

## 4 WAYS THERMOSTATIC MIXING VALVES



### Description

Barberi 4-way thermostatic mixing valves are devices with mixed water on side or central way and are used to regulate the water temperature. They are used in sanitary water plants, heating circuits, in heating plants, in heat generators (hang-wall boilers, wood boilers, heat pumps) and in generic industrial water plants.

Their function is to maintain constant the mixed water temperature sent to consumer even when temperature and pressure at the hot and cold water inlets will vary. The valves can be used as 4-way valves (using the forth way to make water go back to boiler) or as three way valves (using a plug).

### Articles range

- cod. **630** 4-way thermostatic mixing valve with mixed water on the side port - Kv 3,5 - 30÷60°C
- cod. **630.10** 4-way thermostatic mixing valve with mixed water on the side port - Kv 3,5 - 25÷50°C
- cod. **630.1.2** 4-way thermostatic mixing valve with mixed water on the side port - pump connection  
- Kv 3,5 - 30÷60°C - flat gasket
- cod. **630.101** 4-way thermostatic mixing valve with mixed water on the side port - pump connection  
- Kv 3,5 - 25÷50°C - flat gasket
- cod. **630.1.2.T** 4-way thermostatic mixing valve with mixed water on the side port - pump connection  
- Kv 3,5 - 30÷60°C - flat gasket, side plug
- cod. **630.3** 4-way thermostatic mixing valve with mixed water on the side port - pump and manifold connection  
- Kv 3,5 - 30÷60°C - side plug
- cod. **630.103** 4-way thermostatic mixing valve with mixed water on the side port - pump and manifold connection  
- Kv 3,5 - 25÷50°C - side plug
- cod. **W51** 4-way thermostatic mixing valve "OCTOPUS" with mixed water from central port - pump connection  
- Kv 4,5 - 25/58°C

### Technical features

Temperature range: cod. **630, 630.1.2, 630.1.2.T, 630.3** = 30÷60 °C  
cod. **630.10, 630.101, 630.103** = 25÷50 °C  
cod. **W51** = 25÷58 °C

Max. working temperature: **90 °C**

Accuracy: **±2 °C**

Factory setting : **45 °C**

Working conditions: Hot T = **70 °C**

Cold T = **20 °C**

Hot and cold water pressure = **0,7 bar**

Max static pressure (structure): **10 bar**

Flow rate factor: art. **630** = **KV 3,5**

art. **W51** = **KV 4,5**

Installation's connections: **threaded connections ISO 228/1**

**threaded connections UNI EN10226-1**

Suitable fluids: **water for thermic installations, glycoled water (max.50%), sanitary water**

Standard: **EN1111A**

on request: **versions with galvanic treatment**

### Materials

Valve's body: **Brass UNI EN 1982 CB753S**

Washers: **EPDM**

Chamber: **Brass UNI EN 1982 CB753S**

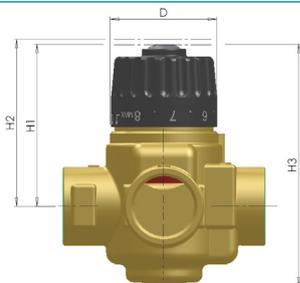
Spring: **stainless steel AISI 302**

Handle: **ABS**

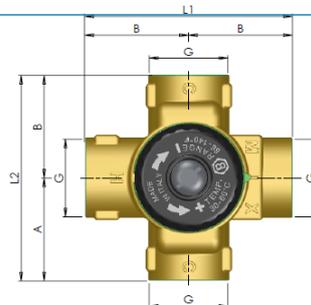
## 4 WAYS THERMOSTATIC MIXING VALVES

## Dimensions

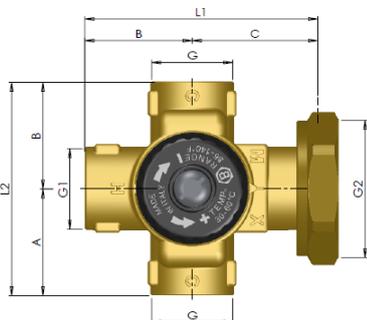
630  
630.10  
630.T  
630.1.2  
630.101  
630.1.2.T  
630.3  
630.103



