

# TA-MATIC 3410



## Mixing valves

Thermostatic mixing valve for domestic hot water –  
DN 65-80

# TA-MATIC 3410

Thermostatic mixing valve for control of domestic hot water systems in apartment blocks with or without hot water circulation. Perfect for systems with circulation pump.



## Technical description

### Application:

Domestic hot water systems in private houses, blocks of flats, hospitals, old-age and 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.

It works most efficient, 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 65-80

### Pressure class:

PN 10

### Temperature:

Max. working temperature: 90°C

### Temperature range:

Standard temperature settings:

DN 65: 25°C or 55°C

DN 80: 55°C

Factory-set standard temperatures can be adjusted within the limits:

25°C: 20-30°C

55°C: 45-65°C

### Material:

Valve body: Gunmetal CC499K (CuSn5Zn5Pb2-C)

Seat: Stainless steel

Expansion medium in the thermostat sensing element are gaseous hydrocarbon, wax and pulverized copper.

### Marking:

TA-MATIC 3410, JRGUMAT, PN10 and dimension.

### Connections:

Flanges according to EN 1092-2.

### Packaging:

The packaging of the TA-MATIC can be used to provide insulation against heat losses.

## General

Centrally controlled water mixer temperature increases safety and comfort and saves energy.

### Comfort

Desired water temperature just by turning the tap. No other adjustment needed.

### Energy saving

1. No water wastage while temperature is adjusted.
2. The normal temperature in the hot water pipes is considerably lower in TA-MATIC 3410 systems than in conventional systems. Heat loss decreases substantially.

## Installation

### Installation

The TA-MATIC 3410 mixing valve works in any position. Only the backflow prevention valve prescribed in the diagrams may be inserted.

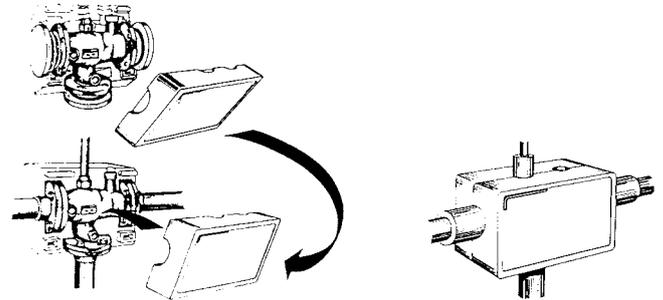
In order to prevent malfunctioning of the mixer to be caused by radiant heat, the mixer should be positioned beside the heater, leaving at least 1 m between the water heater and the TA-MATIC.

If the minimum distance can not be reached a heat lock shown in the drawing below must be installed.

### Back flow prevention

For the connection of the TA-MATIC 3410 mixing valve, only low pressure-loss back flow preventer valves may be used.

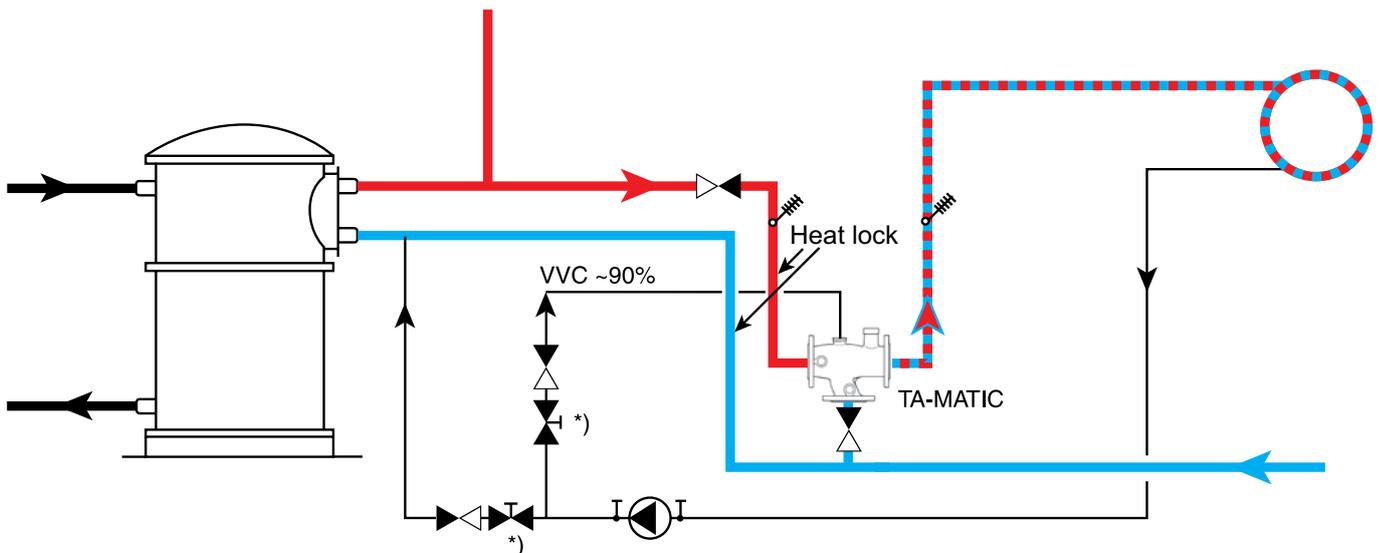
The packaging of the TA-MATIC 3410 can be used to provide good insulation against heat losses



### Application example

#### Example of hot water control from the boiler

System with constant circulation losses.



To achieve a heat lock, the TA-MATIC 3410 must be installed at less than half the height of the boiler.

\*) Alternatively, install two STAD, two Regutec or two STK.

## Function

The mixing valve is a proportional controller. The high thermostat sensitivity and short valve plug stroke ensure a mixing valve that reacts rapidly to incorrect thermostat temperature.

