



V2420

Verafix-E

Pre-settable lockshield valve

APPLICATION

The Verafix-E is a pre-settable 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.

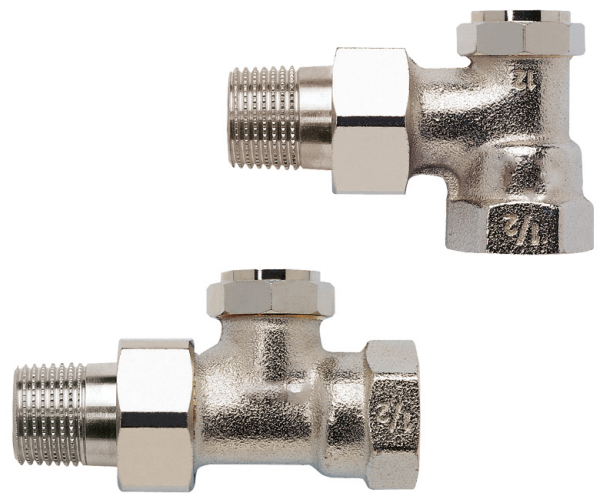
The lockshield valve is suitable for hot water and low pressure steam heating systems and cold water cooling systems.

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
- Easy identification: cover cap with octagon and circular collar on top; also see illustration identification

SPECIFICATIONS

| | | |
|---|---|-------------|
| Medium: | Water, water-glycol mixture Quality to VDI2035 | |
| Operating temperature: | 2 - 130 °C (36 - 266 °F) | |
| Operating pressure: | PN 10 | |
| K _{vs} (C _{vs})-value: | Straight | 1.25 (1.46) |
| | DN10, DN15 | |
| | Angle | 1.70 (1.98) |
| | DN10, DN15 | |
| | Straight, Angle | 1.80 (2.09) |
| | DN20 | |



DESIGN

The lockshield valve consists of:

- Valve housing PN10, DN10, 15 or 20 with
 - internal thread connection to DIN2999 (ISO7) or external thread connection to DIN/ISO228 on inlet
 - external thread connection to DIN/ISO228 with union-nut and radiator tailpiece (not V2406) on outlet
 - Body dimensions to DIN3842
- Valve insert
- Protection cap

MATERIALS

- Valve housing made of nickel-plated brass
- Valve insert made of brass with EPDM seals
- Tailpiece, protection cap and union-nut made of nickel-plated brass

FUNCTION

The Verafix-E connects the return of a radiator or heat exchanger to the heating loop and has the functions 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.

