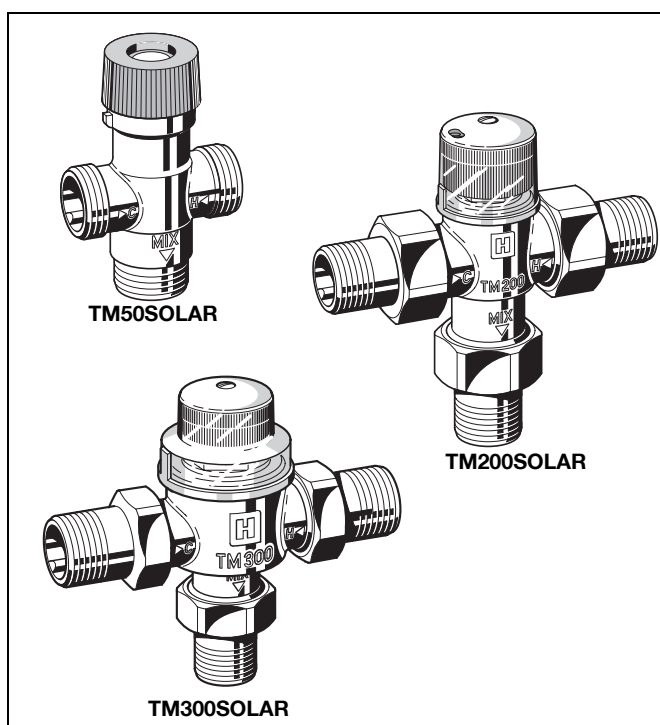




## TM50/TM200/TM300SOLAR

Thermostatic mixing valve with scald protection for solar installations

### Product specification sheet



#### Application

Thermostatic mixing valves of this type are used for central regulation of the water temperature in solar-powered, bivalent water heaters.

A cold water break can be fitted in the circulation line in water heater systems, which prevents cold water from mixing at the extraction point via the circulation line.

#### Special Features

- Highly sensitive thermal element with good all-round water-temperature sensing, even at low flow rates
- Simple setting of the required water temperature
- Scald protection - the hot water inlet is automatically cut off if the cold supply fails provided that the hot water inlet temperature is at least 10 K higher than that of mixed water setting
- The cold water inlet is automatically cut off if the hot supply fails
- Meets KTW recommendations for potable water
- Inner components are of scale-resistant materials
- With integrated check valves, TM50SOLAR-1/2 ERV only

#### Range of Application

Medium	Water
Operating pressure	Max. 10 bar
Maximum pressure difference between hot and cold inlet supplies	2,5 bar

#### Technical Data

	TM50SOLAR	TM200SOLAR	TM300SOLAR
Installation position	Arbitrary		
Hot water inlet temperature	Max. 110 °C		
Connection size	1/2"	3/4"	3/4"
Setting range	30 °C - 60 °C		
Set at the factory to	40 °C	40 °C	40 °C
Flow rate at 1.0 bar pressure differential across valve approx.	25 l/min	27 l/min	40 l/min
Control accuracy	< ± 4 K	< ± 4 K	< ± 4 K

