

# TA-MATIC



## Mixing valves

Thermostatic mixing valve for domestic hot water

# TA-MATIC

Thermostatic mixing valve for control of domestic hot water systems with or without hot water circulation.



## Technical description

### Application:

Blending of domestic hot water systems in private houses, blocks of flats, hospitals, nursing homes, hotels, shower-rooms of sports facilities, industrial and commercial buildings.

### Function:

The TA-MATIC is intended mainly as a central mixing unit for domestic hot water systems in apartment buildings, in systems with or without hot water circulation.

Most efficient operation is achieved, if the system is equipped with a circulation pump. In this case, the unit can also be used as a central mixer for shower and bath facilities.

### Dimensions:

DN 20-50

### 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.  $\Delta t$  between inlets and outlet: 10°C

### Temperature range:

Temperature can be adjusted between 35-65°C  
Factory temperature setting: 55°C

### Sensibility:

$\pm 2^\circ\text{C}$

### Material:

Valve body: Brass CC770S  
Inner parts: Brass CW625N, UNI EN 12164  
Springs: Stainless steel  
Internal seals: EPDM (Perox)  
Expansion medium in the thermostat sensing element are gaseous hydrocarbon, wax and pulverized copper.  
Connections:  
DN 20-40 brass CW625N, UNI EN 12164  
DN 50 brass CW625N, UNI EN 12165

### Marking:

IMI TA, TA-MATIC, PN, DN, CR, C - H - MIX.

### Pipe connection:

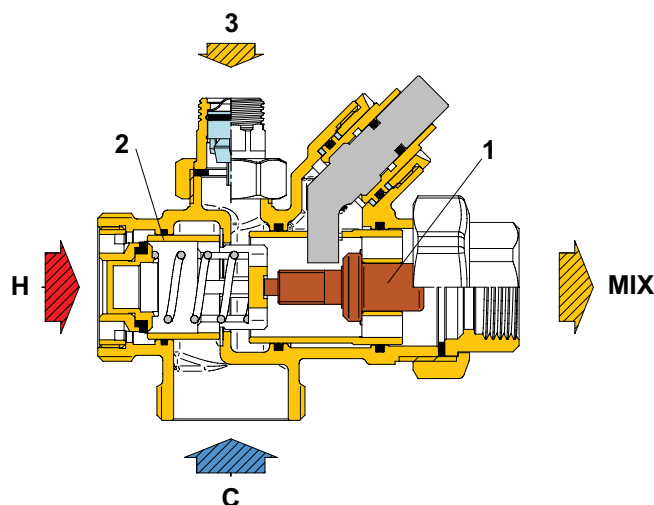
Female threaded couplings.  
Threads according to ISO 228.

## 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-MATIC 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 valves have a connection for direct recirculation of the water.

In this way the valve can be installed much easier in the system.



1. Thermostatic element
2. Plug
3. Circulation water inlet

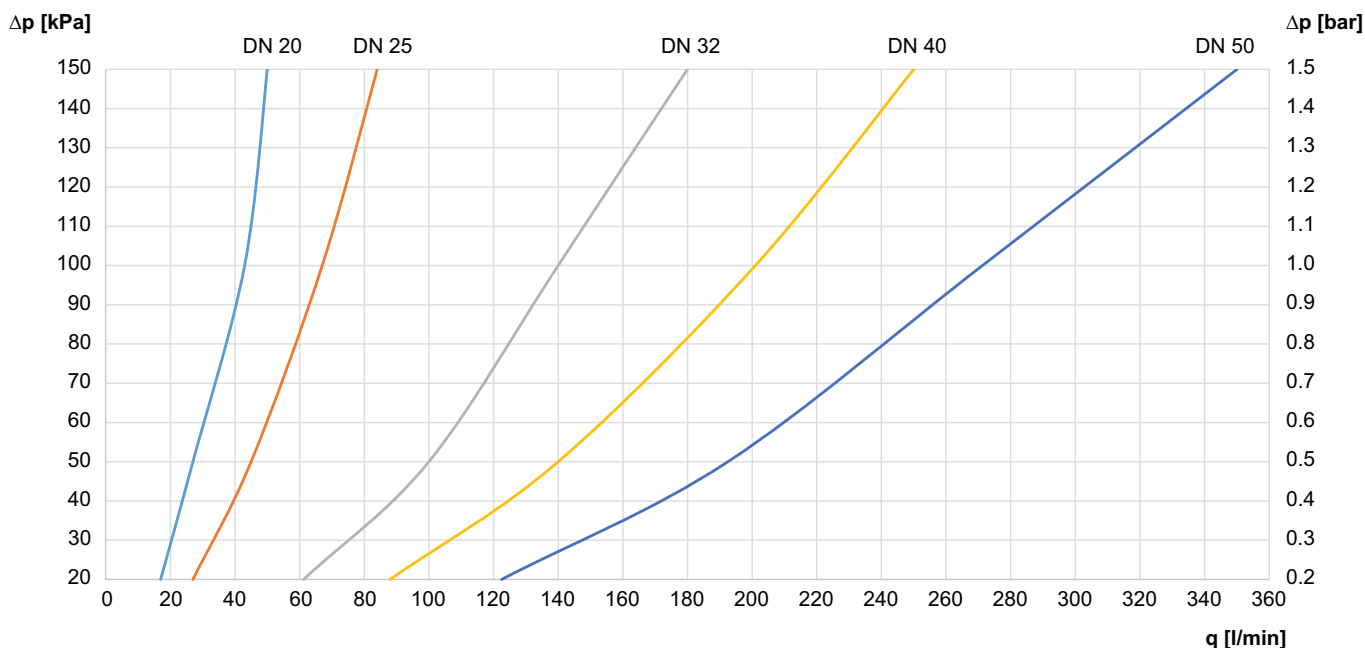
The following are shown on the mixer body:

