

REVERSIBLE LINEAR ACTUATORS FOR VRG - VRB - VL - VF - VS VALVES WITH SPRING RETURN



CEF Eng.

- Power supply : 230 - 24 V~ Protezione IP 54.
- Three-wire electric control.
- Maximum run: 15 mm; Run times : 11 s/mm - 3 s/mm
- Direct mounting on valve without calibration.
- Manual operation.



1. APPLICATION

CEF... actuators are designed to operate, with reversible linear movement and with spring return, the seat valves VRG - VRB - VL - VF - VE and VS, up to DN 50, used in heating and air-handling plants with maximum fluid temperature of 150°C with vertical mounting and 200°C with horizontal mounting.

Model CEF U16.. (closure with shaft up) suitable for VRG 3.., VRB 3.., VL 3.. and VF 3.. valves.

Model CEF D 16.. (closure with shaft down) suitable for VE 2.. and VS 2.. valves.

2. OPERATION

They can be controlled by an On-Off device (thermostat, remote switch, manual switch) or by a modulating controller. The three-wire electrical control (Common - Opens - Closes) powers a small, reversible, synchronous, electric motor with double windings the rotary movement of which is converted into linear movement by a mechanism that permits a maximum run of 15 mm.

The run is limited by two microswitches operated automatically by springs when the valve plug strikes against one of the valve seats. This system ensures that the motor is always able to exercise its nominal force on the valve spindle, thereby permitting mounting without any calibration of the run.

Without power, using the return spring, the actuator autonomously closes the valve.

By removing the cover it is possible, using a 6mm hexagonal key, to operate the valve manually.

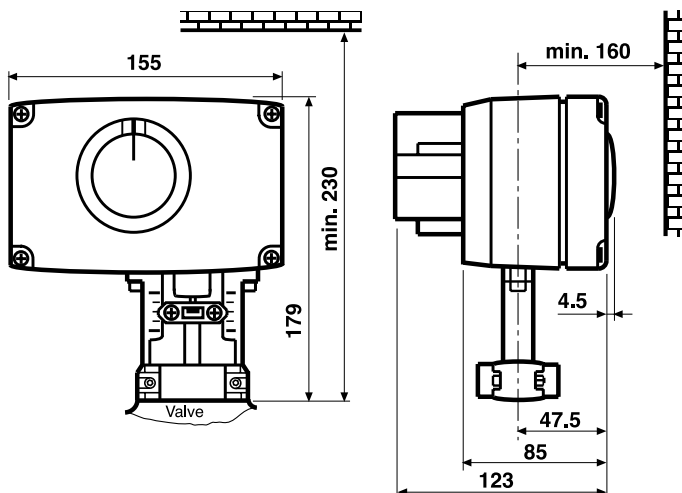
3. MODELS

Code	Power supply V~ (VA)	Spring return	Run max. mm	Speed s/mm	Run max. s	Force max. s	Valves (up to DN)		
							VRG / VRB	VL / VF	VE / VS
CEF U168	230 (12)	Up	15	11	165	450	50	50	-
CEF U164	24 (12)	Up	15	11	165	450	50	50	-
CEF D168	230 (12)	Down	15	11	165	450	-	-	50
CEF D164	24 (12)	Down	15	11	165	450	-	-	50

4. ACCESSORIES

Code	Description
FCF 002	Two auxiliary SPDT microswitches 6 (2) A.

