



Badger Meter Europa

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Pneumatic actuator type AC-OS / USA-Type 754-ATO

Direction „Air to open–ATO“

Description

Pneumatic diaphragm actuators have proved as low-maintenance, reliable and economical actuator type for control valves. With accessories like i/p-converters or i/p-positioners they can easily be connected to electrical controllers or micro-processor-based control systems with a 4-20 mA output. Another advantage results in the short and precise floating times.

Function

The instrument signal 0.2 – 1.0 bar generates a force at the diaphragm (11) that is balanced by the spring (20) placed in the actuator. The strength of the preload determines the signal range as well as the rated travel, adjustable with spring nut (16).

Options

- Spring ranges 0.2 - 1.8 bar, 0.4 - 2.0 bar
- Manual handwheel for operation without air; that can also be used as a down travel stop
- Manual handwheel for use as an up travel stop
- Side mounted positioner of various types
- Additional accessories like e.g. limit switches, solenoid valves, i/p-converter, gauges, positioner response
- Silicone diaphragm

Technical data

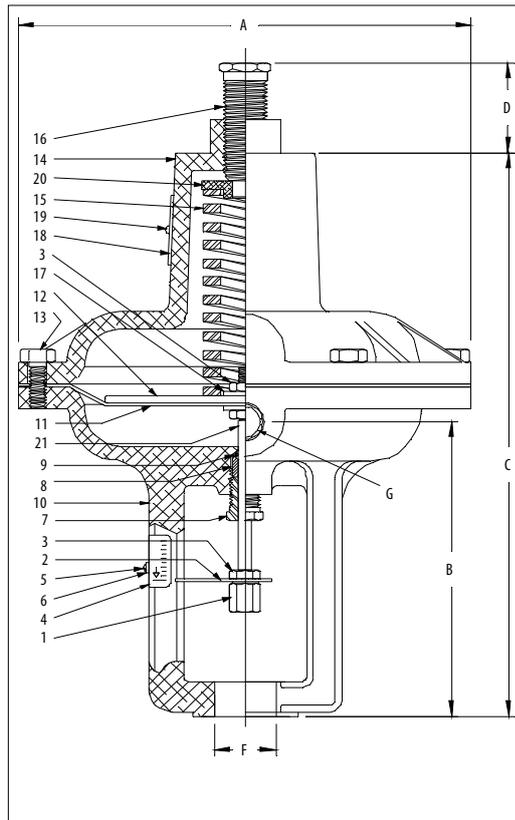
Preload	The required preload force for the closed position of the valve (= safety position) can be seen on the chart below.		
Diaphragm effective area	1/4" actuators: 47 cm ² 1/2" actuators: 73 cm ²		
Maximum allowable air pressure	4 bar		
Shut off force at standard setting (0.2 bar)	1/4" actuators: 18 N 1/2" actuators: 29 N		
Shut off force	1/4" actuators: 290 N 1/2" actuators: 450 N		
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		
Signal range	Standard: 0.2 - 1 bar Optional: 0.4 - 2 bar		
Air failure	Spring to close		
Weight	1/4" actuators: 0.9 kg 1/2" actuators: 1.7 kg		

Features

- Two sizes for 1/4" and 1/2"-1" Research Control® valves
- Direct air to open – on air fail valve is closed
- Standard spring range 0.2 – 1.0 bar, continuously adjustable with a spring range of 0.8 bar

Materials

Body	Die cast aluminium with Epoxy coating, or stainless steel (316L) (only for 1/2" actuators).
Spring	Spring steel (painted)
O-Ring	Silicone rubber
Diaphragm	Buna on Nylon fabric
Diaphragm plate	Zinc plated steel
Small parts	Stainless steel



Description of items

1. Stem connector, 300 SS
2. Travel pointer, SS
3. Stem nut, 300 SS
4. Travel scale, SS
5. Screw, 300 SS
6. Washer, Aluminium
7. Gland, 300 SS
8. Follower-"O" ring, PTFE
9. "O" ring, Silicone
10. Pressure case yoke, Aluminium
11. Diaphragm, Buna
12. Diaphragm plate, V. Steel
13. Screw, 300 SS
14. Pressure case, Aluminium
15. Spring, Steel
16. Spring adjuster, 300 SS
17. Washer (stem), 300 SS
18. Nameplate, 300 SS
19. Drive screw, 300 SS
20. Spring seat, Aluminium
21. Stem (actuator), 300 SS

RCV	A	B	C	D	F	G	stroke
1/4" NPT	130	85	167	4-8	16	1/8"	11,1
1/2" NPT	163	109	217	6-10	22	1/4"	14,3