

## LINEAR PNEUMATIC ACTUATORS PA45

### DESCRIPTION

Pneumatic multi-spring linear actuators PA series for modulating and open-close duty, ideal for demanding industrial valve control tasks.

### MAIN FEATURES

Direct and reverse action actuators for a maximum of 50 mm valve stroke.

Operation with compressed air, nitrogen or clean water.

**OPTIONS:** Limit switches.  
Different types of positioners.  
Stainless steel construction.

**USE:** Actuating of V series Adcatrol control valves, or others on request.

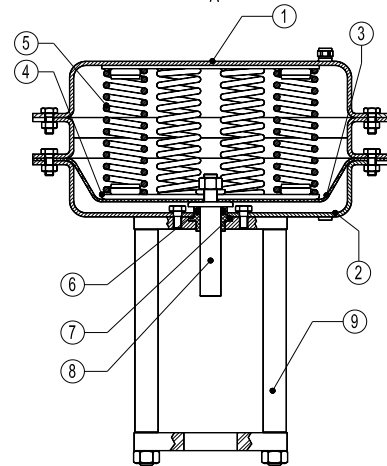
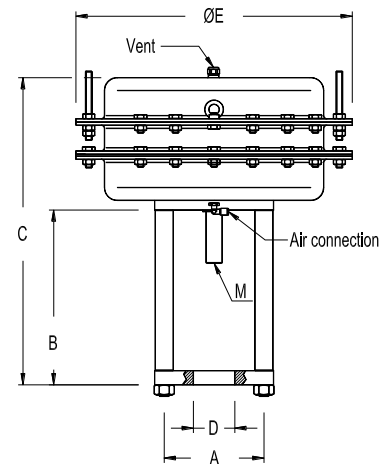
**AIR SUPPLY:** Max. 6 bar.

**CONNECTION:** 1/4".

**AVAILABLE**

**MODELS:** PA45.

**MAX.AMBIENT TEMPERATURE** -20 °C to 80 °C.



DIMENSIONS (mm)								
MODEL	A	B	C	D	E	M	STROKE	WGT. (kg)
PA45.B	110	265	473	45	430	M16	50	45
PA45.C	155	272	480	65	430	M16	50	45

MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Body (steel)	S235JRG2 / 1.0038
	Body (st. steel)	AISI 304 / 1.4301
2	Body (steel)	S235JRG2 / 1.0038
	Body (st. steel)	AISI 304 / 1.4301
3	* Diaphragm	NBR70
4	Diaphragm plate	S235JRG2 / 1.0038
5	Spring	Spring steel
6	* Seal ring	NBR
7	Guide	Nylon
8	Rod	AISI 316 / 1.4401
9	Yoke (steel)	C45E / 1.1191
	Yoke (st. steel)	AISI 304/ 1.4301

\* Available spare parts.

**Kvs VALUES FOR ADCATROL V16 / V25 / V40 – STANDARD PARABOLIC PLUGS**

SEAT Ø (mm)	VALVE STROKE (mm)	SIZES												
		DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	
4	20	0,1	–	–	–	–	–	–	–	–	–	–	–	–
4		0,25	–	–	–	–	–	–	–	–	–	–	–	–
4		0,5	–	–	–	–	–	–	–	–	–	–	–	–
8		1	–	–	–	–	–	–	–	–	–	–	–	–
8		1,7	1,7	–	–	–	–	–	–	–	–	–	–	–
12		2,1	2,5	3	–	–	–	–	–	–	–	–	–	–
12		2,7	3,7	4	4,3	–	–	–	–	–	–	–	–	–
15		3,8	4,7	5,8	6,1	6,8	–	–	–	–	–	–	–	–
20		–	5,1	6,3	7,8	9,3	10,2	–	–	–	–	–	–	–
25		–	–	9,4	11,7	14,6	17,5	18,7	–	–	–	–	–	–
32		–	–	–	15,4	19,2	24	28	30,5	–	–	–	–	–
40		–	–	–	–	22,2	27,7	34,6	40,8	44,7	–	–	–	–
50		–	–	–	–	–	40,1	49	61	68	74,1	–	–	–
65		30 / 40	–	–	–	–	–	63,4	79,2	91	109,3	119	–	–
80			–	–	–	–	–	–	89,7	112,1	139,8	166	182	–
100	–		–	–	–	–	–	–	136,7	170,8	212,5	243	–	
125	40 / 50	–	–	–	–	–	–	–	–	230,6	288,2	359,4	–	
150		–	–	–	–	–	–	–	–	–	316,1	396	–	
200	50 / 80	–	–	–	–	–	–	–	–	–	–	–	590	