7. OVERALL DIMENSIONS

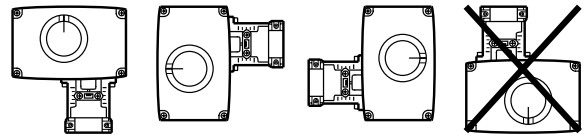


5. TECHNICAL DATA

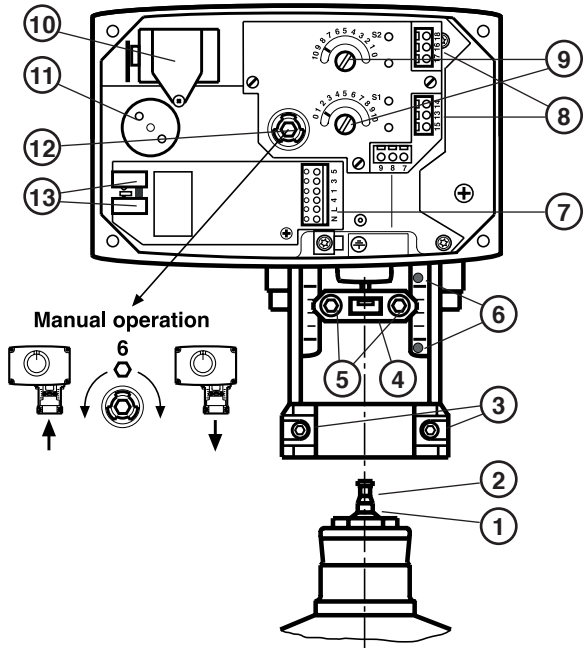
Power supply :	230 V~ ±10%
CEF ...8	24 V~ ±10%
CEF ...4	50 ... 60 Hz
Frequency	12 VA
Consumption	IP 54
Protection	3 wire electric
Control	15 mm
Maximum run	165 s
Time for 15 mm run	450 Nm
Force	6 (2) A
Current auxiliary microswitches	Maximum fluid temperature valve
Maximum fluid temperature valve	Vertical mounting
Vertical mounting	150 °C
Horizontal mounting	200 °C
Ambient temperature :	
Operating	0...55 °C
Storage and transport	- 40...70 °C
Weight	2.3 kg

6. MOUNTING

- Avoid mounting the actuator below the valve

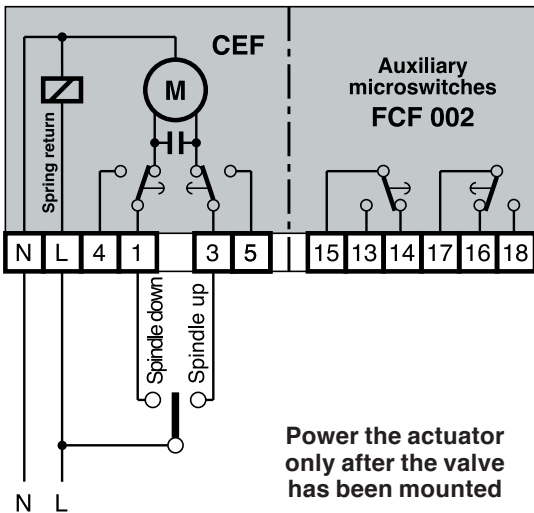


- Loosen the securing screws (5) of the mounting block (4).
- Loosen the securing screws of the actuator (3) and withdraw completely the valve spindle (1).
- Mount the actuator on the valve so that the groove (2) of the spindle fits into the mounting block (4); tighten up the securing screws (5).
- Press on the actuator until it rests on the surface of the valve.
- Tighten the actuator securing screws (3) and check that the mounting is correct by making a complete valve run using the manual pivot (12).
- Carry out the electric wiring according to the diagram and in compliance with the relevant regulations in force.

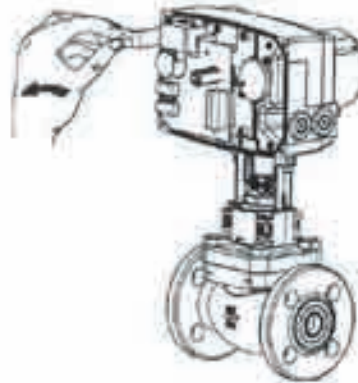


- 1 – Valve spindle
- 2 – Spindle securing groove
- 3 – Actuator securing screws
- 4 – Coupling block
- 5 – Valve spindle securing screws
- 6 – Valve open (red) and valve closed (blue) indicators
- 7 – Terminal block for power and control connections
- 8 – Terminal block for connections auxiliary microswitches
- 9 – Adjustment intervention auxiliary microswitches
- 10 – Coil for release return spring
- 11 – Synchronous motor
- 12 – Pivot for manual operation
- 13 – End-of-run microswitches

8. WIRING DIAGRAM



Models CEF D 168 and CEF D 164 :
After mounting the actuator on the valve, and before making the electrical connections, remove the protective cover



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