

Compact rotary actuator for brass mixing valves

EUROMIX MV 120 ...

FIRST®

INSTRUCTIONS FOR ASSEMBLY AND USE

The assembly should be performed by qualified personnel only !



FEATURES

Euromix MV 120 is a compact version of a motor and four way rotating mixing valve. It is designed for use in radiators, floor or remote heating systems.

- Due to small dimensions is suitable for systems with copper installation
- Dimensions from 1/2" to 1 1/4"
- Three wire control with two or three point regulators
- Possibility of manual control
- Visible mark of valve shutter position (red pointer on drive cover)
- Quick and simple assembly the actuator on the mixing valve by push/pull system, without screwing

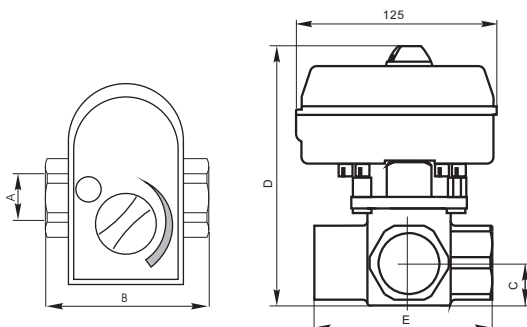
TECHNICAL CHARACTERISTIC

Drive unit

Power supply.....	230 V, 50 Hz
Power consumption.....	3.5 VA
Rotation angle.....	90°
Rotation time for 90°.....	210s
Max. starting torque.....	max 8 Nm
Drive protection class.....	IP 44
Electrical protection.....	class II
Ambient temperature.....	10 ... 60 °C
Micro switch rating.....	5(1)A, 250 VAC
Connection cord.....	4 x 0.5 mm ² , L=2000 mm
Controls.....	With three wires SPDT
Reduction gears.....	Steel gears, sintered and milled
Housing.....	Synthetic materials (PA66)

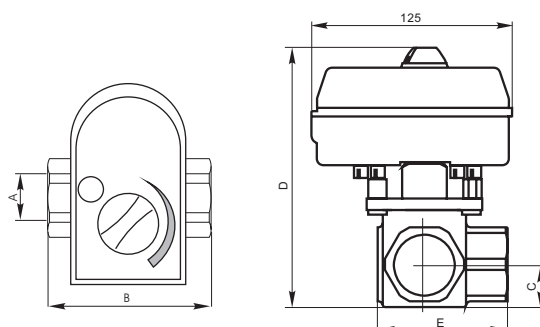


WITH FOUR WAY BRASS MIXING VALVE



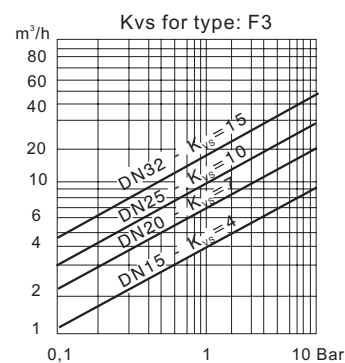
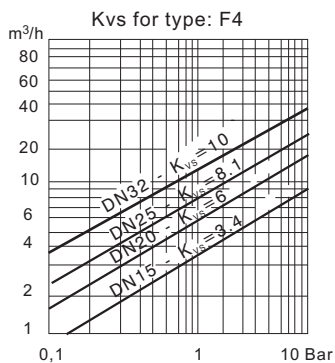
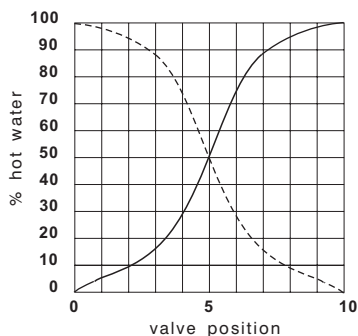
	CODE	DN	A	B	C	D	E	Kvs	
EUROMIX F4-2	10055	15	1/2"	72	18.5	139	72	3,4	1,34
EUROMIX F4-3	10056	20	3/4"	72	18.5	139	72	6	1,22
EUROMIX F4-4	10057	25	1"	90	24	146	90	8,1	1,97
EUROMIX F4-5	10058	32	1 1/4"	90	24	146	90	10	1,56

