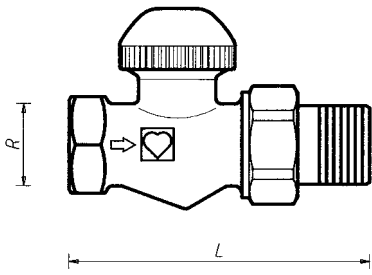


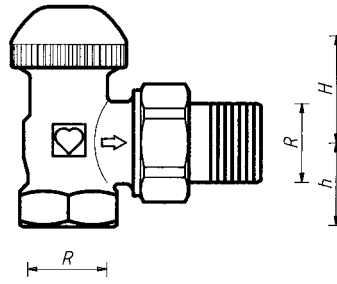
HERZ-TS-90-V

Valve – Lower Parts Continuous Presetting

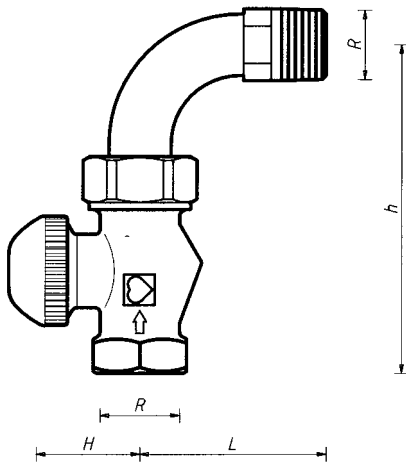
Standard Sheet
7723 V/7724 V/7728 V
7758 V/7759 V
 Edition 0909 (0909)



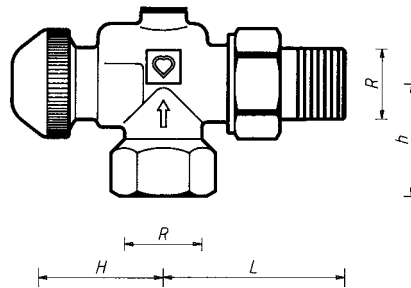
7723 V



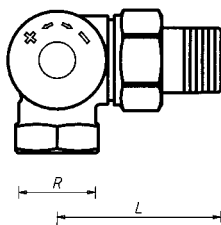
7724 V



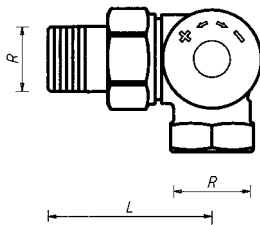
7723 V + 6249



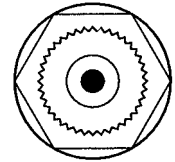
7728 V



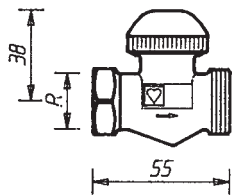
7758 V



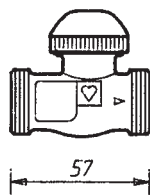
7759 V



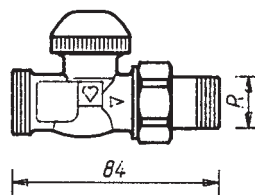
HERZ-TS-90-V
 Thermostatic upper part



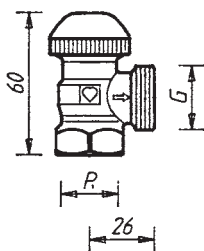
1 **7723 71**



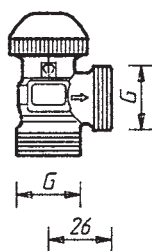
1 **7737 67**



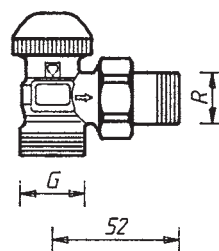
1 **7733 67**



1 **7724 71**



1 **7724 42**



1 **7738 67**

Special Models

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

We reserve the right to make modifications necessitated by technological progress.

Art. No.	Designation	DN	R	Ø	L	H	h	Order No.
7723 V	Dimensional Series F Straight valve	10	3/8	12	75	27	—	1 7723 65
		15	1/2	15	83	27	—	1 7723 67
7724 V	Dimensional Series F Angle valve	10	3/8	12	49	27	20	1 7724 65
		15	1/2	15	54	23	23	1 7724 67

Dimensions in mm for Standard Series EN 215 T 2 HD 1215

Art.-No.	Design Type	R	Ø	L	H	h	Order No.
7723 V + 6249	EN 215 F Straight valve with elbow	3/8	12	40	27	84	Valve and elbow must be ordered separately
		1/2	15	54	27	94	
7728 V	Reverse angle model	3/8	12	49	35	27	1 7728 65
		1/2	15	55	35	29	1 7728 67
7758 V	AB	1/2	15	53	26	31	1 7758 67
7759 V	CD	1/2	15	53	26	31	1 7759 67

Dimensions in mm for HERZ-Series

All models are nickel plated and supplied with a red screw cap.

