

Pneumatic actuator with positioner type AC-OP / USA-Type 766-BLRA

Direction „Air to open – ATO”

Description

The type AC-OP is an actuator with integrated pneumatic positioner BLRA especially constructed as a compact extension for the Research Control® valve. The positioner BLRA (Bottom Load Reverse Action) ensures a fast and precise regulation by its high positioning precision that can be kept independent of the changing media pressures.

This actuator should be used if higher shut off forces are required at same input signal of 0.2 – 1.0 bar, by influences like e.g. friction of the packing or media pressure.

Function

The BLRA positioner is based on the force compensation method. Every position of the valve equates to a definite force on the spring (29). In an unbalanced state, the supply air is directed behind the diaphragm (4), until a balanced state is reached. The positioner ensures a given allocation of valve position and instrument signal. This is obtained by constantly comparing the instrument signal 0.2 – 1.0 bar with the travel of the valve.

Features

- High precision
- For compact installations

Options

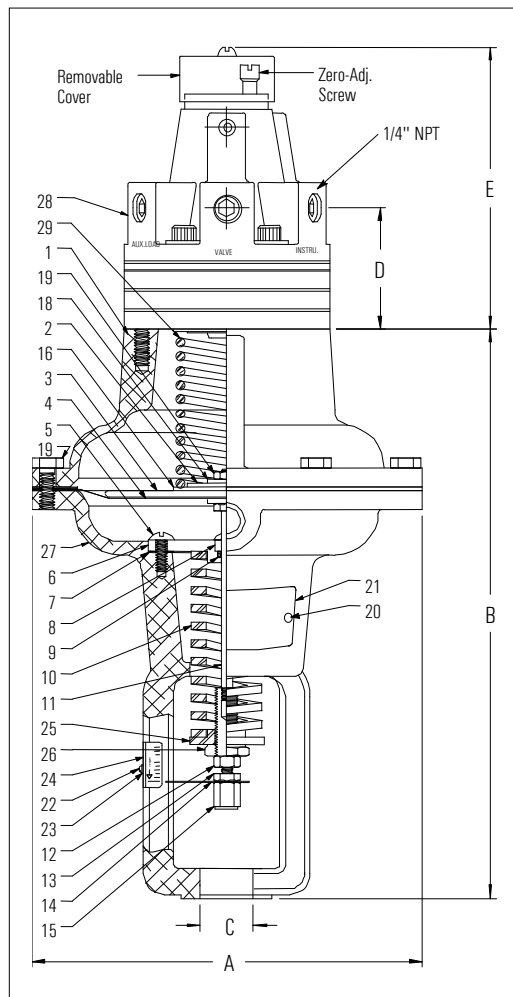
- Split range operation 0.4 bar; equals i.e. a signal range of 0.2 - 0.6 bar or 0.6 - 1.0 bar
Other ranges (split range) upon request
- Additional accessories (limit switches, solenoid valves, i/p-converter, gauges, position response)
- Silicone diaphragm

Materials

Body	Die cast aluminium with Epoxy coating
Spring	Spring steel (painted)
O-Ring	Silicone rubber
Diaphragm	Buna on Nylon fabric
Diaphragm plate	Zinc plated steel
Small parts	Stainless steel

Technical data

Preload	The calculation of the required preload resp. force for the closed position of the valve (= safety position) is described on page 8 of the "Selection guide for standard applications".		
Diaphragm effective area	1/4" actuators: 47 cm² 1/2" actuators: 73 cm²		
Maximum supply pressure	4 bar		
Maximum shut off force	Actuators:	1/4"	1/2"
	Spring (black)	289 N	445 N
	Spring (red)	- -	800 N
Ambient temperature	Buna diaphragm: -30°C to 70°C Silicone diaphragm: -30°C to 150°C		
Air consumption at 1 bar supply pressure	1.0 m³/h in regulation		0.4 m³/h in open position
Response level at signal change	≤0.1% of maximum travel		
Signal range	Standard: 0.2 - 1 bar	Optional: 0.2 - 0.6 bar Optional: 0.6 - 1.0 bar	
Air failure	Spring to close		
Weight	1/4" actuators: 2.4 kg 1/2" actuators: 3.2 kg		



Description of items

1. Body, Aluminium
2. Spring locating plate, Aluminium
3. Diaphragm plate, Steel
4. Diaphragm, Buna
5. Screw, Steel
6. Spring plate, Aluminium
7. Gasket, Vellumoid
8. „O“ Ring, Silicone
9. Bushing, Nylon
10. Spring, Steel
11. Stem, 316 SS
12. Connector, 300 SS
13. Stem nut, 300 SS
14. Travel pointer, SS
15. Connector nut, 300 SS
16. Washer, Aluminium
17. Stem nut, 300 SS
18. Washer, Steel
19. Screw, 300 SS
20. Nameplate, SS
21. Drive screw, SS
22. Screw, SS
23. Washer, SS
24. Travel scale SS
25. Spring seat, Aluminium
26. Spring adjusting nut
27. Pressure case yoke, Aluminium
28. Positioner BLRA
29. Range spring, Steel

RCV	A	B	C	D	E	stoke
1/4" NPT	130	201	16	51	118	11,1
1/2" NPT	163	239	22	51	118	14,3