WITH THREE WAY BRASS MIXING VALVE



	CODE	DN	A	B	C	D	E	Kvs	
EUROMIX F3-2	10051	15	1/2"	72	18.5	139	54	4	1,29
EUROMIX F3-3	10052	20	3/4"	72	18.5	139	54	7	1,19
EUROMIX F3-4	10053	25	1"	90	24	146	69	10	1,10
EUROMIX F3-5	10054	32	1 1/4"	90	24	146	69	15	1,53

FLOW DIAGRAM



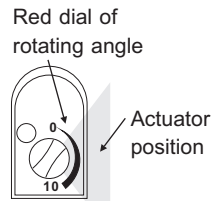
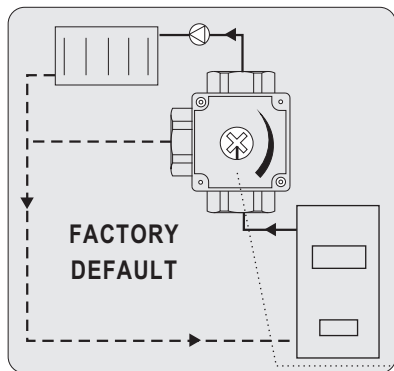
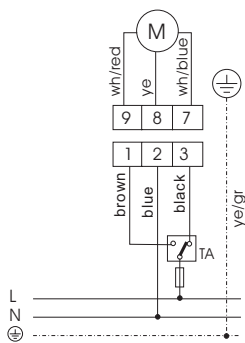
! WARNING !

The motor is not equipped with a connecting cord with plug nor with a switch for disconnecting the device from the mains ! Therefore the connection should be performed through a suitable external switch ! It is also necessary to built-in a fuse in front of the drive to protect it from the current overloads ! The device should be protected from over voltage shocks ! Before each intervention the drive should be disconnected from power supply ! By installation must be observed to according to relevant local standards. The installation must be grounded.

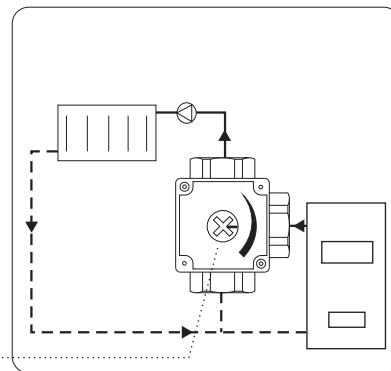
ELECTRIC CONNECTION (with three way brass mixing valve)

The motor is equipped with cord of connection to the mains. When connecting the drive it is not necessary to open it.

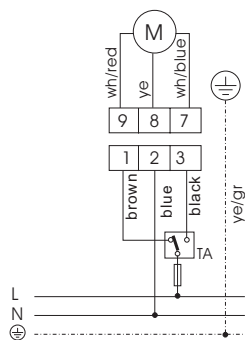
1. 2. Boiler on right



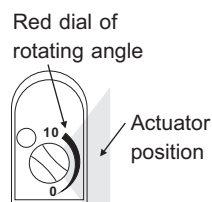
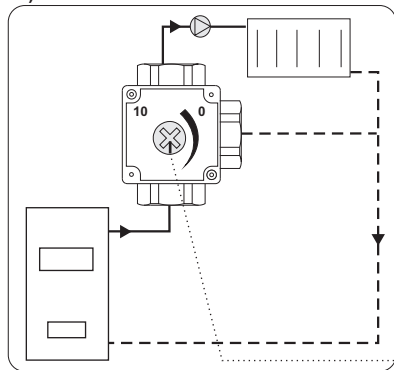
Incision shows rotor position in valve



