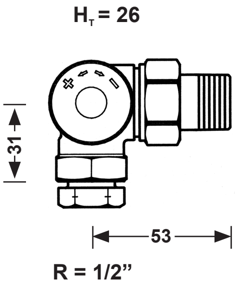
HERZ-1000

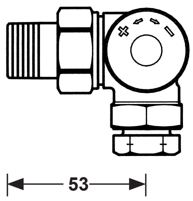
Radiator connection sets for thermostat and manual control operation

Data sheet for HERZ-1000, Issue 0724

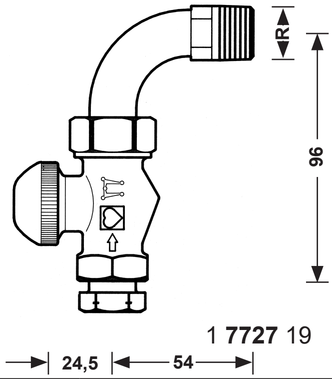
Control valve



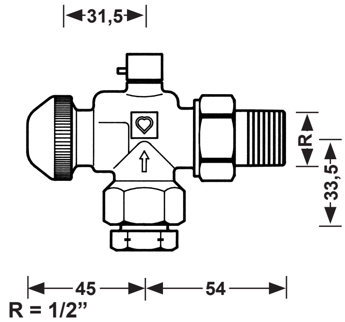
1 **7758** 19



1 **7759** 19



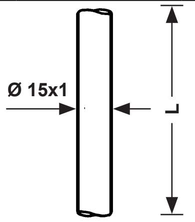
1 **7727** 19



1 **7728** 92

Connection pipe

1 **6330** X1

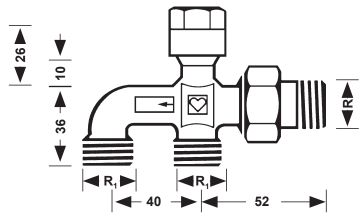


L = 550 mm

L = 1000 mm

Bypass body

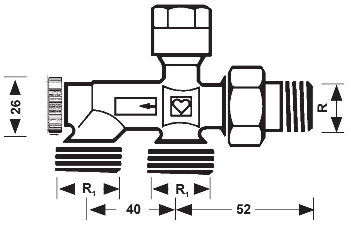
not lockable



1 **7179** 11 **one-pipe**
1 **7182** 11 **two-pipe**

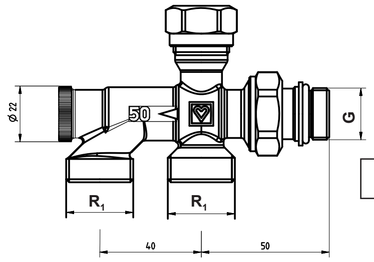
R$_1$ = M22x1,5 R = R 1/2"	for 1 **7179** 11 and 1 **7182** 11

lockable



1 **7184** 11 1 **7187** 11 **one-pipe**
1 **7186** 11 1 **7189** 11 **two-pipe**

R$_1$ = M22x1,5 R = R 1/2"	for 1 **7184** 11 and 1 **7186** 11
R$_1$ = G 3/4" R = R 1/2"	for 1 **7184** 11 and 1 **7186** 11

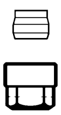


1 **7187** 12 **one-pipe**
1 **7189** 12 **two-pipe**

R$_1$ = G 3/4" G = G 1/2"	for 1 **7187** 12 and 1 **7189** 12

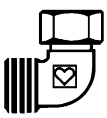
Pipe connection

M 22 x 1,5



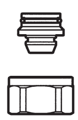
10, 12, 14, 15, 16

6284



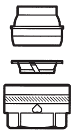
1 **6248** 16

G 3/4



8, 10, 12, 14, 15, 16

6274



12, 14, 15, 16, 18

6276

copper and mild steel pipe

M 22 x 1,5

14 x 2; 15 x 2,5; 16 x 2; 17 x 2

6066

G 3/4

10 x 1,3; 14 x 2; 15 x 2,5; 16 x 2; 16 x 2,25; 17 x 2; 17 x 2,5; 18 x 2; 18 x 2,5; 20 x 2; 20 x 2,25; 20 x 2,5; 20 x 2,8; 20 x 3,4

