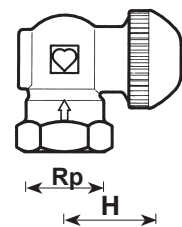
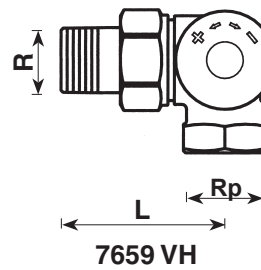
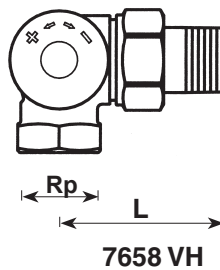
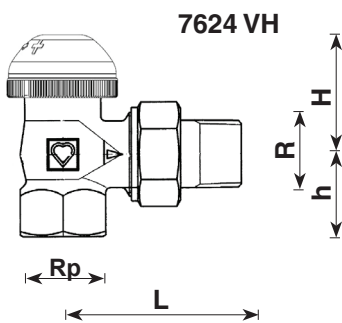
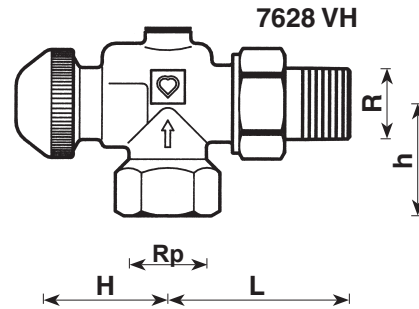
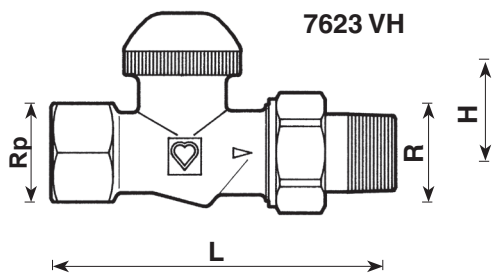


HERZ-TS-98-VH

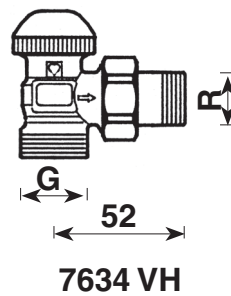
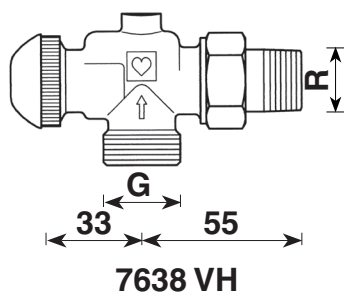
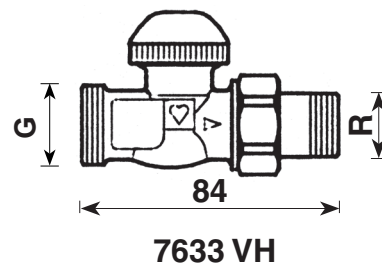
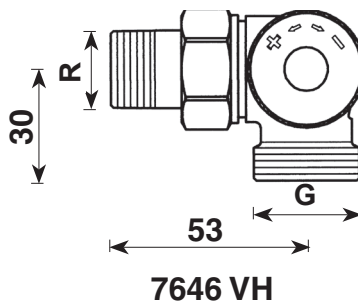
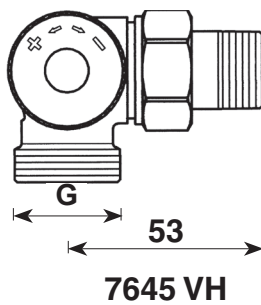
Thermostatic valves M30x1,5 with continuous pre-setting and readout

