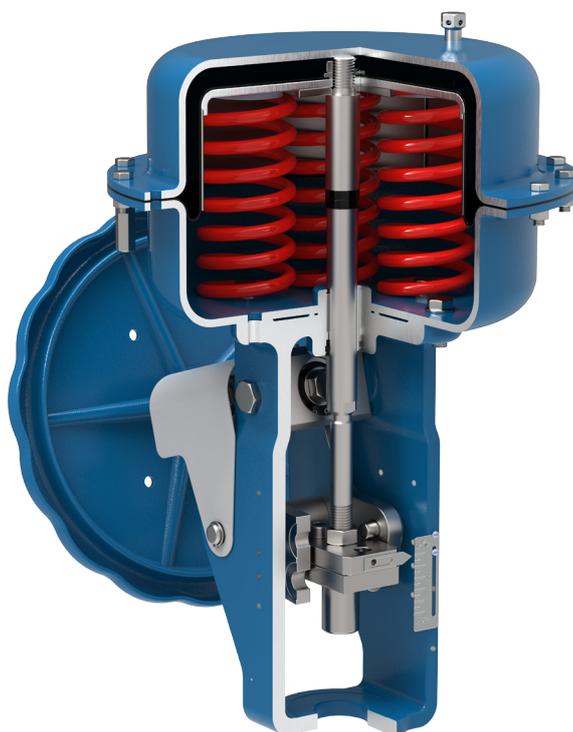


Pneumatic Actuator

Type LP1

The multi-spring diaphragm pneumatic actuators of LP1 type are applied for control operation of control valves and other positioning elements in industrial automatic systems.



TECHNICAL PARAMETERS

Actuator Function	<ul style="list-style-type: none"> • direct – the spring opens without air pressure • indirect – the spring closes without air pressure 	Potential Force [kn]	1 – 90 (air) 0.5 – 54 (spring)
Actuator Type	single-acting pneumatic diaphragm actuator	Maximum Supply Pressure [kpa]	140 / 250 / 450
Actuator Stroke [mm]	20, 38, 50, 60, 80, 100	Working Temperature Range	<ul style="list-style-type: none"> • -40 °C to +80 °C – standard • -60 °C to +80 °C – low-temperature design
Diaphragm Working Area [cm ²]	250, 400, 630, 1000, 1500, 3000	Hand Control	side handwheel
Spring Deflection Range [kpa]	<ul style="list-style-type: none"> • 20 – 100, 40 – 120, 60 – 140 (3 springs) • 40 – 200, 80 – 240, 120 – 280 (6 springs) • 180 – 380 (12 springs) 	Optional Accessories	pneumatic positioner electropneumatic positioner position transmitter, limit switches 3/2 – way control valve supply pressure reducing unit filter lock-up valve, pneumatic booster

PNEUMATIC ACTUATOR

OVERVIEW

There are three design options of the actuators:

- direct action (air - ejects the stem)- type P1,
- reverse action (air - retracts the stem)- type R1,
- direct action, handwheel- type P1B,
- reverse action, handwheel- type R1B

FEATURES

- completely reversible action, option to change spring range w/o extraparts,
- rigid structure of cast yoke,
- wide range of available forces,
- linear dependence of stem movement from control pressure, due to application of diaphragms with constant effective area,
- various spring ranges achieved by changing the number of springs and/or changing position of spacer elements,
- capability of the actuator to incorporate side-mounted handwheel, pneumatic or electro-pneumatic positioners, limit switches, air sets, three-way pneumatic solenoid valves, lockup valves, position transducers,
- high strength of diaphragms, springs and packings,
- low weights and small overall dimensions.

TECHNICAL SPECIFICATION

Input signal range:

20...100 kPa; 40...120 kPa; 60...140 kPa	- 3 springs
40...200 kPa; 80...240 kPa; 120...280 kPa	- 6 springs
180...380 kPa	- 12 springs