6098

plastic pipe

Control valve

HERZ-TS-90

1 **7727** 19	**1/2 x 15**	Thermostatic valve, straight model with elbow, radiator connection with elbow 1 **6249** 01, with cone. Connection set mounted for connection pipe. The thermostatic head can be mounted sideways or facing forward.
1 **7728** 92	**1/2 x 15**	Thermostatic valve, reverse angle model with air vent. Radiator connection with cone. Connection set mounted for connection pipe.
1 **7758** 19	**1/2 x 15**	Thermostatic valve 3-axis valve „AB“, valve left of radiator. Radiator connection with cone. Connection set mounted for connection pipe.
1 **7759** 19	**1/2 x 15**	Thermostatic valve 3-axis valve „CD“, valve right of radiator, otherwise like 7758 C

Connection pipe

6330

1 **6330** 11	**550**	Connection pipe of copper, nickel-plated. Length 550 mm. Dimension 15 x 1 mm
1 **6330** 31	**1000**	ditto, length 1000 mm

Bypass body

M 22 x 1,5

1 **7179** 11	**R1/2 x M 22 x 1,5**	Bypass body for one-pipe operation, water distribution 50%, radiator connection 1 **6210** 21 and clamp set 1 **6284** 04 for connecting pipe mounted, without pipe connection
1 **7182** 11	**R1/2 x M 22 x 1,5**	Bypass body for two-pipe operation, water distribution 100%, radiator connection 1 **6210** 21 and clamp set 1 **6284** 04 for connecting pipe mounted, without pipe connection
1 **7184** 11	**R1/2 x M 22 x 1,5**	Bypass body for one-pipe operation, water distribution 50%, can be shut off, otherwise like **7179**
1 **7186** 11	**R1/2 x M 22 x 1,5**	Bypass body for two-pipe operation, water distribution 100%, can be shut off and regulated, otherwise like **7179**

G 3/4

1 **7187** 11	**R1/2 x G 3/4**	Bypass body for one-pipe operation, water distribution 50%, can be shut off, otherwise like **7179**
1 **7189** 11	**R1/2 x G 3/4**	Bypass body for two-pipe operation, water distribution 100%, can be shut off and regulated, otherwise like **7179**
1 **7187** 12	**G1/2 x G 3/4**	Bypass body for one-pipe operation, water distribution 50%, radiator connection G1/2“ with O-ring, shut-off valve, compression adapter 1 **6284** 04 mounted for connection pipe, without pipe connection.
1 **7189** 12	**G1/2 x G 3/4**	Bypass body for one-pipe operation, water distribution 100%, radiator connection G1/2“ with O-ring, shut-off and control valve, clamping set 1 **6284** 04 mounted for connecting pipe, without pipe connection.

Bypass bodies for one-pipe operation are marked on the housing with the number “**50**” and for two-pipe operation with the number “**100**”.

Pipe connections

M 22 x 1,5

1 **6248** 16	**M 22 x 1,5**	90° connection elbow with freely-rotating nut, is used between the bypass body and the connection if the pipe is to be deflected at a right angle.

Compression adapter for steel and copper pipes

6284	**10–16**	Compression adapter consisting of a olive and nut for pipe diameters of 10, 12, 14, 15, and 16 mm.

Plastic pipe connections for PE-RT, PE-X, PB and aluminum composite pipes

6066	**14–17**	Plastic pipe connections with double O-ring and insulating washer, consisting of spigot, olive and union nut M 22 x 1.5 for pipe diameters 14 x 2, 16 x 2, 17 x 2 and 15 x 2.5 mm.

G 3/4

1 **6248** 01	**G 3/4**	90° connection elbow with freely-rotating nut, used between the bypass body and the connection when the pipe needs to be deflected at a right angle.

Compression adapter for steel and copper pipes

6276	**12–18**	Compression adapter with soft seal consisting of a olive, solid rubber seal (EPDM), and nut for external pipe diameters of 12, 15, and 18 mm.

Plastic pipe connections for PE-RT, PE-X, PB and aluminum composite pipes

6098	**10–20**	Plastic pipe connections with double O-ring and insulating washer, consisting of spigot, olive and union nut G 3/4 for pipe diameters 10 x 1.3, 14 x 2, 15 x 2.5, 16 x 2, 16 x 2.25, 17 x 2, 17 x 2.5, 18 x 2, 18 x 2.5, 20 x 2, 20 x 2.25, 20 x 2.5, 20 x 2.8, 20 x 3.4.

