/V2430

Verafix-E

Presettable and drainable lockshield valve

APPLICATION

The Verafix-E is a presettable radiator lockshield valve for the return connection of radiators or heat exchangers. It is used:

- in typical two-pipe heating systems
- in special applications in one-pipe heating systems

for shut-off and regulation of individual radiators. Together with a draining adapter (see 'Accessories') radiators can be drained or filled with the system in operation. The presetting isn't affected by this.

Installation in supply also possible, draining/filling function isn´t supported.

The lockshield valve is suitable for hot water and low pressure steam heating systems and cold water cooling systems.

SPECIAL FEATURES

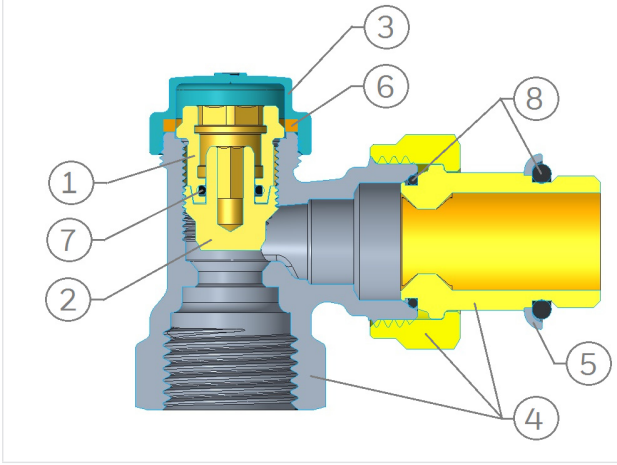
- Presetting, shut-off and draining/filling with one valve
- Presettable by stroke limitation
- Optional flow direction. Performance values apply for both directions
- Piston externally O-ring sealed
- Body dimensions to DIN3842
- Connection to all types of pipe DN10 - DN20

TECHNICAL DATA

Media		
Medium:	Water, water-glycol mixture Quality to VDI2035	
pH-value:	8 - 9.5	
Connection/Sizes		
Sizes:	DN10, DN15, DN20	
Pipe-side connections:	internal thread connection to DIN EN 10226-1	
	$^{3}/_{4}$" Euroconus (EN 16313)	
Radiator-side connections:	external thread connection to DIN EN 10226-1 with union-nut and radiator tailpiece	
	external thread connection to DIN/ISO228 with union-nut and soft sealing radiator tailpiece	
Operating temperatures		
Max. operating temperature:	130 °C	
Min. operating temperature medium:	-10 °C non-freezing	

Pressure values		
Max. operating pressure:	PN10, 10 bar (1000kPa)	
Max. differential pressure:	1.0 bar (100 kPa)	
Differential pressure recommended for quiet operation:	≤0.2 bar (20 kPa)	
Flow rates		
k_{VS}-value:	Straight DN10, DN15	1.25
	Angle DN10, DN15	1.70
	Straight, Angle DN20	1.80
Identification		
cover cap with embossed logo		

CONSTRUCTION

Overview		Components	Materials
	**1**	Insert cartridge for radiator draining	Brass
	2	Plunger for regulation and outlet pipe isolation	
	3	Cap for fail-safe sealing after draining	
	4	Valve body, tailpiece, nut	
	5	Radiator connection o-ring retaining plate (only V2430 and V2437)	
	6	Secondary seal for fail-safe sealing after draining	PTFE
	7	Plunger o-ring	EPDM 70
	8	Radiator tailpiece o-rings (only V2430 and V2437)	

METHOD OF OPERATION

The Verafix-E connects the return of a radiator or heat exchanger to the heating loop and has the functions of regulation, shut-off and draining/filling.

Regulation:

The flow can be regulated by presetting the Verafix-E to a certain value derived from the flow diagram. By presetting, the opening between valve insert and valve seat is reduced. In this way the flow is throttled. The Verafix-E is supplied set fully open.

Shut-off:

The return of the radiator can be shut-off by closing the valve insert.

Draining:

Draining or filling of the radiator is carried out with the draining adapter (see 'Accessories'). Draining of individual radiators using the Verafix-E has no influence on the water loop or other radiators in the loop.