Universal models with special socket for threaded pipe connection and compression union:

7723 V	3/8-1/2	Straight model, series F
7724 V	3/8-1/2	Angle model, series F
7728 V	3/8-1/2	Reverse angle model
7758 V	1/2	3-axis valve "AB", radiator to the right of the intake valve
7759 V	1/2	3-axis valve "CD", radiator to the left

Universal models in straight and angle versions are also available for dimension series "D".

Models and Versions

HERZ-TS-90-V

HERZ-3-D-V

HERZ TS-90-V-valves in special versions, dimension 1/2

1 7723 71	Straight model, universal socket x male thread G3/4, with cone seal
1 7737 67	Straight model, 2 x male thread G 3/4, with cone seal
1 7733 67	Straight model, radiator connection with cone seal, pipe connection male thread G 3/4
1 7724 71	Angle model, universal socket x male thread G 3/4, with cone seal
1 7724 42	Angle model, 2 x male thread G 3/4, with cone seal
1 7738 67	Angle model, radiator connection with cone seal, pipe connection G 3/4

HERZ-TS-90 Special Versions

HERZ-TS-90	Valves without pre-setting function
HERZ-TS-90-E	Valves with reduced resistance for one-pipe systems
HERZ-TS-E	Valves with maximum flow for one-pipe systems
HERZ-TS-98-V	Valves with continuous pre-setting readout
HERZ-TS-90-kv	Valves with fixed kv-values for district heating systems

Separate standard sheets are available for these models.

Other Models

Maximum operating temperature 90 °C
Maximum operating pressure 10 bar
Heating water purity according to Austrian standard ÖNORM H 5195 and/or VDI-guideline 2035.

When using HERZ compression unions for copper and steel pipes take into account the permissible temperature and pressure ratings according to EN 1264-2: 1998 specified in Table 5.
A maximum operating temperature of 80 °C and maximum operating pressure of 4 bar applies for plastic pipe connections, if permitted by the pipe manufacturer.

Operating Data

HERZ Compression Union

Water heating systems in which hydraulic balancing via return valves is not possible or not desired.

Field of Application

Iron pipe connection 6210, with cone seal, installed.
It is recommended that the HERZ assembly key 6680 be used.

Radiator Connection

To be used instead of the radiator connection; on both sides in case of 7737 VX:

6210	1/2	Iron pipe connection, lengths 26 or 35 mm.
6211	1/2	Reducing connection, 1/2 x 3/8
6213	3/8	Reducing connection 3/8 x 1/2
6218	3/8–1/2	Long threaded bush, without nut, can be shortened to compensate for differences in structural dimensions, lengths 3/8 x 40; 1/2 x 39, 42 and 76 mm.
6218	1/2	Threaded bush, without nut, lengths 36,48 and 76 mm.
6235	3/8–1/2	Soldering connection, 3/8 x12; 1/2 x 12, 15 and 18 mm.
6249	3/8–1/2	Iron pipe connection elbow, without nut, with cone seal.
6274	G 3/4	Compression union for copper and thin-walled steel pipes, for external pipe diameters 8, 10, 12, 14, 15, 16 and 18 mm.
6275	G 3/4	Compression union with soft seal for copper and thin-walled steel pipes, particularly suitable for hard special steel pipes and pipes with hard galvanised surfaces. For external pipe diameters 12, 14 and 15 mm.
6098	G 3/4	Compression union for PE-X-, PB and plastic composite pipes.

To be used at the socket side of valves:

6219	1/2	Reduction socket, brass version, for pipe-valve connection, internal thread (pipe) x external thread (valve). 1 x 1/2, 1 1/4 x 1/2.
6066	M 22 x 1,5	Plastic pipe connection for PE-X, PB-, and plastic composite pipes, to be used with adapter 1 6272 01 (R 1/2 x M 22 x 1.5)
6098	G 3/4	Plastic pipe connection for PE-X, PB-, and plastic composite pipes, to be used with adapter 1 6266 01 (R 1/2 x G 3/4)

Pipe dimensions of plastic pipe connections according to HERZ catalogue.

The universal models are equipped with special sockets offering the option of connecting either a threaded pipe or a calibrated soft-steel or copper pipe, the latter two by means of a compression union. The compression union must be ordered separately.

When using R = 1/2 valves for external pipe diameters of 10, 12, 14, 16, and 18 mm, use adapter Art. No. 6272 between valve and compression union.

