

ELECTRONIC MIXING VALVES FOR DOMESTIC HOT WATER

MAS 6.. Eng.

- Power supply 230 V~; consumption 4 VA
- Direct mounting on valve
- Run time for 90°: 30 s
- Complete with detector and pocket
- IP 55 protection



1. APPLICATION

MAS mixing valve is designed for the modulated regulation of temperature in DHW distribution circuits for direct installation in view of the consumer.

It is supplied complete with a three-way full bore ball mixing valve with the detector already installed on the valve in the correct position.

WARNING: For best performance there must be a secondary circulation pump in the circuit.

2. OPERATION

The mixing valve compares the temperature of the mixed water, monitored by the detector, with the desired temperature set by means of the knob on the cover. In the event of a difference MAS 6.. produces a modulating signal with PI characteristics for the control of the valve, proportional to the difference itself and to the proportional band of the controller.

3. MODELS

Type	Power supply V~ (VA)	Time s	Nominal torque kg/cm (Nm)	Starting torque kg/cm (Nm)	DN	3-way ball valves	
						flow l/min.	Kvs m³/h
MAS 615	230 (4)	30	60 (6)	90 (9)	1/2"	40	2.5
MAS 620	230 (4)	30	60 (6)	90 (9)	3/4"	70	5
MAS 625	230 (4)	30	60 (6)	90 (9)	1"	130	9
MAS 632	230 (4)	30	60 (6)	90 (9)	1"1/4	180	13.5

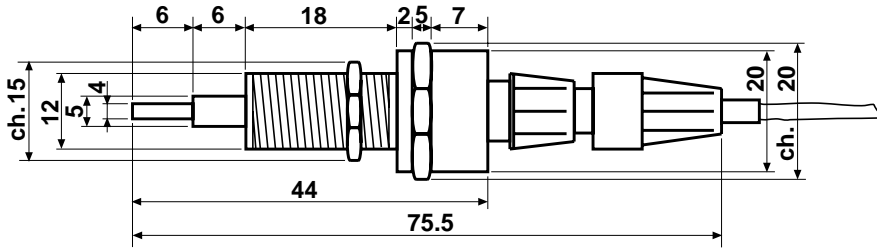
N.B. The flow is to be considered with an average pressure of 4 bar and a pressure drop of about 20%

4. TECHNICAL DATA

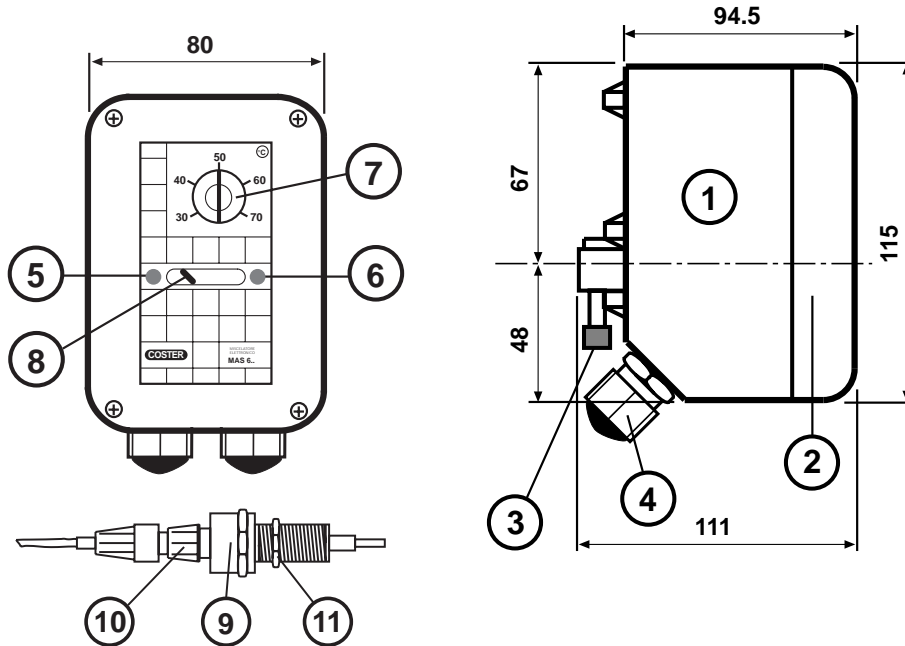
<ul style="list-style-type: none"> • Controller 	<ul style="list-style-type: none"> • Valve
Power supply	230 V~
Frequency	50/60 Hz
Consumption	4 VA
Rotation angle	90°
Time for 90° run	30 s
Setting range	30...70 °C
Materials:	
base	NYLON 66
cover	POLYCARBONATE
Ambient temperature :	
operation	0...45 °C
storage	- 20...+60 °C
Ambient humidity	Class F DIN 40040
Protection	IP 55
	Test pressure
	Working pressure
	Maximum differential pressure
	Let by
	Fluid temperature
	Glycolate fluid
	Materials:
	valve body
	ball
	spindle
	ball gasket
	spindle gasket
	OT 58 nickeled
	OT 58 hard chromed
	OT 58 (UNI 5705)
	PTFE (Teflon)
	O-Ring (Viton)