Detailed illustrations of above functions chapter Shut-off/ Draining and Presetting.

TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

Parameter	Value
Environment:	clean, dry and dust free
Min. ambient temperature:	0 °C
Max. ambient temperature:	50 °C
Max. ambient relative humidity:	75 % *

*non condensing

INSTALLATION GUIDELINES

Setup requirements

- 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 Resideo
- Please contact us if you should have any special requirements or needs

Installation Example

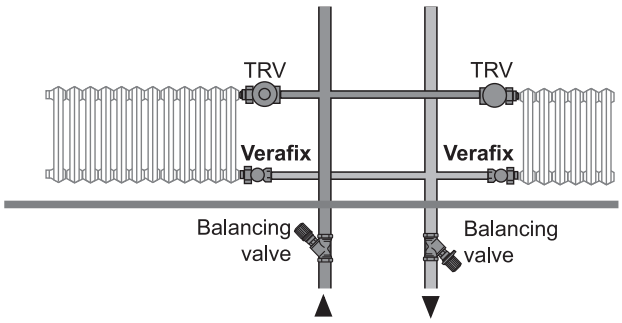


Fig. 1. Installation example heating system

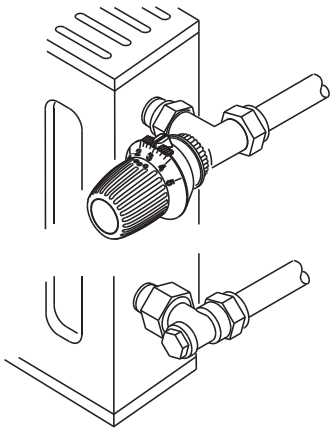
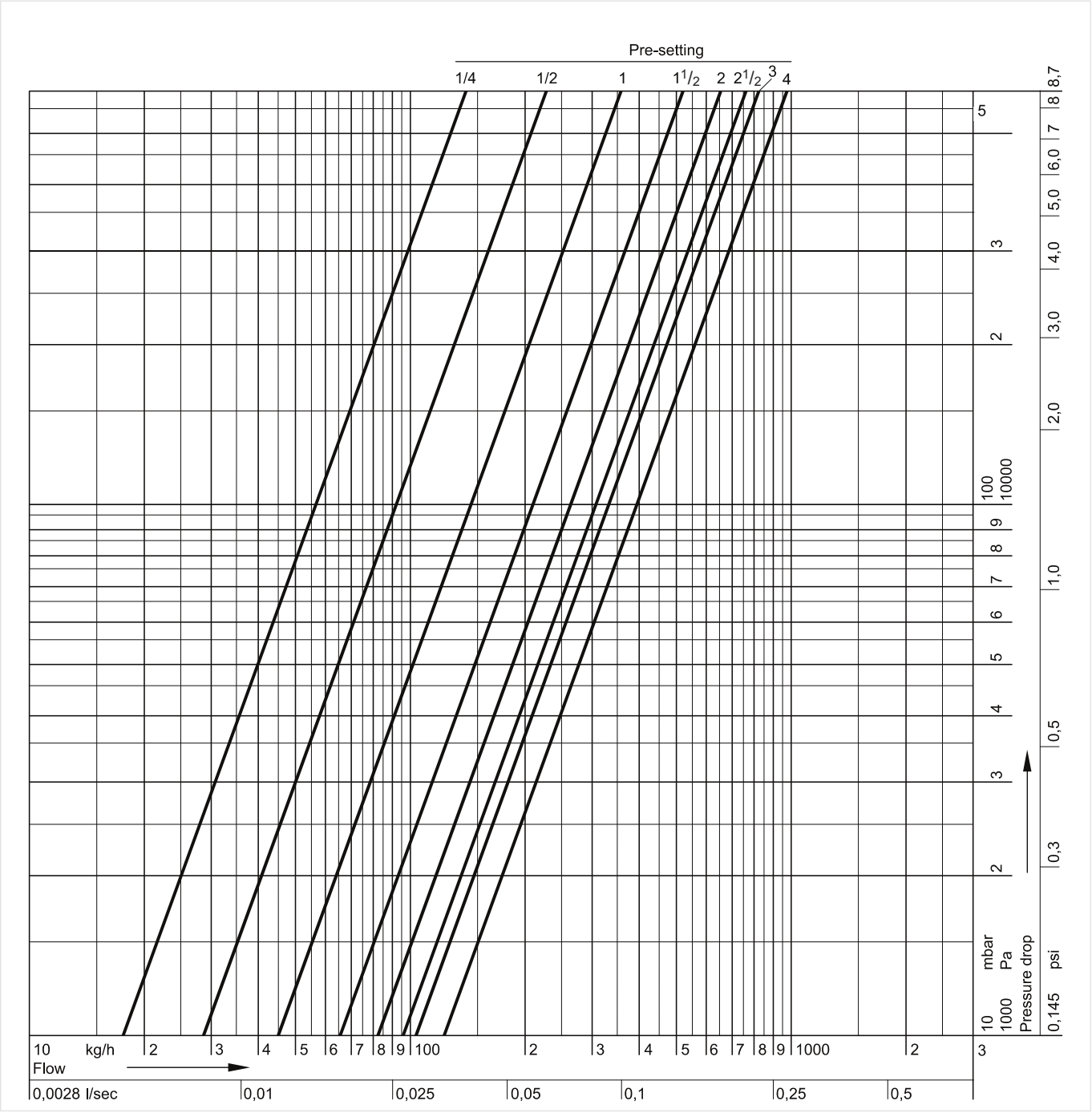