Screw connection with cone

Press connections for plastic pipes, for aluminum composite pipes, union nut G 3/4:

T **7016** 82 Screw connection 16 x 2, nickel-plated
T **7020** 82 Screw connection 20 x 2, nickel-plated
T **7016** 81 Screw connection 16 x 2, unfinished
T **7020** 82 Screw connection 20 x 2, unfinished

Press connections for plastic pipes, for aluminum composite pipes, union nut M 22 x 1,5

T **7016** 86 Screw connection 16 x 2, nickel-plated

Radiator connections

1 **6210** 21	**1/2**	Iron pipe connection mounted with conical seal
1 **6249** 01	**1/2**	Connection elbow mounted with conical seal (valve 7727)
1 **6211** 00	**1/2 x 3/8**	Reducing connection conical sealing, to be ordered separately

The use of the HERZ assembly key **6680** is recommended.

Models

The radiator connection sets consist of a regulating valve, connecting pipe, bypass body and pipe connections. All components are supplied in a nickel-plated version and can be combined with one another according to requirements. The individual parts must be ordered separately.

Mode of installation

The connection systems are mounted laterally onto the radiator, the control valve above and the bypass body below.

Field of application

One- and two-pipe water heating systems with calibrated steel, copper or plastic pipes.
When renovating systems (replacing radiators/section radiators to panel radiators) as a replacement for VT valves.

Operating data

Max. operating pressure	10 bar
Max. operating temperature	110 °C

Heating water quality in accordance with ÖNORM H 9195 or VDI guideline 2035.

For compression adapters for metallic pipes
For the use of compression adapters for copper and steel pipes, the permissible temperature and pressure information according to EN 1254-2:1998, Table 5, must be observed.

For plastic pipe connections
The plastic pipe connections are suitable for application classes 4 and 5 according to ISO 10508 (surface heating and radiator connection) and for pipes made of PE-RT (EN ISO 22391), PP (EN ISO 15874), PB (EN ISO 15876) and PE-X (EN ISO 15875)as well as plastic metal composite pipes (EN ISO 21003). This results in the maximum operating temperature being 95 °C at 10 bar. It is the user’s responsibility to select the operating pressure (P) and operating temperature (T) for the respective type of pipe so that the pipe manufacturer’s standard values and permissible operating data are adhered to. Deviations from this information are specifically noted in the technical documentation.

HERZ - Pipefix
HERZ press fittings are connecting elements for plastic composite pipes. The fittings are designed as multiple-sealing radial press connection elements. Support bodies are located on the fitting to accommodate the pipe end with a double O-ring seal.

Hub distance

Calculation of the pipe length for adjustment to hub distance:
Hub distance of the radiator - Insertion depth of the pipe = required pipe length

Pipe insertion depths

Pipe insertion depths for	1 **7727** 19	=	102 mm
	1 **7728** 92	=	37 mm
	1 **7758** 01	=	39 mm
	1 **7759** 01	=	39 mm

Adjusting the connecting pipe

The connecting pipe should be cleanly shortened using a pipe cutter, and if necessary, the shortened pipe should be calibrated. Take into account the section on Installation of Compression Unions.

Special design features

In one-pipe systems, the entire circulating water volume is diverted past the radiator in the bypass body. When the valve is opened part of this water is passed through the radiator, and after cooling off it is mixed with circulation water in the bypass body. The water flow into the radiator can be limited by an adjusting screw in the bypass body.

For two-pipe systems, bypass bodies **7182**, **7186** and **7189** are used. In this case, the water flow through the pipe connections is directed 100% through the radiator.

Circulation brake

A circulation brake is included with all one-pipe bypass bodies. To reduce heat transfer in radiators, this must be inserted in the correct position before installation.

Presetting using adjusting screw

Pre-setting of two-pipe systems must be performed by means of the adjustment and shutoff screw. Remove cap. Use key **6625** to adjust the pre-setting screw beginning from the closed valve position. For the values to be set refer to the diagrams.

Replacing the thermostatic valve upper part

The HERZ thermostatic valve upper part can be replaced under pressure using the HERZ replacement device:

- for cleaning the seat seal on the spindle or for replacing the upper valve part. This permits easy removal of malfunctions at the thermostatic valves, caused, e.g., by foreign substances such as dirt, welding or soldering residues.

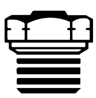
ATTENTION when changing valve upper parts:
The control valve 1 **7728** 92 is equipped with an upper part 3/4 (1 **6390** 92).
When using it, please follow the operating instructions included with the replacement device.

