

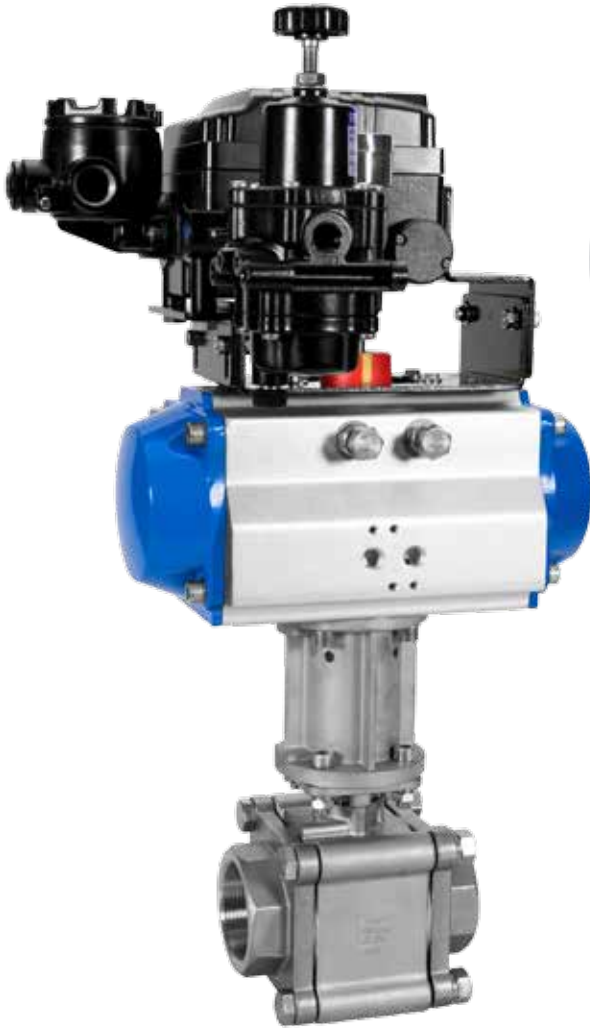


# **PNEUMATIC ACTUATORS**

# PNEUMATIC ACTUATOR



M306  
RP100  
4" stem extension  
YT-1000  
YT-200



RP100  
YT-850  
YTS1  
WT8851

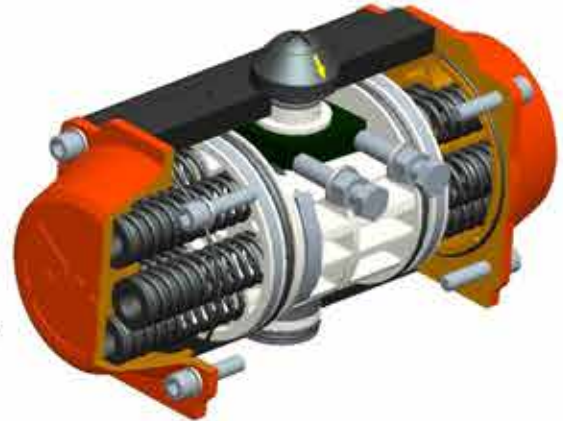


RP100  
YT-1200  
YT-200

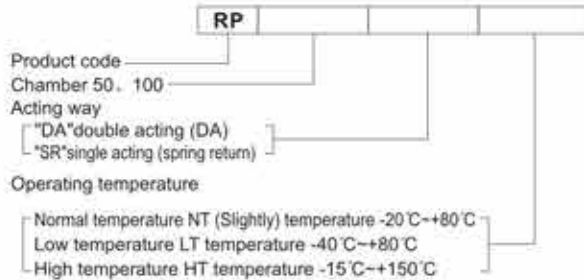
## Customized Service

The pneumatic actuator has been designed, developed and tested incorporating with the latest technology and materials available. With some innovative design features. As a result of this product research we have obtained a high grade product with the following characteristics:

- \*Reliability
- \*High performance
- \*Wider product range permitting a more economical sizing selection
- \*Innovative and patented universal drive shaft and multifunction position indicator
- \*Full compliance with latest worldwide specifications
- \*A wide selection of highest levels of corrosion protection technology
- \*Aesthetically compact and modern style with no external cavities to avoid deposit build up



## Product specification



Description: Actuator Mode RP50, Double Acting and Low Temperature

Description: Actuator Mode RP88, Single Acting (Spring Return) and Normal Temperature

## Instructions

### 1. Operating media:

Dry or lubricated air or inert / non-corrosive gases on condition that they are compatible with internal actuator parts and lubricant. The operating media must have a dew point equal to -20°C(-40°F) or at least 10°C below the ambient temperature. The maximum particle size must not exceed 30µm.

