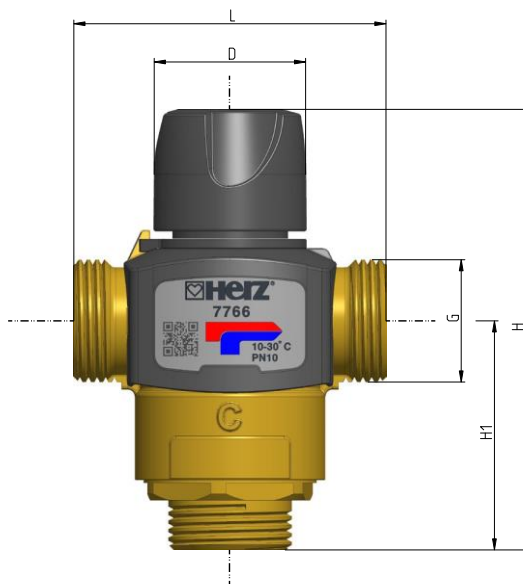


HERZ Thermostatic mixing valves for heating

TMV

Datasheet **7766**, Issue 0725

☑ Dimensions



Product Nr.	Temperature range [°C]	G [mm]	H [mm]	H1 [mm]	L [mm]	D [mm]
1 7766 40	10 - 30	1"	119	62	84	41
1 7766 41	10 - 30	1-1/4"	119	62	84	41
1 7766 42	20 - 45	1"	119	62	84	41
1 7766 43	20 - 45	1-1/4"	119	62	84	41
1 7766 44	45 - 70	1"	119	62	84	41
1 7766 45	45 - 70	1-1/4"	119	62	84	41

☑ Material and construction

Mixing valve body:	Forged brass, EN 12164
Spring:	Stainless steel
Internal parts:	Thermoelement
Stem:	Brass, EN 12164
Handwheel:	Plastic PP
Sealings:	EPDM
External thread:	acc. to ISO 228, flat sealing
Connection thread:	G1" or G1-1/4", male, flat sealing

☑ Operating data

Max. hot water inlet temperature:	100 °C (1 7766 42 / 43 / 44 / 45) 65 °C (1 7766 40 / 41)
Max. static pressure:	10 bar
Maximum differential pressure:	5 bar
Maximum flow rate :	82 l/min
Temperatre stability:	+/- 2 K

Medium:

Heating water according to ÖNORM H5195 or VDI- Standard 2035. The use of ethylene and propylene glycol in a mixing ratio of 25- 50 vol.-% is allowed. EPDM gaskets can be affected by mineral oils lubricants and thus lead to failure of the EPDM seals. Please refer to the manufacturers documentation when using ethylene and propylene glycol products for frost and corrosion protection.

Advantages of HERZ TMV for heating:

- adjustable flow temperature
- reliable design and long service life
- permanent quality control of production
- easy installation
- easy to use and maintain
- anti-scald function

Function principle

HERZ TMV for heating is connected to the hot main supply (A). The mixing valve is mixing the hot liquid (A) with cold liquid (B) and it adjusts the temperature that flows into the system according to the set value (AB).

Field of application

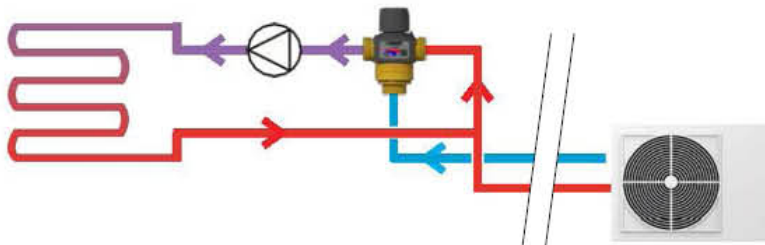
HERZ thermostatic mixing valves are essential components in domestic hot water systems, ensuring a stable mixed water temperature regardless of fluctuations in hot and cold water inlet conditions. Designed for precision and reliability, these valves maintain a consistent output temperature, enhancing system efficiency and user comfort.

Typical applications include systems incorporating heat pumps, underfloor heating and heating systems with radiators, where precise temperature control is critical for safety and performance.

