Climate
Control

IMI TA

TA-Mix

Mixing valves

Thermostatically controlled mixing valve

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TA-Mix

Thermostatic mixing valve for control of domestic hot water supply or of similar smaller systems.

Technical description

Applications:
Domestic hot water systems.

Functions:
Control of domestic hot water supply or of similar smaller systems.

Dimension:
DN 15

Pressure class:
PN 10

Working pressure:
Max. dynamic pressure: 500 kPa
Max. inlet pressure ratio (H/C or C/H): 2:1

Temperature:
Max. working temperature: 90°C
Min. Δt between inlets and outlet: 10°C

Temperature range:
Temperature can be adjusted between 35-60°C
Factory temperature setting: 35°C

Media:
Water or neutral fluids, water-glycol mixtures (0-50%).

Sensibility:
±2°C

Material:
Valve body: Brass CW625N, UNI EN 12165.
Inner parts: PSU and ULTEM.
Springs: Stainless steel.
Internal seals: EPDM
Thermostatic element: Wax

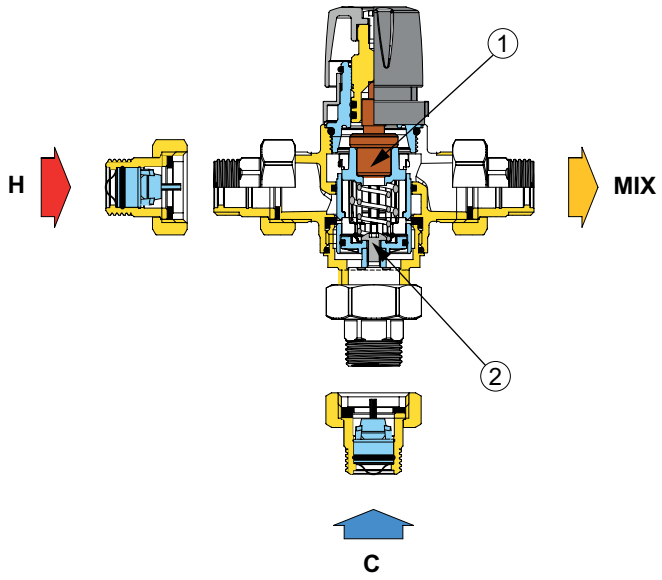
Marking:
IMI TA, TA-Mix, PN, DN, CR, C - H - MIX.

Pipe connection:
External threaded couplings.
Threads according to ISO 228.