Fig. 2. Installation example radiator

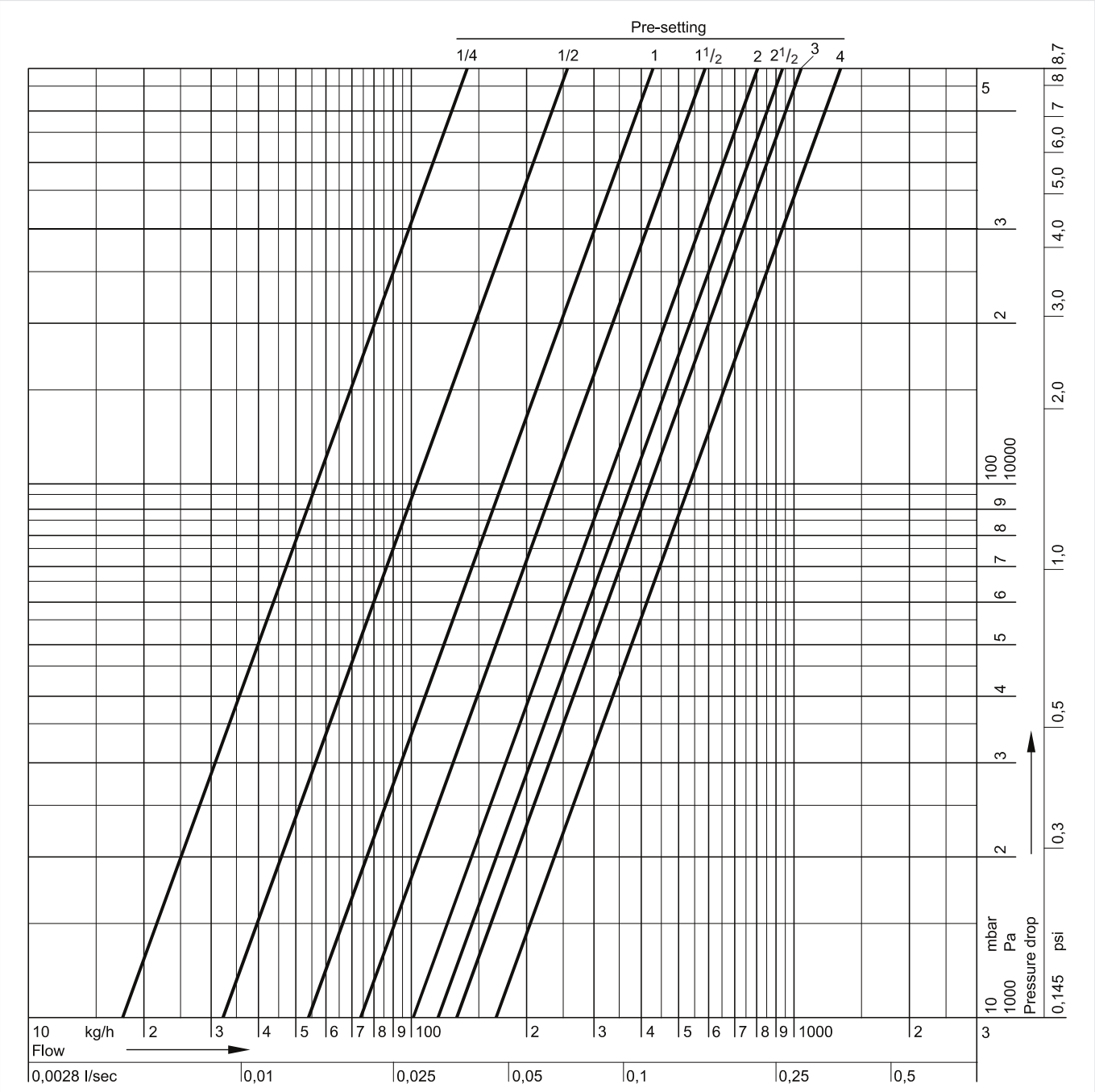
TECHNICAL CHARACTERISTICS

Flow Diagram for Verafix Straight, DN10 (V2420D0010), DN15 (V2420D0015)