### 2. Supplying pressure:

For Double Acting and spring Return actuators the maximum supply pressure is 8 Bar (116PSI), minimum supply pressure is 2.5 Bar (36PSI)

### 3. Operating Temperature:

- \*Standard product from -20°C(-4°F) to +80°C (-176°F)
- \*Low temperature LT actuator with VMQ "O" rings from -40°C (-40°F) to +80°C(+176°F)
- \*High temperature HT actuator with FPM "O" rings from -15°C (+5°F) to +150°C(+302°F) Caution: For low and high temperature service. Special lubricant is required. Please contact PMP for each application. High and low temperature will vary change the output torque of the actuator.

### 4. Stroke:

There is ±5° adjustable angle at the position of open and end of close.

### 5. Operating Time:

See Technical Data sheet

### 6. Lubrication:

Actuators are factory lubricated for the life under normal operating conditions. The standard lubricant is suitable for use from -20°C(-4°F)+80°C (+176°F) For low (LT) and high (HT) temperature service, where special lubricant is required please contact PMP.

### 7. Construction:

Twin piston rack and pinion actuator design suitable for both indoor and outdoor installation.

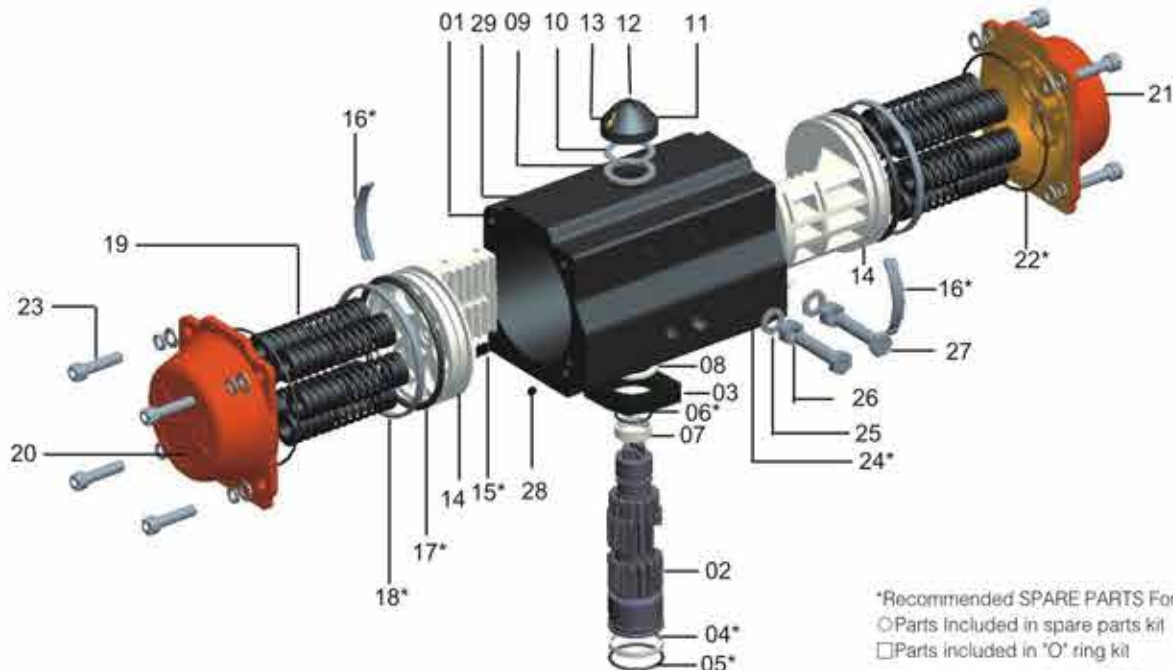
### 8. Protection and Corrosion Resistance:

Actuators are supplied with corrosion protections for normal environments. For sever duties select from the protection level table or contact PMP.

