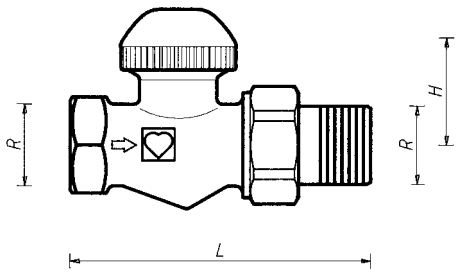
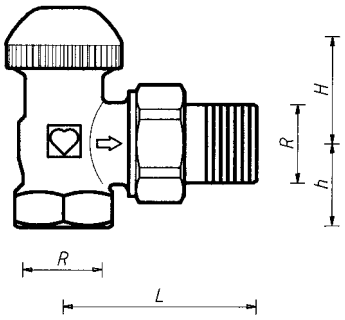
HERZ-TS-90-V

Valve – Lower Parts Continuous Presetting

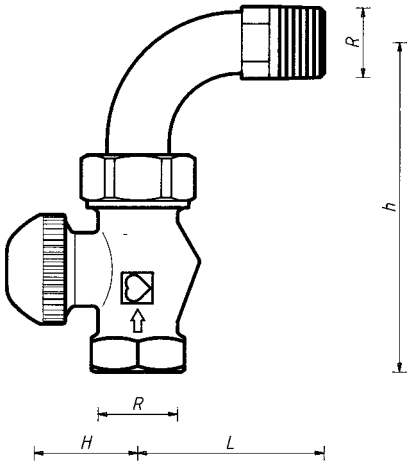
Standard Sheet
7723 V/7724 V/7728 V
7758 V/7759 V
Edition 1000 (0999)



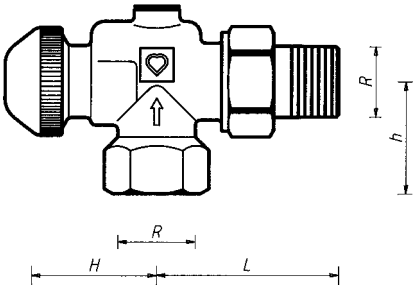
7723 V



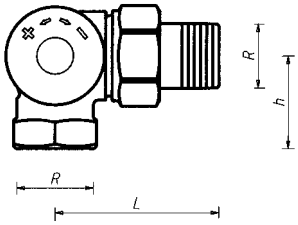
7724 V



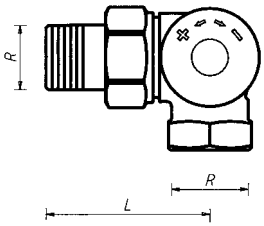
7723 V + 6249



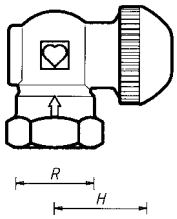
7728 V

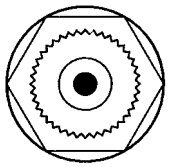


7758 V



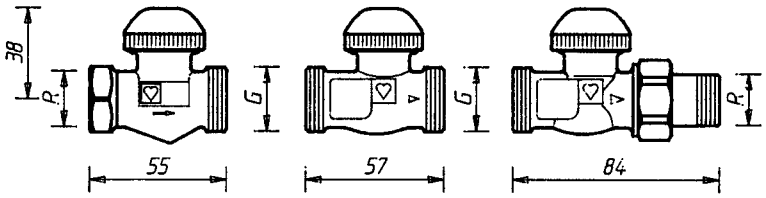
7759 V



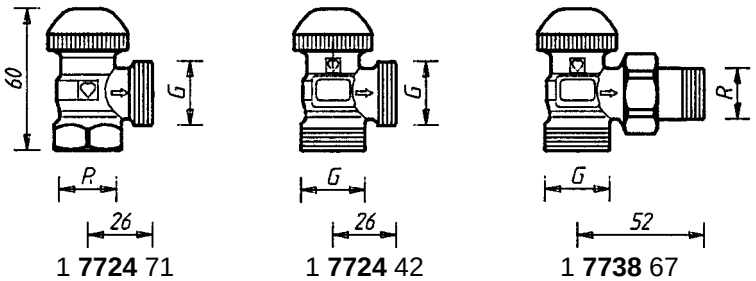


HERZ-TS-90-V
Thermostatic upper part

Special Models



1 **7723** 71 | 1 **7737** 67 | 1 **7733** 67



1 **7724** 71 | 1 **7724** 42 | 1 **7738** 67

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

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

HERZ Armaturen
Richard-Strauss-Straße 22 • A-1230 Wien

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

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 HERZ-Series

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

Models and Versions

All models are nickel plated and supplied with a red screw cap.
Universal models with special socket for threaded pipe connection and compression union:

HERZ-TS-90-V

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

HERZ-3-D-V

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

HERZ-TS-90 Special Versions

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

Other Models

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-k_V	Valves with fixed k_V-values for district heating systems

Separate standard sheets are available for these models.

Operating Data

Maximum operating temperature 110 °C
Maximum operating pressure 10 bar

Heating water purity according to Austrian standard ÖNORM H 5195 and/or VDI-guideline 2035.

HERZ Compression Union

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.