Data sheet 7623 / 7624 / 7628 / 7658 / 7659, issue 0122

HERZ-TS-98-VH



Special models



R = R 1/2
G = G 3/4

☑ Dimensions in mm for Standard Series EN 215 T2 HD 1215

| Art. No. | Designation | DN | Rp | R | L | H | h | Order No. |
|----------|--|----|-----|-----|------|----|------|-----------|
| 7623 VH | Dimensional series „D“, straight valve | 10 | 3/8 | 3/8 | 75,6 | 28 | - | 1 7623 25 |
| 7623 VH | Dimensional series „D“, straight valve | 15 | 1/2 | 1/2 | 95 | 28 | - | 1 7623 26 |
| 7623 VH | Dimensional series „D“, straight valve | 20 | 3/4 | 3/4 | 106 | 31 | - | 1 7623 27 |
| 7624 VH | Dimensional series „D“, angle valve | 10 | 3/8 | 3/8 | 51,5 | 28 | 22 | 1 7624 25 |
| 7624 VH | Dimensional series „D“, angle valve | 15 | 1/2 | 1/2 | 58 | 23 | 26 | 1 7624 26 |
| 7624 VH | Dimensional series „D“, angle valve | 20 | 3/4 | 3/4 | 67 | 27 | 29 | 1 7624 27 |
| 7628 VH | Reverse angle model | 15 | 1/2 | 1/2 | 55 | 35 | 29 | 1 7628 26 |
| 7658 VH | 3-axis valve „AB“ | 15 | 1/2 | 1/2 | 53 | 26 | 31 | 1 7658 26 |
| 7659 VH | 3-axis valve „CD“ | 15 | 1/2 | 1/2 | 53 | 26 | 31 | 1 7659 26 |
| 7623 VH | Dimensional series „F“, straight valve | 10 | 3/8 | 3/8 | 75 | 28 | - | 1 7623 20 |
| 7623 VH | Dimensional series „F“, straight valve | 15 | 1/2 | 1/2 | 83 | 28 | - | 1 7623 21 |
| 7623 VH | Dimensional series „F“, straight valve | 20 | 3/4 | 3/4 | 98 | 28 | - | 1 7623 22 |
| 7624 VH | Dimensional series „F“, angle valve | 10 | 3/8 | 3/8 | 49 | 28 | 20,5 | 1 7624 20 |
| 7624 VH | Dimensional series „F“, angle valve | 15 | 1/2 | 1/2 | 53,3 | 26 | 23,5 | 1 7624 21 |
| 7624 VH | Dimensional series „F“, angle valve | 20 | 3/4 | 3/4 | 63,4 | 25 | 26 | 1 7624 22 |

☑ Models

All models are nickel-plated with a white screw cap. Universal models with special socket for threaded pipes and pipe connections suitable for compression adapter connection.

☑ HERZ-TS-98-VH

| | | |
|---------|-----|--|
| 7623 VH | 1/2 | Straight model dimensional series „D“ |
| 7624 VH | 1/2 | Angle model dimensional series „D“ |
| 7628 VH | 1/2 | Reverse angle model |
| 7658 VH | 1/2 | 3-axis valve „AB“, valve left of radiator |
| 7659 VH | 1/2 | 3-axis valve „CD“, valve right of radiator |

☑ HERZ-TS-98-VH valves in special versions

HERZ-TS-98-VH valves in special versions, dimension 1/2:

- 1 7633 26 Thermostatic valve, straight model. Radiator connection with cone, pipe connection male thread G 3/4 with cone according to DIN V 3838
- 1 7634 26 Thermostatic valve, angle model. Radiator connection with cone, pipe connection male thread G 3/4 with cone according to DIN V 3838
- 1 7645 26 Thermostatic valve, 3-axis valve «AB». Valve left of radiator, radiator connection with cone, pipe connection male thread G 3/4 with cone according to DIN V 3838
- 1 7646 26 Thermostatic valve HERZ-TS-90-H, 3-axis valve «CD». Valve right of radiator, radiator connection with cone, pipe connection male thread G 3/4 with cone according to DIN V 3838
- 1 7638 26 Thermostatic valve HERZ-TS-90-H, reverse angle model. Radiator connection with cone, pipe connection male thread G 3/4 with cone according to DIN V 3838

☑ Other models

| | |
|-----------------|--|
| HERZ-TS-90-D | Thermostatic valves without pre-setting, dimensional series „D“ |
| HERZ-TS-90-F | Thermostatic valves without pre-setting, dimensional series F |
| HERZ-TS-90-kv | Thermostatic valves with fixed kv values |
| HERZ-TS-90 E | Thermostatic valves with reduced resistance for one-pipe systems |
| HERZ-TS E | Thermostatic valves with maximum flow rate for one-pipe systems |
| HERZ-TS-90 V-D | Thermostatic valves with continuous, concealed pre-setting, dimensional series „D“ |
| HERZ-TS-90 V-F | Thermostatic valves with continuous, concealed pre-setting, dimensional series „F“ |
| HERZ-TS-98-V-D | Thermostatic valves with continuous pre-setting and readout, dimensional series „D“ |
| HERZ-TS-98-V-F | Thermostatic valves with continuous pre-setting and readout, dimensional series „F“ |
| HERZ-TS-99-FV-D | Thermostatic valves with ultra-fine 6 position pre-setting and readout, dimensional series „D“ |
| HERZ-TS-99-FV-F | Thermostatic valves with ultra-fine 6 position pre-setting and readout, dimensional series „F“ |
| HERZ-TS-90 H | Thermostatic valves without pre-setting, dimensional series „D“ |