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

DIMENSIONS AND ORDERING INFORMATION

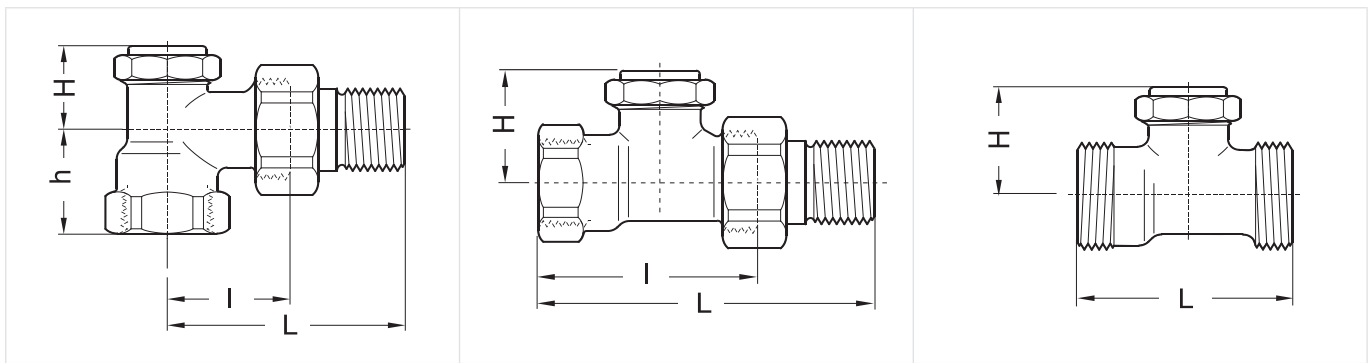


Fig. 1. Angle

Fig. 2. Straight

Fig. 3. Straight with external threads

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

| Type | DN | Pipe connection | $k_{vs}(c_{vs})$ -value | L | I | H | h | OS-No. |
|--|----|-----------------|-------------------------|----|----|----|----|------------|
| Angle (Fig. 1) | 10 | Rp 3/8" | 1.70 (1.99) | 52 | 26 | 23 | 22 | V2420E0010 |
| | 15 | Rp 1/2" | 1.70 (1.99) | 58 | 29 | 23 | 26 | V2420E0015 |
| | 20 | Rp 3/4" | 1.80 (2.09) | 66 | 34 | 27 | 29 | V2420E0020 |
| Straight (Fig. 2) | 10 | Rp 3/8" | 1.25 (1.46) | 75 | 49 | 30 | - | V2420D0010 |
| | 15 | Rp 1/2" | 1.25 (1.46) | 80 | 51 | 30 | - | V2420D0015 |
| | 20 | Rp 3/4" | 1.80 (2.09) | 91 | 59 | 30 | - | V2420D0020 |
| Straight with external threads (Fig. 3) | 15 | G 3/4" | 1.25 (1.46) | 51 | - | 30 | - | V2426D0015 |

Note: All dimensions in mm unless stated otherwise.

INSTALLATION EXAMPLE

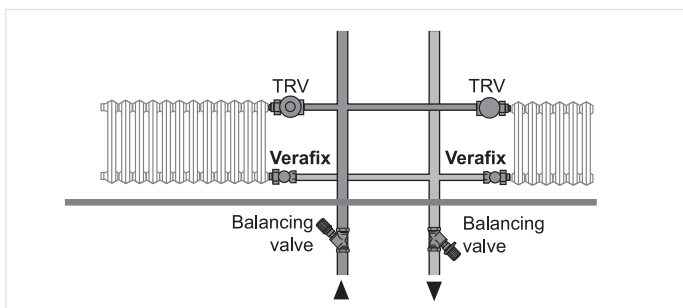


Fig. 4. Installation example heating system

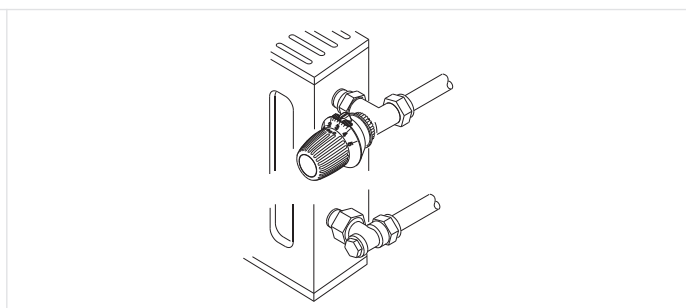
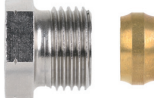
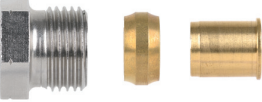