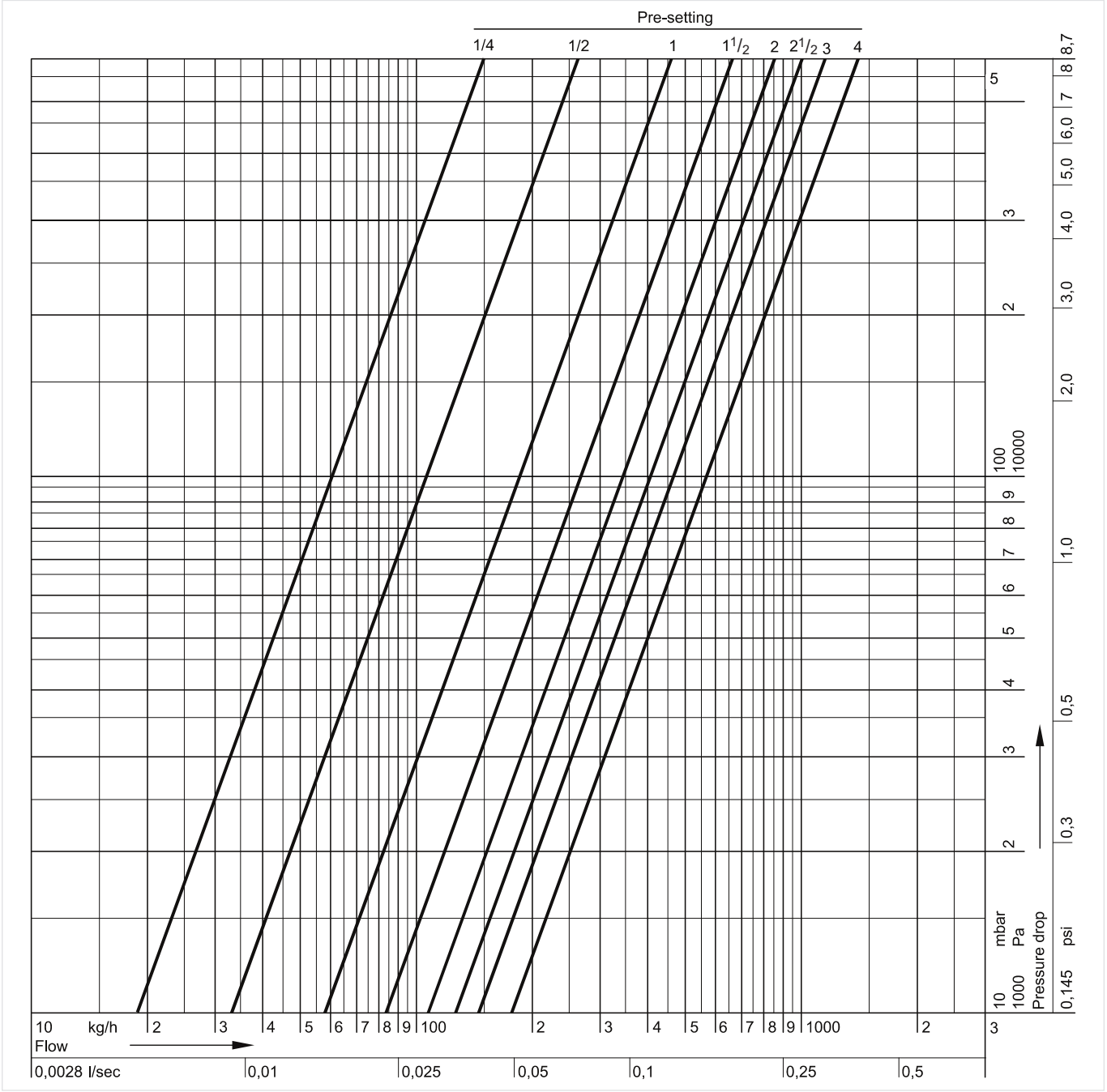
Turns of presetting screw	1/4	1/2	1	1 1/2	2	2 1/2	3	4 = open = k_{vs}
k_v-value	0.18	0.29	0.45	0.66	0.84	0.96	1.06	1.25
cv-value	0.21	0.34	0.53	0.77	0.98	1.12	1.23	1.47