Detailed information of thermostatic valve models can be found in separate data sheets.

Operating data

Max. operating temperature 120 °C
 Max. operating pressure 10 bar
 Hot water quality conforming to ÖNORM H 5195 and/or VDI guideline 2035.

HERZ compression adapters

When using HERZ compression adapters for copper and steel pipes, observe the permissible temperatures and pressures as in EN 1254-2:1998 Table 5. The plastic pipe connections are suitable for application classes 4 and 5 according to ISO 10508 (panel heating and radiator connection) and for pipes made of PE-RT (EN ISO 22391), PP (EN ISO 15874), PB (EN ISO 15876) und PE-X (EN ISO 15875). This results in a maximum operating temperature of 95 °C at 10 bar. It is up to the user to select the operating pressure and temperature for the respective pipe type so that the standard values and the permissible operating data of the manufacturer are adhered to.

Field of application

Thermostatic valves are used in hot water heating systems where hydraulic balancing using valves to shut off the radiators is not possible or desirable.

Radiator connections

Iron pipe connection **6210** with cone and O-Ring.
 It is recommended to use HERZ assembly key 6680.

Further connecting options

Order numbers can be found in the HERZ catalogue.

Can be used instead of the radiator connection and on the male thread G3/4:

| | | |
|-------------|-------|--|
| 6252 | 1/2 | Radiator connection with O-Ring |
| 6210 | 1/2 | Radiator connection, lengths 26 or 35 mm |
| 6211 | 1/2 | Radiator connection, 1/2 x 3/8 |
| 6218 | 1/2 | Long threaded bush, without nut, can be shortened to even out installation dimension differences. Length 3/8 x 40, 1/2 x 76 or 3/4 x 76 mm |
| 6218 | 1/2 | Threaded bush, without nut. Length 36, 39, 42, 48 or 76 mm |
| 6235 | 1/2 | Solder connection 1/2 x 12, 15 and 18 |
| 6249 | 1/2 | 90° iron pipe connection elbow, without nut, with conical seal. |
| 6274 | G 3/4 | Compression adapters for copper and thin-walled steel pipes, for external pipe diameters 8,10,12,14,15,16 mm. Not suitable for chrome-plated metal pipes and stainless steel pipes. |
| 6276 | G 3/4 | Compression adapter with soft seal, olive, solid rubber seal (EPDM) to pipe, union nut G 3/4. For external pipe diameters 12, 14, 15, 16 and 18 mm. Not suitable for chrome-plated metal pipes, soft steel pipes or stainless steel pipes. |
| 6098 | G 3/4 | Plastic pipe connections G 3/4 for PE-X, PB and aluminium composite pipes, consisting of spigot, olive and union nut G 3/4 with cone. |

For use on the socket side of the valve:

| | | |
|-------------|-----------|--|
| 6219 | 1/2 – 3/4 | Reduction socket for connecting pipe/valve, brass version. Female thread (pipe) x male thread (valve), G1 x R1/2, G1¼ x R1/2, G1 x R3/4, G1¼ x R3/4. |
|-------------|-----------|--|

For pipe dimensions of plastic pipe connections refer to the HERZ catalogue.

Pipe connection universal models

Universal models are fitted with special sockets offering the option of connecting either a threaded pipe or a calibrated soft steel or copper pipe. The compression adapter must be ordered separately.

| Pipe Ø D mm | 12 | 14 | 15 |
|--------------|------------------|------------------|------------------|
| Order number | 1 6292 12 | 1 6292 14 | 1 6292 01 |
| Order number | - | - | 1 6292 11 |

The following fittings are used for PE-X, PB and plastic pipes. Compression adapters must be ordered separately.

| | | |
|--------------|------------------|------------------|
| Pipe Ø D mm | 14 x 2,0 | 16 x 2,0 |
| Order number | 1 6092 02 | 1 6292 01 |

For thermostatic valves G 3/4 with Euro-cone connection according to DIN V 3838 and for pipes with outer diameters of 10, 12, 14, 16 and 18 mm HERZ compression adapters from the table below are used. Compression adapters must be ordered separately.

