



## Pneumatic actuator type AC-CS / USA-Type 755-ATC

### Direction „Air to close 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 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.

#### 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

#### Features

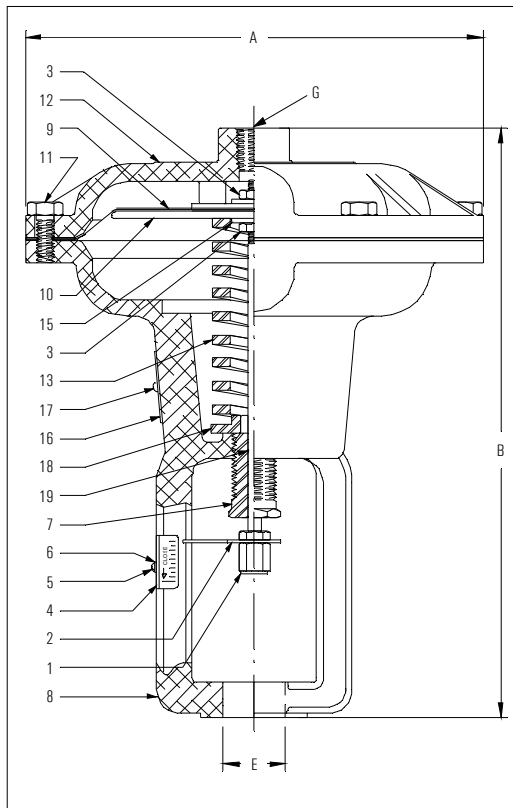
- Two sizes for 1/4" and 1/2"-1" Research Control® valves.
- Direction air to close – on air fail valve is open.
- Standard spring range 0.2 – 1.0 bar, continuously adjustable with a spring range of 0.8 bar.

#### 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   |

#### 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<br>1/2" actuators: 146 N   |  |        |
| Effective shut off pressure  | 1.0 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<br>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 cm <sup>2</sup><br>1/2" actuators: 73 cm <sup>2</sup>  |  |        |
| Maximum allowable air pressure   | Buna diaphragm: -30°C to 70°C<br>Silicone diaphragm: -30°C to 150°C   |  |        |
| Signal range   | Standard: 0.2 - 1 bar   | Optional: 0.4 - 2.0 bar<br>Optional: 0.2 - 1.8 bar |        |
| Air failure  | Spring to open  |  |        |
| Weight   | 1/4" actuators: 1.0 kg<br>1/2" actuators: 1.9 kg  |  |        |



### Description of items

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

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