



Cert. No. LRQ 0963008

ISO 9001

spirax sarco

TI-P357-17
CH Issue 3

PN5700 Series Spring Extend Pneumatic Actuators for DN125 to DN200 Valves

Description

A range of compact linear actuators for matching the requirements of DN125 to DN200 valves at various differential pressures. The actuators are fitted with a mechanical stroke indicator and incorporate a semi-rolling diaphragm to produce good linearity over the operating stroke.

These actuators are designed to operate with two port KE and three port QL valves as detailed below.

Actuator type	Valve types	Valve sizes
50 mm travel	KE and QL series	DN125 to DN200
30 mm travel	KE series (Reduced K_{VS})	DN125 to DN200

Available types

PN5700 series spring extend spindle, multi-spring pillar mounted actuators.

Spring ranges

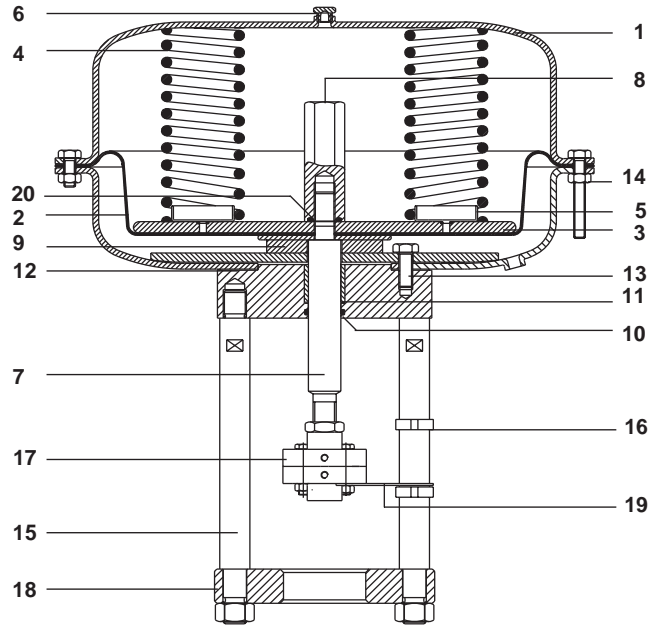
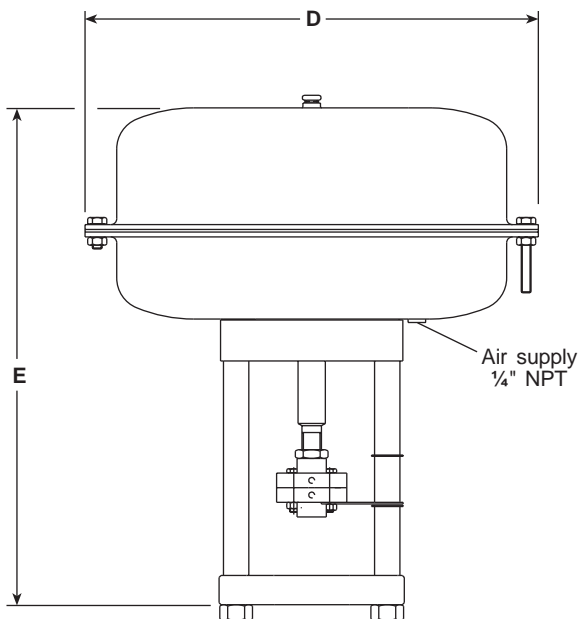
Actuator types	Spring range	Travel
PN5750	0.2 to 1.0 bar (0.4 - 1.2 bar)	50 mm
PN5756	1.0 to 3.0 bar	50 mm
PN5757	0.8 to 2.4 bar	50 mm

Technical data

Temperature range	-20°C to +100°C
Maximum operating pressure	4.5 bar g
Air supply connection	¼" NPT

Dimensions/weight (approximate) in mm and kg

Actuator	D	E	Weight
PN5700 series	465	505	50



Materials

No.	Part	Material
1	Diaphragm housing	Steel
2	Diaphragm	Reinforced nitrile rubber
3	Diaphragm plate	Steel
4	Spring	Spring steel
5	Spring guide	Zinc plated steel
6	Vent plug	Nickel plated brass
7	Spindle	Stainless steel
8	Lock-nut / spacer	Stainless steel
9	Clamp plate	Zinc plated steel
10	Spindle 'O' ring	Nitrile rubber
11	Guide bush	Bronze
12	Gasket	Non asbestos fibre
13	Fixing screws	Steel
14	Housing bolts and nuts	Steel
15	Pillar	Zinc plated steel
16	Travel indicator	Stainless steel
17	Linkage set	Zinc plated steel
18	Mounting plate	Zinc plated steel
19	Anti-rotation plate	Zinc plated steel
20	Sealing 'O' ring	Nitrile rubber
21	Pillar nut	Zinc plated steel

Differential pressures for PN5700 actuators

Valve size	DN125			DN150			DN200					
Travel mm	50	30		50	30		50	30				
Valve seat size	Full Kvs	Reduced Kvs			Full Kvs	Reduced Kvs			Full Kvs	Reduced Kvs		
		No. 1	No. 2	No. 3		No. 1	No. 2	No. 3		No. 1	No. 2	No. 3

KE 2-port valves

Actuator	Spring range bar g	Minimum air pressure bar g	Positioner required	Maximum differential pressure (bar)											
				PN5750	0.2 - 1.0	1.2	Optional	0.77	-	-	-	0.44	0.77	-	-
	0.4 - 1.2	1.4	Optional	2.74	-	-	-	1.81	2.74	-	-	0.90	1.81	2.74	-
PN5756	1.0 - 3.0	3.5	Yes	9.40	-	-	-	6.40	9.40	-	-	3.40	6.40	9.40	-
	1.8 - 3.0*	3.5	Yes	-	22	35	40	-	-	22	35	-	-	-	22

*Standard 50 mm travel actuator will provide 30 mm travel across spring range shown.

QL 3-port valves

Actuator	Spring range bar g	Minimum air pressure bar g	Positioner required	Maximum differential pressure (bar)											
				PN5750	0.2 - 1.0	1.2	Optional	0.35	-	-	-	0.15	-	-	-
	0.4 - 1.2	1.8	Optional	2.70	-	-	-	1.80	-	-	-	0.90	-	-	-
PN5757	0.8 - 2.4	3.5	Yes	6.60	-	-	-	4.50	-	-	-	2.40	-	-	-

Note: Differential pressures shown above apply to valves having chevron stem seals or bellow sealed stems. For valves having graphite packed stem seals, refer to Spirax Sarco.

Installation

Actuators should be mounted on the valve with the stem in a vertical position. Installation and Maintenance Instructions are supplied with the product.

How to order

Example: 1 off Spirax Sarco PN5750 pneumatic actuator.

Spare parts

The spare parts available are indicated by capital letters. The other parts are not supplied as spares.

Available spares

Stem seal kit	A
Diaphragm kit	B
Spring kit	C
Linkage kit (lock-nut, top adaptor, bottom adaptor, bolts and nuts)	D, E, F, G

How to order spares

Always order spares by using the description in the column headed 'Available spares' and state the actuator type.

Example: 1 - Diaphragm kit for a PN5750 pneumatic actuator.

