

Pneumatic Actuator

RPA Series



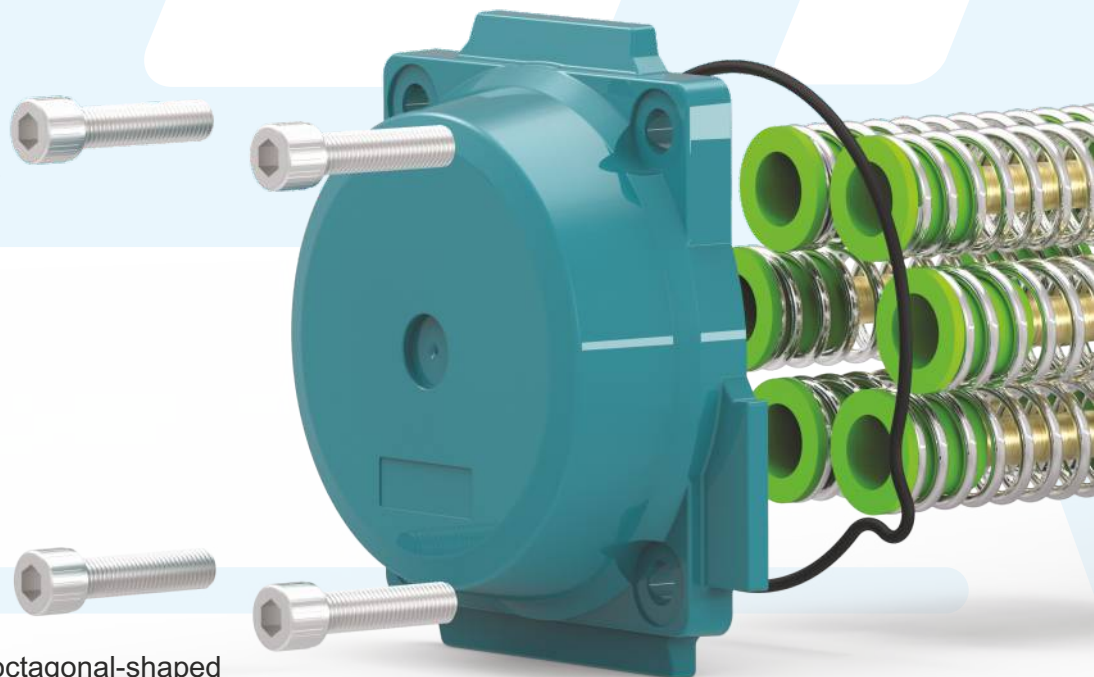
What is a Pneumatic Actuator?

The Lubi RPA Series Pneumatic Actuator is a quarter-turn type actuator. It provides a rugged solution with a compact and symmetrical design, along with high quality, reliability, and cost-effectiveness.

These actuators are mainly used for the quick operation of rotary-type ON-OFF valves, such as Ball Valves and Butterfly Valves. The design of these actuators ensures a high cycle life without any wear and tear.