2. Boiler on left

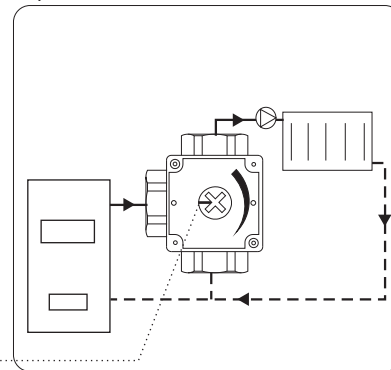


C.) Inlet from bottom



Incision shows rotor position in valve

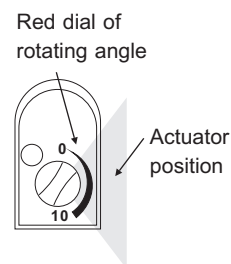
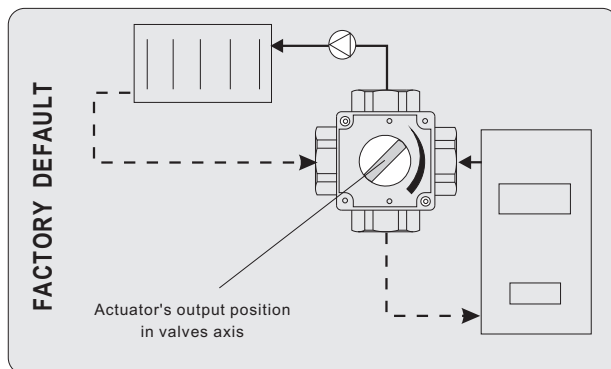
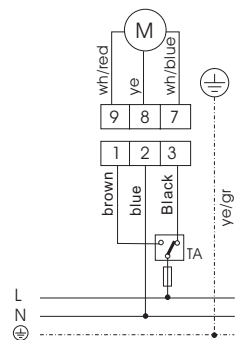
D.) Inlet from left



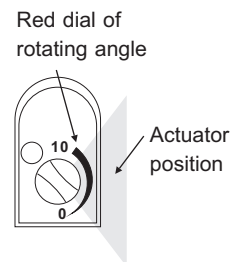
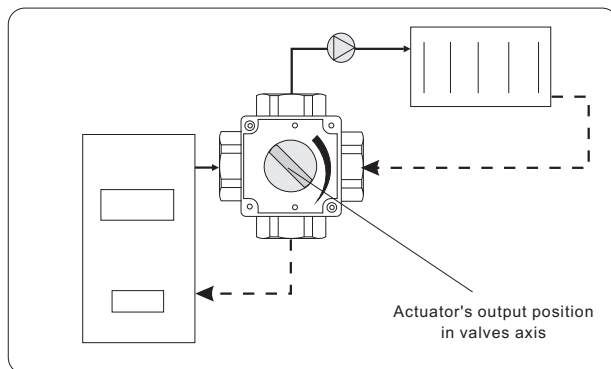
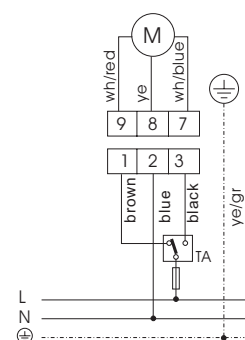
ELECTRIC CONNECTION (with four way brass mixing valve)

The motor is equipped with cord of connection to the mains. When connecting the drive it is not necessary to open it.

1. Boiler on right



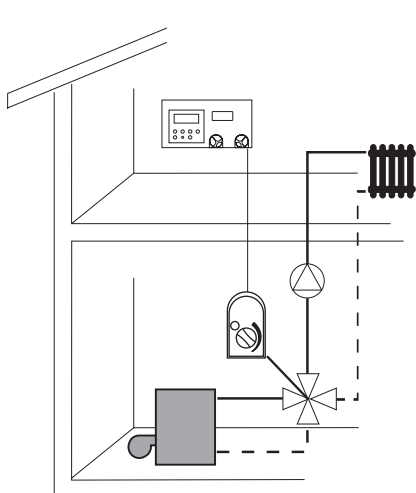
2. Boiler on left



! WARNING !