Flow Diagram for Verafix Angle, DN10 (V2420E0010), DN15 (V2420E0015)



Turns of presetting screw	1/4	1/2	1	1 1/2	2	2 1/2	3	4 = open = k_{vs}
k_v-value	0.18	0.33	0.55	0.77	1.03	1.20	1.34	1.70
cv-value	0.22	0.38	0.64	0.90	1.20	1.39	1.55	1.98

Flow Diagram for Verafix Angle, Straight DN20 (V2420E0020, V2420D0020)



Turns of presetting screw	1/4	1/2	1	1 1/2	2	2 1/2	3	4 = open = k_{vs}
k_v-value	0.20	0.34	0.59	0.85	1.10	1.29	1.48	1.80
cv-value	0.23	0.39	0.69	0.99	1.28	1.50	1.72	2.09

DIMENSIONS AND ORDERING INFORMATION

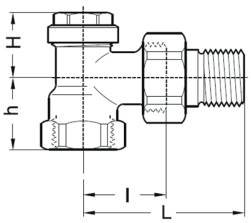


Fig. 3. Angled

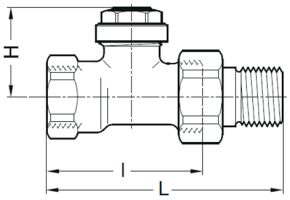


Fig. 4. Straight

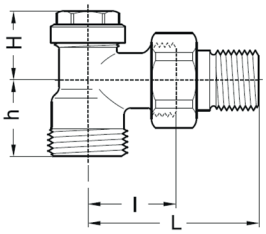


Fig. 5. Angled with external thread

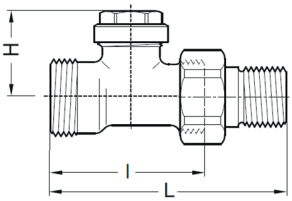


Fig. 6. Straight with external thread

Ranges

V2420	V2427	V2430	V2437
Bodies with internal threads and metal-to-metal sealing radiator tailpieces	Bodies with internal threads and metal-to-metal sealing radiator tailpieces	Bodies with internal threads and soft sealing radiator tailpieces	Bodies with internal threads and soft sealing radiator tailpieces
			

Tab. 1 V2420: Bodies with internal threads and metal-to-metal sealing radiator tailpieces

Type	DN	Pipe connection	k_{vs}-value	L	l	H	h	OS-No.
Angle	10	Rp 3/8"	1.70	52	26	23	-	V2420E0010
(Fig. 3)	15	Rp 1/2"	1.70	58	29	23	-	V2420E0015
	20	Rp 3/4"	1.80	66	34	27	-	V2420E0020
Straight	10	Rp 3/8"	1.25	75	49	30	-	V2420D0010
(Fig. 4)	15	Rp 1/2"	1.25	80	51	30	-	V2420D0015
	20	Rp 3/4"	1.80	91	59	30	-	V2420D0020

Note: All dimensions in mm unless stated otherwise.