Fig. 5. Installation example radiator

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 antitension elastic compression ring and one-piece reinforcing insert. For valves with external thread G ^{3/4} ". Note: Max. operating temperature 90°C, max. operating pressure 10 bar. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <tbody> <tr> <td>G^{3/4}", 1 pcs.</td> <td>14 x 2 mm</td> <td>FEG3/4PM14X2</td> </tr> <tr> <td>G^{3/4}", 1 pcs.</td> <td>16 x 2 mm</td> <td>FEG3/4PM16X2</td> </tr> <tr> <td>G^{3/4}", 10 pcs.</td> <td>16 x 2 mm</td> <td>FEG3/4PM16X2-10</td> </tr> <tr> <td>G^{3/4}", 1 pcs.</td> <td>16 x 2.2 mm</td> <td>FEG3/4PM16X2.2</td> </tr> <tr> <td>G^{3/4}", 1 pcs.</td> <td>17 x 2 mm</td> <td>FEG3/4PM17X2</td> </tr> <tr> <td>G^{3/4}", 10 pcs.</td> <td>17 x 2 mm</td> <td>FEG3/4PM17X2-10</td> </tr> <tr> <td>G^{3/4}", 1 pcs.</td> <td>18 x 2 mm</td> <td>FEG3/4PM18X2</td> </tr> <tr> <td>G^{3/4}", 10 pcs.</td> <td>18 x 2 mm</td> <td>FEG3/4PM18X2-10</td> </tr> <tr> <td>G^{3/4}", 1 pcs.</td> <td>20 x 2 mm</td> <td>FEG3/4PM20X2</td> </tr> </tbody> </table> | G ^{3/4} ", 1 pcs. | 14 x 2 mm | FEG3/4PM14X2 | G ^{3/4} ", 1 pcs. | 16 x 2 mm | FEG3/4PM16X2 | G ^{3/4} ", 10 pcs. | 16 x 2 mm | FEG3/4PM16X2-10 | G ^{3/4} ", 1 pcs. | 16 x 2.2 mm | FEG3/4PM16X2.2 | G ^{3/4} ", 1 pcs. | 17 x 2 mm | FEG3/4PM17X2 | G ^{3/4} ", 10 pcs. | 17 x 2 mm | FEG3/4PM17X2-10 | G ^{3/4} ", 1 pcs. | 18 x 2 mm | FEG3/4PM18X2 | G ^{3/4} ", 10 pcs. | 18 x 2 mm | FEG3/4PM18X2-10 | G ^{3/4} ", 1 pcs. | 20 x 2 mm | FEG3/4PM20X2 |
| G ^{3/4} ", 1 pcs. | 14 x 2 mm | FEG3/4PM14X2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G ^{3/4} ", 1 pcs. | 16 x 2 mm | FEG3/4PM16X2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G ^{3/4} ", 10 pcs. | 16 x 2 mm | FEG3/4PM16X2-10 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G ^{3/4} ", 1 pcs. | 16 x 2.2 mm | FEG3/4PM16X2.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G ^{3/4} ", 1 pcs. | 17 x 2 mm | FEG3/4PM17X2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G ^{3/4} ", 10 pcs. | 17 x 2 mm | FEG3/4PM17X2-10 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G ^{3/4} ", 1 pcs. | 18 x 2 mm | FEG3/4PM18X2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G ^{3/4} ", 10 pcs. | 18 x 2 mm | FEG3/4PM18X2-10 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G ^{3/4} ", 1 pcs. | 20 x 2 mm | FEG3/4PM20X2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | VA5201Axxx | Radiator tailpiece with thread up to collar for valves DN10 (3/8") for valves DN15 (1/2") for valves DN20 (3/4") | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <tbody> <tr> <td></td> <td></td> <td>VA5201A010</td> </tr> <tr> <td></td> <td></td> <td>VA5201A015</td> </tr> <tr> <td></td> <td></td> <td>VA5201A020</td> </tr> </tbody> </table> | | | VA5201A010 | | | VA5201A015 | | | VA5201A020 | | | | | | | | | | | | | | | | | | |
| | | VA5201A010 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | VA5201A015 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | VA5201A020 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | VA5204Bxxx | Extended radiator tailpiece, nickel-plated, to be shortened as required 3/8" x 70 mm (for DN10) thread approx. 50 mm 1/2" x 76 mm (for DN15) thread approx. 65 mm 3/4" x 70 mm (for DN20) thread approx. 60 mm | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <tbody> <tr> <td></td> <td></td> <td>VA5204B010</td> </tr> <tr> <td></td> <td></td> <td>VA5204B015</td> </tr> <tr> <td></td> <td></td> <td>VA5204B020</td> </tr> </tbody> </table> | | | VA5204B010 | | | VA5204B015 | | | VA5204B020 | | | | | | | | | | | | | | | | | | |
| | | VA5204B010 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | VA5204B015 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | VA5204B020 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | VA5230 | Soldering tailpiece (Outphased) for DN10 for DN15 for DN20 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <tbody> <tr> <td></td> <td>3/8" x 12 mm</td> <td>VA5230A010</td> </tr> <tr> <td></td> <td>1/2" x 15 mm</td> <td>VA5230A015</td> </tr> <tr> <td></td> <td>3/4" x 22 mm</td> <td>VA5230A020</td> </tr> </tbody> </table> | | 3/8" x 12 mm | VA5230A010 | | 1/2" x 15 mm | VA5230A015 | | 3/4" x 22 mm | VA5230A020 | | | | | | | | | | | | | | | | | | |
| | 3/8" x 12 mm | VA5230A010 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1/2" x 15 mm | VA5230A015 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3/4" x 22 mm | VA5230A020 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | VA3300 | Draining adapter for all sizes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <tbody> <tr> <td></td> <td></td> <td>VA3300A001</td> </tr> </tbody> </table> | | | VA3300A001 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | VA3300A001 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | VA8300 | Verafix-key for all sizes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <tbody> <tr> <td></td> <td></td> <td>VA8300A001</td> </tr> </tbody> </table> | | | VA8300A001 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | VA8300A001 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SERVICE PARTS