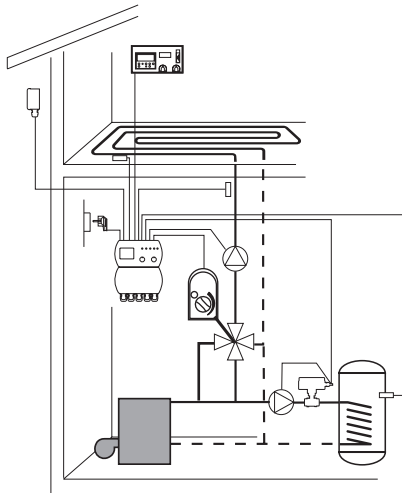
Electrical connection to the mains can be performed only by qualified person in compliance with local regulations.

EXAMPLES FOR USE OF THE DRIVE IN HEATING SYSTEMS



VALVE CONTROL OPEN/CLOSE:

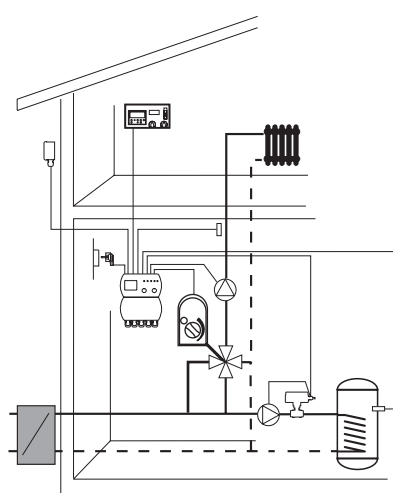
It is performed with the connection of the drive on room thermostat through a switching contact. The above example shows our ELTHERM AT8 room thermostat. When the drive is connected to room thermostat through operating contact only, use an external relay or a drive version built-in relay module.



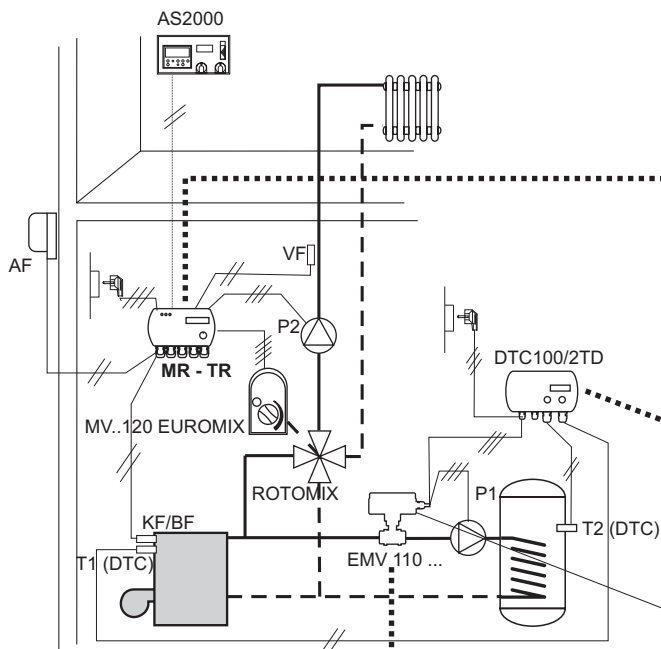
CONTROL OF VALVE POSITION:

The control is performed with the connection of the drive to 3-point regulation control unit which regulates the temperature of heating water with mixing valve in dependence from outer and/or room temperature (programme ROTOTERM). The left above example shows the regulation of floor heating with programmable regulation control unit ROTOTERM AT2000. The right example shows remote heating system. Heating is regulated with programmable control unit ROTOTERM R2000. There can be used also other ROTOTERM control units from our production range, which are mounted on the wall.