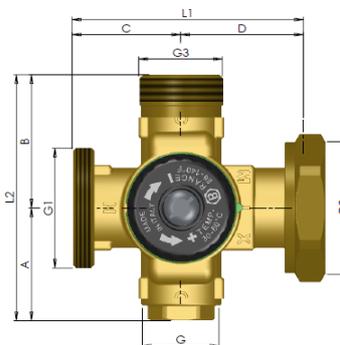
630  
630.10  
630.T



630.1.2  
630.101  
630.1.2.T



art. 630.3



## 630

cod.	Plug	°C	G	G1	G2	H1	H2	H3	D	L1	L2	A	B	C	D	Weight	NPS	NPC
630A20000	-	30-60°C	Rp 3/4"	-	-	67	71.5	98	43	82	82	41	41	-	-	830	1	10

## 630.10

cod.	Plug	°C	G	G1	G2	H1	H2	H3	D	L1	L2	A	B	C	D	Weight	NPS	NPC
630A20010	-	25-50°C	Rp 3/4"	-	-	67	71.5	98	43	82	82	41	41	-	-	830	1	10

## 630.T

cod.	Plug	°C	G	G1	G2	H1	H2	H3	D	L1	L2	A	B	C	D	Weight	NPS	NPC
630A20000T	side plug	30-60°C	Rp 3/4"	-	-	67	71.5	98	43	82	90	49	41	-	-	866	1	10

## 630.1.2

cod.	Plug	°C	G	G1	G2	H1	H2	H3	D	L1	L2	A	B	C	D	Weight	NPS	NPC
630A200001	-	30-60°C	Rp 3/4"	Rp 3/4"	G 1"1/2	67	71.5	98	43	87	82	41	41	46	-	940	1	10
▶ 630A200002	-	30-60°C	Rp 3/4"	Rp 3/4"	G 1"	67	71.5	98	43	87	82	41	41	46	-	910	1	10

## 630.101

cod.	Plug	°C	G	G1	G2	H1	H2	H3	D	L1	L2	A	B	C	D	Weight	NPS	NPC
630A200101	-	25-50°C	Rp 3/4"	Rp 3/4"	G 1"1/2	67	71.5	98	43	87	82	41	41	46	-	940	1	10

## 630.1.2.T

cod.	Plug	°C	G	G1	G2	H1	H2	H3	D	L1	L2	A	B	C	D	Weight	NPS	NPC
630A200001T	side plug	30-60°C	Rp 3/4"	Rp 3/4"	G 1"1/2	67	71.5	98	43	87	90	49	41	46	-	976	1	10
▶ 630A200002T	side plug	30-60°C	Rp 3/4"	Rp 3/4"	G 1"	67	71.5	98	43	87	90	49	41	46	-	946	1	10

## 630.3

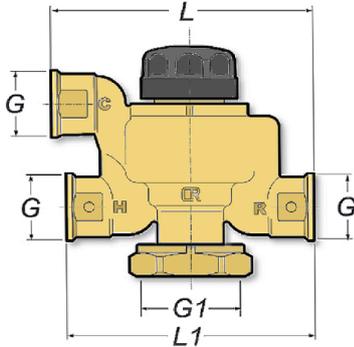
cod.	Plug	°C	G	G1	G2	H1	H2	H3	D	L1	L2	A	B	C	D	Weight	NPS	NPC
630A200003	side plug	30-60°C	G 1" M	G 1"1/2 M	G 1"1/2	67	71.5	98	43	89	98	45	53	43	46	1068	1	10

## 630.103

cod.	Plug	°C	G	G1	G2	H1	H2	H3	D	L1	L2	A	B	C	D	Weight	NPS	NPC
630A200003	side plug	30-60°C	G 1" M	G 1"1/2 M	G 1"1/2	67	71.5	98	43	89	98	45	53	43	46	1068	1	10