Main Features

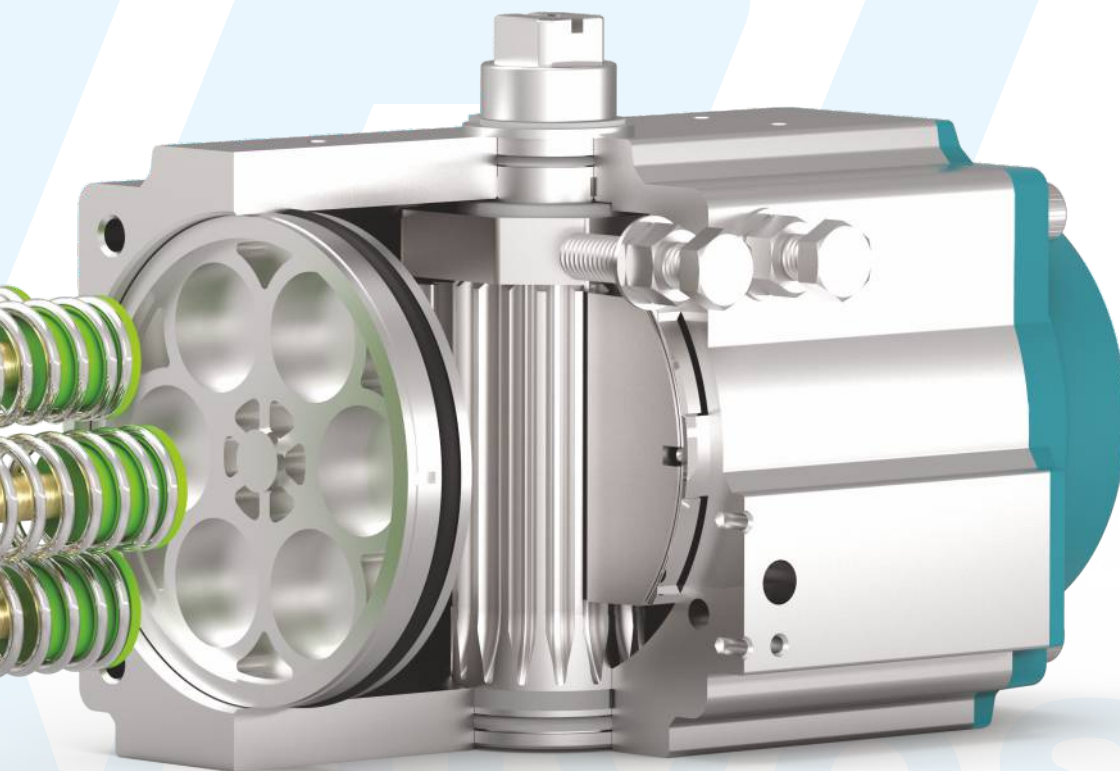
1. Hard-anodized body to reduce friction, increase durability, and improve corrosion resistance.
2. Large piston design to minimize backlash between the rack and pinion, ensuring precise engagement. Advanced rack and pinion design to ensure stable torque output throughout the range of travel.
3. Travel adjustment is possible with the help of two external travel stops, allowing for 5° of adjustment. This enables the actuator travel to be adjusted from 80° to 100°.
4. A replaceable guide plate is installed on the piston rack to absorb lateral deflection and ensure smooth operation by eliminating metal-to-metal contact. This improves wear resistance and increases efficiency.
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6. Self-lubricating drive shaft bearings provide low friction, high cycle life, and reliable performance.
7. The pinion is fitted with an octagonal-shaped anti-blowout device to ensure safety and a high cycle life.