Pipe Ø D mm		12	10	12	14	15	16	18
Valve	R =	3/8	1/2					
Adapter	Order No.		1 6272 01	1 6272 01	1 6272 01		1 6272 01	1 6272 11
Compression Union	Order No.	1 6292 00	1 6284 00	1 6284 01	1 6284 03	1 6292 01	1 6284 05	1 6289 01

We suggest using support sleeves for the installation of soft steel or copper pipes with compression union. For perfect compression union installation, it is imperative to lubricate the thread of the locking nut as well as the olive with oil. We refer to our instructions for installation.

Presetting is performed by means of a flow restrictor downstream of the valve seat enclosing the seat seal. This flow restrictor is continuously adjustable from outside. It does not obstruct the working lift of the valve spindle. Any set presetting step is protected against tampering by unauthorised persons.

Setting of the upper part is performed by means of the HERZ setting key (1 **6809** 67). This key consists of two parts, hand wheel and graduated disk.

HERZ-TS-90 valves are available in four series with different upper parts.

- HERZ-TS-90 – standard version
- HERZ-TS-90-k_v – thermostatic valves with fixed k_v-values
- HERZ-TS-90-V – thermostatic valves with continuous presetting
- HERZ-TS-98-V – thermostatic valves with continuous presetting and readout

If it turns out, while the heating system is in operation that another upper part is to be preferred for individual control of volume flows through the radiator, the HERZ-tool makes replacing of the upper part easy, even while the heating system is on.

The seat seal can be cleaned in the same way. This is an easy way of removing defects in radiator thermostatic valves, caused, e.g., by foreign substances such as dirt, welding or soldering residues.

When working with the HERZ changing tool follow the instructions enclosed with this device.

Further Connecting Options

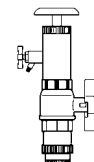
Please refer to the HERZ catalogue for order numbers

Pipe Connection Universal Models

Presetting Function

Compatible with HERZ-TS-90

Changing the Upper Part of a Thermostatic Valve



1. Remove HERZ thermostatic head, hand wheel or screw cap.
2. Unscrew the cover screw. Use the insert stored in the handle of the presetting key to engage with the valve and slacken the cover screw by turning anticlockwise.
3. Screw the presetting key onto the valve and make sure that the teeth engage.
4. Turn the handle of the key clockwise up to the stop. This is the starting point for setting.
5. Turn graduated disk in such a way that the indicator nose corresponds to the "0"-mark of the handle.
6. Hold graduated disk and turn the handle anticlockwise until the desired setting step corresponds to the indicator nose.
7. Unscrew presetting key from the valve without changing the step set.
8. Tighten cover screw by hand
9. Install HERZ thermostatic head or hand wheel.

The value set is secured and inaccessible to unauthorised persons

Setting Process



**HERZ-TS-90-V
Presetting Key**
1 6809 67 (blue)

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

The presetting stage is to be re-set after changing the upper part.

1. Remove the HERZ thermostatic head or the 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.

The upper part can be changed by means of the HERZ-tool while the heating system is under pressure. Take into account the instructions for the use of this tool.

Order Number for HERZ-TS-90-V Valve upper part: 1 6367 97

Spindle Seal



**HERZ-TS-90-V-
Valve Upper Part**

The screw cap is used for operation during the installation phase (pipe flushing). The thermostatic valve is formed 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 "-" is at the position marked according to item 2.

HERZ-Thermostatic Valve

Nominal Lift



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

During installation, follow the instructions enclosed with the handwheel.

HERZ-TS Handwheel



The lower part of the thermostatic valve is incorporated into the radiator intake with the flow in the direction of the arrow (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.

Installation

Under no circumstances should the HERZ thermostatic head be exposed to direct sunlight or to the 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 cannot control it. In such cases, use the HERZ thermostat with remote sensor or the HERZ thermostat with remote adjustment.

For detailed information on the HERZ thermostats consult the individual standard sheets.

Important for Installation

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.

Summer Setting

- | | |
|-----------|---|
| 1 6680 00 | HERZ Assembly key for radiator connections |
| 1 6807 90 | HERZ-TS-90 Assembly key |
| 1 6808 67 | HERZ-TS-90-V Setting key red, for valves with hexagon O-ring screw (old model) |
| 1 6809 67 | HERZ-TS-90-V Setting key blue, for valves with cover screw with teeth (new model) |
| 1 7780 00 | HERZ changing tool for thermostat upper parts |
| 1 7102 80 | HERZ-TS-90 Handwheel, Series 7000 with pre-setting and locking functions |
| 1 9102 80 | HERZ-TS-90 Handwheel, Series 900 "Design". |

Accessoires

Handwheels

- | | |
|-----------|--------------------------------------|
| 1 6367 97 | HERZ-TS-90-V thermostatic upper part |
|-----------|--------------------------------------|

Spare Parts

All details contained in this brochure correspond to that available at the time of printing and are for information only. We reserve the right to make changes resulting from HERZ's ongoing development policy. The illustrations are understood to be indicative and may therefore vary visually from the actual products. Any differences in colour are due to the printing technology used. Products may also vary according to the country. We reserve the right to make changes to technical specifications and functions. For questions please contact your nearest HERZ office.