5. OVERALL DIMENSIONS

5.1 Detector pocket



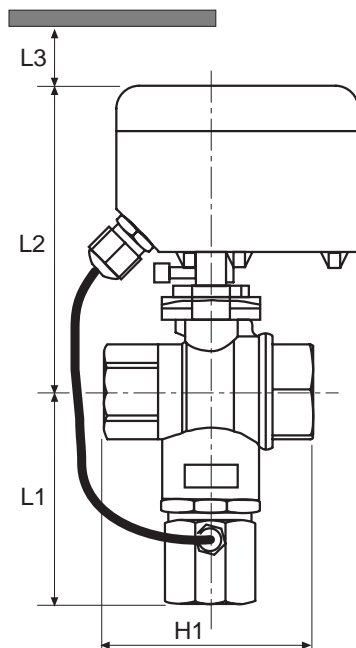
5.2 Controller



- 1 - Motor supporting base
- 2 - Protective cover for electronic components
- 3 - Fixing screw for valve coupling pins
- 4 - PG 11 cable entry gland
- 5 - Red mark (opens)
- 6 - Blue mark (closes)

- 7 - Knob for setting set point
- 8 - Motor position indicator
- 9 - Detector pocket
- 10 - Connector for detector fitting (rotate anticlockwise and extract)
- 11 - Pocket lock nut

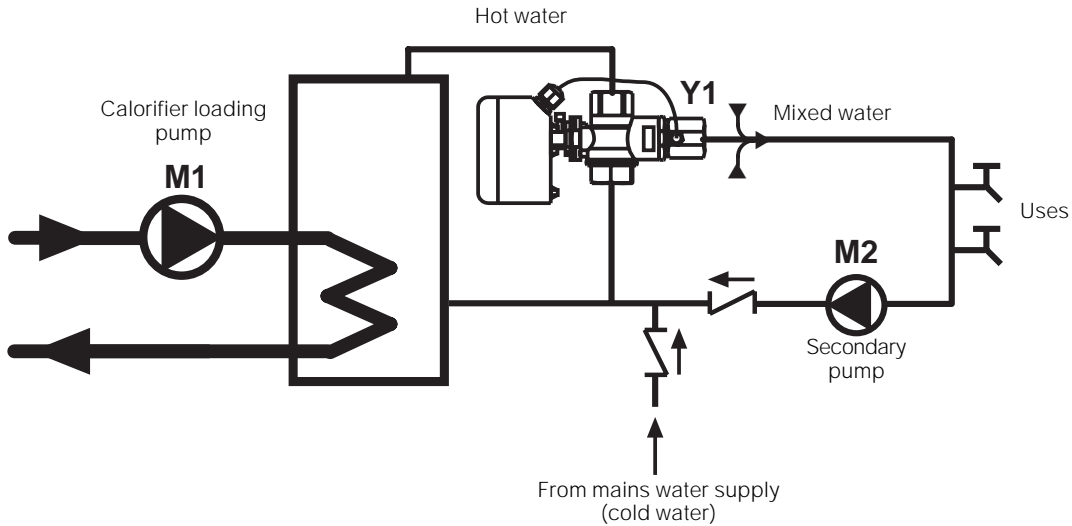
5.3 Controller and valve



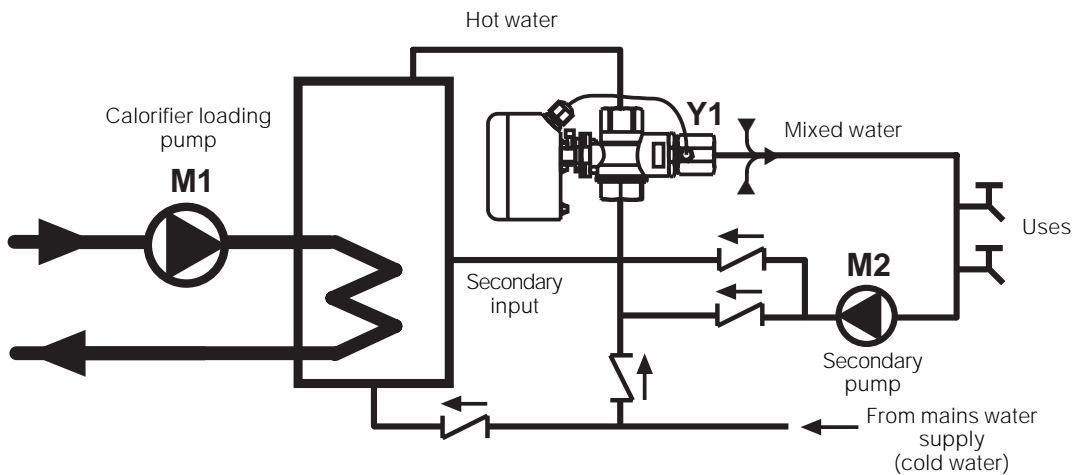
Type DN	L1 mm	L2 mm	L3 mm	H1 mm
1/2"	71	144	20	60
3/4"	82	149	20	71
1"	92	154	20	84
1"1/4	105	174	20	96