Connection G 3/4

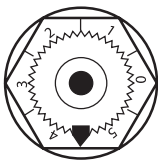
| | | | | | | | |
|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Pipe Ø D mm | 8 | 10 | 12 | 14 | 15 | 16 | 18 |
| Order number | 1 6274 18 | 1 6274 00 | 1 6274 01 | 1 6274 02 | 1 6274 03 | 1 6274 04 | - |
| Order number | - | - | 1 6276 12 | 1 6276 14 | 1 6276 15 | 1 6276 16 | 1 6276 18 |

The following compression adapters are used for PE-X, PB and plastic pipes. Compression adapters must be ordered separately.

| | | | | | | | | | | |
|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Pipe Ø D mm | 10 x 1,3 | 14 x 2,0 | 16 x 2,0 | 16 x 2,2 | 17 x 2,0 | 17 x 2,5 | 18 x 2,0 | 18 x 2,5 | 20 x 2,0 | 20 x 2,5 |
| Order number | 1 6098 18 | 1 6098 02 | 1 6098 03 | 1 6098 12 | 1 6098 04 | 1 6098 05 | 1 6098 07 | 1 6098 06 | 1 6098 08 | 1 6098 11 |

We recommend the use of support sleeves for the installation of soft steel or copper pipes with compression adapters. For perfect installation, it is imperative to lubricate the thread of the locking nut (male thread and female thread) as well as the olive itself with silicon oil. We refer to our instructions for installation.

Pre-setting function

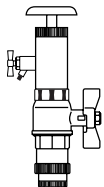


Pre-setting is performed by means of a flow restrictor downstream of the valve seat enclosing the pre-setting function valve seal. This flow restrictor is adjustable from the outside. It does not obstruct the working lift of the valve spindle.

Pre-setting can be performed manually by means of the light grey pre-setting button. This is performed by setting the pointer on the pre-setting button to the figure on the scale of the upper part obtained by calculation or from the HERZ- standard diagram.

For convenient pre-setting a HERZ pre-setting key is available (1 **6819 98**) which engages with the teeth of the pre-setting button.

Special design features



Changing the upper part of a thermostat valve

1 **7780 98** HERZ Changefix Tool for HERZ thermostatic inserts on HERZ "H" valves with connecting thread M 30x1,5.

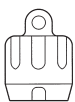
The HERZ thermostatic valve upper part can be exchanged under pressure with the HERZ exchange device Changefix „H“ for:

- Equipping the valve with another thermostatic valve upper part with fixed, stepped kv-values or with pre-adjustable upper part. This allows for adaption of the volume flows through the individual radiators to actual requirements.
- Cleaning the seal at the spindle and/or changing the upper part of the valve. These are easy methods of removing defects in radiator thermostat valves, caused e. g. by foreign substances such as dirt, welding and soldering residues.

When using the valve with the new upper part follow the instructions enclosed with the changing tool.

Setting instructions HERZ-TS-98-VH

Pre-setting key 1 **6819 98**



1. Remove HERZ thermostatic head, handwheel or screw cap.
2. Set the orange setting button (factory setting 6 = 0 (360° open)) with the setting key (1 **6819 98**) clockwise to the required pre-setting level 5-1.
3. Mount HERZ thermostatic head or handwheel.

The value set is thus secured.

☑ Spindle seal

HERZ-TS-98-VH upper part



The spindle seal is a special sealing ring which keeps maintenance requirements to a minimum and ensures ease of valve operation over a long period of time. If the spindle seal is worn, the upper valve part has to be replaced, which means simultaneous replacement of the seat seal which may also be damaged.

The pre-setting stage is to be reset after changing the upper part:

1. Remove the HERZ thermostatic head or HERZ-TS-handwheel.
2. Unscrew and remove the old upper part and replace it with a new one.
3. Replace HERZ thermostatic head or HERZ-TS handwheel.

Turn the HERZ-TS handwheel clockwise as far as it will go to check that the valve is closed!