**Parts and Materials**

Part No.	Spare parts	UNIT Q. TY	PART (DESCRIPTION)	STANDARD MATERIAL	CORROSION PROTECTION *A*(A)	OPTIONAL MATERIAL
01		1	BODY	Extruded Aluminum alloy	Anodized	--
02		1	DRIVE SHAFT	Steel alloy	Oxidation	--
03		1	ADJUST CAM	45#	--	--
04*	○	1	BOTTOM BEARING	POM	--	--
05*	○	1	*O*RING (Pinion bottom)	NBR	--	FPM/ VMQ
06*	○	1	*O*RING (Pinion top)	NBR	--	FPM/ VMQ
07*	○	1	TOP BEARING	POM	--	--
08		2	THRUST BEARING (Pinion)	POM	--	--
09		1	WASHER	Stainless Steel	Nickel plated	--
10		1	CIR CLIP	Stainless Steel	--	--
11		1	INDICATOR	Nylon PA	--	--
12		1	SCREW	Nylon PA	--	--
13		2	INDICATOR FLAKE	Nylon PA	--	--
14		2	PISTON	Die Cast Aluminum alloy	Anodized	--
15*	○	2	PLUG	POM	--	--
16*	○	2	BEARING (Back piston)	POM	--	--
17*	○	2	BEARING	POM	--	FPM/ VMQ
18*		2	*O* RING (Piston)	NBR	--	--
19		5-12	SPRING	Steel Alloy	--	--
20		1	LEFT END CAP	Die Cast Aluminum alloy	Anodized	--
21		1	RIGHT END CAP	Die Cast Aluminum alloy	Anodized	--
22*	○	2	*O* RING (END CAP)	NBR	--	FPM/ VMQ
23		8C	SREW	Stainless Steel	--	--
24*	○	2	*O* RING (Stop Screw)	NBR	--	FPM/ VMQ
25		2	WASHER	Stainless Steel	--	--
26		2	NUT	Stainless Steel	--	--
27		2	Adjustment SCREW	Stainless Steel	--	--
28		2	PLUG	NBR	--	FPM/ VMQ
29		1	LABEL	Polyester-Aluminum	--	--

PMP reserves the right to amend the technical parameters.

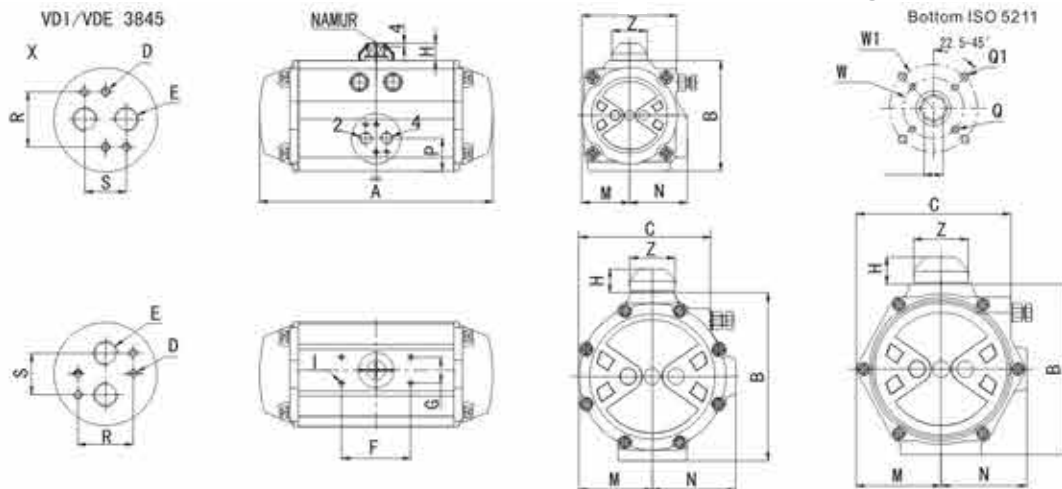


\*Recommended SPARE PARTS For maintenance  
 ○Parts included in spare parts kit  
 □Parts included in 'O' ring kit  
 The connections conform to ISO5211.

