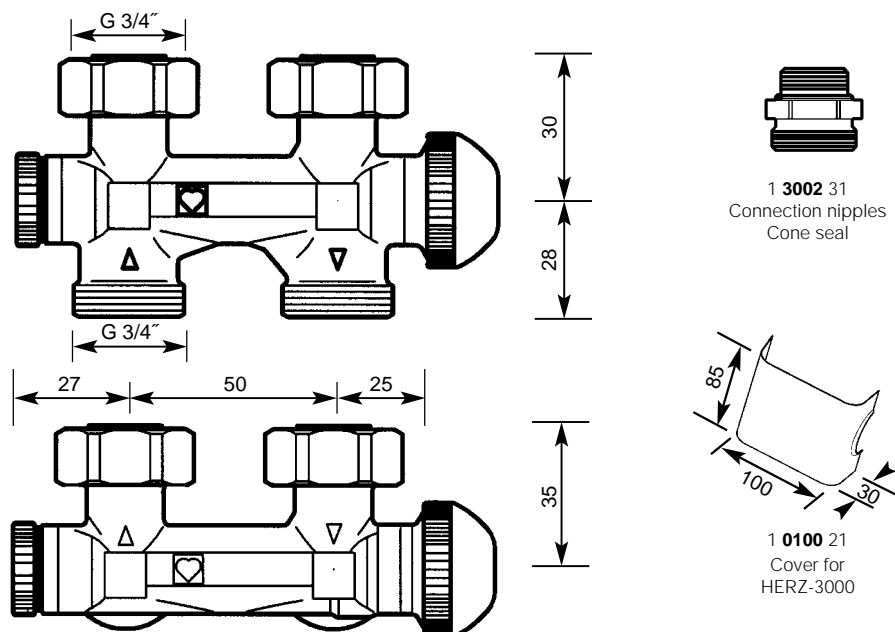


HERZ TS-3000

Connection system for radiators
Thermostatic valve and shut-off return valve

Standard sheet for
3691-3694
3791-3794
Issue 0702



Dimensions in mm

HERZ-3000 Thermostatic valves, bypass body for one-pipe systems

Straight model, on radiator side free moving nut, on pipe side outside thread G 3/4 for compression unit. Pipe connections are to be ordered separately.

- 1 3791 92 G 3/4
1 3792 92 Rp 1/2 x G 3/4 2 Connection nipples 1 3002 31 are included.

Angle model, on radiator side free moving nut, on pipe side outside thread G 3/4 for compression unit. Pipe connections are to be ordered separately.

- 1 3793 92 G 3/4
1 3794 92 Rp 1/2 x G 3/4 2 Connection nipples 1 3002 31 are included.

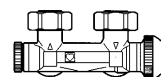
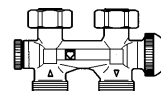
HERZ-3000-Connection elements for two-pipe systems with integrated thermostatic valve (With direct pre-setting and readout)

- 1 3691 91 G 3/4
1 3692 91 Rp 1/2 x G 3/4 2 Connection nipples 1 3002 31 are included.

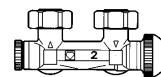
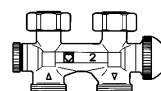
Angle model, on radiator side free moving nut, on pipe side outside thread G 3/4 for compression unit. Pipe connections are to be ordered separately.

- 1 3693 91 G 3/4
1 3694 91 Rp 1/2 x G 3/4 2 Connection nipples 1 3002 31 are included.

Model One-pipe systems



Two-pipe systems



The HERZ-3000 thermostatic valve combines thermostatic valve and shut-off return valve in one fitting where the thermostatic sensing device is used in a favourable heat flow position.

Constructional characteristics

The valve body is marked with characteristic numbers.

- "1" - Bypass body for one-pipe systems
"2" - Connection elements for two-pipe systems

Marking of the models

HERZ-3000 thermostatic valves can be used for all radiators with connection from below, connection centre distance 50 mm, with threaded connection G 3/4 or Rp 1/2. During mounting, arrows on valve body have to be observed.

Radiators with integrated valves do not require an installation of thermostatic inserts. The threaded connection is closed by means of a plug.

Installation

We reserve the right to make modifications in line with progress in engineering.

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Water heating systems for one- and two-pipe systems that are installed with calibrated steel, copper or plastic pipes.