Spindle seal

HERZ-TS-90 O-ring chamber

As a spindle seal, an O-ring is used in a brass chamber that can be replaced during operation. The O-ring ensures maximum maintenance-free operation and provides lasting smoothness of the valve.

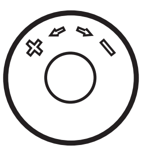
Changing the O-ring



1. Disassembly of the HERZ thermostatic head or the HERZ TS hand wheel.
2. Unscrew the O-ring chamber with the O-ring and replace it with a new one. During this change use a wrench to hold the upper part. After removal of the thermostatic head or hand wheel the valve is completely open and therefore sealed tight towards upstream. However, a few drops of water may leak out.
3. For re-assembly follow the above steps in reverse sequence. When installing the HERZ-TS-hand wheel, test whether the valve shuts by turning the hand wheel.

Article number of O-ring set: 1 **6890** 00

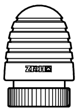
HERZ-Thermostatic valve



The screw cap is used for operation during the installation phase (pipe flushing). By removing the screw cap and screwing on the HERZ thermostatic head, the thermostatic valve is completed without the need to drain the system.

Adjustment of the nominal stroke is done using the screw cap:
1. Closing the valve by turning it to the right.
2. Turning the screw cap to the left by about 90°

HERZ-TS Hand wheel



In case the lower part of a HERZ thermostatic valve is not equipped with a HERZ thermostatic head the HERZ-TS handwheel will replace the screw cap.
During assembly follow the enclosed instructions.

Disassembly of the radiator

After closing the regulating screw on the bypass body and shutting off the control valve, the radiator can be removed, even while the system is in operation. In thermostatic operation, the radiator is shut-off when the thermostat is set to "0". Therefore, only a lockable thermostat should be used.

ATTENTION For safety reasons, the open connections should be closed with a cap 1 **8525** 02 if disassembly takes a longer period of time.

Assembly at the construction site

1. Seal and tighten radiator screw connections.
2. Install the control valve.
3. Secure the connecting pipe (shorten if necessary) to the control valve using clamp sets.
4. Connect the bypass body to the radiator, inserting the connecting pipe.
5. Secure the bypass body on the connecting pipe with a clamp set.
6. Provide the connection pipe of the ring line with a olive and union nut, then insert it into the sockets of the bypass body.
7. Tighten union nut (approximately 1/4 turn).

Assembly of the compression adapters

Do not use adjustable pliers or any similar tool. This would cause deformation of the locking nut! It is recommended to use support sleeves for the pipe of the apartment supply line. The pipe must be deburred neatly and calibrated. Lubricate the thread of the locking nut with silicone oil during installation. Mineral oil would destroy the o-ring of the olive!
We draw attention to our working instructions, as well as to the section "instructions for installation, installation process" in the data sheet "HERZ compression adapters".

Delivery form and order example

The HERZ-1000 radiator connection systems are available in a wide variety of versions. This combination system significantly simplifies inventory management, but requires ordering and delivery of individual components. HERZ-1000 radiator connection systems in nickel-plated design, for thermostatic operation in a one-pipe system, mechanically shutoff, valve axis parallel to the radiator, radiator connection 1/2", distance between installation bore centres 500 mm, apartment supply line of 14 mm copper piping.

Thermostat Mini	9200	1 **9200** 60
Control valve	7728	1 **7728** 92
Connection pipe	6330 Pipe length 550mm	1 **6330** 11
Bypass body	7184	1 **7184** 11
Compression adapters	6284 Ø14	1 **6284** 03

Accesories

1 **6625** 00	Multipurpose key for preset
1 **6680** 00	Assembly key for connections
1 **6822** 40	Double rosette, pipe centre spacing 40 mm
1 **6890** 00	HERZ-TS-90 O-ring set
1 **7780** 00	HERZ-Changefix, tool for thermostatic inserts

Thermostatic heads and hand wheel from the current product range.