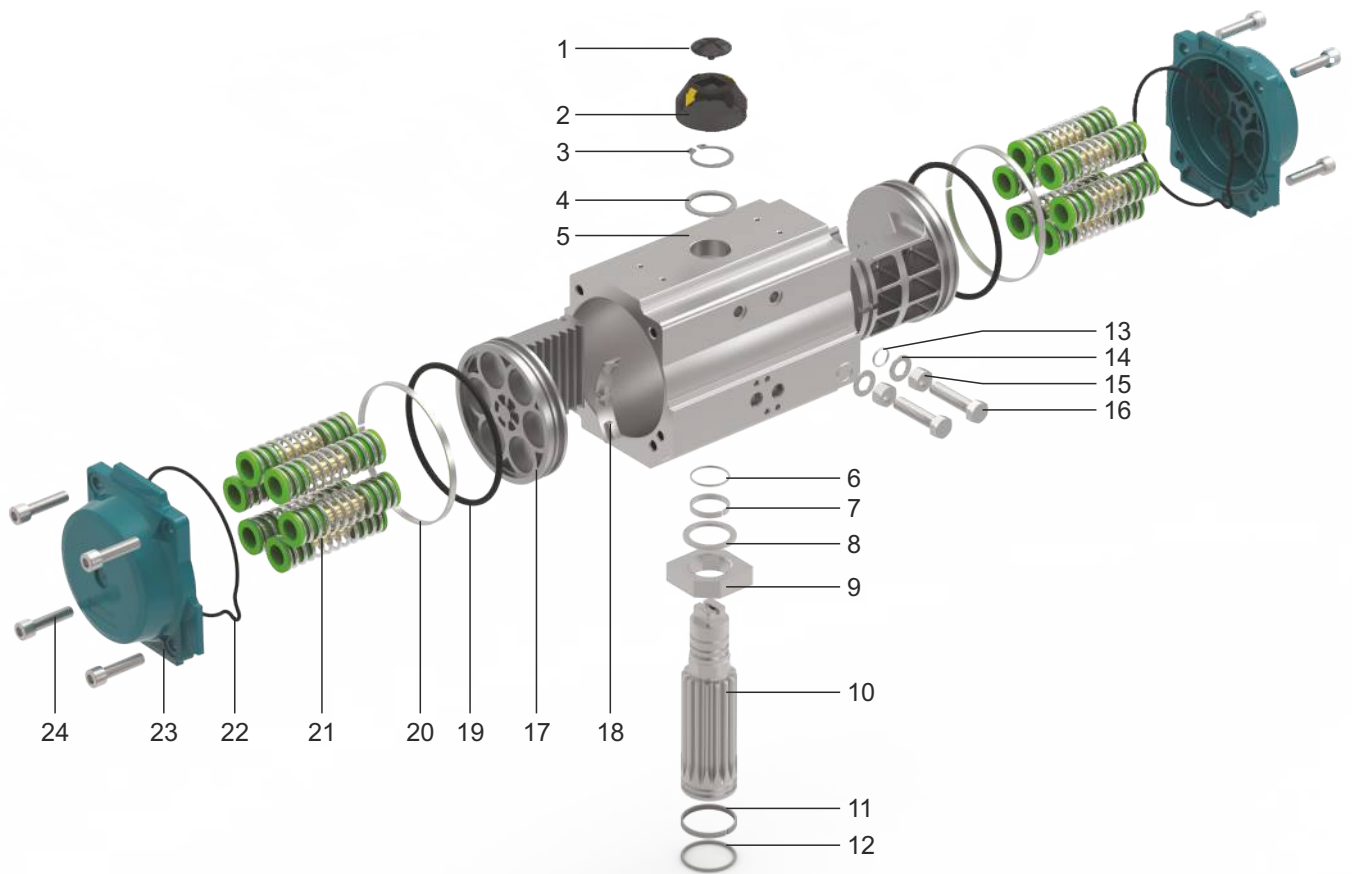


- 8. A NAMUR standard Top Mounting Interface is provided for the direct installation of accessories such as limit switch boxes and positioners.
- 9. A NAMUR standard Solenoid Mounting Pad is provided for the direct mounting of solenoid valves to actuators.
- 10. Valve mounting pads conform to the ISO 5211 standard for quarter-turn valves.



- 11. A visual position indicator is provided as standard on top.
- 12. Actuator rotation direction is field-reversible by simply removing the pistons, rotating them by 180°, and re-installing.





Material of Construction

No.	Description	QTY	Standard Material
1	Indicator Screw	1	ABS
2	Position Indicator	1	ABS
3	Spring Clip	1	Stainless Steel
4	Gasket	1	POM
5	Housing	1	Aluminum Extrusion
6	Top O-Ring	1	NBR / FPM
7	Top Bearing	1	POM
8	Spacer Washer	1	POM
9	Travel Cam	1	Carbon Steel
10	Drive Shaft	1	Carbon Steel
11	Bottom Bearing	1	POM
12	Bottom O-Ring	1	NBR / FPM
13	Adjust O-Ring	2	NBR
14	Adjust Plan Washer	2	Stainless Steel
15	Adjust Nut	2	Stainless Steel
16	Adjust Bolt	2	Stainless Steel
17	Piston	2	Aluminum Die Casting
18	Guide Plate	2	PA66
19	Piston O-Ring	2	NBR / FPM
20	Piston Bearing	2	POM
21	Spring Assembly	6-12	Spring Steel, Die Casting
22	End Cover O-Ring	2	NBR / FPM
23	End Cover	2	Aluminum Die Casting
24	End Cover Bolt	8	Stainless Steel