| | |
|---|---|
|  | Cover cap for all sizes VS3301C001 |
|  | Sealing ring for cover cap for all sizes VS3302A001 |
|  | Exchange valve insert Verafix type VS1300VF02 |
|  | 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 |

IDENTIFICATION

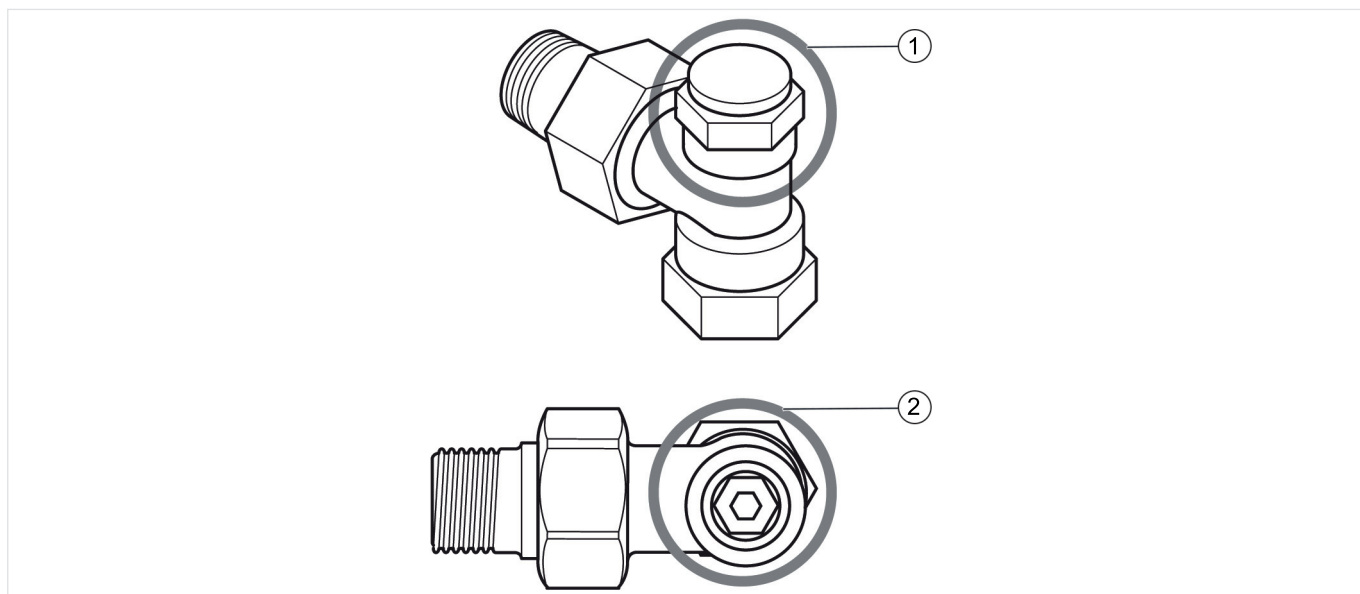
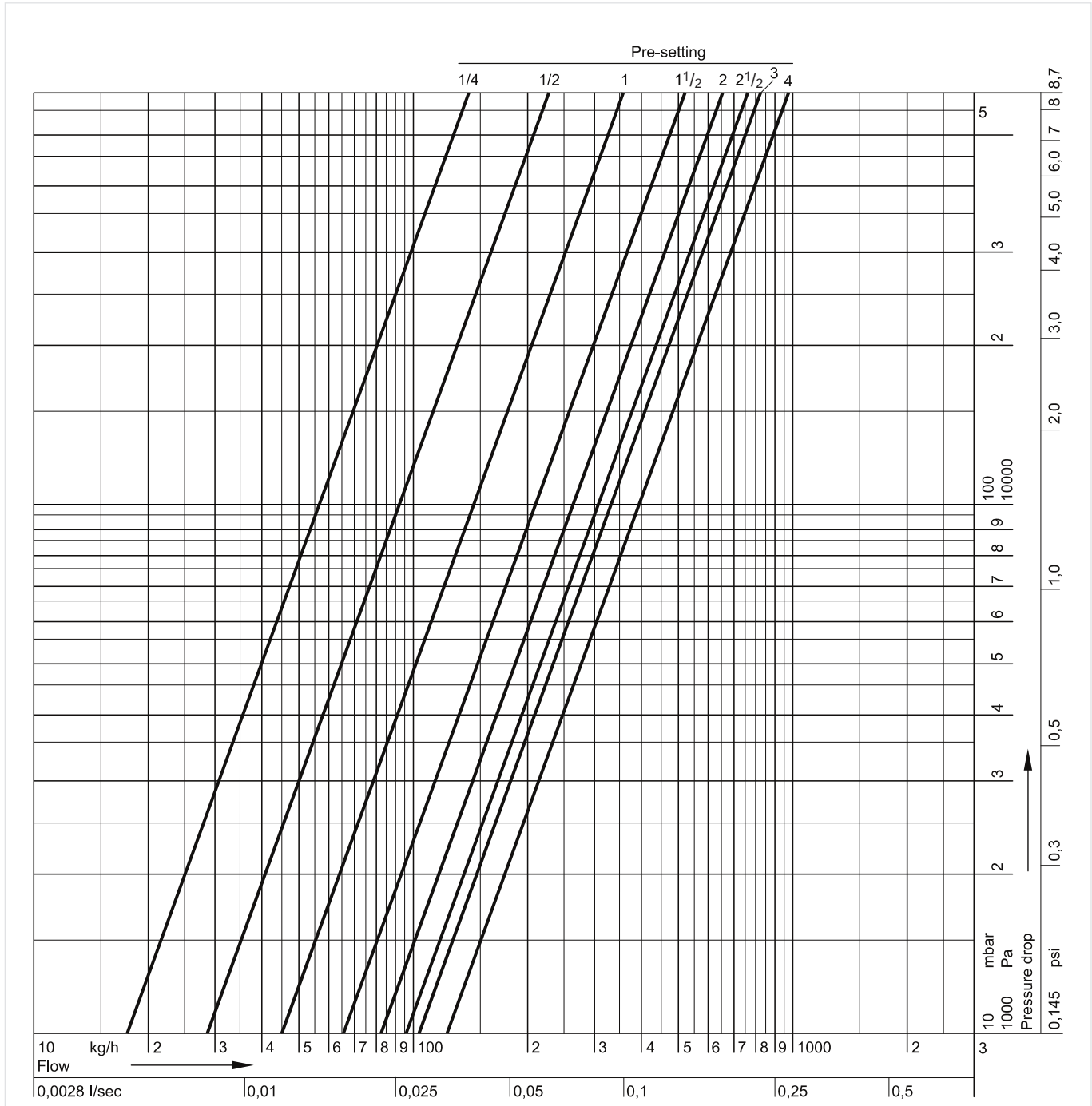


Fig. 6. Identification of Verafix-E

- 1) Protection cap with octagon (SW24) and raised circular centre
- 2) Protection cap removed: valve insert with smooth rim, 2 hexagons inside (SW10 and SW4)