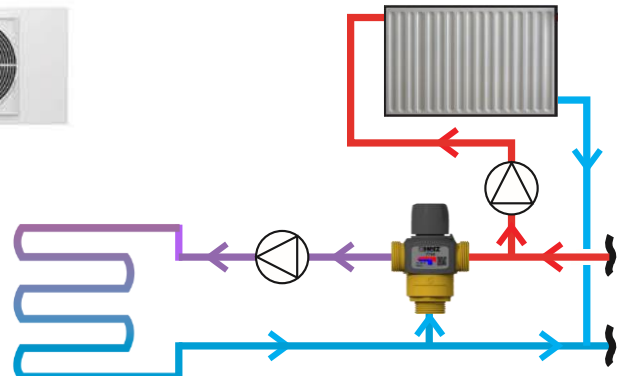
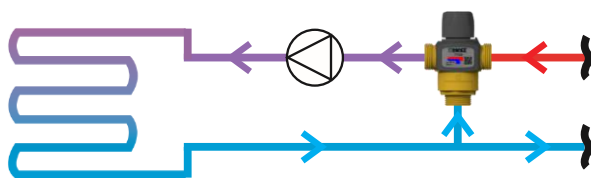
Valves have integrated anti-scald function, that automatically stops the hot water flow in case of failure of the cold water circuit.

10 – 30 °C	Heat pump - cooling
20 – 45 °C	Floor heating
45 – 70 °C	Radiator heating

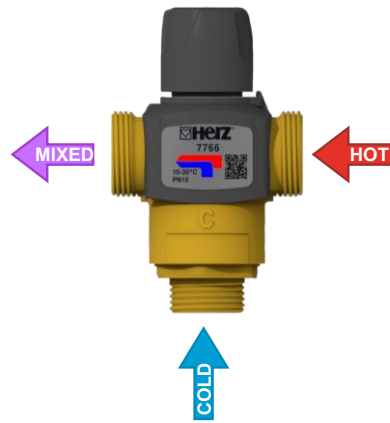
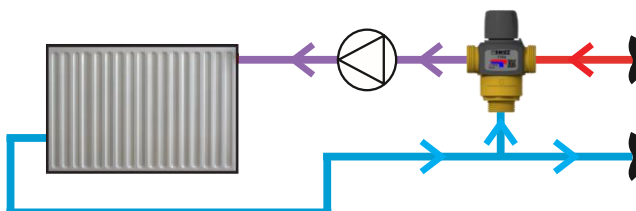
Heat pump - cooling



Floor heating



Radiator heating



Brass

HERZ TMV for heating is made from brass due to its good strength and excellent corrosion resistance. Under 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.

Assembly

HERZ TMV for heating can be mounted directly on the hydraulic system. The mounting position is arbitrary (vertical or horizontal). Before installing the HERZ TMV for heating, the system must be inspected to ensure that its operating conditions are within the range of the operating data/conditions, for example, the supply temperature, supply pressure, etc.

A system where the HERZ TMV for heating is installed must be flushed to remove any dirt or debris that may have accumulated during installation. Failure to remove dirt or debris may affect performance and the manufacturer's warranty. The installation of filters of appropriate capacity at the inlet of the water from the main supply is always advisable.

Each mixing valve installation must include shut-off valves nearby to allow maintenance or servicing without shutting down the entire system.

Access to the HERZ TMV for heating must be unobstructed for any maintenance that may be required to the HERZ TMV for heating or valve connections. The pipework from/to the HERZ TMV for heating must not be used to support the weight of the HERZ TMV for heating itself.

When connecting the HERZ TMV to the system components use suitable sealing material. All the connecting pipes have to be correctly aligned, so the valve is not loaded with a bending moment. When using copper or plastic pipes take into account the pressure and temperature limits of used material.

When assembling, use a suitable assembly tool that adapts to TMV end connections. Following assembly, the connections must be checked for water-tightness by the installer. All engineering standards and recognized regulations must be adhered to by these specialist staff.

It is recommended to install isolating valves to be able to isolate the TMV in case of maintenance.



WARNING

HOT WATER / LIQUID

Pay attention while installing / commissioning / servicing the HERZ TMV for heating because the temperature of medium can exceed 100 °C. Exposure to this high temperature medium can cause death, serious injury or damage of the other components in the system. Make sure that when works are being carried out on the HERZ TMV for heating the system is cooled down and it is unpressurised. Before any disassembly make sure that the system is drained.

Mixing valve

After installation of the HERZ TMV for heating, the mixing valve needs to be commissioned and tested by the instructions given below, taking into account applicable standards and codes of practice.

1. Ensure that the system is clean and free from any dirt and debris before commissioning the thermostatic mixer
2. It is recommended that the temperature is set using a suitable calibrated digital thermometer. The valve must be commissioned by measuring the temperature of the mixed water at the point of use.
3. Adjust the temperature using the adjusting handle on the valve.