Tab. 2 V2430: Bodies with internal threads and soft sealing radiator tailpieces

Type	DN	Pipe connection	k_{vs}-value	L	l	H	h	OS-No.
Angle	10	Rp 3/8"	1.70	52	26	23	22	V2430E0010
(Fig. 3)	15	Rp 1/2"	1.70	58	29	23	26	V2430E0015A
Straight	10	Rp 3/8"	1.25	75	49	30	-	V2430D0010
(Fig. 4)	15	Rp 1/2"	1.25	80	51	30	-	V2430D0015

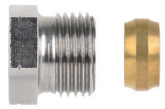
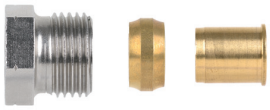
Tab. 3 V2427: Bodies with external threads and metal-to-metal sealing radiator tailpieces

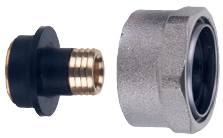
Type	DN	Pipe connection	k_{vs}-value	L	l	H	h	OS-No.
Angle	15	G 3/4"	1.70	58	29	23	26	V2427E0015
(Fig. 5)								
Straight	15	G 3/4"	1.25	80	51	30	-	V2427D0015
(Fig. 6)								

Tab. 4 V2437: Bodies with external threads and soft sealing radiator tailpieces

Type	DN	Pipe connection	k_{vs}-value	L	l	H	h	OS-No.
Angle	15	G 3/4"	1.70	58	29	23	26	V2437E0015
(Fig. 5)								
Straight	15	G 3/4"	1.25	80	51	30	-	V2437D0015
(Fig. 6)								