The thermostat is situated at the valve outlet and controls a balanced cylindrical plug, which mixes hot and cold water flow to obtain the desired temperature. If the cold water supply fails, the hot water supply shuts down automatically to a level (drop leakage) where the mixed water will not cause scalding.

High water temperature plus hard water ( $dH^{\circ} > 20$ ) can impair the function of the valve.

## Change of standard temperature

The factory-set standard temperature is indicated on the temperature plate (Fig. 1). Different temperature settings are limited to the specified range and can be changed as follows:

Insert Allen key (8 mm) in the centre of the temperature plate. **NOTE!** The temperature plate must not be removed.

Turning the screw clockwise increases the water temperature and turning it anticlockwise reduces it.

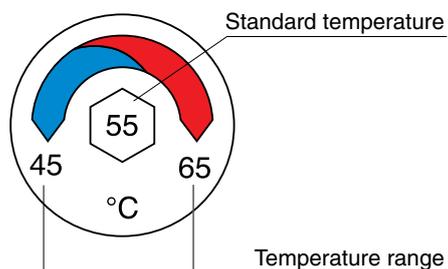
The volumetric flow must be in accordance with the diagram.

### The hot water temperature must be at least 5°C above the thermostat setting

Factory-set standard temperature [°C]	Temperature range [°C]	One full turn of the Allen key changes the temperature
25	20-30	approx. 2K
55	45-65	

**Fig. 1**

Example of the temperature plate.

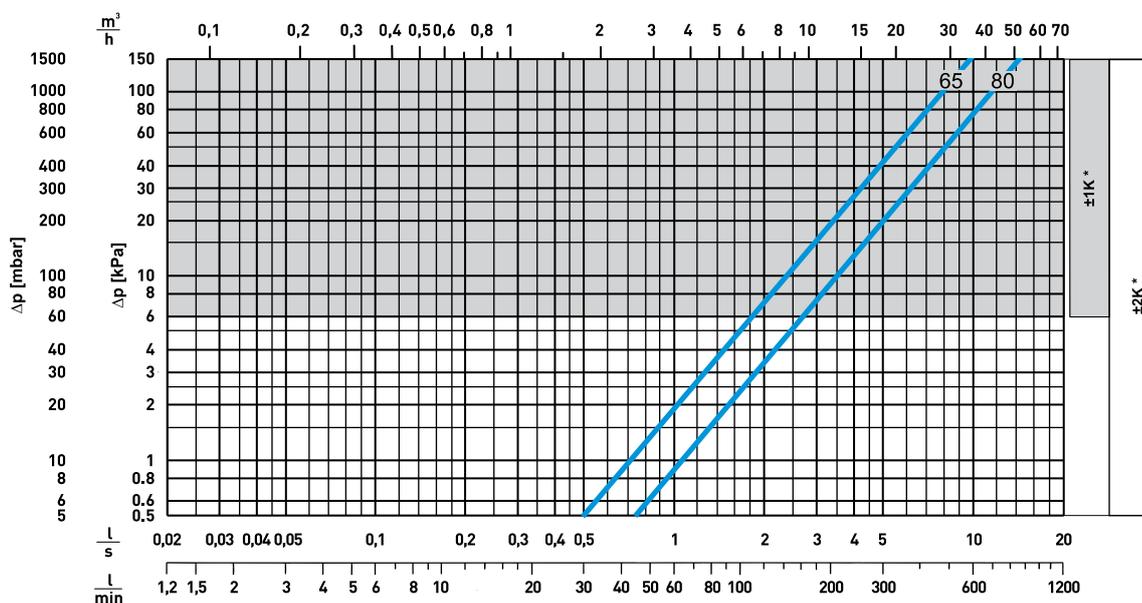


## Determination of heat loss

To determine heat loss in systems with different sizes, use the following table.

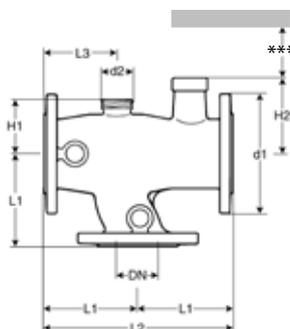
DN in mm Cu pipes	Insulation thickness in mm with heat transfer capacity of: 0,035W/mK	Heat loss in W/m at the following differences between ambient temperature and hot water at:					
		20K	25K	30K	40K	50K	60K
22	20	3,75	4,70	5,64	7,55	9,46	11,37
28	30	3,53	4,42	5,31	7,10	8,89	10,68
35	30	4,04	5,05	6,07	8,20	10,15	12,20
42	40	3,92	4,90	5,58	7,86	9,83	11,81
54	50	3,98	4,97	5,97	7,97	9,97	11,98

## Capacity diagram



\*) Tolerance

## TA-MATIC 3410



### Excl. flange gaskets

No. of bolt holes:

DN 65: 4

DN 80: 8

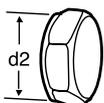
DN	°C*	°C**	d1	d2	L1	L2	L3	H1	H2	Kg	EAN	Article No
65	25	20-30	185	G1 1/2	145	290	112	82	121	23	7613263014399	52 742-565
65	55	45-65	185	G1 1/2	145	290	112	82	121	23	7613263014375	52 745-565
80	55	45-65	200	G2	155	310	124	92	127	28	7613263014313	52 745-580

\*) Standard mixing temperature

\*\*) Adjustable range

\*\*\*) Minimum clearance 100 mm

## Accessories



### Cap

for closing the circulation connection when no circulation is used.  
With gasket. Brass.

d2	Valve DN	EAN	Article No
G1 1/2	DN 65	7613263014245	83 255-600
G2	DN 80	7613263014238	83 256-400

