

ROTARY MOTORIZED VALVES
MIXING VALVE
SERIES 3F

3F, DN 20–150, cast iron, PN 6. Flange.



Flange

OPERATION

The ESBE series F is a valve made of cast iron for use in heating and cooling installations.

The mixing proportions are adjusted manually with a handle or, in automatically controlled systems, by means of an actuator. Suitable actuators are ESBE series ARC300, ARD100, ARD200 or series 90. The valve can also be equipped with ESBE controllers series 90C and CRA120.

Valve series 3F is available in dimensions DN 20-150 with flanged connections.

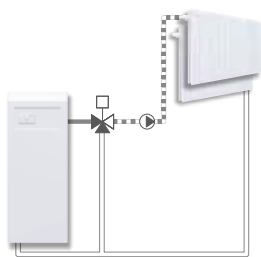
The scale is graded on both sides and can be turned, allowing a choice of mounting positions. Operation angle = 90°.

SERVICE AND MAINTENANCE

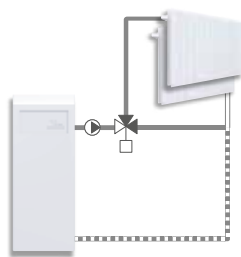
All major parts are replaceable. The shaft seal consist two o-rings, one of which can be replaced without the need for draining down the system or dismantling the valve. However, before doing so, the system must be depressurized.

INSTALLATION EXAMPLES

All the examples of installations can be reversed. The valve position plate is graded on both sides and should at the installation be fitted in the correct position as shown in the instruction for installation.



Mixing



Diverting

VALVE 3F DESIGNED FOR

- Heating
- Comfort cooling

SUITABLE ACTUATORS AND CONTROLLERS

- Series 90 ≤DN100
- Series 90C ≤DN100
- Series ARC300
- Series CRA120 ≤DN100
- Series ARD100 ≤DN80
- Series ARD200

TECHNICAL DATA

Pressure class: _____ PN 6
 Media temperature: _____ max. 110°C, min. -10°C
 Differential pressure drop: DN 20–50, _____ max. 50 kPa
 DN 65–150, _____ max. 30 kPa
 Leakrate in % of flow: _____ max. 1.5%
 Rangeability Kv/Kv^{min}: _____ 100
 Connection: _____ Flange according to EN 1092-2

Material _____ DN 20–25 _____ DN 32–150
 Valve body: _____ Cast iron EN-JL 1030
 Slide: _____ brass CW 614N _____ brass CW 614N and stainless steel
 Bushing: _____ plastic _____ brass CW 602N
 Cover plate: _____ zinc _____ cast iron
 O-rings: _____ EPDM

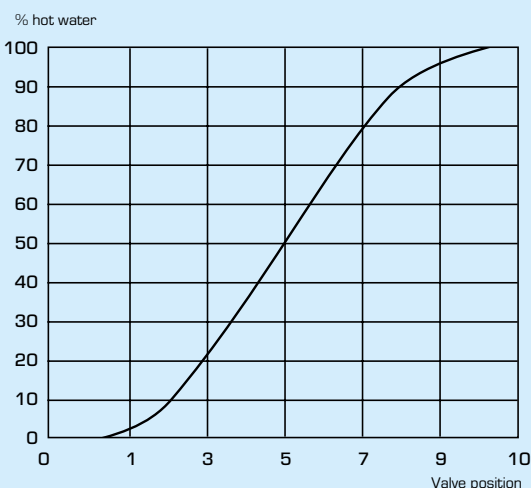
PED 2014/68/EU, article 4.3

REQUIRED ACTUATOR TORQUE

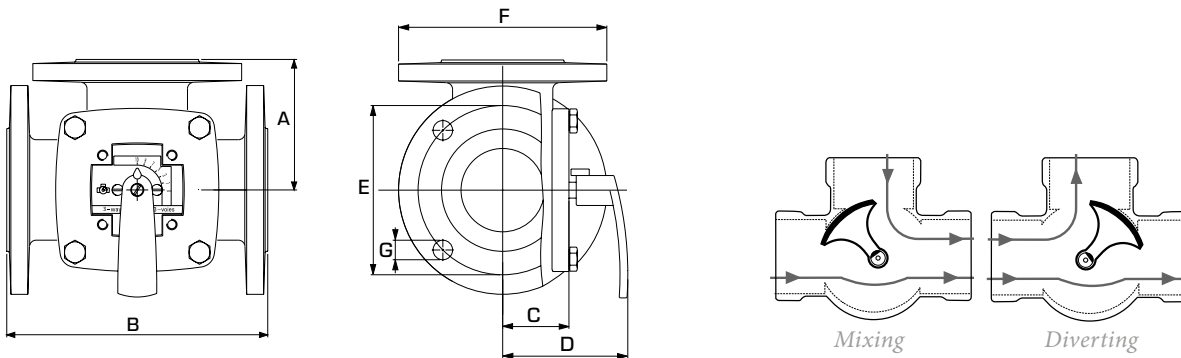
The figures below are intended only as a recommendation for ordinary installations. In some applications the valve may require even more actuator torque.

| | |
|------------------------------------|----------------------|
| Valve size up to _____ DN 25 _____ | actuator torque 3 Nm |
| _____ DN 50 _____ | 5 Nm |
| _____ DN 80 _____ | 10 Nm |
| _____ DN 100 _____ | 15 Nm |
| _____ DN 150 _____ | 20 Nm |

VALVE CHARACTERISTICS



MIXING VALVE SERIES 3F



Flanged connection PN6,
standard EN 1092-2

The flat-sided spindle top
(as well as the indicator of the knob)
points towards the sleeve position.

SERIES 3F

| Art. No. | Reference | DN | Kvs* | A | B | C | D | E | F | G | Weight [kg] |
|------------|-----------|-----|------|-----|-----|----|-----|-----|-----|--------|-------------|
| 1110 01 00 | 3F 20 | 20 | 12 | 70 | 140 | 40 | 82 | 65 | 90 | 4x11.5 | 3.5 |
| 1110 02 00 | 3F 25 | 25 | 18 | 75 | 150 | 40 | 82 | 75 | 100 | 4x11.5 | 4.0 |
| 1110 03 00 | 3F 32 | 32 | 28 | 80 | 160 | 40 | 82 | 90 | 120 | 4x15 | 5.9 |
| 1110 04 00 | 3F 40 | 40 | 44 | 88 | 175 | 40 | 82 | 100 | 130 | 4x15 | 6.8 |
| 1110 06 00 | 3F 50 | 50 | 60 | 98 | 195 | 50 | 92 | 110 | 140 | 4x15 | 9.1 |
| 1110 08 00 | 3F 65 | 65 | 90 | 100 | 200 | 52 | 95 | 130 | 160 | 4x15 | 10.0 |
| 1110 10 00 | 3F 80 | 80 | 150 | 120 | 240 | 63 | 106 | 150 | 190 | 4x18 | 16.2 |
| 1110 12 00 | 3F 100 | 100 | 225 | 132 | 265 | 73 | 116 | 170 | 210 | 4x18 | 21.0 |
| 1110 14 00 | 3F 125 | 125 | 280 | 150 | 300 | 80 | 123 | 200 | 240 | 8x18 | 27.0 |
| 1110 16 00 | 3F 150 | 150 | 400 | 175 | 350 | 88 | 130 | 225 | 265 | 8x18 | 37.0 |

* Kvs-value in m³/h at a pressure drop of 1 bar. Flow chart, see product catalogue.