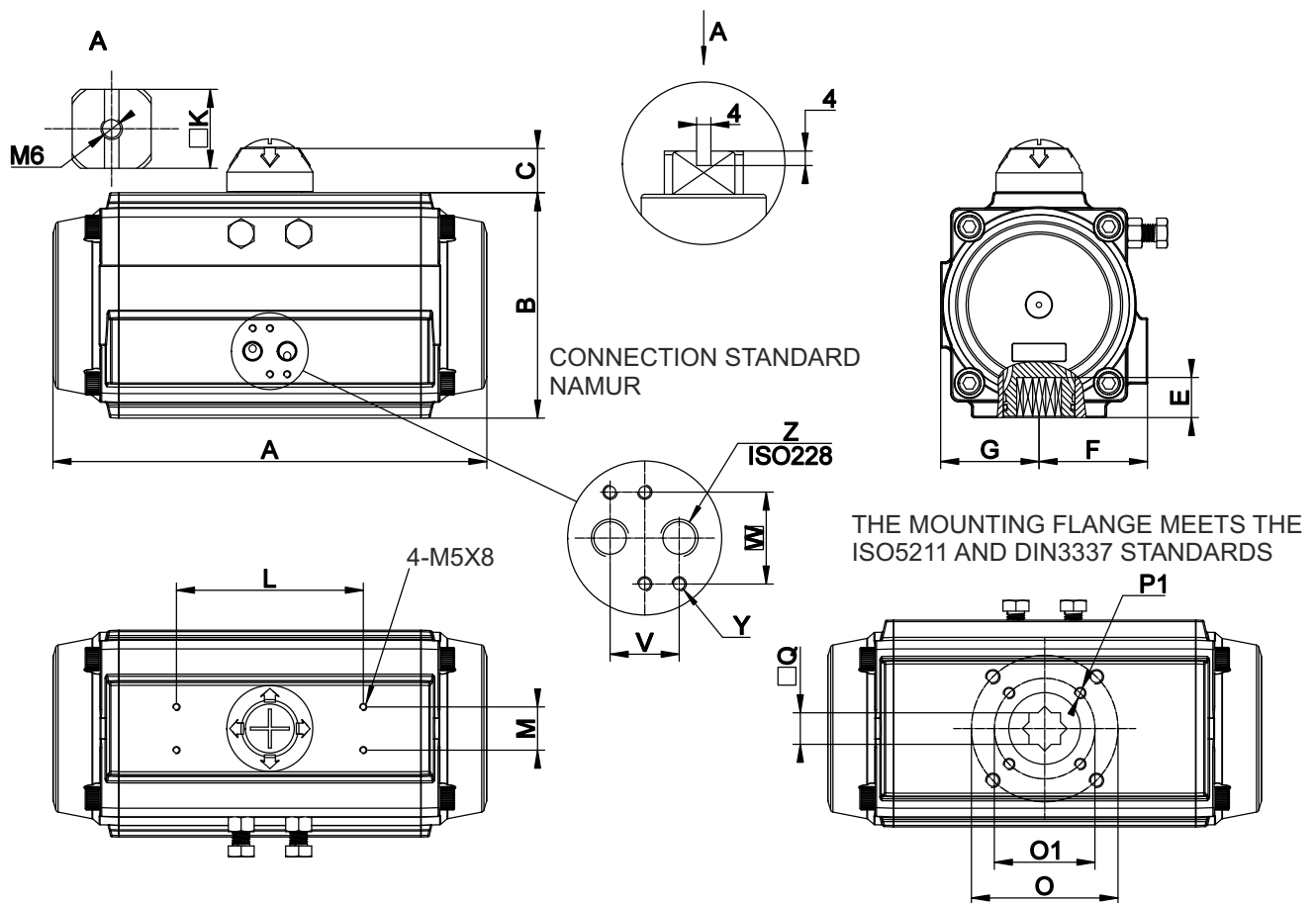
Output Torque - Double Acting Actuators

Model	Air supply pressure (Unit:bar)										Weight (kg)
	2	2.5	3	4	4.5	5	5.5	6	7	8	
RPA032D	3	4	5	6	7	8	8	9	11	12	0.57
RPA052D	8	10	12	16	18	20	22	24	28	32	1.2
RPA063D	15	18	22	29	33	36	40	44	51	58	2.0
RPA075D	20	25	30	40	45	50	55	60	70	80	2.45
RPA083D	31	39	47	63	70	78	86	94	110	125	2.95
RPA092D	45	56	68	90	102	113	124	135	158	181	4.15
RPA125D	100	125	150	200	226	251	276	301	351	401	5.8
RPA140D	171	214	256	342	385	427	470	513	598	684	13.22