Material

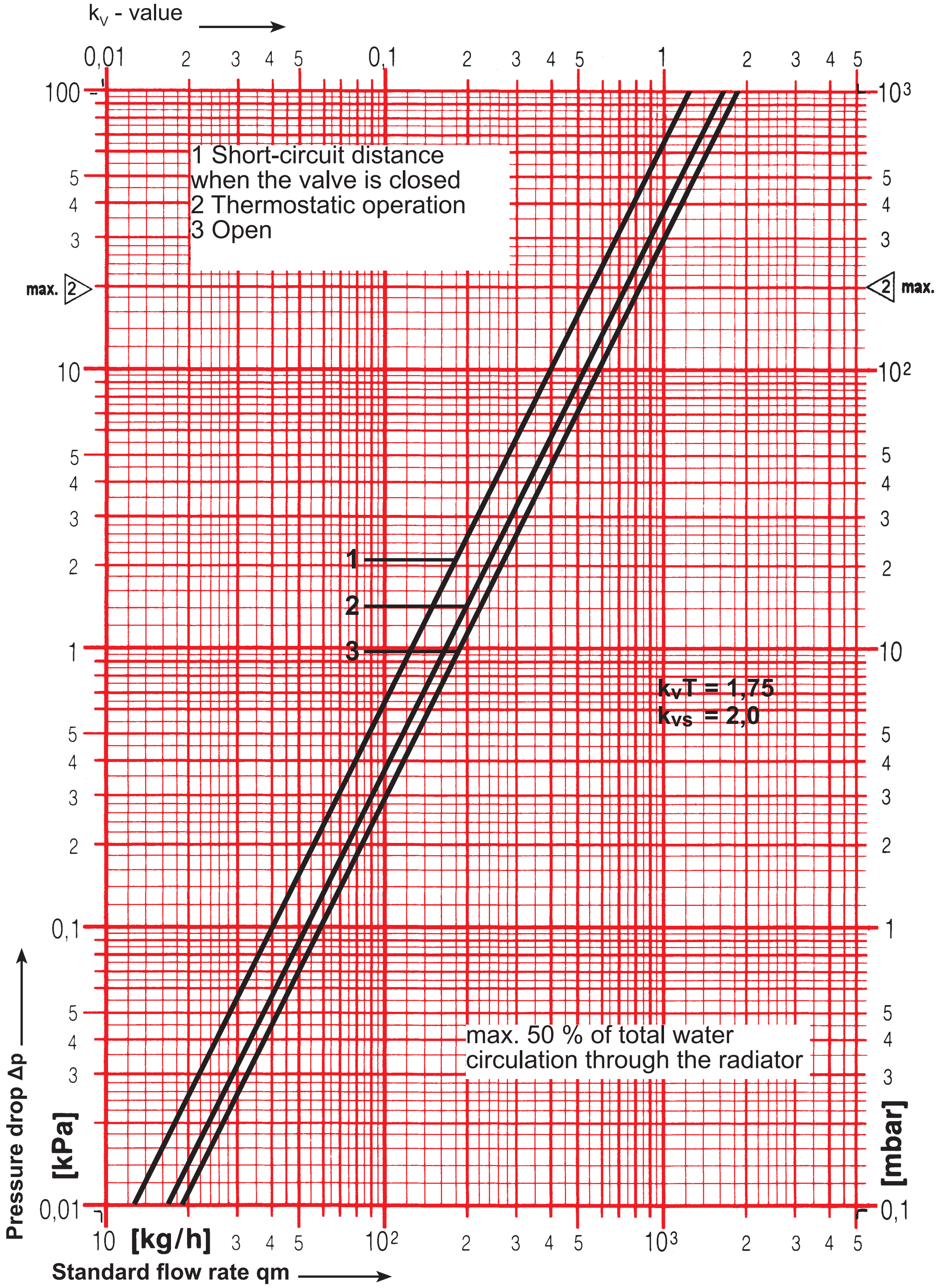
Pursuant to Article 33 of the REACH Regulation (EC No. 1907/2006), we are obliged to point out that the material lead is listed on the SVHC list and that all brass components manufactured in our products exceed 0.1% (w / w) lead (CAS: 7439-92-1 / EINECS: 231-100-4). Since lead is a component part of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

Disposal

Local and currently applicable legislation must be observed for disposal. The disposal of HERZ-1000 bypass bodies must not endanger the health or the environment.