In both cases the heating of sanitary water in water heater is separately regulated through the probe of the heater. Output from the regulator is controlled by motor driven ball valve EMV110.. of our production range and it controls also the pump for water heater. Use of EMV prevents thermal circulation of water through water heater.

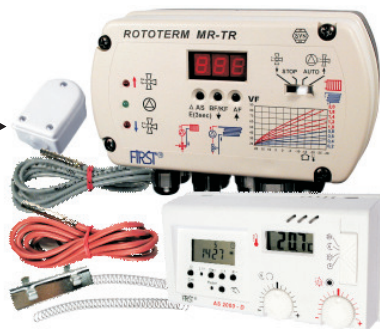


Example of use with heating controller ROTOTERM MR-TR "plus"



ROTOTERM MR-TR "plus"

3-point regulator, which regulates the temperature of heating water with mixing valve.



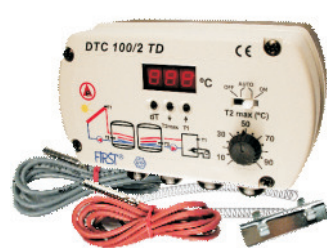
- Contents of the package**
- ROTOTERM MR-TR regulator
 - complete of sensors (outside sensor, mixed flow sensor and boiler sensor)
 - mounting kit
 - Indoor programming unit AS2000-D

EMV 110..602 Motorized ball valve



- built-in relay

DTC100/2TD Differential thermostat



MR-TR
regulator



AS 2000
room unit



DTC100/2TD
differential thermostat



Electromotor drive
for brass mixing valve
EUROMIX MV 120..



ROTOMIX
3 or 4 way brass mixing valve
ROTOMIX F3 or F4



T - sensor

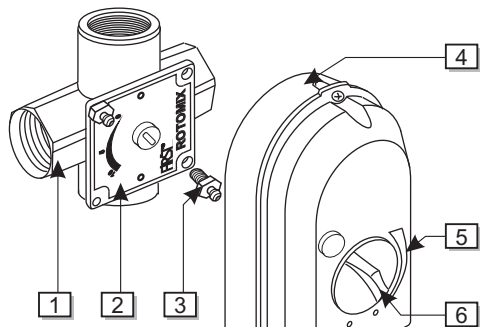


EMV 110..compact



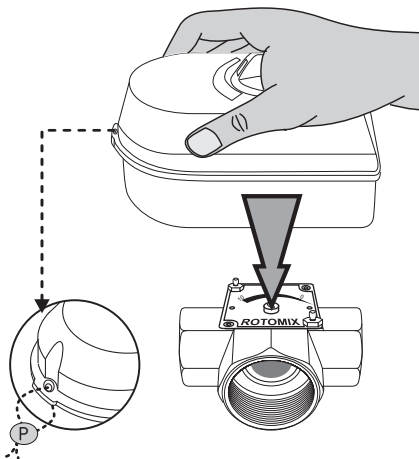
P1, P2
P1 - pump for sanitary water heating
P2 - pump for heating circle

MOUNTING THE ACTUATOR ON THREE OR FOUR WAY BRASS MIXING VALVE



LEGEND :

- 1 - valve
- 2 - valve indicating plate
- 3 - screw with supporting spacer
- 4 - rotary actuator
- 5 - valve position pointer
- 6 - knob for manual control



Push the actuator direct on the mixing valve, that it sit on supporting spacers and the mounting is finished.

If you want to remove drive because of any kind of the reason, you can simply pull it off the valve !

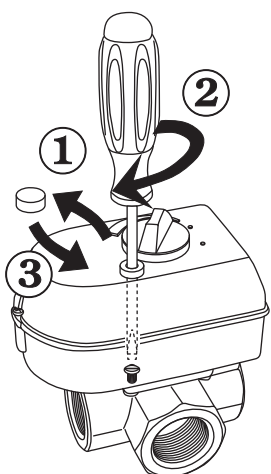
Possibility of sealing the housing of the actuator.

