



Braukmann TM50/200/300SOLAR

Thermostatic mixing valve with scald protection
for solar installations

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
- 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
- Simple setting of the required water temperature
- Inner components are of scale-resistant materials
- Meets UBA regulations for drinking water

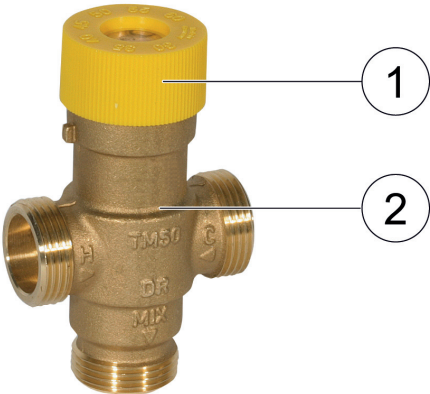


TECHNICAL DATA

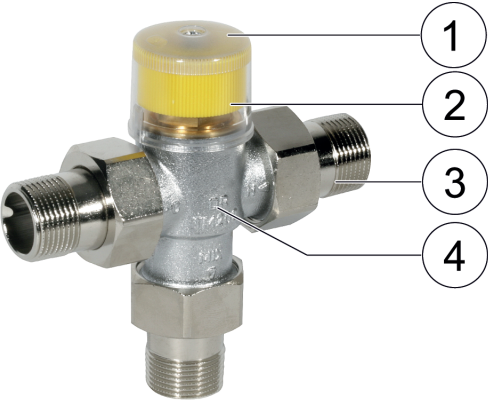
	TM50S OLAR	TM200S OLAR	TM300S OLAR
Media			
Medium:	Water		
Connections/Sizes			
Connection size:	1/2"	3/4"	3/4"
Pressure values			
Max. operating pressure:	max. 10 bar		
Maximum pressure difference between hot and cold inlet supplies:	2.5 bar		
Operating temperatures			
Max. hot water inlet temperature:	110 °C		
Setting range:	30 – 60 °C		
Preset temperature during manufacture:	40 °C		
Control accuracy:	<±4 K		
Specifications			
Flow rate at 1.0 bar pressure differential across valve appr.:	25 l/min	27 l/min	40 l/min
Installation position:	Arbitrary		

CONSTRUCTION

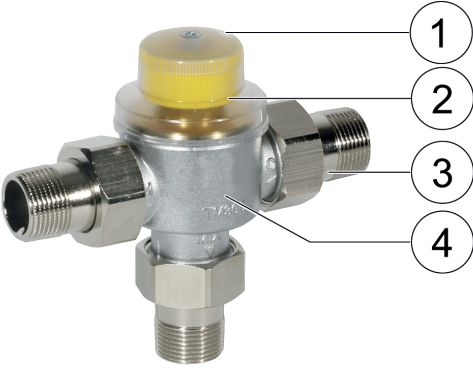
TM50

Overview	Components	Materials
	1 Adjustment knob	High-quality synthetic material
	2 Housing	Dezincification-resistant brass
	Not depicted components:	
	Adjustment spring	Stainless steel
	Moving parts	High-quality, scale-resistant synthetic material
	Thermostat	-

TM200

Overview	Components	Materials
	1 Protective cap	Transparent plastics
	2 Adjustment knob	High-quality synthetic material
	3 Connection fittings	Dezincification-resistant brass
	4 Housing	Dezincification-resistant brass
	Not depicted components:	
	Adjustment spring	Stainless steel
	Moving parts	High-quality, scale-resistant synthetic material
	Thermostat	-

TM300

Overview	Components	Materials
	1 Protective cap	Transparent plastics
	2 Adjustment knob	High-quality synthetic material
	3 Connection fittings	Dezincification-resistant brass
	4 Housing	Dezincification-resistant brass
	Not depicted components:	
	Adjustment spring	Stainless steel
	Moving parts	High-quality, scale-resistant synthetic material
	Thermostat	-

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 shut-off 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

TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

Parameter	Value
Environment:	clean, dry and dust free
Min. ambient temperature:	5 °C
Max. ambient temperature:	55 °C
Min. ambient relative humidity:	25 % *
Max. ambient relative humidity:	85 % *

*non condensing

INSTALLATION GUIDELINES

Setup requirements

- Install without tension or bending stresses
- Fit a return flow-retarder unit where the hot water supply system includes a circulation circuit
- Observe the flow direction arrow when fitting a 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 $\frac{3}{4}$ " (20 mm) pipework and 17 metres for $\frac{1}{2}$ " (15 mm)
- Requires regular maintenance in accordance with EN 806-5

Installation Example

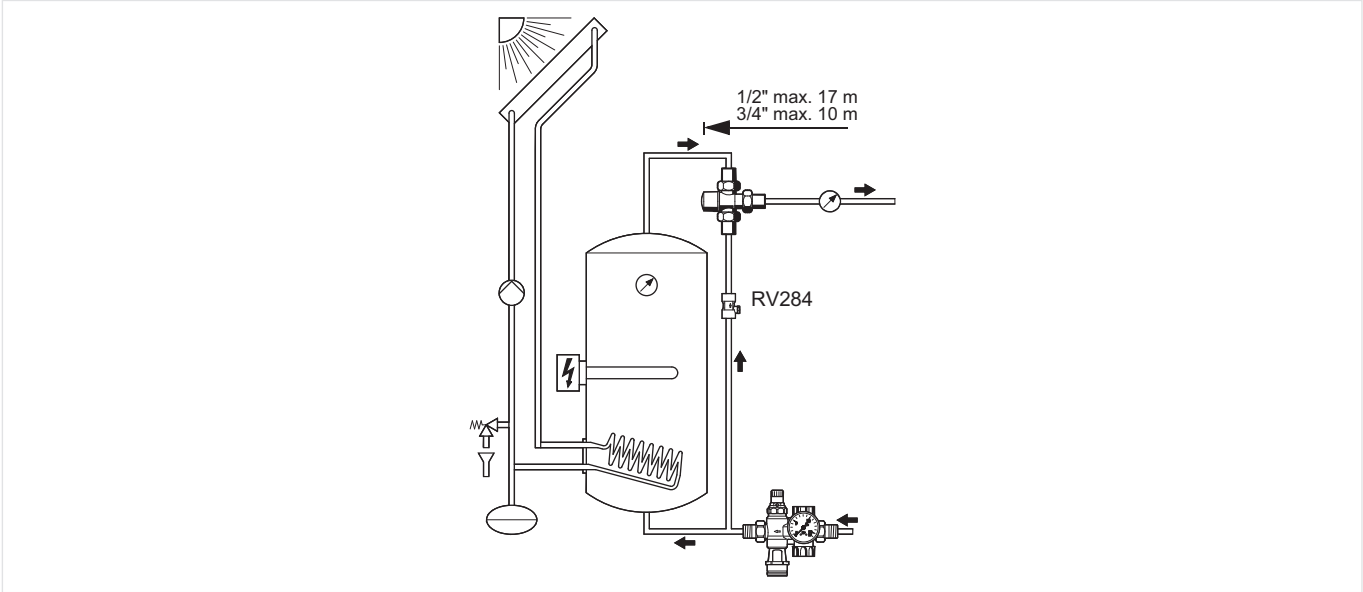
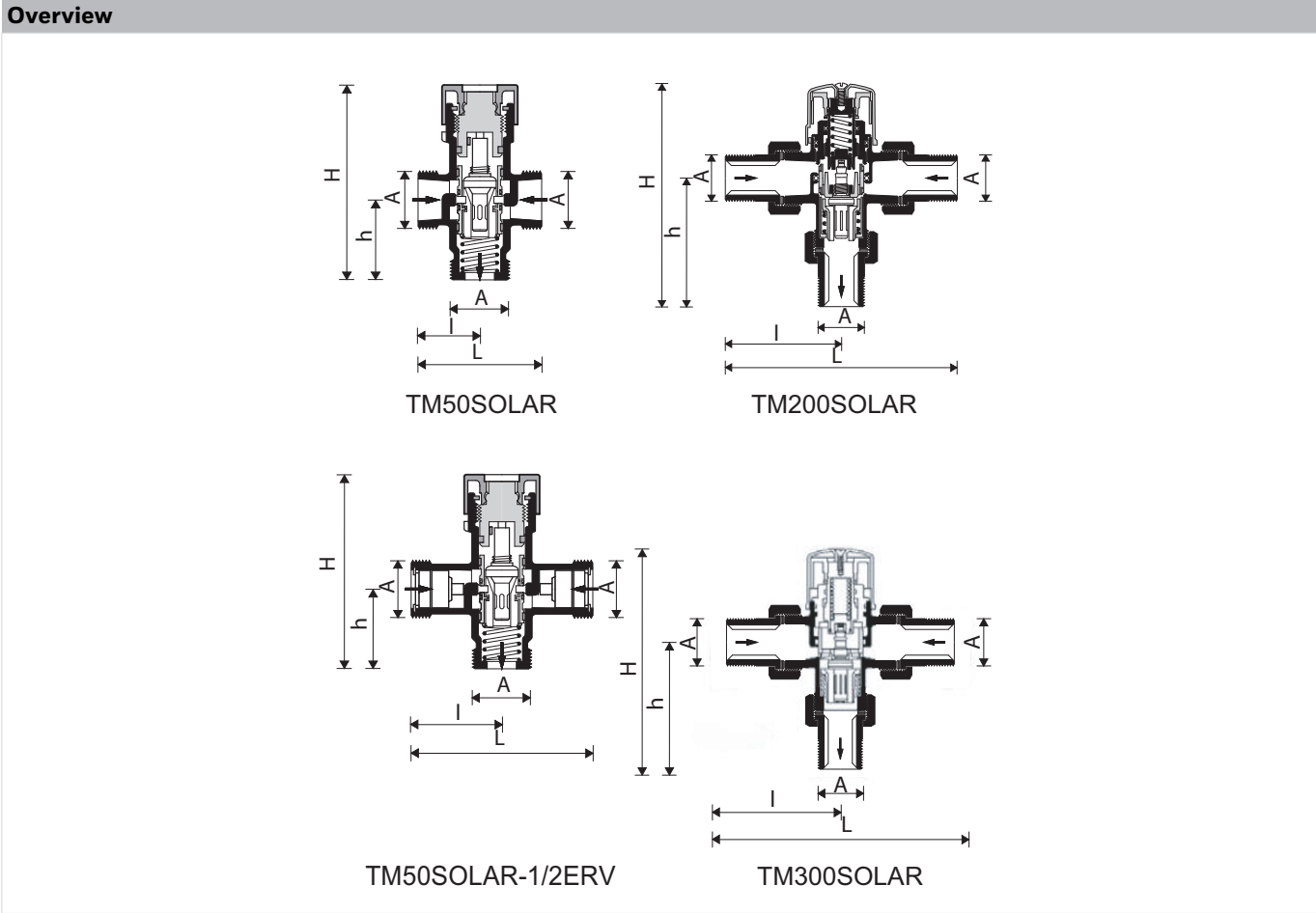


Fig. 1 Standard installation example for the mixing valve

DIMENSIONS



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

Note: All dimensions in mm unless stated otherwise.

ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

Options

The valve is available in the following sizes: 3/4", Ø 22 mm

- standard
- not available

	Connection type	Size	Notes
TM50SOLAR-1/2E	without connection fittings	G 3/4"	
TM50SOLAR-1/2ERV	without connection fittings	G 3/4"	Check valve integrated
TM200SOLAR-3/4A	with threaded union connectors	R 3/4"	
TM200SOLAR-3/4E	without connection fittings	G 1"	
TM300SOLAR-3/4A	with threaded union connectors	R 3/4"	

Spare Parts

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

Overview	Description	Dimension	Part No.
TM200SOLAR (exemplary)	1 Valve insert complete		
	for TM50SOLAR		TM50A-30/60
	for TM200SOLAR		TM200A-30/60
	for TM300SOLAR		TM300A-30/60



Manufactured for
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