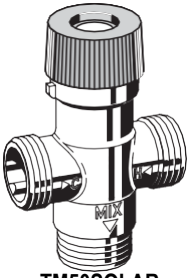
resideo

Braukmann
TM50/200/300SOLAR

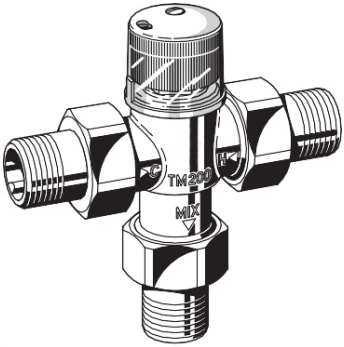
Einbauanleitung
Instrukcja montażu

Installation instructions
Istruzioni di montaggio

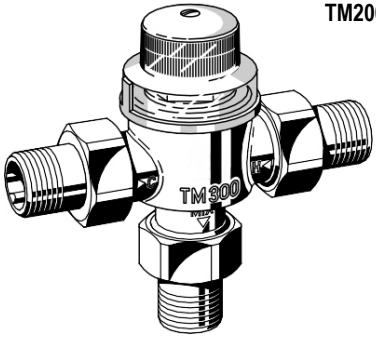
Notice de montage
Instrucciones de montaje



TM50SOLAR



TM200SOLAR



TM300SOLAR

Anleitung zum späteren Gebrauch aufbewahren!
Keep instructions for later use!
Conserver la notice pour usage ultérieur!
Conservare le istruzioni per uso successivo!
Guardar estas Instrucciones para su uso futuro!

Thermostatische Wassermischer
Thermostatic mixing valves
Mitigeurs d'eau thermostatiques
Miscelatori termostatici
Válvulas termostáticas mezcladoras de agua

32304685-001

1. Safety Guidelines

1. Follow the installation instructions.
2. Use the appliance
   - according to its intended use
   - in good condition
   - with due regard to safety and risk of danger.
3. Note that the appliance is exclusively for use in the applications detailed in these installation instructions. Any other use will not be considered to comply with requirements and would invalidate the warranty.
4. Please take note that any assembly, commissioning, servicing and adjustment work may only be carried out by authorized persons.
5. Immediately rectify any malfunctions which may influence safety.

2. Description of function

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.

3. Application

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

4. 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 approximately	25 l/min	27 l/min	40 l/min
Control accuracy	< ± 4 K	< ± 4 K	< ± 4 K

5. Scope of delivery

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

6. Options

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 G1"
TM300SOLAR-3/4A = with threaded union connectors R 3/4"

7. Assembly

7.1. Installations 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)

7.2. Assembly instructions

The flow direction arrows must be observed when connecting the hot and cold water inlets.

- Install so that the valve is not strained or twisted

7.3. Set Mix Water Temperature

The mixing valve can be set within the range 30°C to 60°C as follows:

- Remove the protective cap.
- Rotate setting wheel until the desired temperature number coincides with the marking

7.4. Locking the setting (not in TM50SOLAR)

Once the correct setting has been achieved it can be locked in position.

1. Place the protection cap (1) over the control knob
   - Ensure the notch (3) in the protection cap and lug (4) on the valve are engaged
2. Secure the cap in place with the screw provided
3. The valve is now ready for use
   - The actual set point temperature can be viewed through the clear window (2) on the locking cap

8. Start-up

1. Check that the designation of the valve matches the intended application, that the supply pressures are within the range of operating pressures and that the supply temperatures are within the range permitted for the valve from guidance information on the prevention of legionella.

2. Adjust the temperature of the mixed water

- record the temperature of the hot and cold supplies
- record the temperature of the mixed water at the smallest and largest draw-off flow rates
- turn off the cold water supply and record the mixed water temperature and the maximum temperature achieved

⚠ The values should not be greater than 2°C of the nominal set point.

9. Maintenance

9.1. General information

Most domestic water supplies contain calcium which will separate out when the water is heated in a system.
The degree and speed of scaling depends, amongst other factors, on water flow rates, system design, the degree of hardness of the water and the temperature to which it is heated.
Over a period, scale may form within the valve, particularly at the hot inlet where the water is hottest and this may eventually prevent one or more ports from closing fully and thereby impair the temperature control.
Descaling of the mixing valve then becomes necessary.
Because circumstances differ between installations, it is not possible to give a definitive water hardness level which will affect the mixing valve within a certain time period.
Simple scale protection of the incoming water supply on any system will always provide benefits in extending the efficient operating life of thermostatic mixing valves and other fittings before service is required.

⚠ Scale protection is essential in applications where water is particularly hard.

If purpose made measuring equipment is not readily available, a good guide to hardness can be established by checking site experience with speed of scale build up in kettles or coffee machines.

9.2. Inspection

Following commissioning, in-service tests should be carried out at 6-8 weeks and 12-15 weeks.

1. If no significant changes (i.e. ≤ 1K) occur in either test, a further inservice test should be carried out at 24 to 28 weeks after commissioning.
2. If small changes (i.e. 1 to 2K) occur in one test necessitating adjustment, a further in-service test should be carried out at 24 to 28 weeks after commissioning.
3. If small changes (i.e. 1 to 2K) occur in both tests necessitating adjustment, a further in-service test should be carried out at 18 to 21 weeks after commissioning.
4. If significant changes (i.e. > 2K) occur in either test necessitating service work, a further in-service test should be carried out at 18 to 21 weeks after commissioning

⚠ The general principle to be observed after the first 2 or 3 in-service tests is that the intervals of future tests should be set to those which previous tests have shown can be achieved with no more than a small change in mixed water temperature.

9.3. 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.

⚠ Please note that during servicing the valve piston should be greased with an approved (WRAS) silicon lubricant.

⚠ If required, a Honeywell Home service kit is available for cartridge replacement.

1. Prior to servicing, the mixed water temperature must be recorded. Should the temperature be 2°C greater than the nominal setting the following should be checked before dismantling the valve
   - Check strainers are clean
   - Ensure check valves are in good working order
   - Check isolating valves are fully open
2. If these checks are satisfactory then the Honeywell Home service kit is available for cartridge replacement (sepa- rate instructions in the service kit detail this procedure).
3. Set mix water temperature

10. Disposal

- 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)

Observe the local requirements regarding correct waste recycling/disposal!

11. Spare Parts

1 Control valve, complete

for TM50SOLAR TM50A-30/60

for TM200SOLAR TM200A-30/60

for TM300SOLAR TM300A-30/60

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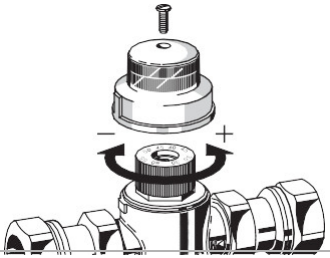

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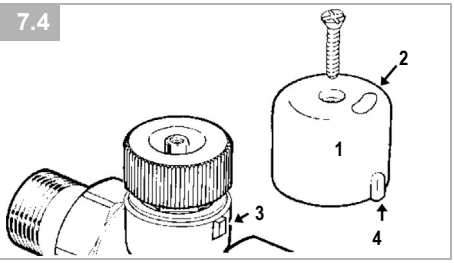

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TM200SOLAR (exemplary)