H = hot water inlet

C = cold water inlet

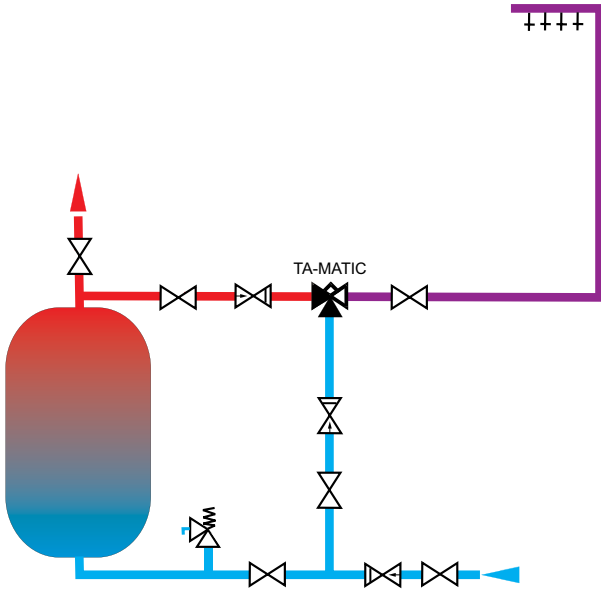
MIX = mixed water outlet

## Flow chart



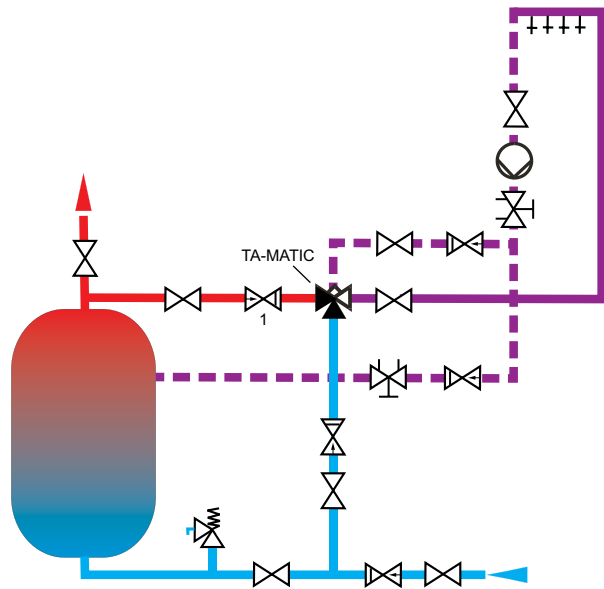
## Application examples

### Mixed water supply without circulation mixing and hot water outlet



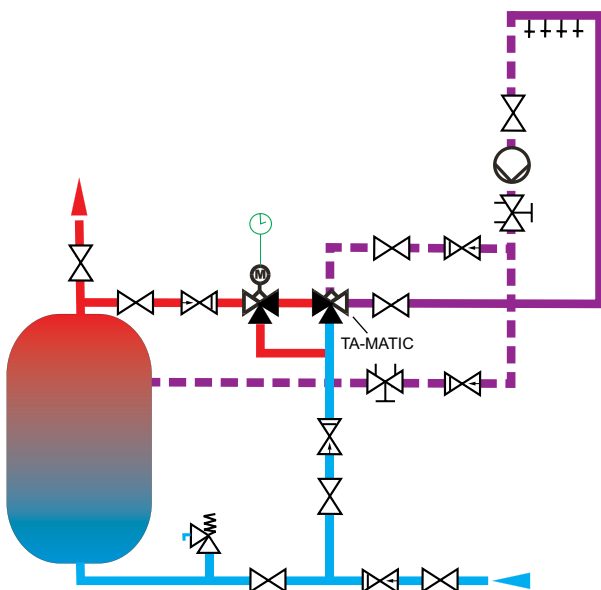
### Mixed water supply with circulation mixing and separate hot water outlet

If the separate hot water outlet is omitted, the check valve "1" can be omitted.