6. EXAMPLES OF INSTALLATIONS

6.1 Calorifier without secondary circulation



6.2 Calorifier with secondary return



7. INSTALLATION

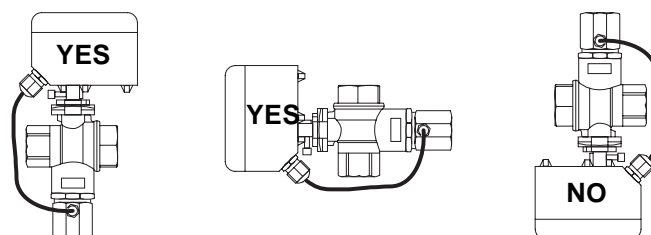
Carry out the installation of the valve, positioning it so that the controller is not facing downwards. Valve and controller are supplied separately: mount the valve and set aside the controller so as to avoid any damage to it.

The output port of the mixed water must always be the central one where the detector pocket is installed. The input ports of the hot and cold water are those opposite each other (see examples at point 7.1) and can be inverted according to installation requirements.

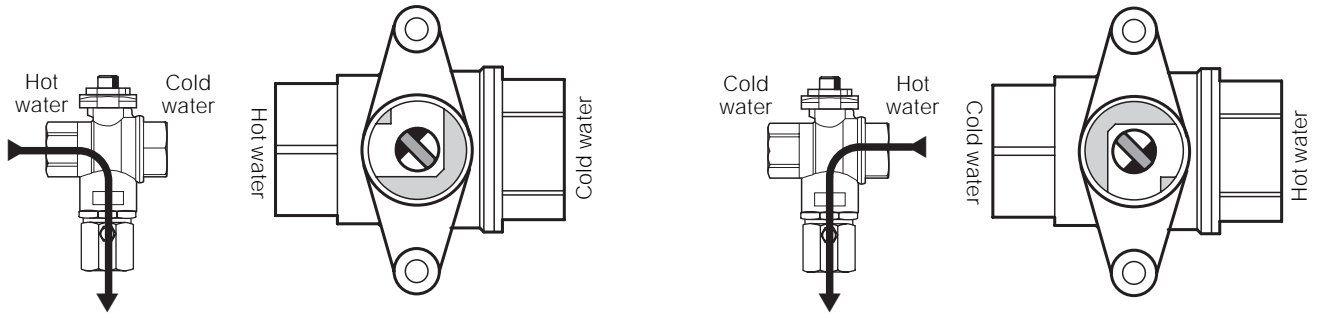
When the hydraulic installation of the valve has been completed install the controller, taking care to position its spindle so that with the actuator open (as supplied) the hot water entry port is open. Then connect the detector lead by inserting the plug in the housing provided and rotating the locking nut clockwise in order to secure it. For installation of the controller in the UK, the European plug (supplied) should be removed and discarded.

The remaining cable should be connected to a 230 V~ 3A fused supply with double pole isolation. All wiring must comply with the local regulations in force at the time of installation.

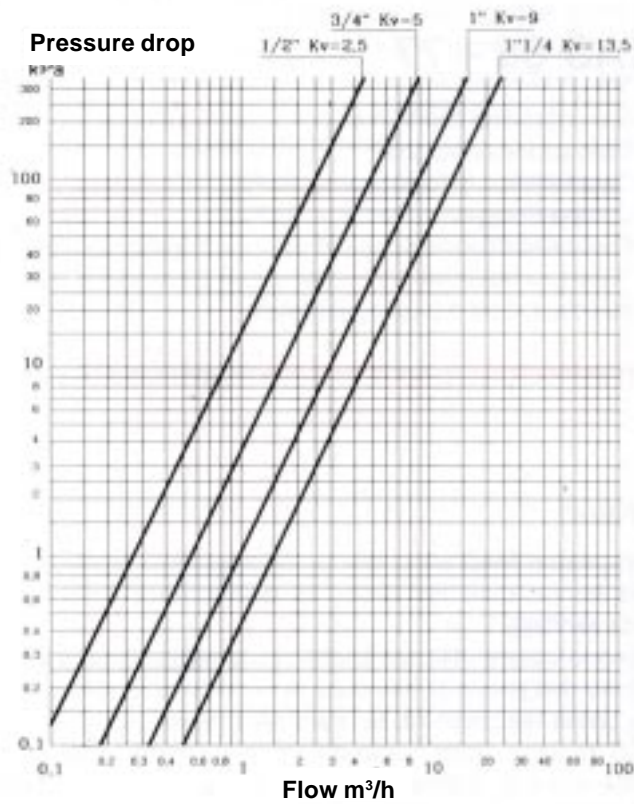
WARNING: Should the replacement of the detector pocket be necessary, position the lock nut at the same distance as that installed; in this manner the sensing element is positioned at the centre of the flow inside the valve. Position of the actuator when supplied in the open position (hot water completely open).



7.1 Position of valve spindle (hot water input)



8. PRESSURE DROP DIAGRAM



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