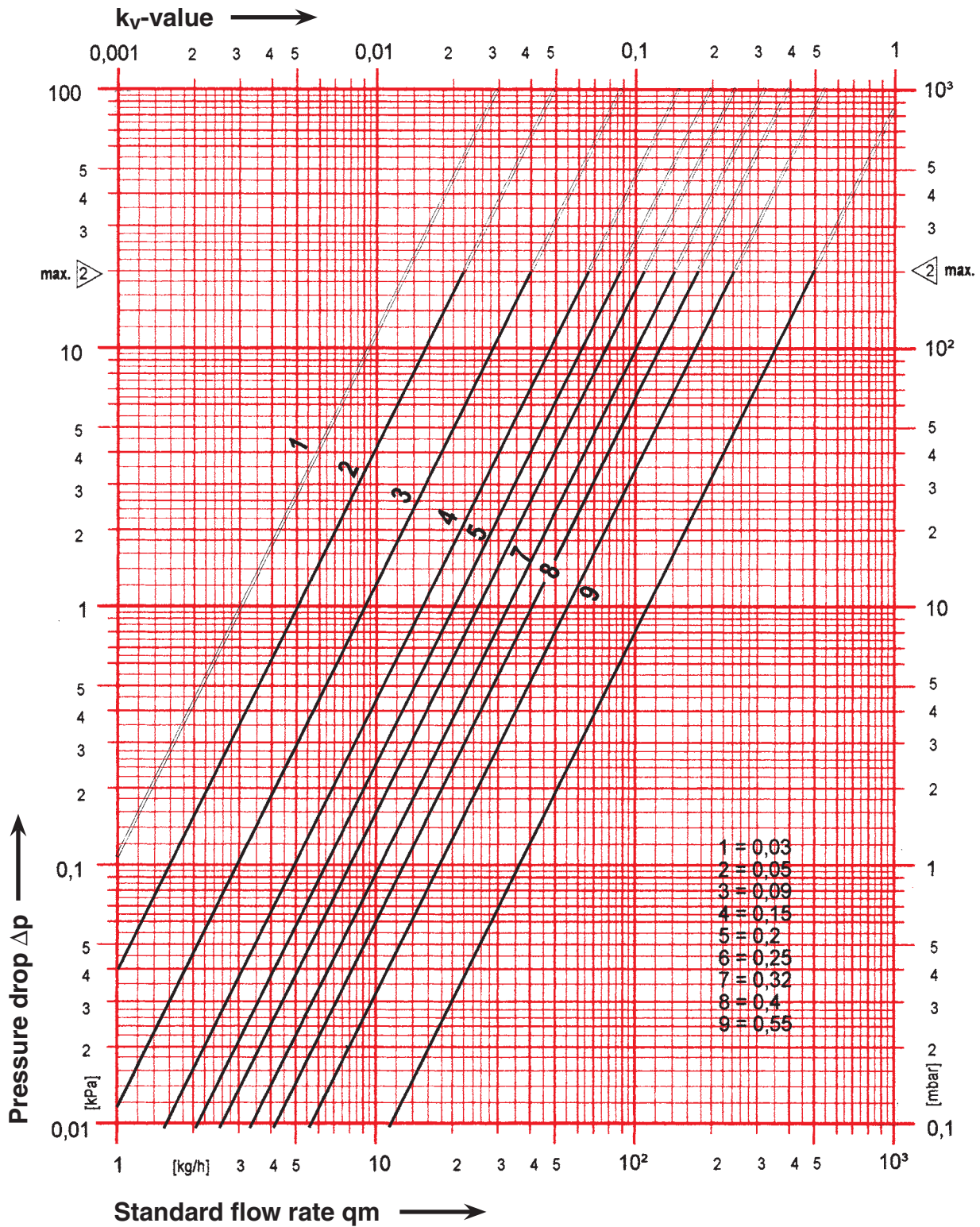
HERZ Standard Diagram

HERZ-TS-90-V

Art. No. 7723 V – 7759 V

Dim. DN 10 R=3/8 • DN 15 R=1/2

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 characteristics "1-9" are valid for nominal lift (2 K) of the valve cone.

We reserve the right to make modifications.