# THERMOSTATIC MIXING VALVE FOR RADIANT PANEL SYSTEMS

de pala ITALIAN OEM Technology

FIXED POINT CONTROL

| | | |
|---|---|---|
| **MTP10** | **1"** | **Range control temp. : 20 ÷ 65 °C** |
| **MTP10B** | **3/4"** | |
| **MTP64** | **1"1/2** | **Range control temp. : 20 ÷ 55 °C** |
| **MTP64B** | **1"1/4** | |

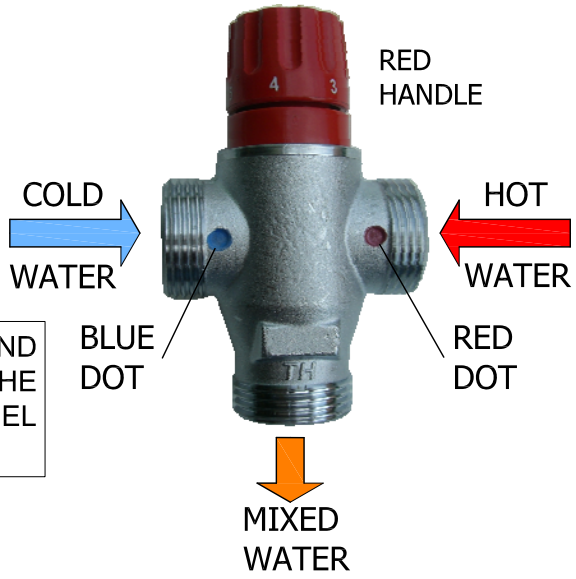
## INSTRUCTION SHEET

## ☐ DESCRIPTION

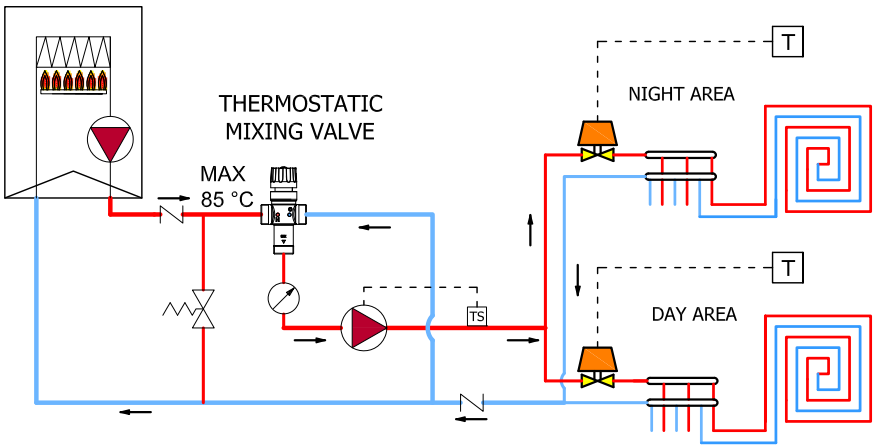
The thermostatic mixer regulates the temperature of the hot water to a set value. It is supplied by hot water from the boiler and by cold water returning from the system. In radiant panel systems, the temperature control made by this mixer implements the so-called **"fixed point"** regulation, which consists in regulating the flow temperature to a predetermined and constant value with the possibility of manually varying the set temperature according to climatic conditions. Compared to an electronic control unit with an external and flow probe, it is a more **intuitive, economical** and efficient system with fewer breakdowns. A sensor placed on the central way of the mixer detects the flow temperature to the panel and adjusts it to the preset value, continuously dosing the quantity of hot and cold water necessary to guarantee the set temperature.

## ☐ WARNINGS

The mixer can be mounted vertically and horizontally without any restrictions. The connections shown in the adjacent illustration must be observed:
**Red dot** - HOT WATER;
**Blue dot** - COLD WATER;
Central way - MIXED WATER.




HYDRAULIC SYSTEM DIAGRAM WITH GAS BOILER AND THERMOSTATIC MIXER FOR FIXED POINT REGULATION OF THE FLOW WATER TEMPERATURE OF THE RADIANT PANEL HEATING SYSTEM.




## ☐ MIXED TEMPERATURE SET ADJUSTMENT

| MTP10 and MTP10B | | | | | | | |
|---|---|---|---|---|---|---|---|
| knob position | MIN | 1 | 2 | 3 | 4 | 5 | MAX |
| temperature (°C) | 16 | 23 | 33 | 36 | 43 | 55 | 64 |

| MTP64 and MTP64B | | | | | | | |
|---|---|---|---|---|---|---|---|
| knob position | MIN | 1 | 2 | 3 | 4 | 5 | MAX |
| temperature (°C) | 20 | 24 | 32 | 37 | 43 | 48 | 55 |

The regulation of the mixing water temperature is carried out according to the following obligatory steps:
1) **Determine and adjust the SET temperature (indicative):** turn the knob, matching the desired adjustment number (see table above) with the fixed valve index, according to the chosen temperature.

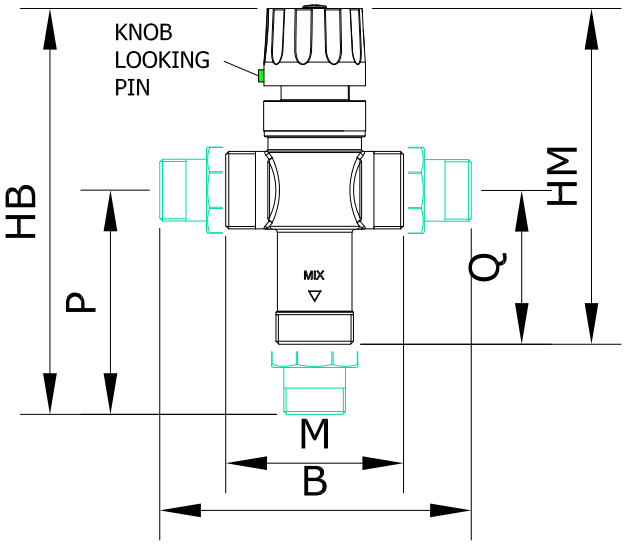
2) **Whait the heating system beaching the operating conditions :** start the system and check the flow temperature after achieving to operating conditions (flow, temperature, return temperature, heat exchange, correct for the type of system in regulation).