**Imperial Dimension & Technical Data**

(DA/SR)	RP50	RP63	RP75	RP88	RP100	RP125	RP145	RP160	RP180	RP200	RP240	RP285	RP300	RP350	RP400
ISO5211	F04	F05	F05/07	F05/07	F07/10	F07/10	F10/12	F10/12	F10/14	F10/14	F12/16	F16	F16	F16	F25
A	5.59	6.42	8.46	9.96	10.63	13.58	16.1	17.28	19.21	21.38	24.76	29.13	34.84	37.2	1062
B	2.72	3.35	4.02	4.53	5	6.18	6.93	7.74	8.66	9.61	11.81	12.99	15.35	17.3	464
C	2.28	2.83	3.41	3.82	4.33	5.33	6.14	6.63	7.52	8.29	9.86	11.75	12.01	14.2	385
D	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M6	M6	M6	M6
E(NPT)	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/2"	1/2"
F	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	5.12	5.12	5.12	5.12	5.12	5.2	5.9
G	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18
H	0.79	0.79	0.79	0.79	0.79	1.18	1.18	1.18	1.97	1.97	1.97	1.97	1.97	1.97	1.97
I	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5
M	1.14	1.42	1.71	1.94	2.18	2.74	3.11	3.46	3.86	4.25	5.14	6.44	6.69	7.9	8.6
N	1.61	1.85	2.09	2.22	2.64	3.23	3.58	3.88	4.21	4.43	5.14	6.54	7.60	8.7	9.7
Q	0.43	0.55	0.67	0.67	0.87	1.06	1.06	1.06	1.42	1.42	1.81	1.81	2.17	2.2	2.4
P	1.06	1.14	1.14	1.26	1.46	1.79	2.07	2.05	2.28	2.46	3.07	6.52	7.68	7.9	8.3
Q	1.65	1.97	1.97	1.97	2.76	2.76	4.02	4.02	4.02	4.02	4.92	6.50	6.50	6.50	10
Q1	-	-	2.76	2.76	4.02	4.02	4.92	4.92	5.51	5.51	6.50	-	-	-	-
R	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.77	1.77	1.77	1.77	1.77
S	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	1.57	1.57	1.57	1.57	1.57
T	0.47	0.63	0.71	0.71	0.87	1.06	1.26	1.26	1.54	1.54	1.93	2.72	2.72	2.7	2.6
W	M5	M6	M6	M6	M8	M8	M10	M10	M10	M10	M12	M20	M20	M20	M20
W1	-	-	M8	M8	M10	M10	M12	M12	M14	M14	M16	-	-	-	-
ΦZ	1.61	1.61	1.61	1.61	1.61	2.20	2.56	2.56	3.15	3.15	4.53	4.53	4.53	4.53	4.53

PMP reserves the right to amend the technical parameters.

