



Badger Meter Europa

PNEUMATIC ACTUATOR

Direction „Air to close--ATC“

Data Sheet

AC-CS

USA-Type 755-ATC

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 microprocessor-based control systems with a 4-20 mA output. Another advantage results in the short and precise floating times.

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

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.

OPTIONS

- ?? Other spring ranges 0.2 - 1.8 bar or 0.4 - 2 bar.
- ?? Manual handwheel for operation without air; can also be used as an up travel stop.
- ?? Side mounted positioner of various types.
- ?? Additional accessories like e.g. limit switches, solenoid valves, i/p-converter, gauges.
- ?? Silicone diaphragm

MATERIALS

- Body: Die cast aluminium with Epoxy coating, selectable 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

TECHNICAL DATA

Adjustment: You will find more details for the adjustment of the actuator as well as the calculation of the medium force on the actuator in the "Selection guide for standard applications". You should generally consider that at higher medium pressure a more exact and independent of the medium pressure regulation is possible by the additional use of a positioner.

Shut off force at standard setting (0.2 - 1.0 bar):

1/4" actuators: 94 N

1/2" actuators: 146 N

Effective shut off pressure 0.2 bar

The increase of the signal in closed position (1.0 bar) by 0.1 bar causes an increase in shut off force of:

1/4" actuators: +47 N

1/2" actuators: +73 N

Maximum shut off force (at 4 bar):

Actuators: 1/4" 1/2"

Spring (black) 1504 N 2304 N

Diaphragm effective area:

1/4" actuators: 47 cm² 1/2" actuators: 73 cm²

Maximum allowable air pressure: 4 bar

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 - 2.0 bar

Optional: 0.2 - 1.8 bar

Air failure: Spring to close

Weight: 1/4" actuators: 1.0 kg

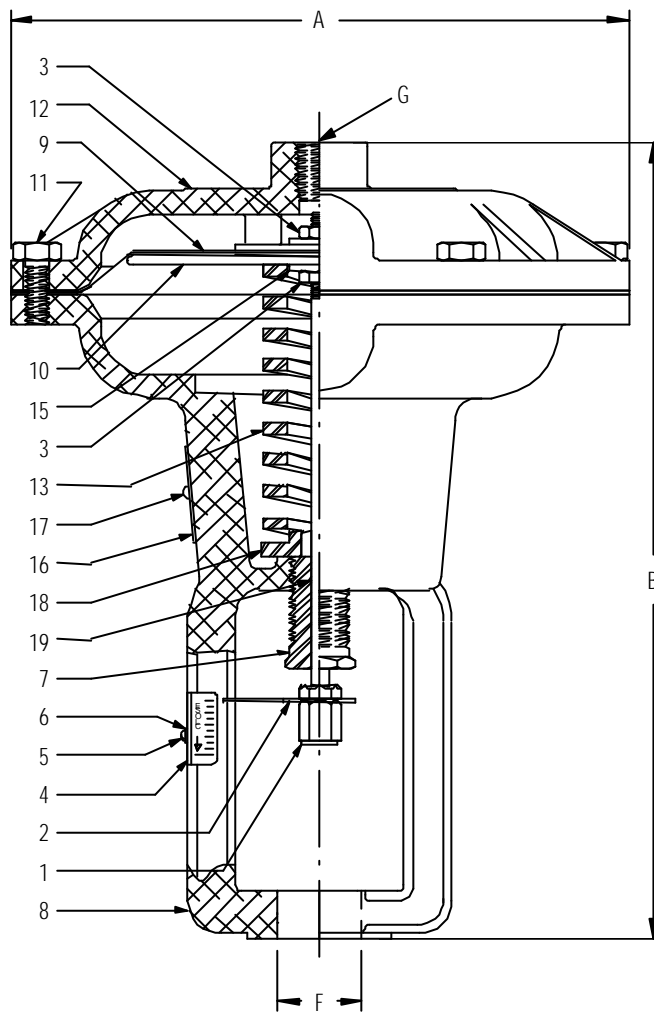
1/2" actuators: 1.9 kg

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|-------------------------------|-------------------------------|
| Description of items | Description of items |
| 1 Connector (stem), 300 SS | 10 Diaphragm plate., V. Steel |
| 2 Travel pointer, 300 SS | 11 Screw, 300 SS |
| 3 Stem nut, 300 SS | 12 Pressure case, Aluminium |
| 4 Travel scale, SS | 13 Spring, Steel |
| 5 Screw, 300 SS | 14 Washer, 300 SS |
| 6 Washer | 15 Nameplate, 300 SS |
| 7 Spring adjuster, 300 SS | 16 Drive screw, 300 SS |
| 8 Spring case yoke, Aluminium | 17 Spring seat |
| 9 Diaphragm, Buna on nylon | 18 Stem, Aluminium |



RCV	A	B	F	G	stroke
1/4" NPT	130	168	16	1/8"	11,1
1/2" NPT	163	213	22	1/4"	14,3

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