

Characteristics

- Small outer dimensions
- Large closing force
- Easy to fit and adjust
- Casing IP 44
- Lifetime lubricated gearbox
- Comprehensive additional accessories incl. spring return

Application

The valve motor has been developed for activation of all Clorius types of valves in sizes up to DN 150 mm. The valve motor can be used for heating, cooling, ventilation and industrial systems where the medium is water, steam or oil.

The valve motor can be supplied for voltages of 24 V AC and 230 V AC. 24 V motors are available in two speeds – see type diagram.

The valve motor can be supplied with spring return for releasing at power failure, positional potentiometer and auxiliary switches.

The valve motor can be mounted in all positions, but mounting above the valve is recommended.

The stuffing box contains no copper combinations, i.e. the motor can be used in oil regulating systems without any risk of oil cracking.

Dimensioning

For sizing of control valve motors, please see "Quick Choice" leaflet no. 9.0.00.

Design

The valve motor is driven by a motor with gearing. The motor is monophasic and synchronous with condenser start. The gearing is fitted in a closed gearbox of pressure die-cast aluminium, where all gear wheels and bearings are lifetime lubricated.

All electric components, terminals and the cam discs of the switch functions are located for easy accessibility under a cover of self-extinguishing plastic.

The stroke of the motor can through a crank mechanism with a scale be adjusted continuously, between 4 and 20 mm and thus be adapted to the lifting height of the valve in question.

The crank mechanism has a pawl mechanism which by means of the operating lever releases the motor and the gearing so that the valve can be activated manually.

The operation lever can be locked in various positions corresponding to the required valve flow.

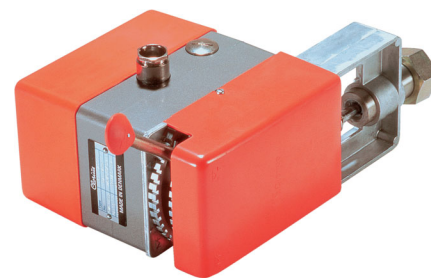
The valve motor is supplied with a stuffing box with a teflon gasket.

The stuffing box is exchangeable as one unit.

A safety spring between the stuffing box and the crank mechanism secures against overload.

The valve motor can be supplied with spring return which is released in case of power failure and which fully opens respectively closes the valve.

The closing spring is encased in a cylindrical housing. When the motor is fitted with spring return, the closing capacity is reduced by lifting heights >9 mm. See figures in parenthesis in "Quick Choice" leaflet no. 9.0.00.



Function

The el-motor with gearing gives a 90° turning of the shaft. By means of the crank mechanism this turning is converted into an upward and downward motion adjustable between 4 and 20 mm.

The operating lever releases the el-motor and the gearing, and thereby the valve can be activated manually.

The outer positions of the lever are marked with valve symbols on the toothed sector and on the front of the plastic cover.

If the valve motor is fitted with a spring return this is mounted to close the valve in case of power failure. When removing the screw fixing the spring housing and turning the latter 180°, the spring fully opens the valve in case of power failure. The spring is always compressed, and in permanent connection with the through-going shaft, ready for release.

Engaging and dis-engaging takes place electromagnetically with a spring mechanism, which dis-engages an idle wheel in the gear-box in the event of power failure.

As soon as the power is back the magnet re-engages the gear wheel, and the motor immediately seeks towards the position required from the controller.

Type Designation							
Power		24 V AC - 50/60 Hz		24 V AC - 50/60 Hz	230 V AC - 50/60 Hz		
Speed		106 sec./90°		212 sec./90°	106 sec./90°		
Springreturn		Without	With	Without	Without	With	
Without Positional potentiometer	No. of aux. switches	0	V1A	V1C	V1E	V1I	V1K
		1	V2A	V2C	V2E	V2I	V2K
		2	V3A	V3C	V3E	V3I	V3K
With Positional potentiometer	No. of aux. switches	0	V4A	V4C	V4E	V4I	V4K
		1	V5A	V5C	V5E	V5I	V5K
		2	V6A	V6C	V6E	V6I	V6K

Subject to changes without notice.