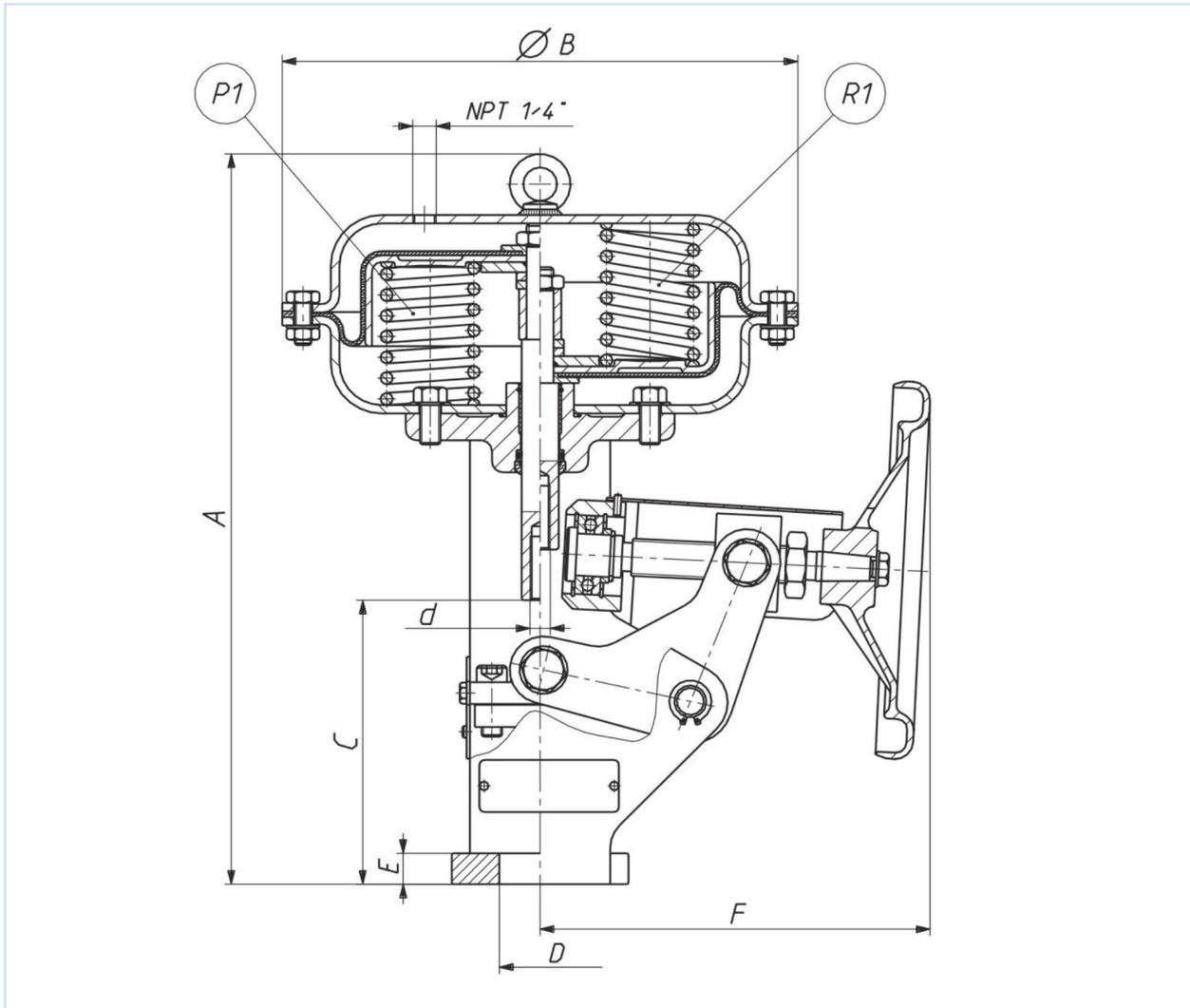
Doubled number of springs (TANDEM version) for the 1500T actuator

- max. supply pressure:	400 kPa (450 kPa for the range 180...380 kPa)
- working temperature:	- 40...+80°C
- relative humidity:	max. 98%

SPECIFICATION

Diaphragm effective area	Stroke	Spring range
[cm ²]	[mm]	[kPa]
400	20	1...6
630	20; 38	1...7
1000	38; 50; 63	
1500	38; 50; 63; 80; 100	
1500T	50; 63; 80; 100	

FIGURE 1 - DIMENSIONS AND WEIGHT



DIMENSIONS AND WEIGHT

Actuator size	A	B	C		D	E	F	d
			P1, P1B	R,1 R1B				
[mm]								
400	453	305	127	100	57,15	17,7	225	M12x1,25
630	548	375	127	107		84,15		22,5
1000	773	477	153	90	57,15	17,7	340	M12x1,25
					84,15; 95,25	22,5		M16x1,5
								M20x1,5
1500	833	550	184	102	57,15	17,7	410	M12x1,25
					84,15; 95,25	22,5		M16x1,5
								M20x1,5
1500T	1138	550			84,15; 95,25			M24x1,5

Actuator size	Weight	
	P1; R1	P1B; R1B
	[kg]	
400	20	28
630	40	50
1000	85	105
1500	120	150
1500T	225	255

VALVEA s.r.o.

Oldřichovice 1044
739 61 Třinec
Czech Republic
tel. no.: +420 558 321 088
email address: info@valvea.eu

 **VALVEA** Born to
control

www.valvea.eu