**MAX. PERM. PRESSURE DROP (bar) – N.C. (Fluid to open) – Reverse action PA45 series actuator (air signal to close)**

ACTUATOR TYPE	SPRING RANGE (bar)	STROKE (mm)	AIR SUPPLY (bar)	SIZES											
				DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
PA45.5B	1,1 ÷ 2,1	40	2,5	–	–	–	–	–	–	22	16	10	–	–	–
	0,5 ÷ 2,1	50		–	–	–	–	–	–	19	14	8	–	–	–
PA45.5C	1,1 ÷ 2,1	40	2,5	–	–	–	–	–	–	–	–	4	3	–	
	0,5 ÷ 2,1	50		–	–	–	–	–	–	–	–	–	–	1	
PA45.8B	1,7 ÷ 3,3	40	3,8	–	–	–	–	–	–	40	28	17	–	–	–
	1,3 ÷ 3,3	50		–	–	–	–	–	–	30	22	13	–	–	–
PA45.8C	1,7 ÷ 3,3	40	3,8	–	–	–	–	–	–	–	–	9	6	3	
	1,3 ÷ 3,3	50		–	–	–	–	–	–	–	–	7	5	2	
PA45.10B	2,1 ÷ 4,1	40	4,5	–	–	–	–	–	–	–	–	22	–	–	–
	1,6 ÷ 4,1	50		–	–	–	–	–	–	–	–	18	–	–	–
PA45.10C	2,1 ÷ 4,1	40	4,5	–	–	–	–	–	–	–	–	12	8	4	
	1,6 ÷ 4,1	50		–	–	–	–	–	–	–	–	10	7	3,5	
PA45.12C	2,5 ÷ 4,9	40	5,5	–	–	–	–	–	–	–	–	15	10,5	5,5	
	1,9 ÷ 4,9	50		–	–	–	–	–	–	–	–	12	8	4,5	
PA45.14C	2,9 ÷ 5,7	40	6	–	–	–	–	–	–	–	–	18	12	6,5	
	2,2 ÷ 5,7	50		–	–	–	–	–	–	–	–	14	10	5,5	

**Important:** The pressure drop values must be used within the body rating limits. The pressure drop values refer to closed valves. In case of different valve strokes, plug designs (perforated and on-off ) or different actuator, please consult the right table or, if not available, consult factory.

ORDERING CODES PA45	
ACTUATOR CODES (PNEUMATIC)	P.
<b>Group designation</b>	
Multi-spring pneumatic linear actuator	
<b>Actuator size</b>	
PA45.4B	14
PA45.4C	24
PA45.5B *	15
PA45.5C *	25
PA45.8B *	18
PA45.8C *	28
PA45.10B *	110
PA45.10C *	210
PA45.12C *	212
PA45.14C *	214
<b>Actuator type</b>	
Direct action (air to close)	D
Reverse action (air to open)	R
<b>Control type</b>	
Option A	A
Option B	B

\* Reverse action only.

→ To be introduced on ".X.", when composing valve ordering codes.

Example:

V25S valve model, EQP metal plug, PTFE/GR stem sealing, DN 125, complete with reverse action PA45.5C, spring range 1,1 – 2,1 bar:

Code: PV.25S13N125.25RA

PA45 SPRING RANGES (bar)						
OPTION	4B, C	5B, C	8B, C	10B, C	12C	14C
A	0,4 – 4	1,1 – 2,1	1,7 – 3,3	2,1 – 4,1	2,5 – 4,9	2,9 – 5,7
B	–	0,5 – 2,1	1,3 – 3,3	1,6 – 4,1	1,9 – 4,9	2,2 – 5,7