

THERMOSTATIC MIXING VALVE FOR DOMESTIC HOT WATER SOLAR CIRCUITS

(MAX. INLET TEMPERATURE: 100 °C)

OPERATING INSTRUCTIONS

MTS34 - attachments
3/4" male

MTS54 - attachments
1" 1/4 male

MTS10 - attachments
1" male

MTS64 - attachments
1" 1/2 male

DHW SET POINT: 30 ÷ 65 °C

FEATURES

The thermostatic mixing valve automatically mixes hot and cold water to give the dhw temperature at the set value. The valve is designed to resist for long periods to high temperatures; hot water comes from the solar tank and cold water comes from the water supply network. Main benefits are maximum comfort, water and energy saving; in the event of a cold water supply failure, it limits the flow of hot water, therefore reducing the risk of accidental scald. It's installed in hot water pipeline, usually in dhw solar circuits. The solar plant can be open loop type or forced circulation type.

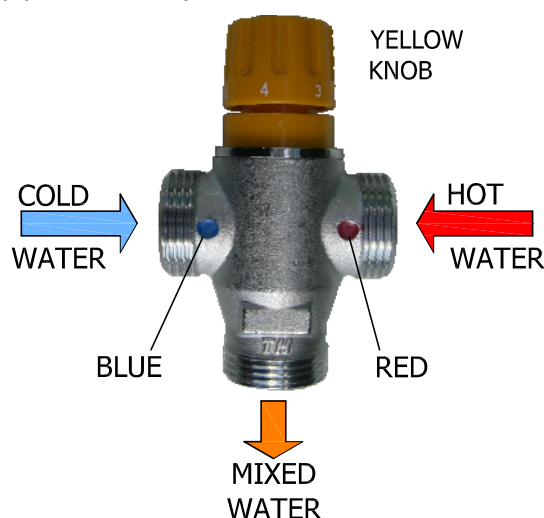
INSTALLATION

The mixing valve can be installed in every position, horizontal or vertical. See the picture to check the right connections:

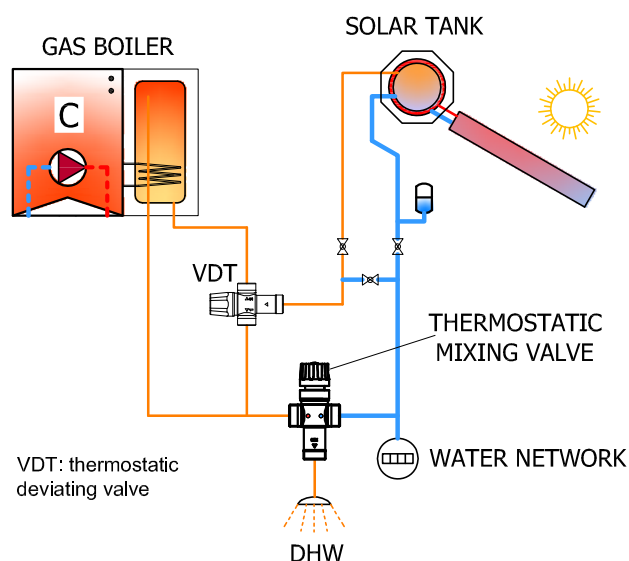
Red spot - HOT WATER;
Blue spot - COLD WATER;
Outlet way - MIXED WATER.

If pressure is higher than 5 bar a pressure reducing valve should be installed.

If hot and cold water pressures are considerably different (> 0.5 bar), check valves must be installed at the inlets. Filter installation is recommended if water contains particles.



EXAMPLE OF INSTALLATION IN A OPEN LOOP SOLAR CIRCUIT



The thermostatic mixing valve is calibrated in order to get a mixed water temperature as described in the table below.

If the water temperature to the user is considerably different from the expected temperature according to the knob position it's possible to make the calibration again:

- rotate the knob until the water temperature is exactly 42 °C;
- remove first the screw, then the knob;
- replace the knob with number 3 aligned to the mark on the body valve;
- tighten the knob with the screw.

knob position	MIN	1	2	3	4	5	MAX
temperature (°C)	-	30	38	42	52	65	-

After the temperature is set, it's possible to lock the yellow knob to avoid accidental regulations, by screwing the grub screw on the knob.



- MTS34B - attachments
1/2" pipe unions
- MTS10B - attachments
3/4" pipe unions
- MTS54B - attachments
1" pipe unions
- MTS64B - attachments
1" 1/4 pipe unions