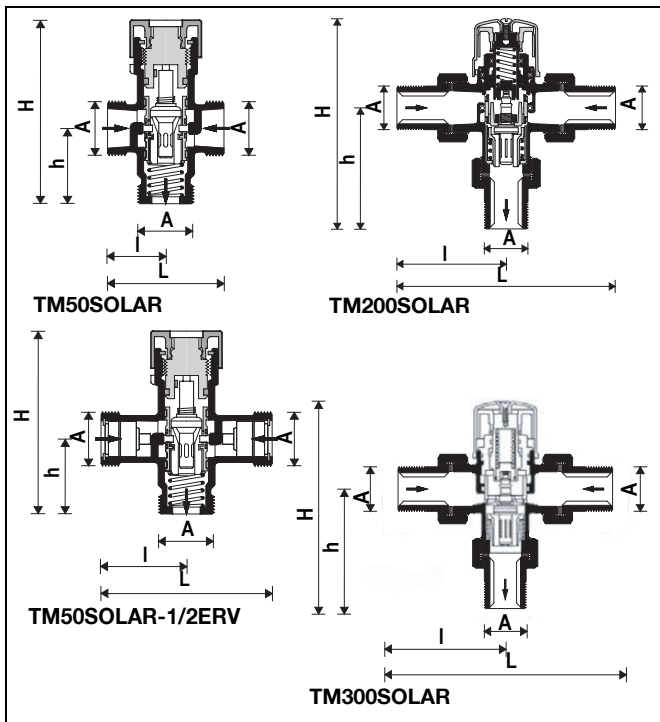
#### Construction

The thermostatic mixing valve comprises:

- Housing
- Connection fittings (not in TM50SOLAR)
- Adjustment knob
- Thermostat
- Protective cap to fix the set mix water temperature (not in TM50SOLAR)
- With integrated check valves, TM50SOLAR-1/2 ERV only

#### Materials

- Dezincification resistant brass housing, nickel plated
- Dezincification resistant brass connection fittings, nickel plated (not in TM50SOLAR)
- Moving parts of high-quality, scale-resistant synthetic material
- High quality-synthetic material adjustment knob
- Stainless-steel spring
- Protective cap made of transparent plastic (not in TM50SOLAR)



**Method of Operation**

Thermostatic mixing valves of this type are used for central regulation of the water temperature in solar-powered, bivalent water heaters.

The highly sensitive thermal element located in the outlet of the valve controls a plug which regulates the flow proportions of cold and hot water in relation to the mixed hot water setting selected. Soft seatings are fitted to both hot and cold water inlets.

They provide:

- A positive hot inlet shutoff if the cold water supply is interrupted, provided that the hot water inlet temperature is at least 10 K higher than that of the mixed water setting.
- The cold water supply is cut off if the hot water supply is interrupted.

**Options**

TM50SOLAR-1/2E = without connection fittings R 1/2"

TM50SOLAR-1/2ERV =without connection fittings R 1/2"  
check valve integrated

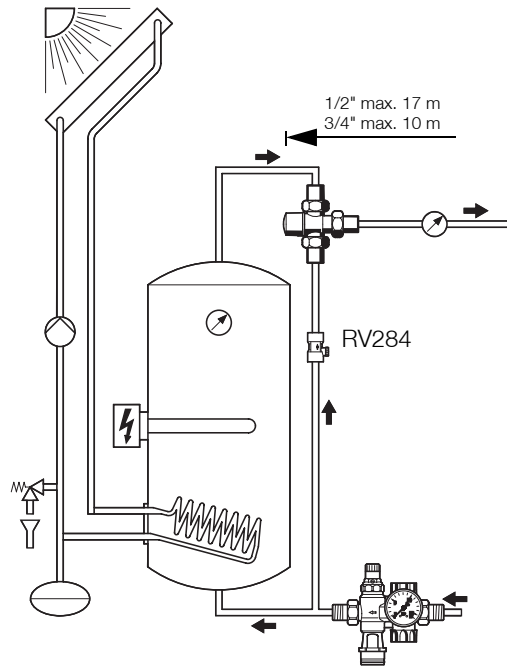
TM200SOLAR-3/4A = with threaded union connectors R 3/4"

TM200SOLAR-3/4E = without connection fittings R 3/4"

TM300SOLAR-3/4A = with threaded union connectors R 3/4"

	TM50SOLAR-1/2E	TM50SOLAR -1/2ERV	TM200SOLAR-3/4A	TM200SOLAR-3/4E	TM300SOLAR-3/4A
Connection size	A G 1/2"		R 3/4"	G 3/4"	R 3/4"
Dimensions (mm)					
L	57	80	134	66	180
I	29	40	67	33	90
h	37	37	65	40	78
H	93	93	128	93	132

**Installation Example**



**Installation Guidelines**

- Fit a return flow-retarder unit where the hot water supply system includes a circulation circuit
- Observe the flow direction arrow when fitting a KB191 return flow-retarder unit
- To prevent the growth of legionella, DVGW-W551 specify that the water volume in the pipework between the mixer valve and the furthest take-off point should not exceed 3 litres. This corresponds to a maximum length of 10 metres for 3/4" (20 mm) pipework and 17 metres for 1/2" (15 mm)

**Typical Applications**

Thermostatic mixing valves are installed in water heating systems according to your specification.