Output Torque - Single Acting Actuators

Air Pressure		Output torque of air springs												Spring's output	
		3 BAR		4 BAR		5 BAR		6 BAR		7 BAR		8 BAR			
Model	Spring	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
	Qty.	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
RPA052	S05	8.8	7.3	13.0	11.6	-	-	-	-	-	-	-	-	5.4	4.0
	S06	8.0	6.3	12.2	10.5	16.5	14.8	-	-	-	-	-	-	6.5	4.7
	S07	8.2	5.2	11.5	9.4	15.7	13.7	20.0	17.9	-	-	-	-	7.6	5.5
	S08	6.4	4.1	10.7	8.3	14.9	12.6	19.2	16.8	23.4	21.1	-	-	8.6	6.3
	S09	-	-	9.9	7.3	14.1	11.5	18.4	15.8	22.6	20.0	26.9	24.3	9.7	7.1
	S10	-	-	9.1	6.2	13.3	10.4	17.6	14.7	21.8	18.9	16.1	23.2	10.8	7.9
	S11	-	-	-	-	12.5	9.4	16.8	13.6	21.0	17.9	25.3	22.1	11.9	8.7
	S12	-	-	-	-	11.8	8.3	16.0	12.5	20.3	16.8	24.5	21.0	13.0	9.5
RPA063	S05	15.7	12.5	23.1	20.0	-	-	-	-	-	-	-	-	9.9	6.8
	S06	14.3	10.5	21.8	18.0	29.3	25.5	-	-	-	-	-	-	11.9	8.1
	S07	13.0	8.5	20.4	16.0	27.9	23.5	35.4	31.0	-	-	-	-	13.9	9.5
	S08	11.6	6.5	19.1	14.0	26.6	21.5	34.0	29.0	41.5	36.5	-	-	15.9	10.8
	S09	-	-	17.7	12.0	25.2	19.5	32.7	27.0	40.2	34.5	47.6	42.0	17.9	12.2
	S10	-	-	16.4	10.0	23.8	17.5	31.3	25.0	38.8	32.5	46.3	40.0	19.9	13.6
	S11	-	-	-	-	22.5	15.5	30.0	23.0	37.5	30.5	44.9	38.0	21.9	14.9
	S12	-	-	-	-	21.1	13.5	28.6	21.0	36.1	28.5	43.6	36.0	23.9	16.3
RPA083	S05	33.8	27.2	50.1	43.4	-	-	-	-	-	-	-	-	21.5	14.9
	S06	30.9	22.9	47.1	39.1	63.3	55.3	-	-	-	-	-	-	25.8	17.8
	S07	27.9	18.6	44.1	34.8	60.4	51.0	76.6	67.3	-	-	-	-	30.1	20.8
	S08	24.9	14.3	41.2	30.5	57.4	46.7	73.6	63.0	89.9	79.2	-	-	34.4	23.8
	S09	-	-	38.2	36.2	54.4	42.4	70.7	58.7	86.9	74.9	103.1	91.1	38.7	26.7
	S10	-	-	35.2	21.9	51.5	38.1	67.7	54.4	83.9	70.6	100.2	86.8	43.0	29.7
	S11	-	-	-	-	48.5	33.8	64.7	50.1	81.0	66.3	97.2	82.5	47.3	32.7
	S12	-	-	-	-	45.5	29.5	61.8	45.8	78.0	62.0	94.2	78.2	51.6	35.6
RPA092	S05	48.0	39.5	71.3	62.8	-	-	-	-	-	-	-	-	30.3	21.8
	S06	43.7	33.5	66.9	56.7	90.2	80.0	-	-	-	-	-	-	36.3	26.1
	S07	39.3	27.4	62.9	50.7	85.8	73.9	109.1	97.2	-	-	-	-	42.4	30.5
	S08	34.9	21.1	58.2	44.6	81.5	67.9	104.7	91.2	128.0	114.4	-	-	48.4	34.9
	S09	-	-	53.8	38.6	77.1	61.8	100.4	85.1	123.6	108.4	146.9	131.6	54.5	39.2
	S10	-	-	49.5	32.5	72.8	55.8	96.0	79.0	119.3	102.3	142.6	125.6	60.6	43.6
	S11	-	-	-	-	68.4	49.7	91.7	73.0	114.9	96.3	138.2	119.5	66.6	47.9
	S12	-	-	-	-	64.0	43.7	87.3	66.9	110.6	90.2	133.8	113.5	72.7	52.3
RPA105	S05	64.6	57.7	99.2	92.4	-	-	-	-	-	-	-	-	46.2	39.3
	S06	56.7	48.5	91.4	83.1	126.0	117.8	-	-	-	-	-	-	55.4	47.2
	S07	48.9	39.3	83.5	79.9	118.2	108.5	152.8	143.2	-	-	-	-	64.6	55.0
	S08	41.0	30.0	75.7	64.7	110.3	99.3	144.9	133.9	179.6	168.6	-	-	73.9	62.9
	S09	-	-	67.8	55.4	102.4	90.1	137.1	124.7	171.7	159.3	206.3	194.0	81.1	70.7
	S10	-	-	59.9	46.2	94.6	80.8	129.2	115.5	163.9	150.1	198.5	184.7	92.3	78.6
	S11	-	-	-	-	86.7	71.6	121.4	106.2	156.0	140.9	190.6	175.5	101.6	86.5
	S12	-	-	-	-	78.9	62.4	113.5	97.0	148.1	131.6	182.8	186.3	110.8	94.3
RPA125	S05	131	104	192	166	-	-	-	-	-	-	-	-	80	53
	S06	120	88	182	150	243	211	-	-	-	-	-	-	96	64
	S07	110	72	171	134	232	195	294	257	-	-	-	-	112	74
	S08	99	56	161	118	222	179	283	241	345	302	-	-	128	85
	S09	-	-	150	102	211	163	273	225	334	334	395	347	144	96
	S10	-	-	139	86	201	147	262	209	323	323	385	331	160	106
	S11	-	-	-	-	190	131	251	193	193	313	374	315	175	117
	S12	-	-	-	-	179	115	241	177	177	302	363	299	191	127
RPA140	S05	188	144	280	236	236	-	-	-	-	-	-	-	133	89
	S06	170	177	263	209	209	355	302	-	-	-	-	-	160	107
	S07	152	90	245	183	183	337	275	368	-	-	-	-	187	125
	S08	135	64	209	156	156	319	249	341	504	433	-	-	213	142
	S09	-	-	191	129	129	302	222	314	486	407	579	499	240	160
	S10	-	-	-	103	103	284	195	288	469	380	561	472	267	178
	S11	-	-	-	-	-	266	169	261	451	353	543	446	293	196
	S12	-	-	-	-	-	248	142	234	433	327	525	419	320	214
RPA160	S05	286	222	427	362	-	-	-	-	-	-	-	-	201	136
	S06	259	182	400	322	541	463	-	-	-	-	-	-	241	163
	S07	232	141	373	282	513	423	654	564	-	-	-	-	281	190
	S08	205	101	345	242	486	383	627	524	768	664	-	-	321	218
	S09	-	-	318	162	459	343	600	483	741	624	881	765	361	245
	S10	-	-	291	-	432	303	573	443	713	584	854	725	401	272
	S11	-	-	-	-	405	263	545	403	686	544	827	685	441	299
	S12	-	-	-	-	377	222	518	363	659	504	800	645	481	326