Application

Maximum operating temperature 110 °C
Maximum operating pressure 10 bar
Hot water quality according Austrian Standard ÖNORM H 5195 and/or VDI-Regulation 2035.

Operational data

When using HERZ compression unions for copper and steel pipes, take into account the permissible temperature and pressure ratings according to EN 1254-2:1998, Table 5. Plastic pipe connections are suitable for application classes 4 and 5 according ISO 10508 (panel heating and radiator connection) as well as for pipes made of PE-RT (DIN 4721), PE-MDX (DIN 4724), PB, PE-X (DIN 4726) and plastic composite pipes (ÖNORM B 5157). From this it follows a maximum operating temperature of 95 °C at 10 bar. It is the operators task to regulate operating pressure and operating temperature in such a way that they are in accordance with the standards. The operational data of the pipe producer have to be respected.

HERZ-Compression union

HERZ-3000 thermostatic valves for one-pipe systems are set to 40% of the radiator heating water quantity.

Flow quantity for one-pipe systems

On the radiator side, two free moving nuts and a cone connection for radiator threaded connection are planned.

Radiator connection

For radiator threaded connections Rp 3/4", two optional connection nipples (1 3002 31) are included

HERZ-3000 thermostatic valves can be pre-assembled to the piping. As soon as flow and return are closed, the system will be filled and a pressure test will be made. After finishing all interior works (painting, decorating), the HERZ thermostatic head is mounted and the radiator is placed.

Pre-assembly

For pre-assembled HERZ-3000 thermostatic valves, it is necessary to cover the raised face and the union nut with security plugs until mounting of radiator will be done.

Close the valve spindle with the HERZ multi-purpose-key (1 6625 00) or with any Allen key 8 mm. The opening is completed after 3 to 3.5 rotations.

Shut-off of return valves

6274 HERZ compression union for copper and thin walled steel pipes
6275 HERZ compression unions with soft seal for copper and thin-walled steel pipes are especially suitable for hard pipes made of stainless steel and pipes with plated surface
6098, 6097 HERZ-compression unions for PE-X, PB- and plastic composite pipes.
For dimensions and order numbers please see HERZ product range.

Pipe connections G 3/4

To be ordered separately

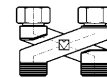
Compression unions are not to be mounted with adjustable pliers or similar tools because this could cause deformation of the union nut. Steel and copper tubes have to be properly calibrated and burred. We recommend using sockets. The union nuts' thread has to be oiled with silicone oil. Mineral oils will damage the O-Ring of the olives. Please observe the mounting instructions, enclosed with compression unions.

Installation of compression unions to piping

The special connection is used as intermediate part between bypass body or connection element and piping to adjust pipe distance or radiator. For detailed information, please refer to standard sheet "Special connection".

Intersection Element in „X“-Model

Intersection element in "X"-Model cannot be shut-off, for regulation of pipe distance or adjustment of radiator.



The thermostatic upper part can be replaced under pressure by means of the HERZ changing tool Changefix 1 7780 00. Application according to manual.

Change of thermostatic upper part

- Change of thermostatic upper part to repair failures, e.g. foreign objects like dirt, welding or soldering residues.

- Two-pipe system: Conversion of thermostatic upper parts with fixed or presentable kv-values.

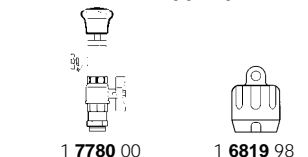
Therefore, the volume flow of the radiator can be adjusted according to individual requirements. The setting is done by means of the pre-setting key 1 6819-98.1.

1. Remove HERZ thermostatic head, hand wheel or screw cap.

2. Set orange adjusting knob (preset between "4" and "5") manually or with pre-setting key (1 6819 98) direct to desired pre-setting step 1-6 (0).

3. Install HERZ-thermostatic head or hand wheel.

The setting is safely fixed now.



The spindle seal is made by means of an O-Ring that is placed in a brass chamber that can be changed during operation. The O-Ring guarantees a maximum level of maintenance-free operation and offers permanent soft running of the valve.

Spindle seal One-pipe-model

1. Dismounting of HERZ thermostatic head respectively HERZ-TS-hand wheel.

2. Unscrew the O-Ring chamber including O-Ring and replace it. During the changing process, the upper part has to be hold up with a key. Because of the dismounting process, the valve is automatically open and reverse joint. It is nevertheless possible, that some water drops emerge.