The upper part can be changed by means of the HERZ changing tool while the heating system is under pressure. Follow the instructions for the HERZ changing tool.

Order number for HERZ-TS-98-VH valve upper part: 1 **6398** 98.

☑ HERZ thermostatic valve

Nominal lift



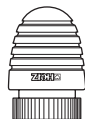
The screw cap is used for operation during the installation phase (pipe flushing). The thermostatic valve is automated by removing the screw cap and screwing in the HERZ thermostatic head without draining the heating system.

Adjustment of nominal lift by means of screw cap:

On the knurled part of the circumference of the screw cap there are two setting marks (webs) in alignment with the “+” and “-” marks.

1. Close the valve by turning the screw cap clockwise.
2. Mark the position corresponding to the setting mark “+”.
3. Turn the screw cap anticlockwise until the setting mark “-” with the previously marked position of the marking.

☑ HERZ-TS-90-H hand wheel



In the exceptional case that the HERZ thermostatic valve lower part is not equipped with a HERZ thermostatic head, the HERZ-TS hand wheel is used to replace the screw cap.

1 **9102** 98 HERZ-TS-90-H hand wheel, series 9000 „Design“.

During installation, follow the instructions enclosed with the handwheel.

☑ Installation

The thermostatic valve is installed in the radiator flow with the flow direction indicated by the arrow on the valve body. If possible, the HERZ thermostatic head should be in a horizontal position in order to permit optimum room temperature control and minimise interference.

☑ Important for Installation

Under no circumstances should the HERZ thermostatic head be exposed to direct sunlight or to the Important for Installation effects of equipment emitting relevant quantities of heat, e.g. TV sets. If the radiator is covered by curtains this will lead to the formation of a heat accumulation zone in which the thermostat cannot sense the room temperature and consequently is not in a position to properly control it. In such cases, use the HERZ thermostat with remote sensor 1 **9430** 98, 1 **9460** 98 or the HERZ thermostat with remote adjustment 1 **9352** 98, 1 **9330** 98, 1 **9355** 98, 1 **9358** 98.

For detailed information on the HERZ thermostatic heads “H” consult the individual standard sheets.

☑ Summer setting

After the end of the heating period open the valve completely by turning it in an anti-clockwise direction to prevent dirt deposits at the valve seat.

☑ Accessoires

- 1 **6680** 00 HERZ assembly key for connections 3/8" - 3/4".
- 1 **6807** 90 HERZ-TS-90 assembly key for replacing the thermostatic upper part
- 1 **6819** 98 Pre-setting key
- 1 **7780** 98 HERZ Changefix Tool for thermostatic inserts “H”
- 1 **9102** 98 HERZ-TS-90-H hand wheel, series 9000 „Design“

☑ Spare parts

- 1 **6398** 98 HERZ-TS-98-VH upper thermostatic insert

Proportional band

| Proportional band [K] | kv-value | | | | | | | |
|-----------------------|----------|------|------|------|------|------|------|------|
| | 0,5 | 1 | 1,5 | 2 | 2,5 | 3 | 3,5 | 4 |
| Pre-setting | | | | | | | | |
| 1 | 0,05 | 0,11 | 0,14 | 0,14 | 0,14 | 0,14 | 0,14 | 0,14 |
| 2 | 0,13 | 0,25 | 0,29 | 0,30 | 0,30 | 0,30 | 0,30 | 0,30 |
| 3 | 0,14 | 0,26 | 0,38 | 0,42 | 0,44 | 0,44 | 0,45 | 0,45 |
| 4 | 0,14 | 0,27 | 0,39 | 0,50 | 0,54 | 0,55 | 0,56 | 0,57 |
| 5 | 0,15 | 0,28 | 0,40 | 0,53 | 0,66 | 0,70 | 0,72 | 0,73 |
| 6 | 0,15 | 0,28 | 0,41 | 0,56 | 0,70 | 0,76 | 0,80 | 0,81 |

 Disposal

Disposal must comply with local and current legislation.