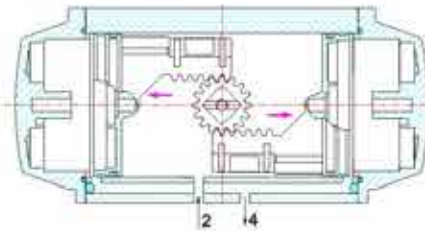


Model	DN Φ(mm)	Revolution of travel adjusted 1"	Air consumption of open (L)	Air consumption of close (L)	Open time (SEC)		Close time (SEC)		Weight (kg.)	
					DA	SR	DA	SR	DA	SR
RP50	50	1/6 turn	0.09	0.15	0.2	0.25	0.25	0.3	0.96	1.06
RP63	63	1/6 turn	0.16	0.26	0.25	0.3	0.3	0.35	1.58	1.7
RP75	75	1/6 turn	0.31	0.49	0.3	0.35	0.4	0.5	2.7	3.15
RP88	88	1/5 turn	0.51	0.78	0.4	0.5	0.5	0.6	3.8	4.4
RP100	100	1/5 turn	0.71	1.11	0.5	0.6	0.7	0.9	5.4	6.51
RP125	125	1/5 turn	1.54	2.34	0.9	1.1	1.2	1.4	10.2	12.6
RP145	145	1/5 turn	2.41	3.78	1.2	1.4	1.5	1.8	14.5	18.1
RP160	160	1/4 turn	3.14	4.92	1.5	1.7	1.8	2.1	19.8	24
RP180	180	1/4 turn	4.26	6.89	2	2.2	2.4	2.8	25	31.6
RP200	200	1/4 turn	5.94	9.46	2.7	3.2	3.5	4	35.5	45.1
RP240	240	1/4 turn	10	15.2	3.5	4	4.1	4.6	53	64
RP265	265	1/4 turn	14.5	21.38	4	4.5	4.5	5	83	102
RP300	300	If need other size actuator, Please contact us anytime.								
RP1000										

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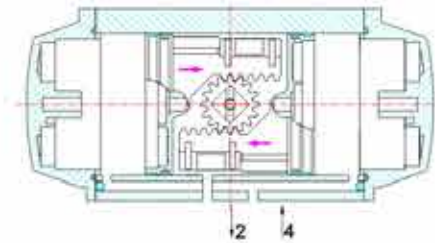
**Operating Principle**

**Double-acting**



**CCW**

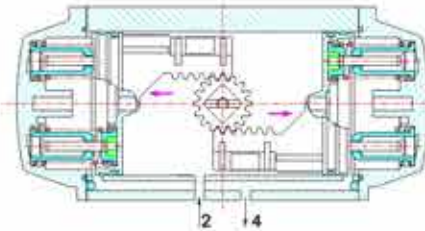
Air to Port A forces the pistons outwards, causing the pinion to turn counterclockwise while the air is being exhausted from Port 4.



**CW**

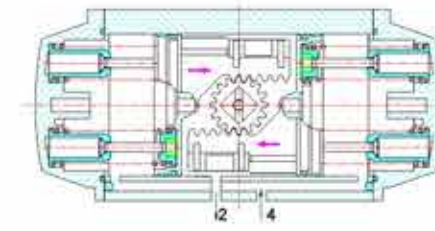
Air to Port B forces the pistons inwards, causing the pinion to turn clockwise while the air is being exhausted from Port 2.

**Single-acting**



**CCW**

Air to Port A forces the pistons outwards, causing the springs to compress, the pinion turns counterclockwise while air is being exhausted from Port 4.

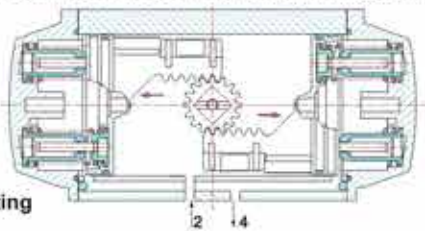


**CW**

Loss of air pressure, the stored energy in the springs forces the pistons inwards, the pinion turns clockwise while air is being exhausted from Port 2.

Single Return can be further divided into Return Acting and Direct Acting.

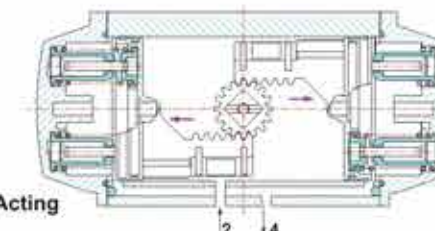
**Return Acting**



When 2 openings intake, the piston will active both sides under the compressed air while the output shaft turn around by counterclockwise. It is called Return Acting.

The Return Acting single return will be converted each other only by exchanging the position of piston.