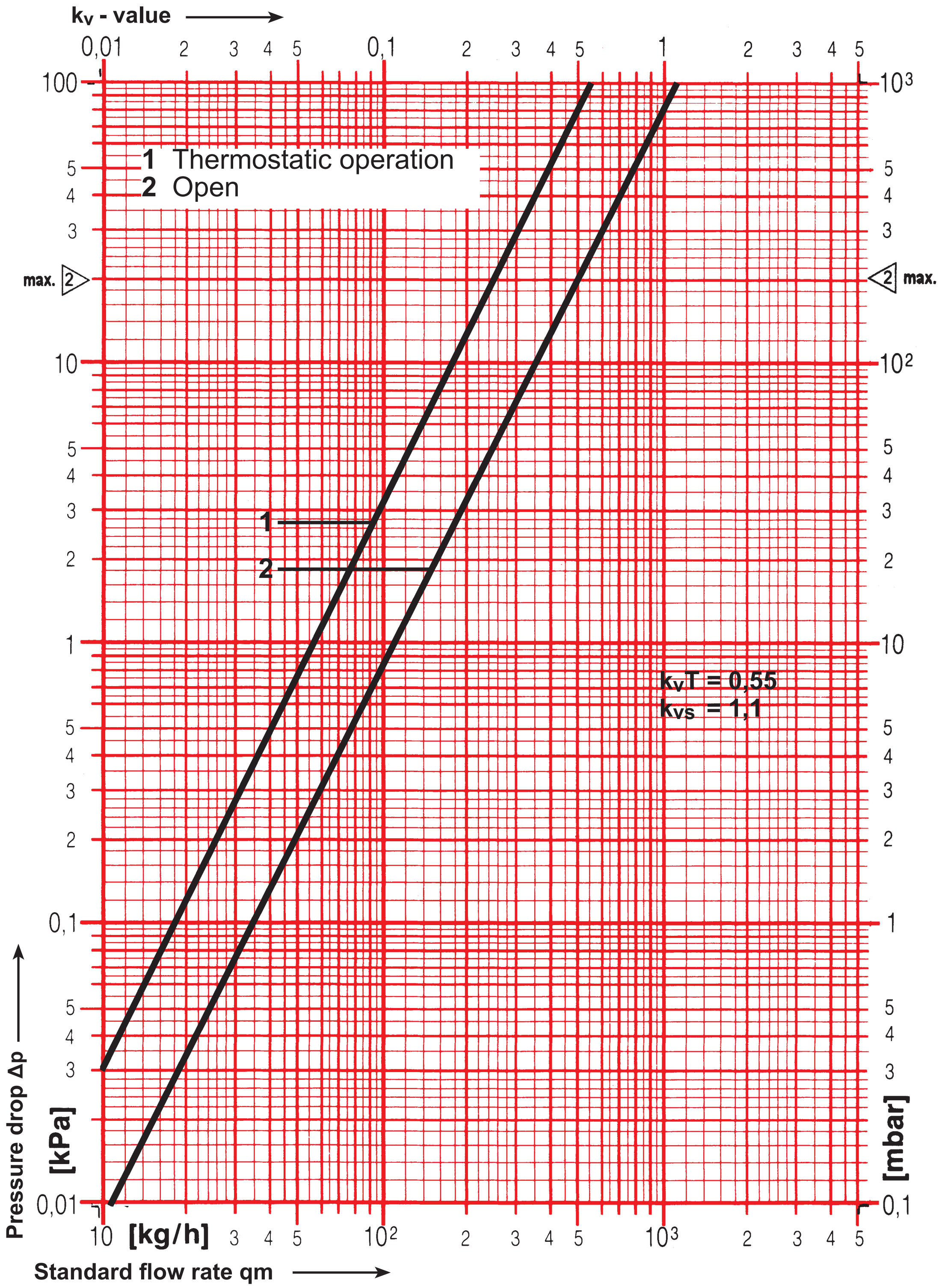
HERZ standard diagram	HERZ 1000 one-pipe systems
Art. No. Bypass body 7179	Dim. DN 15 R = 1/2

Valve dimensioning [Δp] has to be performed in accordance with the “VDMA-Instruction Sheet for Planning and Hydraulic Balancing of Heating Systems with Thermostatic Radiator Valves”