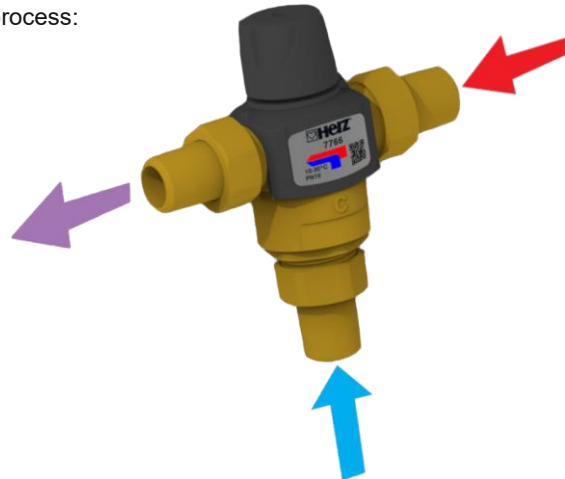
Setting temperature

Setting of temperature is done by rotating the knob up to make its target value to coincide with reference notch. The reference temperatures are indicated on the outline of the knob: they are related to the mixing valve in standard working conditions as stated in the table below:

Temp. range	Handle position (TM)						
	Min	1	2	3	4	5	Max
10 °C – 30 °C	10 °C	13 °C	17 °C	20 °C	23 °C	24 °C	30 °C
20 °C – 45 °C	20 °C	24 °C	28 °C	32 °C	37 °C	41 °C	45 °C
45 °C – 70 °C	45 °C	49 °C	53 °C	55 °C	62 °C	66 °C	70 °C

The following configuration is used to illustrate the mixing process:

- Hot water inlet (TH): **Red**
- Cold water inlet (TC): **Blue**
- Mixed water outlet (TM): **Purple**



Regulation locking

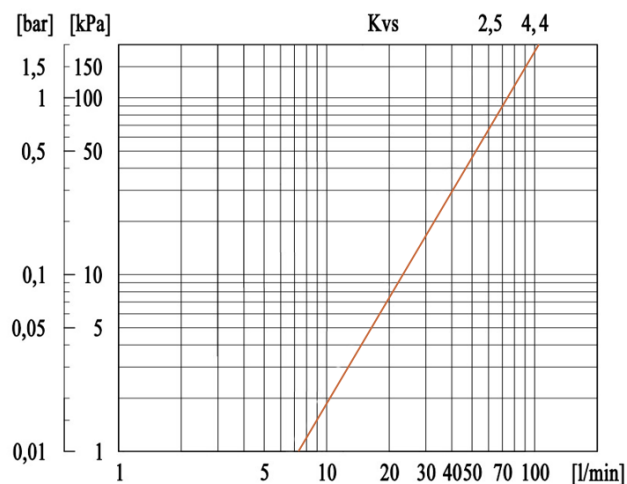
The regulation locking mechanism ensures that the set adjustment remains unchanged by preventing unauthorized or accidental modifications. By removing the fastening screw and repositioning it in the designated locking position between MIN and MAX, the knob is securely fixed. This tamper-proof feature enhances system reliability and prevents unintended alterations, making it particularly suitable for applications where maintaining precise settings is critical. Once locked, adjustments can only be made by authorized personnel, ensuring operational stability.

Anti-scald function

The anti-scald function automatically stops the hot water flow in case of failure of the cold water circuit. This security is operating at a temperature difference of only 10 K between the hot water inlet temperature and the mixed outlet temperature.

Check this operation when the installation is running by closing the cold water isolating valve: the outlet flow of the mixed water must come down to zero very quickly.

Standard working conditions



☑ Maintenance

Regular maintenance of heating systems keeps them running smoothly, optimizing their energy consumption and reducing utility bills. Well-maintained components ensure the heating system doesn't have to work harder than necessary to achieve the desired temperature.

Make sure, that regular maintenance is done periodically at least twice a year, according to the procedures written below:

1. Check and clean the system filters.
2. Check that the non-return valves are operating normally, without problems caused by impurities.
3. Limescale can be removed from internal components by immersion in a suitable de-scaling liquid.
4. When the components which can be maintained have been checked, commissioning should be carried out again.

Mixing valve

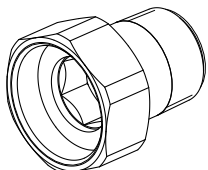
In-service tests should be carried out regularly to monitor the mixer performance, as deterioration of performance could indicate that the valve and/or the system require maintenance. If, during these tests, the temperature of the mixed water has changed significantly in comparison to the previous tests, the details given in the installation and commissioning sections should be checked and maintenance carried out.

The aspects in previous paragraph should be checked regularly to ensure that the optimum performance levels of the valve are maintained, periodically at least twice a year.

☑ Disposal instructions

The disposal of HERZ TMV for heating must not endanger the health or the environment. National legal regulations for the proper disposal of the HERZ TMV for heating have to be followed.

☑ Accessories

Sketch	Description	Article Nr	Pc.
	Free-turning nut connector G1"-R3/4"	1 6221 32	1
	Free-turning nut connector G1-1/4"-R1"	1 6221 33	1