**Direct Acting**



When 2 openings intake, the piston will active both sides under the compressed air while the output shaft turn around by clockwise. It is called Direct Acting

# PNEUMATIC ACTUATOR



Supply Pressure		SPRING RETURN TORQUE RATINGS IN (lb·ft · in)												Spring stroke																	
Actuator Model	Spring set	2.5 Bar		3 Bar		3.5 Bar		4 Bar		4.2 Bar		4.5 Bar			5 Bar		5.5 Bar		6 Bar		7 Bar		8 Bar								
		0° 90°	Start	End	0° 90°	Start	End	0° 90°	Start	End	0° 90°	Start	End		0° 90°	Start	End	0° 90°	Start	End	0° 90°	Start	End	0° 90°	Start	End					
RP50SR	S05	43.4	30.1	58.4	45.1	73.5	60.2	87.6	74.3	87.6	74.3	102.7	89.4	117	103.6										43.4	30.1					
	S06	38.1	22.1	52.2	36.3	67.3	51.3	82.3	66.4	82.3	66.4	97.4	81.4	112	96.6	127	103.6									51.3	35.4				
	S07			46.9	28.3	61.1	42.5	76.1	57.5	76.1	57.5	91.2	81.4	105	87.6	120	101.8	135	115.9							60.2	41.6				
	S08					54.9	33.6	69.9	48.7	69.9	48.7	84.9	63.7	99.1	77.9	114	92.9	128	101.8	158	137						69.0	47.8			
	S09							63.7	39.8	63.7	39.8	78.8	54.9	92.9	69	108	84.1	122	98.2	152	128.3	181	157.5				77.9	54.0			
	S10											73.5	46.9	87.6	61.1	103	76.1	117	90.3	147	120.4	176	149.6				85.9	59.3			
	S11													81.4	52.2	94.5	67.3	111	81.4	141	111.5	170	140.7				94.7	65.5			
	S12															90.3	58.4	104	72.6	135	102.7	164	131.9				103.6	71.7			
	RP63SR	S05	61.4	55.8	107	81.4	133	107.1	159	133.6	169	143.4	185	159.3	211	185												73.4	48.7		
		S06	70.8	39.8	95.5	66.4	123	92	149	118.6	159	128.3	174.4	144.3	200	170	226	195.6										89.4	59.3		
		S07			86.7	51.3	112	77	139	103.4	149	113.2	165	129.2	190	154.9	216	180.6	242.5	207.1								104.4	69		
		S08					102.7	61.9	129.2	88.5	139	98.2	155	114.2	181	139.8	206	165.5	233	192.1	284	243.4							119.5	78.8	
S09								119	73.5	129.2	83.2			145	99.1	170.8	125	196	150.5	223	177	274	228.3	327	280.6		134.5	88.5			
S10												135	84.1	161	109.7	187	135.4	213	162	265	213.3	316.9	265.5				149.6	98.2			
S11														151	94.7	177	120.4	204.5	158.4	254.9	198.3	307.1	250.5				164.6	108			
S12																167	106.2	193.8	132.8	245	184.1	297	236.3				178.8	117.7			
RP75SR		S05	159.3	104.4	211	155.8	261.9	207.1	313	258.4	334	279.7	365	310.7	417	362													153.1	98.2	
		S06	139.6	73.5	191	124.8	242.5	176.1	294	227.5	315	248.7	346	279.7	397	331	449	382.3											184.1	117.7	
		S07			171.7	94.7	223	146	274	197.4	295.6	218.6	326.6	249.6	338	300.9	429	352.3	480	403.4									214.2	137.2	
		S08					203.5	115.1	255	160.2	276	187.6	307	218.6	358	270	410	321.3	461	372.6	563.8	475.3							245.2	156.7	
	S09							237	135.4	258	156.6	289	187.6	340.8	239	392	290.3	443	341.6	546	444.3	649.6	547.9				276.1	174.4			
	S10											268	157.5	319	208.9	371	260.2	422	311.5	524.8	414.2	628.4	517.7				306.2	195.6			
	S11													300	177.9	351.4	229.2	402.7	280.6	505.4	383	609	486.8				337.2	215.1			