Approvals:
WRAS
ACS

Function

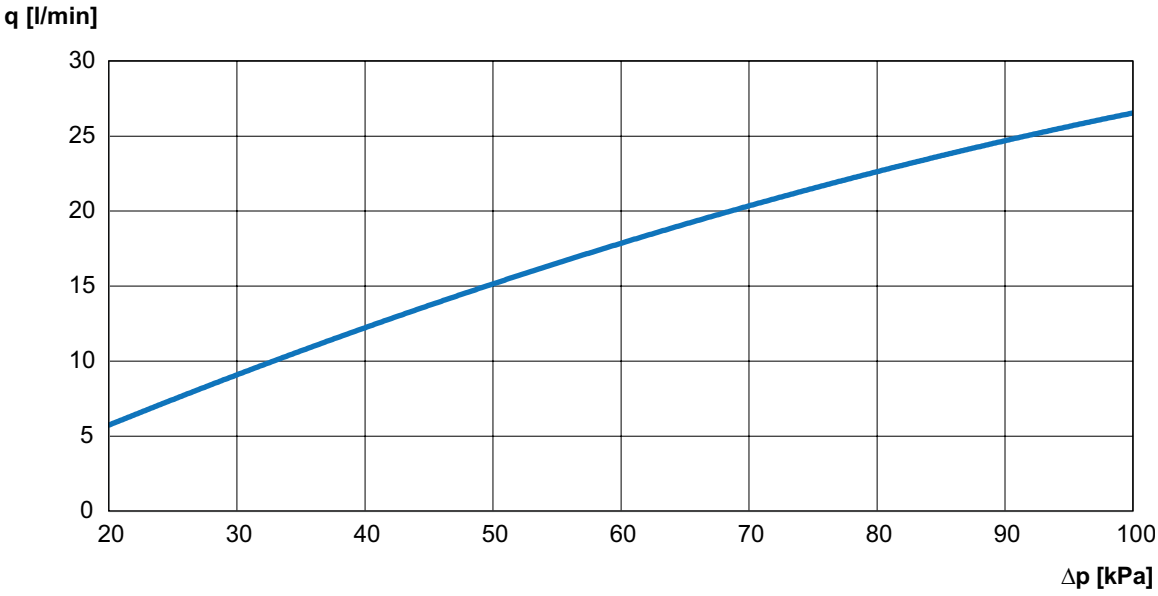
The temperature of the outlet water is regulated by a temperature sensor (1). Thanks to its ability to dilate and contract depending on the temperature perceived, it constantly sets the right proportion between hot and cold inlet water. This type of regulation is possible thanks to a disc (2) that throttles the inlet water in order to maintain the outlet water constant. In this way, even if the hot or cold inlet water changes, the mixer automatically regulates the water flow until the proper outlet default temperature has been reached.
The TA-Mix has an L-shaped function, i.e. unlike a normal thermostatic valve it has the hot water inlet and the mixed water outlet on the same axis.
The sensor inside the valve has a low thermal inertia. This way the TA-Mix can quickly react to any changing inlet conditions, thereby having very short response times.



1. Thermostatic sensor
2. Plug

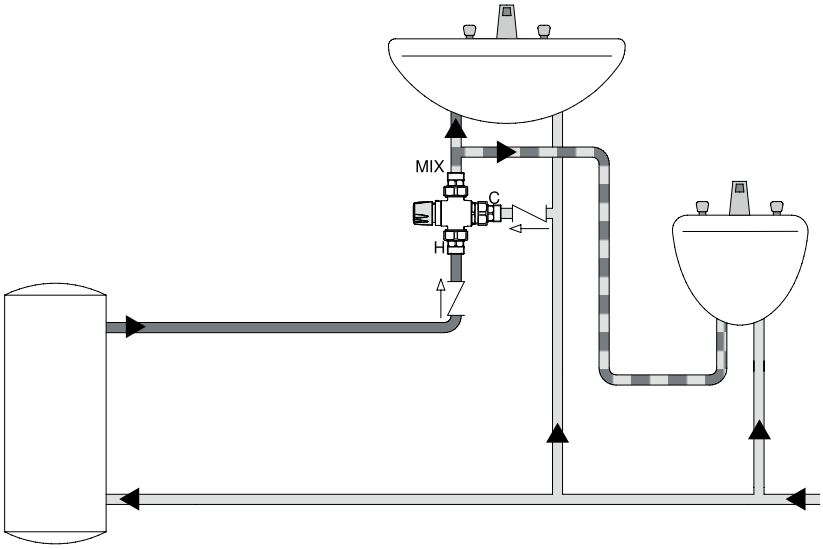
The following are shown on the mixer body:
H = hot water inlet
C = cold water inlet
MIX = mixed water outlet

Diagram

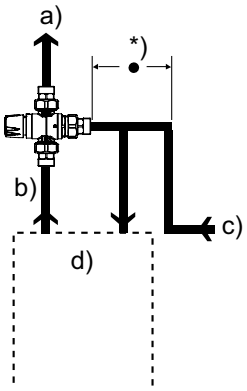


Application examples

A heat block or check valve should be fitted in order to prevent convection (self-circulation) of hot water.
Or, replace existing connections on the hot and cold water inlet with connections with integrated mesh and check valve - see “Accessories”.