Valve Motor type V 24 V AC or 230 V AC

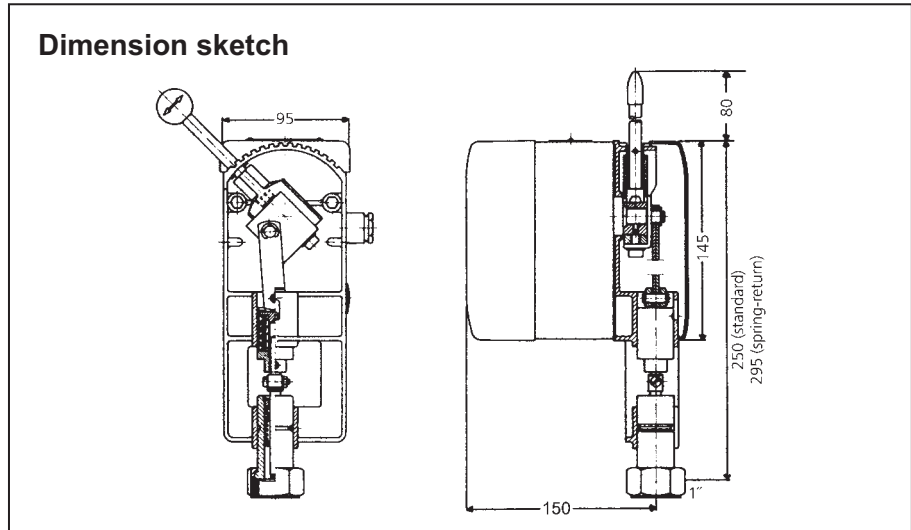
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Technical Data

Power	24 V AC or 230 V AC +10/+15%, 50/60 Hz
Consumption	4 VA without spring return 9 VA with spring return
Casing	IP 44
Cable threading	1 PG 13.5 1 PG 13.5 blind plug
Speed	24 V: 106 or 212 sec. 230 V: 106 sec.
Ambient temperature	+15°C to +60°C
Closing force	1200 N min. 500 N with spring return
Stroke	4 - 20 mm
Valve connection	pipe threads G1 union nut
Weight complete	2.7 kg without spring return 3.7 kg with spring return

Dimension sketch



Additional Equipment

Positional potentiometer

Number: 1
Resistance change at
90° motor turning: 0 - 135 Ohm

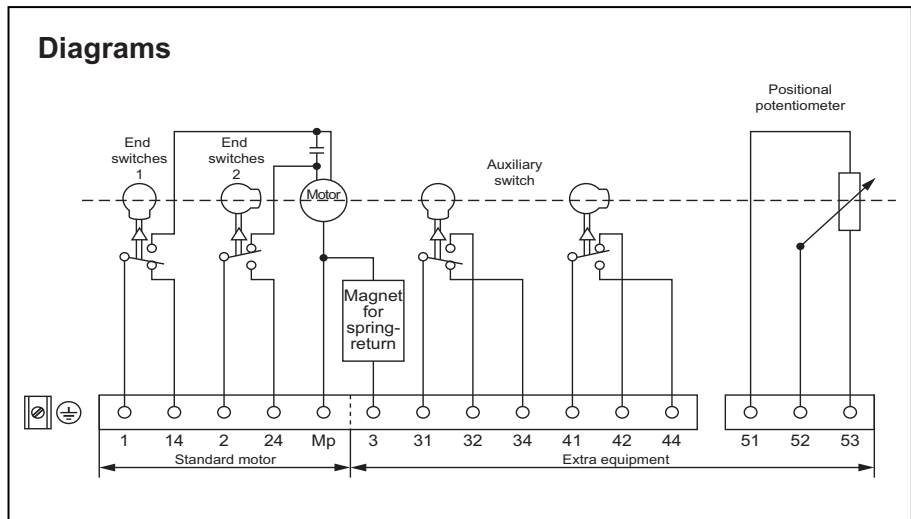
Auxiliary switches

Number: 1 or 2
Function: change-over
Power: max. 250 V AC
Current: max. 10 A

Spring return

Closes (or opens) the valve in case
of power failure

Diagrams



Subject to changes without notice.