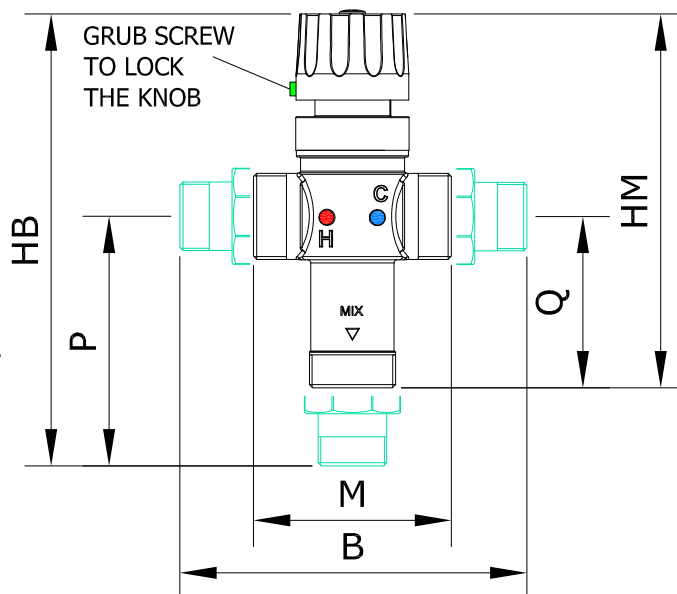
TECHNICAL FEATURES

Max. operating pressure: 10 bar
 Recommended pressure: 1 ÷ 5 bar
 Max differential pressure between inlets: 0,5 bar
 Max. inlet temperature: 100 °C
 Set point: 30 ÷ 65 °C
 Kv MTS12F: 1,6
 Kv MTS34(B): 1,8 - Kv MTS10(B): 3,2
 Kv MTS54(B): 7,4 - Kv MTS64(B): 7,6

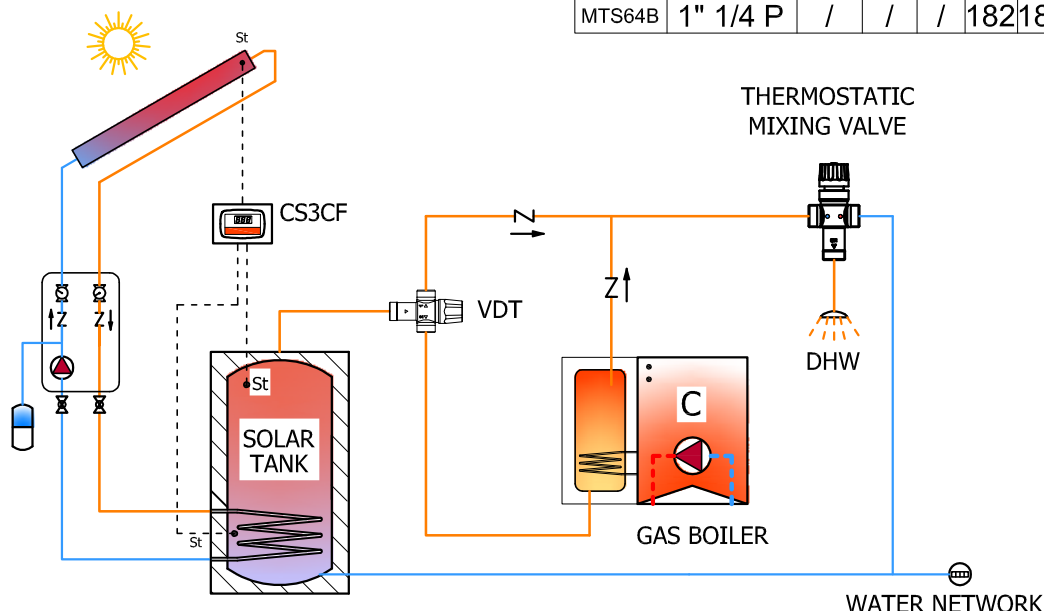
MATERIALI

Valve body: forged brass UNI EN 12165 CW617N nickel plated
 Shutter and inner parts: brass UNI EN 12164 CW614N
 Springs: stainless steel AISI 302
 O-RING: EPDM
 Knob: Nylon, PA 6
 Temperature sensor: expansible wax

OVERALL DIMENSIONS



EXAMPLE OF INSTALLATION IN A FORCED CIRCULATION SOLAR CIRCUIT



COD.	Ø	HM	M	Q	HB	B	P
MTS12F	1/2" F	116	60	52	/	/	/
MTS34	3/4" M	118	60	52	/	/	/
MTS34B	1/2" P	/	/	/	146	116	80
MTS10	1" M	116	70	49	/	/	/
MTS10B	3/4" P	/	/	/	146	130	79
MTS54	1" 1/4" M	140	96	62	/	/	/
MTS54B	1" P	/	/	/	175	166	97
MTS64	1" 1/2 M	144	104	66	/	/	/
MTS64B	1" 1/4 P	/	/	/	182	180	104

WARRANTY

DE PALA company warrant each new valve and servomotor to be free from defects in material, workmanship and construction, and that when installed and used in accordance with this technical datasheet will perform to applicable specifications for a period of two years from production date stamped. If examination by DE PALA discloses that the product has been defective, then our obligation is limited to repair or replacement, at our option, of the defective product or its components. DE PALA Snc is not responsible for products which have been subject to misuse, alteration, accident or for repairs not performed by DE PALA. Products must be returned properly packed with transportation charges prepaid to DE PALA; return delivery terms will be DDP Our Factory. The foregoing warranty constitutes DE PALA sole liability, and is in lieu of any other warranty, of merchantability or fitness. DE PALA shall not be responsible for any incidental or consequential damages arising from any breach of warranty.

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