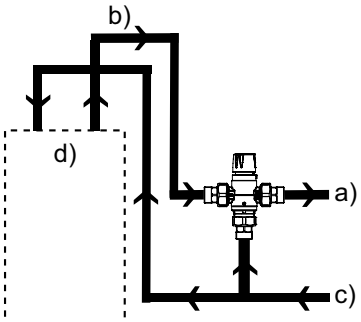


TA-Mix installed over the boiler
To prevent back-flow and building up of pressure in the cold water line, connection should be done as shown in the sketch.



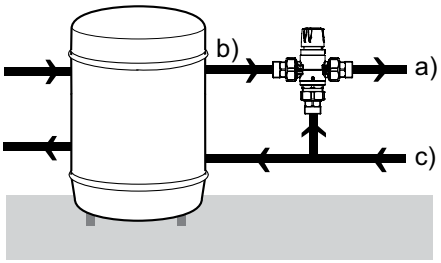
a) Mixed water
b) Hot water
c) Cold water
d) Boiler
*) Shortest possible distance

TA-Mix installed beside the boiler
Install the TA-Mix about 0,75 - 1,0 m below the top of the boiler.



a) Mixed water
b) Hot water
c) Cold water
d) Boiler

Floor-mounted calorifier



a) Mixed water
b) Hot water
c) Cold water

Installation

Before fitting the valves, flush the lines thoroughly to remove any dirt that could affect performance.
A heat block or check valve should be fitted in order to prevent convection. Or, replace existing connections on the hot and cold water inlet with connections with integrated mesh and check valve - see “Accessories”.

Hot water outlets upstream of TA-Mix
Any outlet upstream of the TA-Mix valve, e.g. for dishwasher or similar, causes temperature variations in the draw-off warm water when run at the same time. The reason for this is that the pressure drop through the water heater increases sharply when hot water is drawn off, whereas the pressure drop on the cold water side up to the mixing valve remains the same.
If a hot water outlet is arranged upstream of the valve a non-return valve must be fitted upstream of the mixing valve.

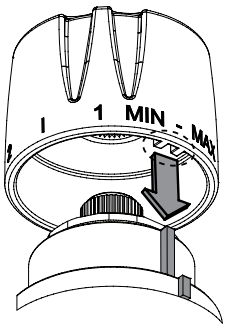
Commissioning

After installation, the valve must be tested and commissioned in accordance with the instructions given below, taking into account local applicable standards and codes of practice.
1. Ensure that the system is clean and free from any dirt or debris before commissioning the thermostatic mixer.
2. It is recommended that the temperature is set using a suitable calibrated digital thermometer. The valve must be commissioned by measuring the temperature of the mixed water emerging at the point of use.
3. The maximum discharge temperature from the valve must be set taking account of the fluctuations due to simultaneous use. It is essential for these conditions to be stabilised before commissioning.
4. Adjust the temperature using the handwheel on the valve.

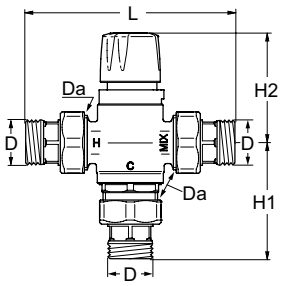
Setting table

MIN	1	2	3	4	5	MAX
33°C	35°C	45°C	50°C	56°C	60°C	62°C

Locking of setting



Articles



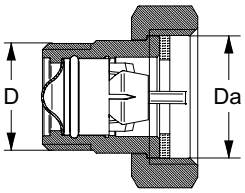
TA-Mix with connections
External threads according to ISO 228

DN	D	Da	L	H1	H2*	°C	Kvs	EAN	Article No
15	G1/2	G3/4	120	67	69,6	35-60	1,6	5902276804724	52 731-115

*) Max. height

Kvs = m^3/h at a pressure drop of 1 bar and fully open valve.

Accessories



Connection with mesh and check valve
For exchange of existing couplings on inlets to prevent backflow.
External threads according to ISO 228

D	Da	EAN	Article No
G1/2	G3/4	5902276804748	344010-30400