Dimension Detail (mm)



Model	RPA 052	RPA 063	RPA 075	RPA 083	RPA 092	RPA 105	RPA 125	RPA 140	RPA 160
ISO Flange	F03/F05	F05/F07	F05/F07	F05/F07	F05/F07	F07/F10	F07/F10	F10/F12	F10/F12
A	151	174	180	208	245	274	302	393	442
B	73	89	101	110	118	134	157	175	196
C	20	20	20	20	20	30	30	30	30
E	13	17	17	20	20	20	27	30	30
F	39	45	52	55	59	66	76	81	93
G	30	38	44	46	52	58	69	77	89
L	80	80	80	80	80	80	130	130	130
M	30	30	30	30	30	30	30	30	30
O	50	70	70	70	70	102	102	125	125
P	4-M6X9	4-M8X12	4-M8X12	4-M8X12	4-M8X12	4-M10X15	4-M10X15	4-M12X18	4-M12X18
O1	36	50	50	50	50	70	70	102	102
P1	4-M5X8	4-M6X9	4-M6X9	4-M6X9	4-M6X9	4-M8X12	4-M8X12	4-M10X15	4-M10X15
Q	11	14	14	17	17	17	22	27	27
V	24	24	24	24	24	24	24	24	24
W	36	36	36	36	36	36	36	36	36
Y	4-M5X8	4-M5X8	4-M5X8	4-M5X8	4-M5X8	4-M5X8	4-M5X8	4-M5X8	4-M5X8
Z	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"
*Weight (kg)	1.31	2.14	2.67	3.29	4.73	6.53	10.01	15.56	21.67

* Weight mentioned is of Single Acting Actuators

Ordering Key

RPA	075	S	10
Series	Cylinder Diameter	Type	Spring Qty. (Only for S/A)
Lubi	032	D - Double Acting	05
Rack & Pinion	052	S - Single Acting	06
(Pneumatic Actuator)	063		07
	075		08
	083		09
	092		10
	105		11
	125		12
	140		
	160		



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Product Improvement is a continuous process at 'LUBI'. The data given in this publication is therefore subject to revision.



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