OPTION FOR ACTUATOR SCREWING ON VALVE

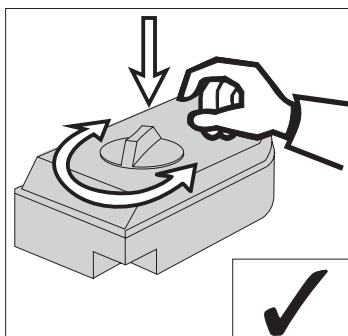
To fix the actuator on the valve it is NOT REQUIRED TO OPEN it!

The screw for the actuator screwing on the valve is inserted in drive bottom!

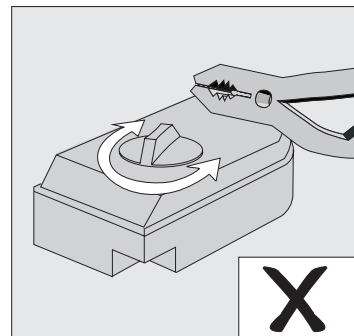
1. Remove protective tap.
2. Use flat screwdriver to screw the drive on the valve.
3. Replace protective tap into the opening.



MANUAL CONTROL



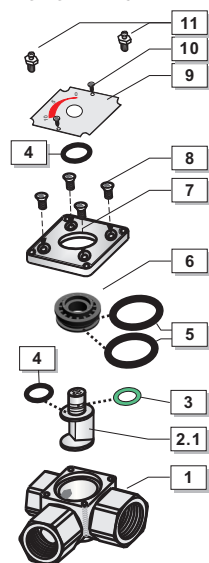
The rotary actuator is equipped with a knob for manual control (in case of current breakdown). Press the knob towards the valve and turn it to the left or right direction (depends whether you want to open or close it).



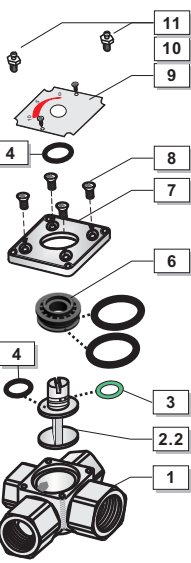
Do not try turning the knob with tongs, because you can damage the gear box! In case the knob can not be turned with hand, disassemble the mixing valve, clean and lubricate it.

MIXING VALVE'S PARTS

ROTOMIX F3



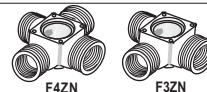
ROTOMIX F4



POS	NAME
1	Body
2.1	Hot stamped CuZn39Pb3
2.2	Rotor with stem
3	Brass CuZn39Pb3
4	Flap stem
5	Brass CuZn39Pb3
6	O-ring 8.73x1,78
7	Viton FKM
8	O-ring 11.91x2.62
9	EPDM
10	O-ring 23.3x5.24
11	EPDM
	Insert
	RYTON R-4-200 BL
	Valves top alloy
	Screw M5x10 DIN 965
	Position plate
	Al
	Screw 2.9x6.5 DIN 7981 BC
	Screw with supporting spacer

Special versions of valves: inner/outer threads

TYP	Inner/Outer(DN)	CODE
MV120 F3ZN/540	DN20 / DN25 - 3/4" / 1"	10059
MV120 F3ZN/540	DN25 / DN40 - 1" / 1 1/2"	10060
MV120 F4ZN/540	DN20 / DN25 - 3/4" / 1"	10061
MV120 F4ZN/540	DN25 / DN40 - 1" / 1 1/2"	



Actuator versions:

TYP	VOLTAGE	TIME	CODE
MV120..540	230VAC, 50/60Hz	210s/90°	10046
* MV120..510	230VAC, 50/60Hz	105s/90°	10047
* MV120..543	24VAC, 50/60Hz	210s/90°	10168
* MV120..513	24VAC, 50/60Hz	105s/90°	10179

* Only by special request

Spare O-ring
(position 4)
code: 500032

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