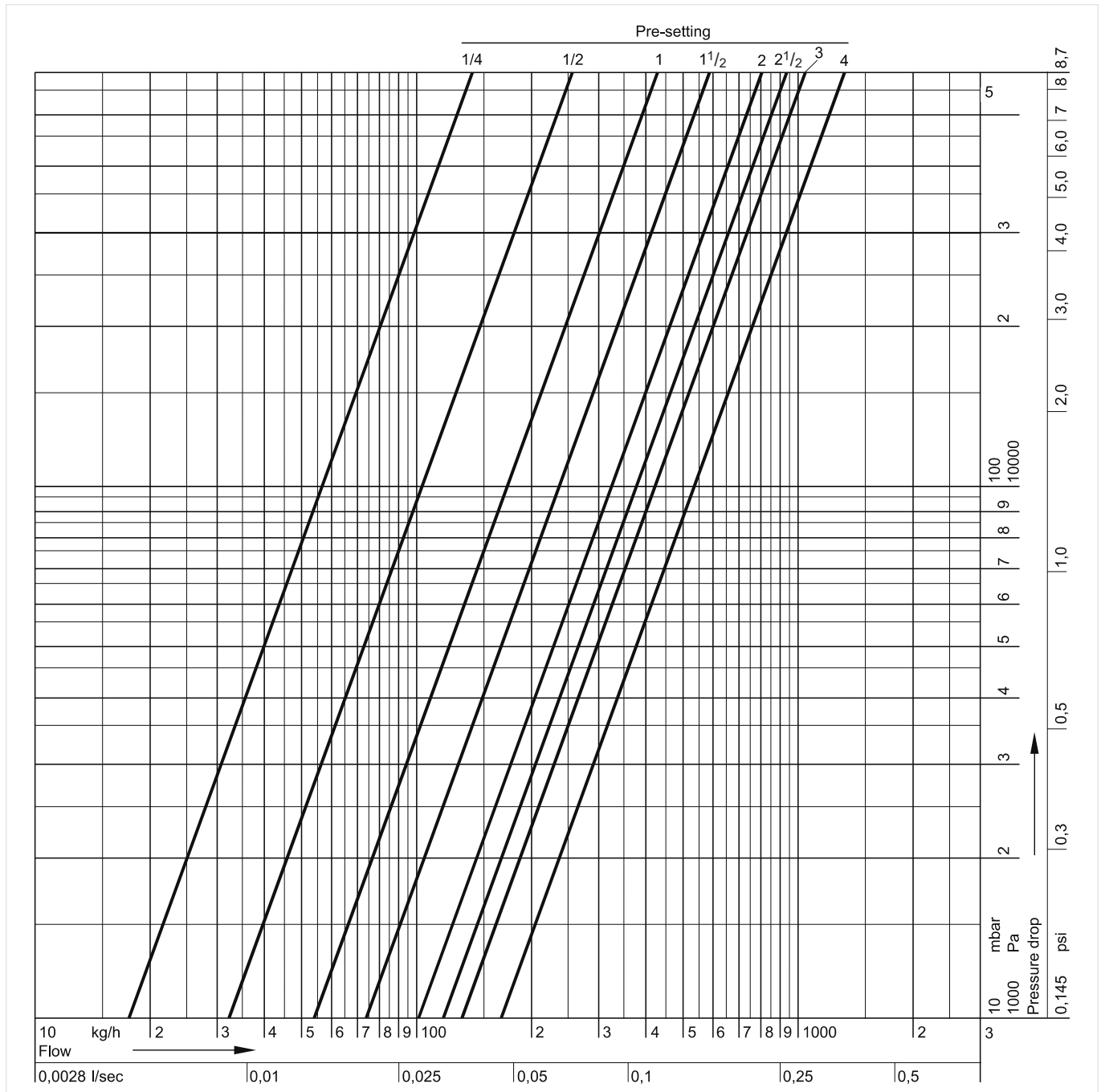
FLOW DIAGRAM FOR VERAFIX STRAIGHT, DN10 (V2420D0010), DN15 (V2420D0015)



| 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 |
| c_v-value | 0.21 | 0.34 | 0.53 | 0.77 | 0.98 | 1.12 | 1.23 | 1.47 |

Note: See chapter NOTE: presetting for pre-setting instructions.