Field of Application

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

Radiator Connection

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

Further Connecting Options

Please refer to the HERZ catalogue for order numbers

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", $1\frac{1}{4}$" 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.

Pipe Connection Universal Models

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 Function

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.

Compatible with HERZ-TS-90

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

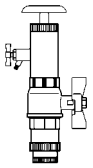
- HERZ-TS-90 – standard version
- HERZ-TS-90-k_v – thermostatic valves with fixed k_v-values
- HERZ-TS-90-V – thermostatic valves with continuous presetting
- HERZ-TS-98-V – thermostatic valves with continuous presetting and readout

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.

Changing the Upper Part of a Thermostatic Valve



Setting Process

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 graduaded 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

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

Spindle Seal

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

HERZ-TS-90-V-
Valve Upper Part

HERZ-Thermostatic Valve

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.

Nominal Lift

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-TS Handwheel

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.

Installation

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.

Important for 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.

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 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

Handwheels

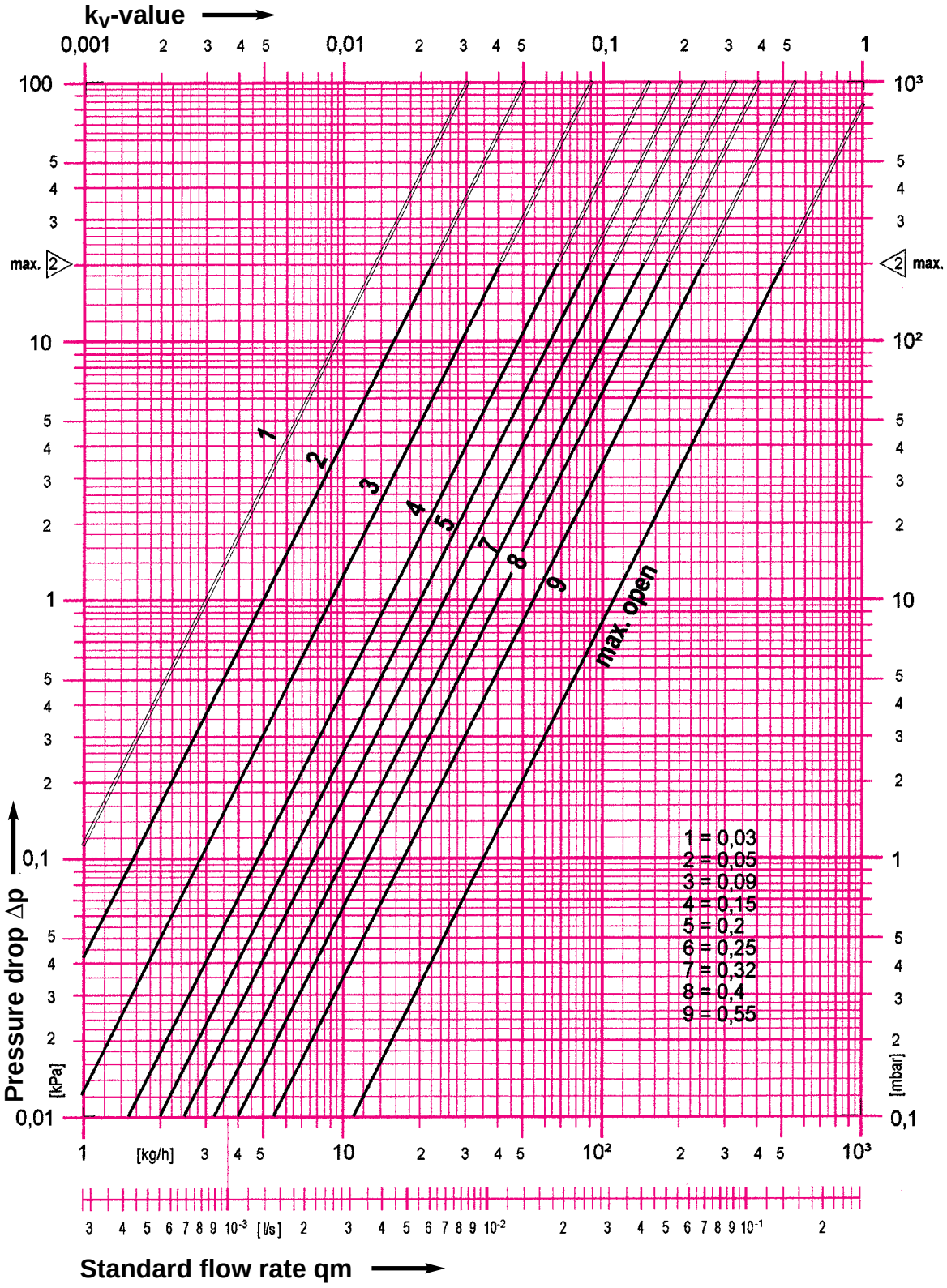
1 **7102** 80	HERZ-TS-90 Handwheel, Series 7000 with pre-setting and locking functions
1 **9102** 80	HERZ-TS-90 Handwheel, Series 900 “Design”.

Spare Parts

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

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 (Δ p) 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.

HERZ Armaturen
Richard-Strauss-Straße 22 • A-1230 Wien