	S12															331	199.1	382	250.7	485	353.1	588.6	456.7				367.3	216.8			
	RP88SR	S05	242.5	149.6	323.9	230.1	405	311.5	486	392.1	517.8	424.8	570.9	473.8	647.9	554													263.8	162	
		S06	210.6	98.2	291.2	179.7	372.6	260.2	453.2	341.6	485.9	373.5	534.6	422.2	615	530.6	696.6	584.1											218.6	194.7	
		S07			258	128.3	340	290.8	420	290.3	453	322.2	501	370.8	582	452.3	663.8	532.8	746	616									357.6	227.5	
		S08					308	158.4	388.5	239	420.4	271.7	469	320.4	550	400.9	631.1	482.4	712.5	562.9	874.5	724.9							409	259.3	
S09								355.8	187.6	388.5	220	437	269	518	349.6	599.2	431	679.7	511.6	841.7	672.7	1000	836.4				460.2	292			
S10												404.5	217.7	485	298.3	566.4	379.7	647	464.1	808	623	973.6	785.1				511.6	324.8			
S11														453	247.8	533.7	328.4	615.1	409.8	777.1	570.9	935.5	730.2				562	356.7			
S12																501.8	277.9	582.4	358.5	743.5	519.5	902.8	682.4				613.4	389.4			
RP100SR		S05	364	239.9	482	357.6	599.2	475.3	717	593	784	640	834	710.7	956	828.4													348.7	223.9	
		S06	319.5	170	437.2	287.6	555	405.3	672.7	523.1	720	570	790.4	640.8	911	758.5	1026	876.2											418.6	269	
		S07			392	217.7	509.8	335.4	627.5	453.2	674	500	745	570.9	863	688.6	978	804.5	1097	920.5									487.7	314.2	
		S08					464.7	265.5	582.4	383.2	630	431	700.1	501	817.8	618.7	934	734.6	1053	854.1	1292	1088							557.6	358.5	
	S09							538.1	314.2	585	361	655	431.9	773.6	550	883.9	666.5	1009	784.2	1248	1018	1478	1257				627.5	403.6			
	S10											610.7	362	728	479.7	846.1	597.4	965	715.1	1195	947	1434	1186				697.4	448.7			
	S11													683.3	409.8	801	527.5	920.5	645.2	1151	876	1389	1115				767.4	492			
	S12															756	457.6	873.6	575.3	1106	814.3	1345	1044				836.4	537			
	RP125SR	S05	757	495.6	1005	743.5	1252	991	1500	1239	1598	1390	1740	1558	1987	1726													725.8	464.7	
		S06	664	345.2	912	593	1159	840.8	1407	1089	1505	1186	1648	1328	1894	1575	2143	1823											876.2	557.6	
		S07			814	451.4	1066	690.2	1314	947	1412	1044	1553	1186	1601	1434	2049	1682	2288	1921									1017.8	650.5	
		S08					974	548.7	1221	797	1319	894	1460	1036	1708	1283	1956	1531	2195	1770	2690	256							1168.3	743.5	
S09								1128	655	1226	752	1367	894	1615	1142	1859	1390	2102	1629	1713	239	3084	2611				1310	836.4			
S10												1274	743	1522	991	1770	1239	2009	1478	2505	223	2991	2461				1460.4	929.3			
S11														1425	850	1678	1097	1912	1336	2407	206	2894	2319				1602	1026.7			
S12																1584	947	1823	1186	2319	190	2805	2168				1752.4	1115.2			
RP145SR		S05	1195	788	1584	1177	1965	1558	2354	1947	2505	2098	2735	2328	3124	2717														1133	725.8
		S06	1044	549	1434	937	1814	1319	2204	1708	2354	1859	2584	2089	2974	2478	3354	2859											1371.9	876.2	
		S07			1292	717	1673	1097	2062	1487	2213																				