3. Re-mounting in reverse order.

Order number for HERZ-TS-O-Ring set 1 6890 00

Change of O-Ring chamber One-pipe-model



If radiator and thermostatic valve are covered (curtains, panelling), heat accumulation will be built up. Consequently, the sensing device cannot sense and adjust the room temperature. In this case, use the HERZ-thermostat with remote sensor or remote control.

You will find detailed information about HERZ-thermostats in the standard sheets.

**Mounting instructions
Thermostat**

In rare cases where the valve is not equipped with a HERZ thermostatic head, the HERZ-TS-hand wheel will replace the screw cap.

During installation, follow the instructions enclosed.

HERZ-TS-hand wheel

The screw cap is used for operation during the construction period (flushing of piping). Remove the screw cap and unscrew the HERZ-thermostatic head in order to compound the thermostatic valve. Draining of the system is not necessary.

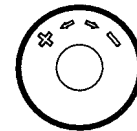
Setting of nominal lifting by means of screw cap.

At the knurl area of the screw cap two set markings can be found. They are in alignment to the markings "+" and "-".

1. Close the valve by means of the screw cap and turn it clockwise.
2. Mark every position that correspond with set marking "+".
3. Turn screw cap anti-clockwise until set marking "-" is set to second marked position.

HERZ-Thermostatic Valves

Nominal lifting



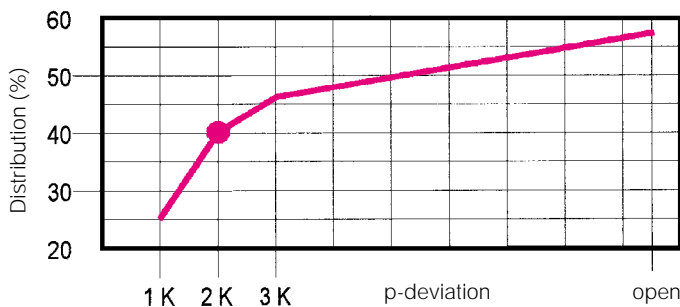
After the heating period, open thermostat and turn it anti-clockwise. This prevents dirt adherence on valve seat.

Summer setting

p-deviation	One-pipe systems (Ring)	Two-pipe systems
1 K	1,3	0,14
2 K	1,55	0,30
3 K	1,7	0,42
open	2,0	0,55

Kv-Values

Distribution on radiator



**Radiator part
One-pipe valve**

- 1 3003 50 Spacer block for distance between pipe centres 50 mm
- 1 3004 34 G Special connection, intersection element 3/4
- 1 6248 01 Connection elbow 90°
- 1 6625 00 HERZ Multi purpose key
- 1 6807 90 HERZ-TS-90 Assembly key
- 1 7780 00 HERZ-Changefix, changing tool for thermostatic upper parts

- 1 9102 80 HERZ-TS-90-Hand wheel, series 9000 „Design“

- 1 7230 06 HERZ-Thermostatic head with shut-off ("O- position")
- 1 7260 06 HERZ-Thermostatic head with frost release (+6°C)
- 1 9230 06 HERZ-Design thermostatic head with shut-off
- 1 9260 06 HERZ-Design thermostatic head with frost release
- 1 9200 06 HERZ-Design thermostatic head "Mini" with shut-off
- 1 9200 06 HERZ-Design thermostatic head "Mini" with frost release
- 1 9860 10 HERZCULES, HERZ-Thermostatic head in robust version
- 1 7330 .. HERZ-Thermostat with remote adjustment
- 1 9330 .. HERZ-Design Thermostat with remote adjustment
- 1 7430 .. HERZ-Thermostat with remote sensor
- 1 9430 .. HERZ-Design Thermostat with remote sensor

Accessories

Hand wheels

Thermostatic Heads

- 1 3002 31 2 Connection nipples for radiator connection Rp 1/2
- 1 6390 91 Thermostatic upper part for two-pipe systems
- 1 6390 92 Thermostatic upper part for one-pipe systems
- 1 6890 00 HERZ-TS-90 O-Ring-Set
- 1 6365 .. Thermostatic upper part with fix kv-values (TS-90-kv)
- 1 6367 97 Thermostatic upper part with pre-setting (TS-90-V)
- 1 6367 98 Thermostatic upper part with pre-setting (TS-98-V)
- 1 6367 99 Thermostatic upper part (TS-FV)

