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REVERSIBLE ROTARY ACTUATORS FOR HGM - HMM - VDM VALVES

CDK 06.-03. Eng.

- EXTRACTABLE TERMINAL BLOCK
- RAPID MOUNTING ON VALVE
- POSITION INDICATORS
- 3-wire electric control (common, opens, closes)
- Auxiliary SPDT miniature switch
- IP 53 protection
- Power supply: 230 V~ or 24 V~

1. APPLICATION

CDK 06. - 03. actuators are designed to operate COSTER HGM - HMM (ball) and VDM (ceramic disk) valves. The actuator is mounted directly on the valve so taht no linkage kit is required.

2. OPERATION

CDK 06. -03. actuators incorporate a reversible synchronous electric motor with three-wire electric control (common, opens, closes). They can be controlled by an On-Off or modulating device (thermostat, switch, modulating controller) provided with an SPDT output switch.

The electric motor transmits the rotary movement to the mechanical reducing gear which governs the rotation speed of the output shaft and, accordingly, the actuator run time.

The actuator run is 90° and is limited by two miniature switches operated by an end-of-run cam.

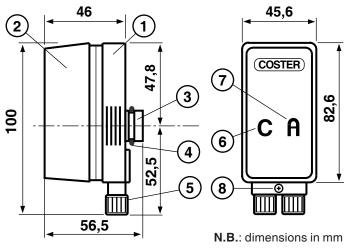
COSTER

They are fitted with two voltage-free SPDT auxiliary miniature switches (switching takes place at approximately the half-run of the actuator).

3. MODELS

Model	Power supply	Run time	Nominal torque	Starting torque	Valves (up to DN)
	V~ (VA)	seconds	kg/cm (Nm)	kg/cm (Nm)	HGM-HMM-VDM
CDK 068	230 (4)	60	15 (1.5)	30 (3.0)	1"
CDK 064	24 (4)	60	15 (1.5)	30 (3.0)	1"
CDK 038	230 (4)	30	10 (1.0)	20 (2.0)	3/4"
CDK 034	24 (4)	30	10 (1.0)	20 (2.0)	3/4"

4. OVERALL DIMENSIONS



1 – Base.

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- 2 Semi-transparent protective cover.
- 3 Coupling for valve.
- 4 Actuator/valve locking spring.
- 5 Unions for passage cables.
- 6 Indicator actuator closed (the "C" turns white).
- 7 Indicator actuator open (the "A" turns white).
- 8 Securing screws for terminal block protective cover.

5. TECHNICAL DATA

Power supply: – CDK 068 - 038 – CDK 064 - 034 Frequency Consumption: Protection Rotation angle Bun time	230 V~ ± 10% 24 V~ ± 10% 5060 Hz 4 VA IP 53 fixed at 90°
– CDK 06. – CDK 03.	60 seconds 30 seconds
Torque CDK 06.: – nominal – starting	15 kg/cm (1.5 Nm) 30 kg/cm (3.0 Nm)
Torque CDK 03.: – nominal – starting	10 kg/cm (1.0 Nm) 20 kg/cm (2.0 Nm)
Auxiliary miniature switch: – maximum switching voltag – maximum switching curren	
Materials: – base – cover Valve fluid temperature	ABS with glass fibre semitransparent polycarbonate 595 °C
Ambient temperature: – operating – storage Weight	0…45 °C − 20…+ 60 °C 0.210 kg



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6. CONSTRUCTION

The actuator base is made of ABS reinforced with glass fibre; the cover is in semitransparent polycarbonate. The closing position (4.6) and the opening position (4.7) are clearly indicated.

Two openings, furnished with cable-strain relief bushing grips, permit the passage of the electric cables. The coupling device, at the rear of the base, permits rapid mounting of the actuator on the valve.

7. ELECTRICAL CONNECTIONS

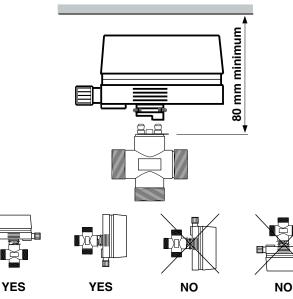
- To ensure a good protection and seal, the outside diameter of the cables must be between 6.25 and 7 millimetres.
- Cable maximum cross section FROR 2x1 mm² or FROR 3x0.75 mm².
 Do not use FROR 3x1 mm².
- Loosen the securing screw (4.8) and the two unions for the passage of the cables (4.5) and remove the protective cover from the terminal block.
- Slip the unions on to the cables.
- To facilitate making the connections the terminal block can be removed.
- Make the electrical connections following carefully the diagram in 10. WIRING DIAGRAM.
- Having made the connections, insert the terminal block (if it has been removed), replace the protective cover, tighten up the unions and then secure the whole with the securing screw.

The union corresponding to the auxiliary switch connection terminals is closed so as to ensure the necessary protection for the actuator in the event that the auxiliary itself is not used. To connect it, it is necessary to open the union passage by breaking the internal protective membrane.

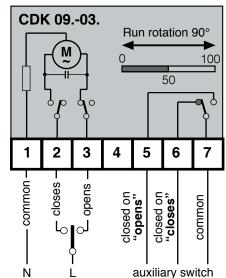
8. MOUNTING THE ACTUATOR ON THE VALVE

- Check the position of the milling on the actuator shaft.
- If necessary, rotate the valve spindle to make it coincide with the milling on the actuator shaft.
- Position the actuator on the valve by inserting the two pivot pins on the latter into the two corresponding holes in the base; then press hard on the head of the actuator until you feel it snap into position on the valve.
- Power the actuator and have it make a couple of complete runs to ensure it works correctly.

9. INSTALLATION IN PLANT



10. WIRING DIAGRAM



Factory setting: actuator closing