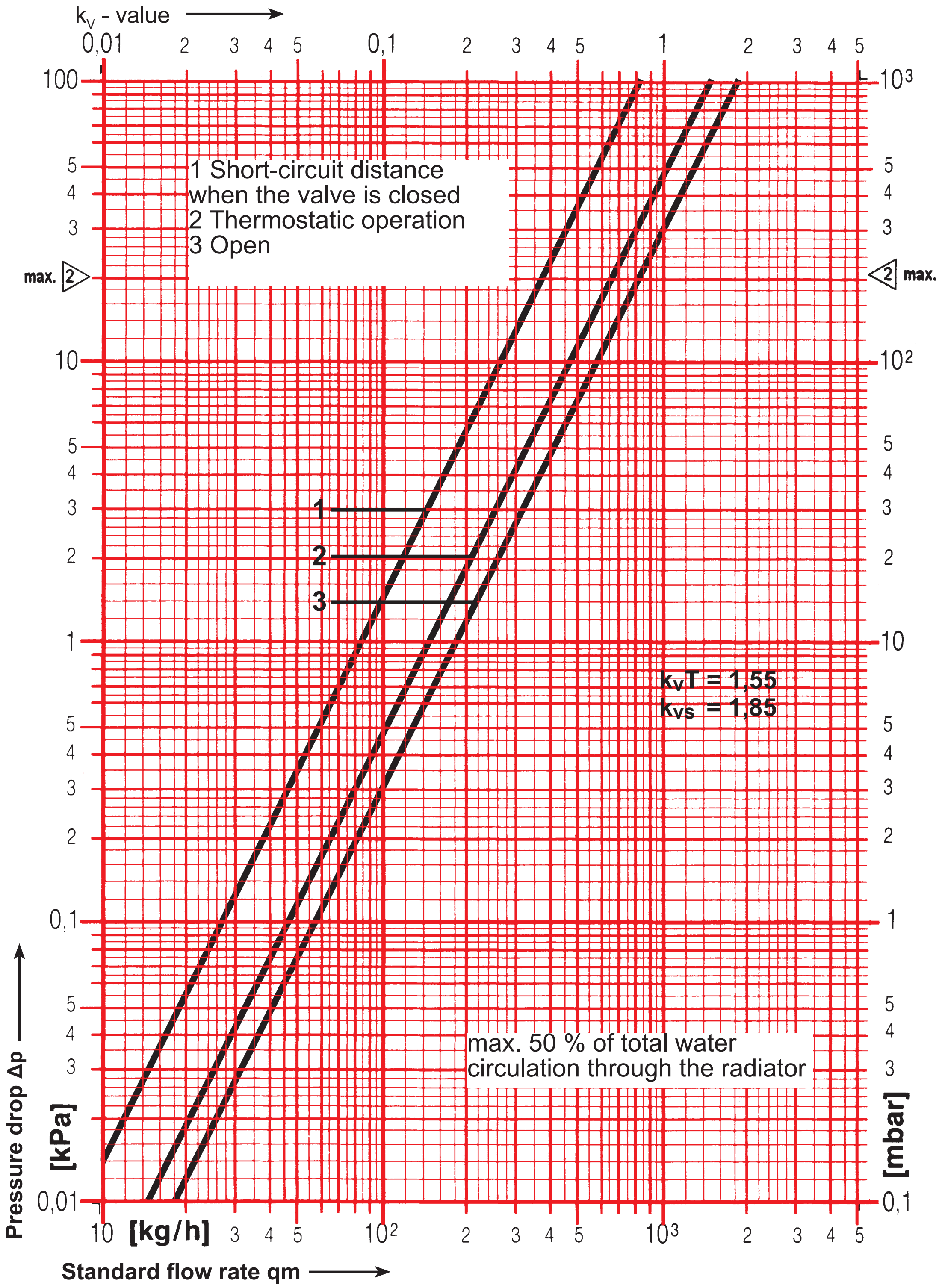
HERZ standard diagram	HERZ-1000 two-pipe systems
Art. No. Bypass body 7182	Dim. DN 15 R = 1/2

Valve dimensioning [Δp] has to be performed in accordance with the “VDMA-Instruction Sheet for Planning and Hydraulic Balancing of Heating Systems with Thermostatic Radiator Valves”



HERZ standard diagram	HERZ-1000 one-pipe systems
Art. No. Bypass body 7184 • 7187	Dim. DN 15 R = 1/2 and G = 1/2

Valve dimensioning [Δp] has to be performed in accordance with the “VDMA-Instruction Sheet for Planning and Hydraulic Balancing of Heating Systems with Thermostatic Radiator Valves”



HERZ-standard diagram	HERZ-1000 two-pipe systems
Art. No. Bypass body 7186 • 7189	Dim. DN 15 R = 1/2 and G = 1/2

Valve dimensioning [Δp] has to be performed in accordance with the “VDMA-Instruction Sheet for Planning and Hydraulic Balancing of Heating Systems with Thermostatic Radiator Valves”