Spare Parts



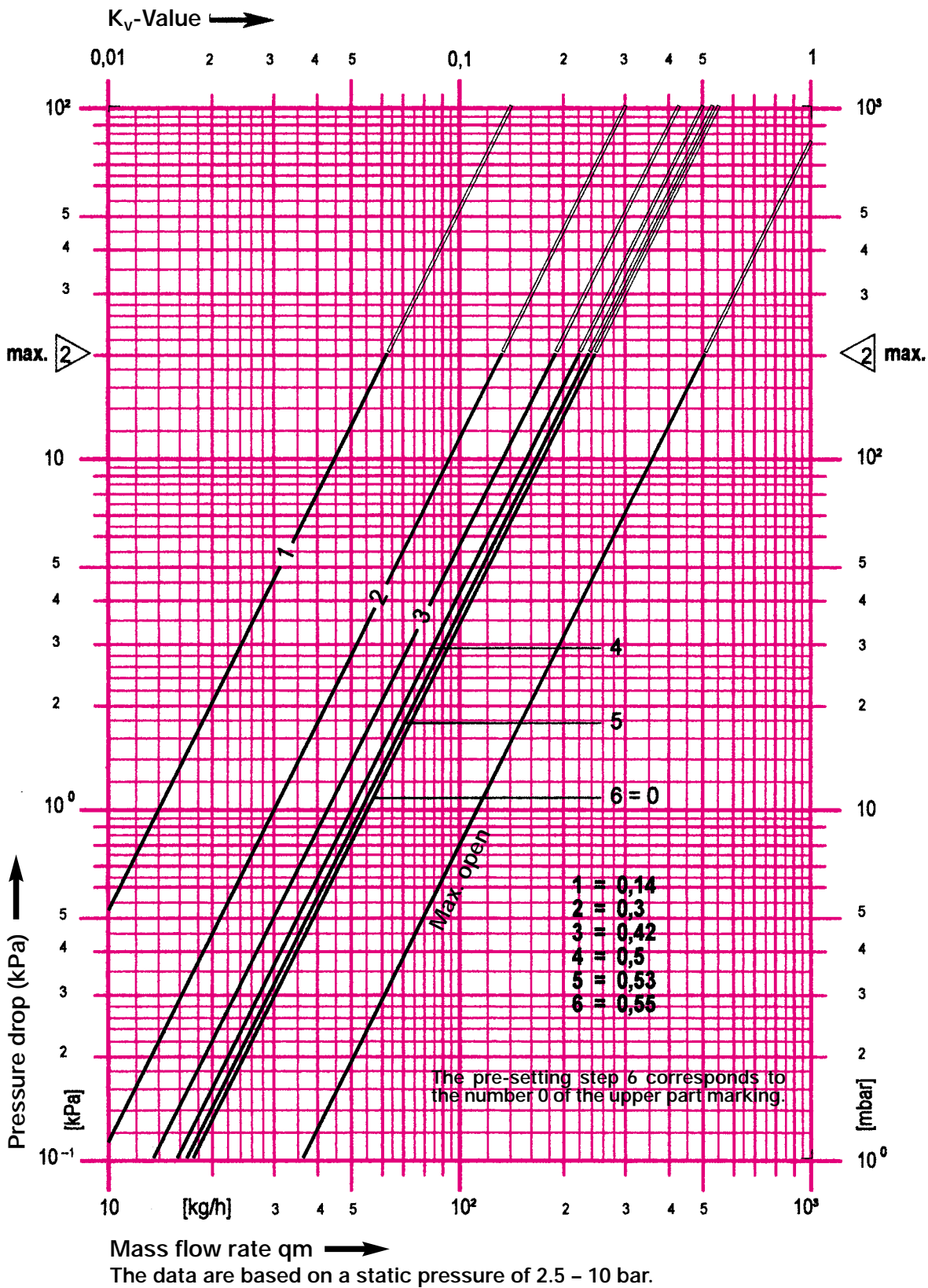
HERZ-Standard diagram

HERZ-3000 in two-pipe systems

Art. No. Connection elements 3691–3694

Dim.

The dimensioning of the valve [p] has to be effected in accordance with the VDMA-Instruction sheet for planning and hydraulic balancing of heating systems with radiator valves.