▶ On request - Weight (grams) - NPS: number of pieces in box, plastic bag - NPC: number of pieces in carton

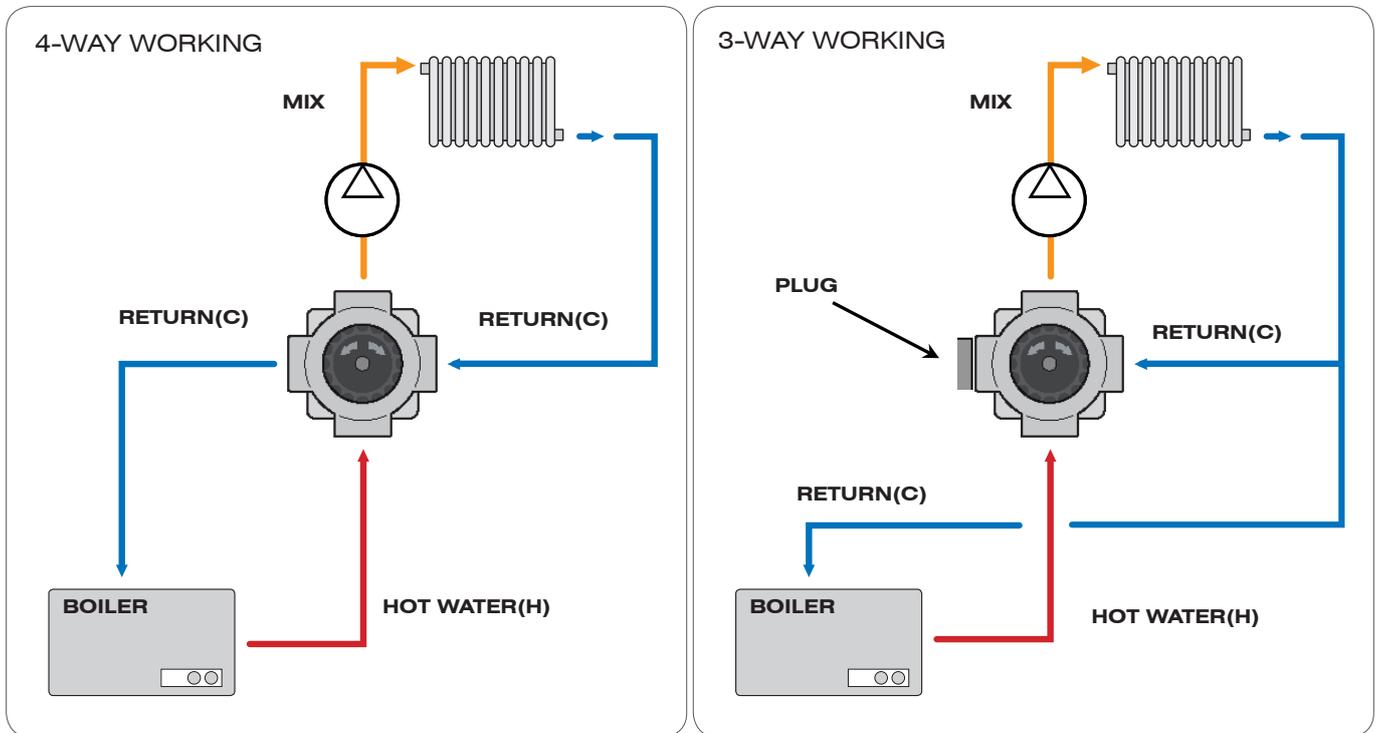
## 4 WAYS THERMOSTATIC MIXING VALVES



Code	°C	G	G1	L	L1	Weight	No. Pcs/B	No. Pcs/C
W51A20000	25-58°C	G 3/4"	G 1"1/2	127	120	1270	1	12

► On request - Weight (grams) - NPS: number of pieces in box, plastic bag - NPC: number of pieces in carton

### Working way



### Installation

It is suggested, before installing a thermostatic mixing valve, to verify working conditions of the installation, for example pressure and temperature, to guarantee that they are suitable for the thermostatic valve working range.