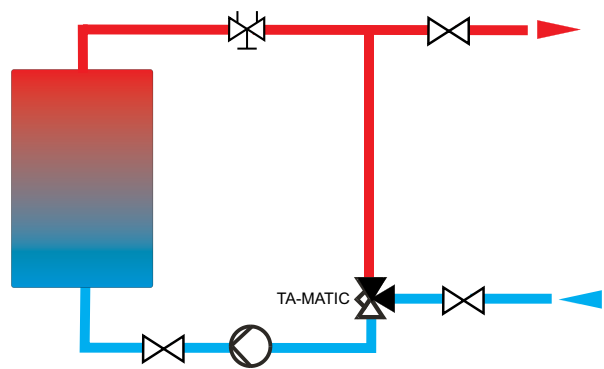


### Mixed water supply with circulation mixing and separate hot water outlet. Thermal disinfection with additional 3-way diverting valve possible

TA-Matic will open full as hot water is entering the cold water inlet when thermal disinfection is activated.



### Constant return temperature control for heat generators



## Installation

Please check that all the components are in the box prior to the installation of this product.

Before installing a TA-MATIC, the system must be inspected to ensure that its operating conditions are within the range of the mixer, checking, for example, the supply temperature, supply pressures, etc..

Systems where the TA-MATIC is to be fitted must be flushed to remove any dirt or debris which may have accumulated during installation. Failure to remove dirt or debris may affect performance and the manufacturer's product warranty.

The installation of filters of appropriate capacity at the inlet of the water from the main supply is always advisable.

In areas which are subject to highly aggressive water, arrangements must be made to treat the water before it enters the valve.

TA-MATIC must be installed in accordance with the diagrams in this manual, taking into account all current applicable standards and code of practice.

TA-MATIC can be installed in any position, either vertical or horizontal.

The following are shown on the valve body:

H = hot water inlet

C = cold water inlet

MIX = mixed water outlet

It is essential that access to the valve is totally unobstructed for any maintenance which may be required to the valve or connections. The pipework from/to the valve must not be used to support the weight of the valve itself.

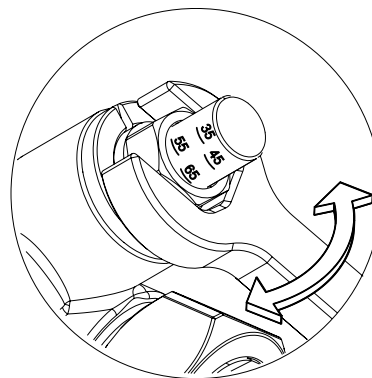
### Back flow prevention

For connection of the TA-MATIC mixing valve back flow preventer valve might be used. See accessory "Female couplings with filter and check valve".

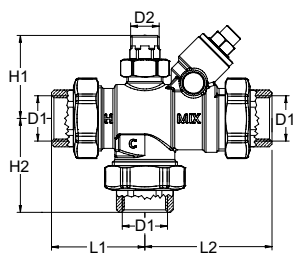
## Commissioning

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 adjusting screw on the valve.



## Articles



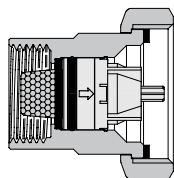
### TA-MATIC – 35-65°C

Temperature setting from factory: 55°C

With female threaded couplings. Threads according to ISO 228.

DN	D1	D2	L1	L2	H1	H2	Kvs	Min. flow [l/min]	Kg	EAN	Article No
20	G3/4	G3/8	64,5	84,5	60,5	64,5	2,6	12	1,1	5902276898075	344010-20506
25	G1	G1/2	69	93	61	69	4	17	1,3	5902276898082	344010-20605
32	G1 1/4	G1/2	83	109	66	83	8,4	22	2,1	5902276898099	344010-20704
40	G1 1/2	G1/2	93	127	75	93	12	30	2,4	5902276898105	344010-20805
50	G2	G1/2	119	159	85	119	16,3	40	3,0	5902276898112	344010-20907

## Accessories



### Female couplings with filter and check valve

For exchange of existing couplings on inlets to prevent backflow.

For valve DN	EAN	Article No
20	5902276898174	359010-10568
25	5902276898181	359010-10606
32	5902276898198	359010-10722
40	5902276898204	359010-10803
50	5902276898211	359010-10902