We reserve the right to make modifications.

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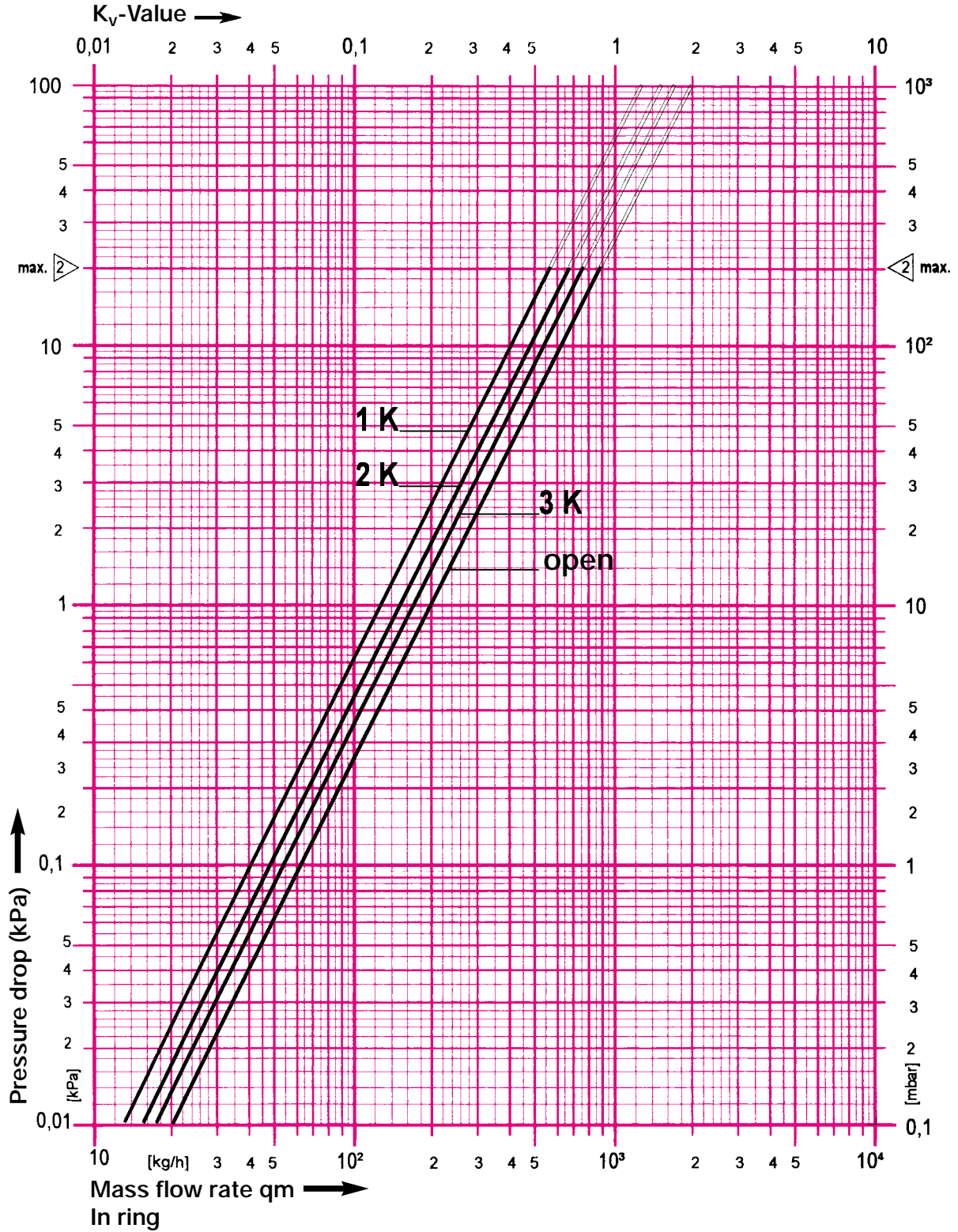
HERZ-Standard diagram

HERZ-3000 in one-pipe systems

Art. No. Bypass body 3791-3794

Dim.

The dimensioning of the valve [p] has to be effected in accordance with the VDMA-Instruction sheet for planning and hydraulic balancing of heating systems with radiator valves.



We reserve the right to make modifications. 01.2011.02