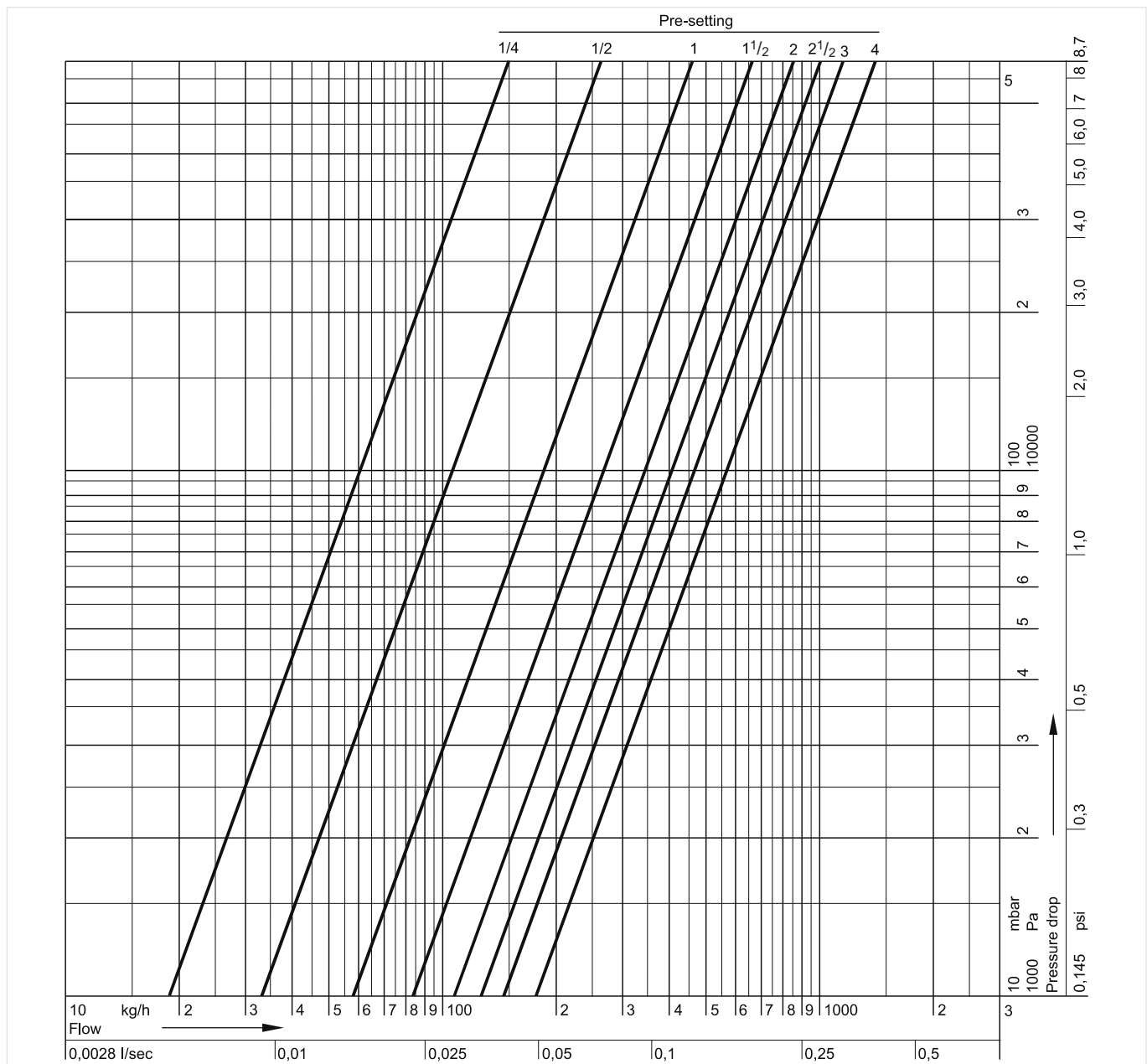
FLOW DIAGRAM FOR VERAFIX ANGLE, DN10 (V2420E0010), DN15 (V2420E0015)



| 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 |

Note: See chapter NOTE: presetting for pre-setting instructions.

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 |

Note: See chapter NOTE: pre-setting for pre-setting instructions.

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
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Subject to change

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