

**THERMOSTATIC MIXING VALVE
R156-2**



R156-2

Description

The thermostatic mixing valve R156-2 is installed on household sanitary systems in order to achieve energy savings, greater comfort in the use of hot water, elimination of risks of skin burns caused by excessive operating temperatures. For this reason the valve is equipped with a thermal shutdown function in case of failure of the cold water supply. It can be used in boiler room at sanitary hot water risers in the immediate vicinity of wall boilers or water tanks, or in distribution cabinets in case of sanitary systems supplied by manifolds.

It is fundamentally important to install the valve on downstream of boilers in solar system installations where the water temperature in storage tanks, especially in summer, reaches very high levels, well above the temperatures of ordinary use.

A wax bulb inside the valve is immersed in the mixed water flow assisted by a balanced system of springs. The valve operates by fast shifts of a few tenths of millimetre carried out depending on the changing temperatures of the hot and cold water supplies to ensure that the required temperature of mixed water is maintained.

Versions and product codes

Product code	Dimension	Kv
R156Y223	1/2"	1,3
R156Y224	3/4"	1,4
R156Y225	1"	5
R156Y226	1 1/4"	5,8
R156Y227	1 1/2"	11
R156Y228	2"	12

Technical data

- Maximum working pressure (static): 10 bar
- Maximum working pressure (dynamic): 5 bar
- Temperature range: 30÷65 °C
- Maximum inlet temperature (hot water): 85 °C
- Accuracy: ± 2 °C
- Maximum inlet pressure ratio (H/C or C/H): 2:1
- Minimum flow rate for stable operation: 9 l/min (1/2", 3/4")
15 l/min (1", 1 1/4")
40 l/min (1 1/2", 2")
- Minimum temperature difference between hot water inlet and mixed water outlet to ensure the thermal closure function: 15 °C

Materials

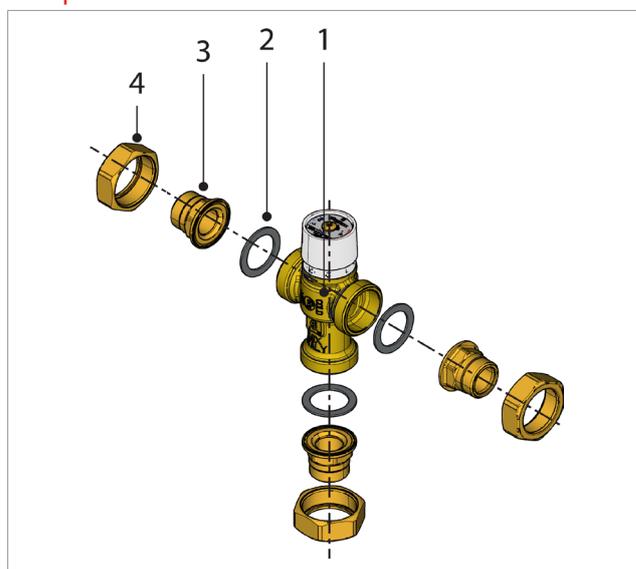
- Body made of DZR brass EN 12165 CW602N
- Internal springs in stainless steel
- O-Rings in EPDM
- Handwheel in high resistance plastic

Thermal shutdown function

In case of accidental lack of cold water at the inlet, the obturator closes the hot water passage, by stopping the outlet of the mixed water.

To ensure the thermal shutdown function with flow interruption, the temperature of the hot water at the inlet, must be higher than the set one of at least 15°C (example: if Set is = 45°C, the inlet hot water must be at least 60°C).

Components



LEGEND

- | | |
|-----------------------|----------------------|
| 1: R156-2 Body | 3: Tail piece |
| 2: Gasket | 4: Cap |

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Regulation

The thermostatic mixing valve R156-2 with seven adjustment positions allows to set the mixing temperature in range of 30÷65°C. As stated in the table, each value of the numbering corresponds to a reference temperature. The adjustment of the mixing valve is carried out by lifting the handle, rotating it until it reaches the chosen numbering and subsequently repositioning it in the grooves present at the top of the body.