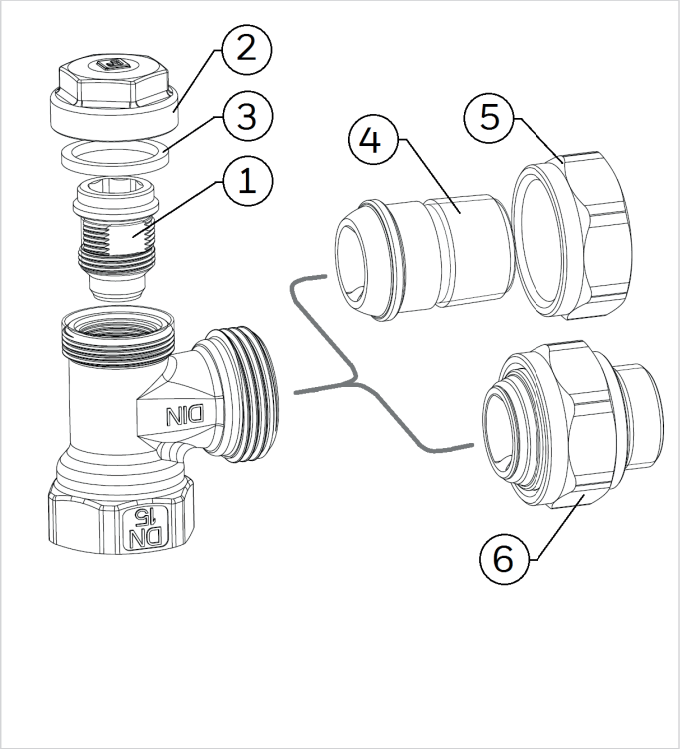
Accessories

	Description		Dimension	Part No.
	**FIG3/8CS**	**Compression fitting for COPPER and STEEL pipe** 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
	**FIG3/8CSS**	**Compression fitting for COPPER and STEEL pipe** 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
	**FIG1/2M**	**Compression fitting for MULTILAYER pipe. Consisting of compression nut, compression ring and support insert. For valves with internal thread.** Note: Max. operating temperature 90°C, max. operating pressure 10 bar		
		$^1/_2$", DN15	16 mm	FIG1/2M16X2
	**FEG3/4CS**	**Compression fitting for COPPER and STEEL pipe.** Consisting of one-piece (preassembled) nut. Soft sealing connection. For valves with external thread G$^3/_4$". 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.		
		G$^3/_4$", 1 pcs.	10 mm	FEG3/4CS10
		G$^3/_4$", 1 pcs.	12 mm	FEG3/4CS12
		G$^3/_4$", 1 pcs.	14 mm	FEG3/4CS14
		G$^3/_4$", 10 pcs.	14 mm	FEG3/4CS14-10
		G$^3/_4$", 1 pcs.	15 mm	FEG3/4CS15
		G$^3/_4$", 10 pcs.	15 mm	FEG3/4CS15-10
		G$^3/_4$", 1 pcs.	16 mm	FEG3/4CS16
		G$^3/_4$", 1 pcs.	18 mm	FEG3/4CS18
	**FEG3/4P**	**Compression fitting for PEX pipe.** Consisting of one-piece (preassembled) nut and reinforcing insert. Soft sealing connection. For valves with external thread G$^3/_4$". Note: Max. operating temperature 90°C, max. operating pressure 10 bar.		
		G$^3/_4$", 1 pcs.	12 x 1.1 mm	FEG3/4P12X1.1
		G$^3/_4$", 1 pcs.	16 x 1.5 mm	FEG3/4P16X1.5

	**FEG3/4PM**	**Compression fitting for PEX and MULTILAYER pipe.** Consisting of one-piece nut with preassembled antitorsion elastic compression ring and one-piece reinforcing insert. For valves with external thread G3/4". Note: Max. operating temperature 90°C, max. operating pressure 10 bar.		
		G3/4", 1 pcs.	14 x 2 mm	FEG3/4PM14X2
		G3/4", 1 pcs.	16 x 2 mm	FEG3/4PM16X2
		G3/4", 1 pcs.	16 x 2.2 mm	FEG3/4PM16X2.2
		G3/4", 1 pcs.	17 x 2 mm	FEG3/4PM17X2
		G3/4", 1 pcs.	18 x 2 mm	FEG3/4PM18X2
		G3/4", 1 pcs.	20 x 2 mm	FEG3/4PM20X2
	**VA5201Axxx**	**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
	**VA5204Bxxx**	**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
	**VA3300**	**Draining adapter**		
		for all sizes		VA3300A001
	**VA8300**	**Verafix-key**		
		for all sizes		VA8300A001
	**VA2202A**	**Pressure cap – for shutting off valves on radiator outlet**		
		G 5/8" internal thread - for DN10 valves		VA2202A010
		G 3/4" internal thread - for DN15 valves		VA2202A015
	**VA5090**	**PTFE sealing ring**		
		for valves DN10		VA5090A010
		for valves DN15		VA5090A015
		for valves DN20		VA5090A020

Spare Parts

Overview



	Description	Dimension	Part No.
1	**Replacement valve insert**		
	Verafix type		VS1300VF02
2	**Cap for fail-safe sealing after draining**		
	for all sizes		VS3301C001
3	**Secondary seal for fail-safe sealing after draining**		
	for all sizes		VS3302A001
4	**Metal-to-metal sealing radiator tailpiece**		
		3/8", DN10	VA5200B010
		1/2", DN15	VA5200B015
		3/4", DN20	VA5200B020
5	**Coupling nut, nickel plated**		
		DN10, nut with G 5/8" internal thread	VA5000B010
		DN15, nut with G 3/4" internal thread	VA5000B015
		DN20, nut with G 1" internal thread	VA5000B020
6	**Soft sealing radiator tailpiece with nut**		
		3/8", DN10, nut with G 5/8" internal thread	VA5536A010
		1/2", DN15, nut with G 3/4" internal thread	VA5536A015

For more information

homecomfort.resideo.com/europe

Ademco 1 GmbH
Hardhofweg 40
74821 MOSBACH
GERMANY
Phone: +49 6261 810
Fax: +49 6261 81309

Manufactured for and on behalf of the
Pittway Sàrl, La Pièce 4, 1180 Rolle, Switzerland
by its Authorised Representative Ademco 1 GmbH
EN0H-2202GE25 R0321
Subject to change