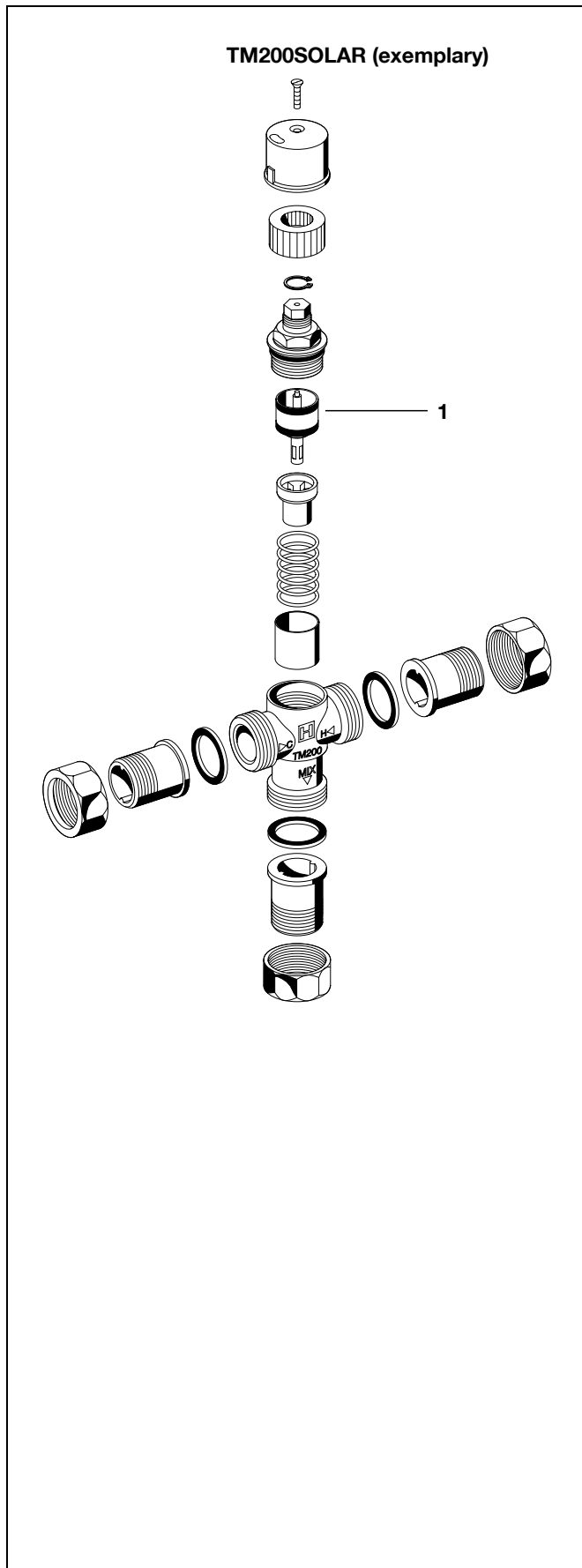
The following are some typical applications:

- Single and multiple-occupancy households
- Retirement homes
- Children's nurseries
- Schools
- Hotels
- Commercial kitchens
- For industrial applications with control either from a central location or adjacent to point-of-use outlets

**Maintenance**

It is recommended that the mixing valves are inspected on a regular basis, at least annually, or more frequently if performance is impaired, to ensure they are working correctly and that dirt ingress into the system does not cause a loss in performance of the mixing valve.

The temperature setting is to be inspected at regular intervals and adjusted as necessary.



**Spare Parts**

**Thermostatic mixing valve TM50/200/300SOLAR, from 2008 onwards**

- |          |                         |              |
|----------|-------------------------|--------------|
| <b>1</b> | Control valve, complete |              |
|          | for TM50SOLAR           | TM50A-30/60  |
|          | for TM200SOLAR          | TM200A-30/60 |
|          | for TM300SOLAR          | TM300A-30/60 |

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