The installation, where the thermostatic valve will be assembled, must be washed and cleaned before the operation. It is also suggested to assemble suitable strainers at the main inlets. If the installation is not accurately cleaned, debris could influence the correct working and warranty of the product. If the valve will be used in areas with very hard water, it is suggested to install water softener before the valve.

The thermostatic mixing valve can be installed in either horizontal or vertical position.

It is important that the valve has free access for maintenance reasons.

To correctly install it please refer to the directional arrow marked with letters on the valve's body

- H(HOT): hot water inlet
- C(COLD): cold water inlet or return way (or outlet towards boiler)
- MIX: mixed water outlet

Assembling on pipes is done through threads using standard plumbing skills

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### Operational instructions and temperature setting

To regularly let the valve operates follow the below instructions:

- Be sure the installation has been cleaned by washing pipes
- The temperature setting must be carried out with a calibrated temperature gauge. To set the temperature, unscrew partially the handle screw, turn the handle clock or anticlockwise until the desired temperature has been reached. Once the temperature has been set, block the screw again.

Pay attention: whilst setting the temperature, wait until the temperature gauge is in a steady position before proceeding.

The valve is pre-set at 45°C. To make an easy setting please refer to schemes 1, 2 and 3.

#### 25-50°C

Scheme 1
Min – 20 °C
1 – 25 °C
2 – 30 °C
3 – 35 °C
4 – 38 °C
5 – 41 °C
6 – 43 °C
7 – 45 °C
8 – 47 °C
Max – 50 °C

#### 30-60°C

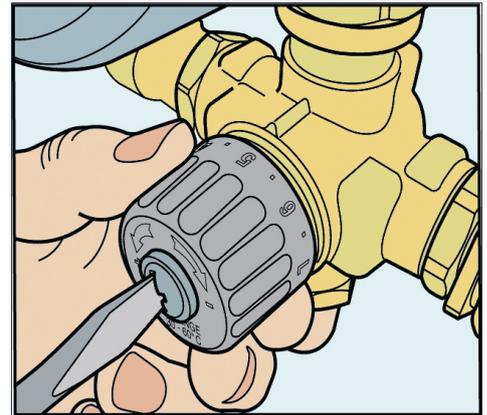
Scheme 2
Min – 30 °C
1 – 34 °C
2 – 38 °C
3 – 41 °C
4 – 43 °C
5 – 45 °C
6 – 47 °C
7 – 50 °C
8 – 54 °C
Max – 60 °C

#### 25-58°C

Scheme 3
Min – 25 °C
1 – 30 °C
2 – 35 °C
3 – 40 °C
4 – 42 °C
5 – 45 °C
6 – 48 °C
7 – 52 °C
8 – 55 °C
Max – 58 °C

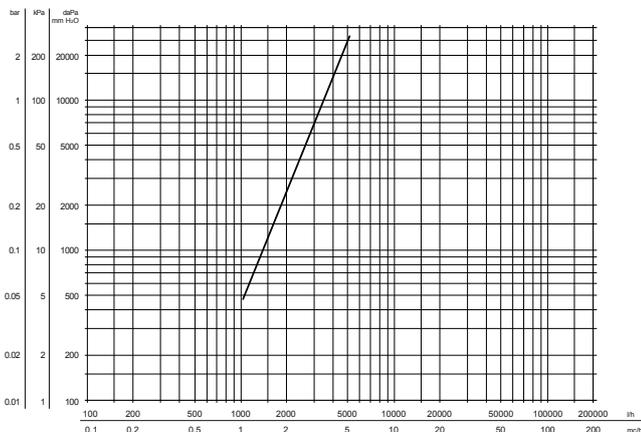
### Maintenance

Installation maintenance and the checking of a correct working of the thermostatic mixing valve must be carried on every 12 months or more frequently if necessary. If the mixed water temperature has heavily changed from previous tests, it is suggested to check the working conditions of the installation as indicated in the **Operational instructions and temperature setting**. If instructions are not respected, warranty could be no more valid.



### Diagrams

art. 630



art. W51