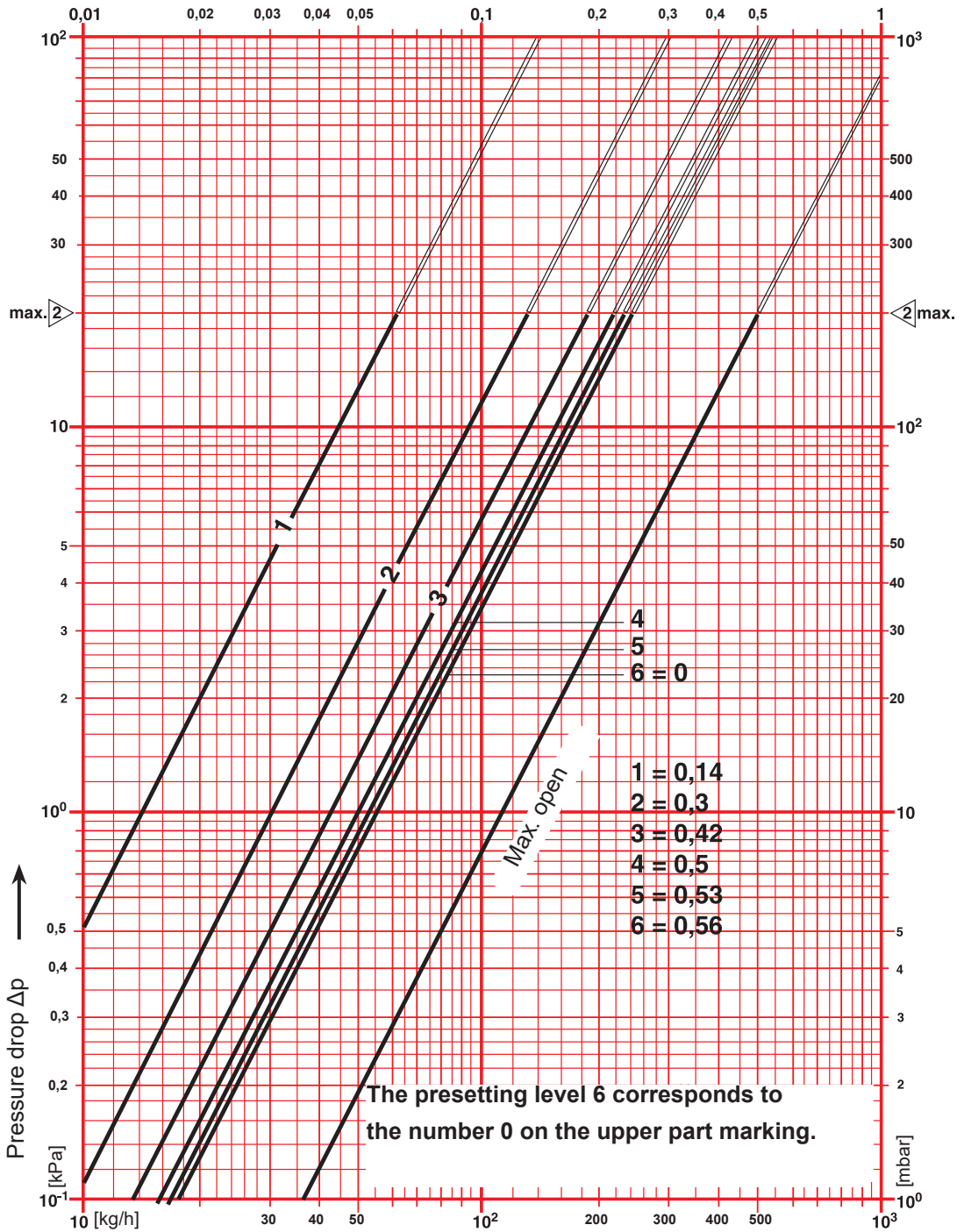
 Material

Pursuant to Article 33 of the REACH Regulation (EC No. 1907/2006), we are obliged to point out that the material lead is listed on the SVHC list and that all brass components manufactured in our products exceed 0.1% (w / w) lead (CAS: 7439-92-1 / EINECS: 231-100-4). Since lead is a component part of an alloy, actual exposure is not possible and therefore no additional information on safe use is necessary.

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| | |
|-----------------------|---|
| HERZ-Standard Diagram | HERZ-TS-98-VH |
| 7623 – 7659 VH | DN 10 R = 3/8; DN 15 R = 1/2; DN 20 R = 3/4 |

Valve dimensioning (Δp) must be performed in accordance with the "VDMA-Instruction Sheet for Planning and Hydraulic Balancing of Heating Systems with Thermostatic Radiator Valves".



The information relates to a static pressure of 2.5 - 10 bar.