Mixing temperature								
Product code	Connect.	MIN	1	2	3	4	5	MAX
R156Y223	1/2"	27	30	39	48	56	65	70
R156Y224	3/4"	27	30	39	48	56	65	70
R156Y225	1"	26	30	44	51	58	65	68
R156Y226	1 1/4"	26	30	44	51	58	65	68
R156Y227	1 1/2"	25	30	38	46	55	65	69
R156Y228	2"	25	30	38	46	55	65	69

with: $T_{hot} = 70\text{ °C} - T_{cold} = 15\text{ °C}$

$P_{hot} = 3\text{ bar} - P_{cold} = 3\text{ bar}$

Installation

Before installing the thermostatic mixing valve, the system must be inspected to ensure that its operating conditions are compatible with the valve, by controlling for example the temperature of supply, discharge pressure, etc.

The system in which the mixer will be installed must be washed to remove any debris or impurities that may have accumulated during installation. The lack of this step (system washing) may affect the performance of the product.

The installation of filters with adequate capacity at the entrance of the water system is highly recommended.

The mixing valve can be installed in any position, horizontally or vertically. On the valve body are the following marks:

- Hot water inlet H
- Cold water inlet C
- Mixed water outlet MIX

It is essential that access to the valve is not completely blocked, for any maintenance that may be required to the valve or connections.

The piping from/to the valve must not be used to support the weight of the valve itself.

Startup

After installing the mixing valve, the system must be tested and put into operation as explained below:

- Adjust the temperature using a suitable calibrated thermometer and measure the mixed water temperature on the output.
- Adjust the maximum temperature on the output, taking into account changes due to simultaneous use by multiple users.
- Adjust the output temperature by using the valve handle.
- To lock the setting of the valve to TMIX set, unscrew the screw on the top, remove the handle and tuck it making sure that the two blades inside the handle get stuck with that protrudes from the bottom ring.

Maintenance

Once the valve has been put into service, regular tests must be performed to monitor its performance. They could indicate that the valve and/or the system require maintenance.

If, during these tests, the mixed water temperature has changed significantly compared to the previous tests the details given in installation and startup sections must be checked and made again.

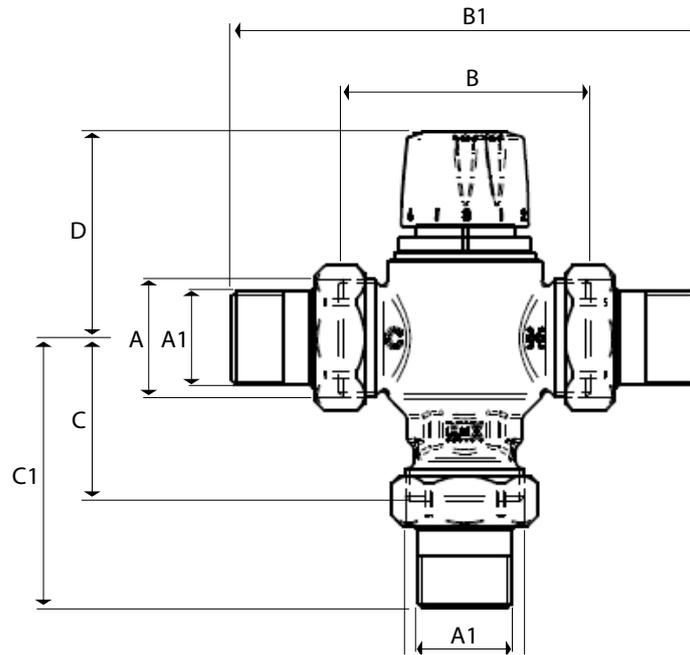
The following aspects should be checked regularly to ensure that optimum levels of the valve performance are maintained.

Normally every 12 months, or more often if necessary.

- Check and clean filters in the system.
- Check that the check valves are working properly without any problems caused by impurities.
- Limescale can be removed from the internal components by immersing the valve in special products.
- When the components have been checked, the startup steps must be performed again.

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Dimensions



Product code	A	A1	B [mm]	B1 [mm]	C [mm]	C1 [mm]	D [mm]
R156Y223	G 3/4"	G 1/2"	58	104	42	65	52
R156Y224	G 1"	G 3/4"	59	119	42,5	72,5	52
R156Y225	G 1 1/4"	G 1"	89	165	58	96	73
R156Y226	G 1 1/2"	G 1 1/4"	90	183	58,5	105	73
R156Y227	G 2"	G 1 1/2"	123	217	80,5	125,5	93
R156Y228	G 2 1/2"	G 2"	123	234	81	136,5	93

Additional information

For additional information please check the Giacomini website at the following address: www.giacomini.com

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