3) **Fine set point adjustment:** if necessary, make the most appropriate knob adjustment corrections in order to obtain the desired initial temperature (to be checked with a thermometer in the delivery line). At the end of this phase, the mixer can be locked by the knob looking pin, thus avoiding accidental tampering.

## ☐ CHARACTERISTICS and MATERIALS

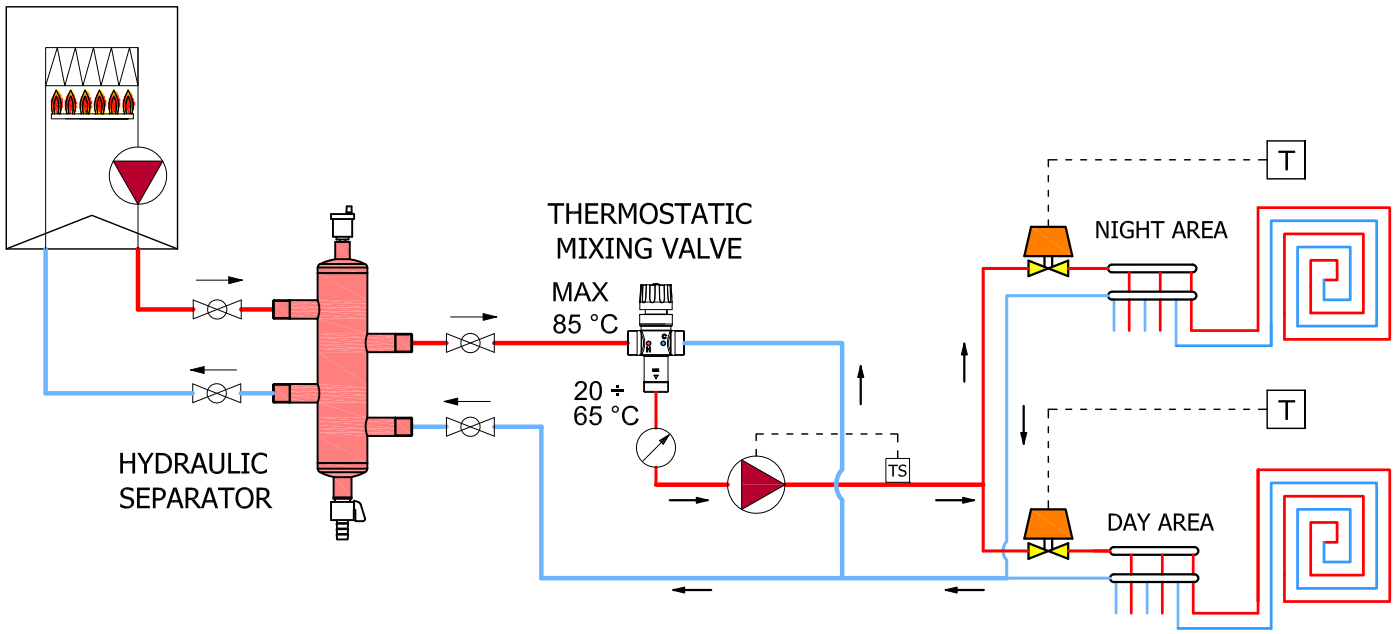
| | MTP10 | MTP10B | MTP64 | MTP64B |
|---|---|---|---|---|
| Connections | 1" male | 3/4" unions | 1"$\frac{1}{2}$ male | 1" $\frac{1}{4}$ unions |
| Range of adjustment | 20 ÷ 65 °C | | 20 ÷ 55 °C | |
| Max. hot water temperature | 85 °C | | | |
| Kv | 3.0 m³/h | | 7.6 m³/h | |
| Max. working pressure | 10 bar | | | |
| Minimum pressure | 0.2 bar | | | |
| Working pressure | up to 5 bar | | | |
| Setting accuracy | +/- 2 °C | | | |
| Valve body | brass UNI EN 12165 CW617N sandblasted and chrome-plated | | | |
| Shutter and internal organs | brass UNI EN 12164 CW614N | | | |
| Springs | stainless steel AISI 302 | | | |
| O-ring | NBR | | EPDM | |
| Knobs | Nylon | | | |
| Heat-sensitive element | wax | | | |

## ☐ MIXING VALVE SIZE




| COD. | Ø | HM | M | Q | HB | B | P |
|---|---|---|---|---|---|---|---|
| MTP10B | 3/4" B | / | / | / | 146 | 130 | 79 |
| MTP10 | 1" M | 116 | 70 | 49 | / | / | / |
| MTP64B | 1" 1/4 B | / | / | / | 182 | 180 | 104 |
| MTP64 | 1" 1/2 M | 144 | 104 | 66 | / | / | / |

HYDRAULIC DIAGRAM OF A SYSTEM WITH GAS BOILER AND STATIC THERMO-MIXER FOR FIXED-POINT CONTROL OF THE WATER FLOW TEMPERATURE IN THE RADIANT PANEL HEATING SYSTEM. THE INTRODUCTION OF A **HYDRAULIC SEPARATOR** ELIMINATES INTERFERENCE BETWEEN THE CIRCULATORS, STABILISING THE FLOW RATES IN THE SYSTEM.



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