# PNEUMATIC ACTUATOR



Supply Pressure		SPRING RETURN TORQUE RATINGS IN (N.m)														Spring stroke												
Actuator Model	Spring set	2.5 Bar		3 Bar		3.5 Bar		4 Bar		4.2 Bar		4.5 Bar		5 Bar		5.5 Bar		6 Bar		7 Bar		8 Bar		90° 0°				
		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		90° 0°				
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	
RP200SR	S05	2823	1921	3761	2859	4708	3806	5647	4744	6027	5116	6594	5682	7532	6629											2788	1885	
	S06	2451	1363	3390	2301	4328	3248	4337	3284	5647	4558	6213	5124	7134	6071	8098	7010									3346	2257	
	S07			3018	1744	3956	2691	3956	3629	5275	4009	5841	4567	6780	5514	7718	6452	8665	7390							3903	2683	
	S08					3576	2133	3565	2133	4894	3452	5461	4009	6399	4956	7346	5894	8284	6833	10169	8718					4461	3009	
	S09									4523	2894			5089	3452	6027	4399	6966	5337	7913	6275	9789	8160	11674	10046	5018	3390	
	S10											4523	2894	5647	3841	6594	4779	7532	5718	8417	7603	11302	9488			5576	3762	
	S11													5275	3284	6213	4160	7160	5160	8037	7045	10922	8930			6134	4142	
	S12													5841	3664	6780	4602	7664	5488	8664	6488	10550	8373			6691	4514	
	RP240SR	S05	4717	3292	6301	4877	7877	6461	9461	8036	10099	8674	11046	9621	12621	11205											4511	3186
		S06	4080	2372	5664	3956	7240	5532	8824	7116	9453	7753	10408	8700	11984	10285	13568	11860									5532	3806
		S07			5027	3036	6602	4611	8187	6195	8815	6824	9771	7780	11347	9355	12931	10939	14515	12524							6461	4470
		S08					7550	5266	8175	5903	9134	6850	10709	8435	12294	10019	13878	11594	17038	14763							7381	5107
S09						6912	4346	7541	4983	8488	5930	10072	7514	11603	9045	13241	10674	16400	13842	19560	17002					8302	5744	
S10										7851	5009	9435	6594	10966	8125	12596	9753	15763	12913	18923	16082					9222	6381	
S11												8798	5673	10329	7204	11957	8833	15126	11993	18256	15161					10143	7019	
S12														9691	6275	11320	7913	14489	11072	17648	14232					11072	7656	
RP265SR		S05	6647	4389	8948	6682	11240	8983	13533	11276	14453	12196	15834	13568	18126	15869											7089	4832
		S06	5682	2947	7983	5266	10275	7559	12568	9860	13488	10771	14869	12152	17161	14444	19453	16745									8506	5797
		S07			7010	3850	9311	6142	11603	8444	12534	9355	13895	10735	16197	13028	18489	15329	20781	17822							9922	6762
		S08					6346	4726	10638	7019	11559	7939	12931	9320	15232	11612	17942	13904	19817	15781							11338	7727
	S09							9674	5603	10594	6523	11966	7904	14267	10198	16559	12488	18852	14790	23445	19374	28039	23968			12763	8691	
	S10									11001	6479	13303	8780	15595	11072	17887	13365	22481	17958	27074	22552					14179	9656	
	S11													14630	9656	16922	11948	21516	16542	26109	21136					15585	10621	
	S12													13865	8240	15958	10532	20551	15126	25136	19719					17011	11586	
	RP300SR	S05	11789	8975	15781	12966	19675	16957	23755	20932	25438	22534	27738	24941	31703	28906											17533	13028
		S06	10169	6788	14152	10771	18135	14754	22127	18745	23719	20339	26110	22729	30101	26720	34084	30703									19728	14657
		S07			12524	8576	16507	12568	20498	16551	22091	18144	24481	20543	28473	24525	32456	28517	36447	32499							21914	16276
		S08					14887	10373	18870	14365	20463	15958	22853	18348	26844	22339	30827	26322	34818	30305	42810	35341					24109	17905
S09								17241	12170	18834	13763	21224	16153	25216	20144	29199	24127	33190	28119	41138	32730	50391	45325			26295	19533	
S10												19604	13966	23587	17949	27570	21941	31562	25924	39457	30119	48484	42961			21914	16276	
S11														21958	15763	25941	19745	29933	23738	37784	27499	46758	40607			24109	17905	
S12																24321	17551	28305	21543	36102	24888	44962	38244			26295	19533	
RP350SR		S05	10152	2717	14745	7311	19348	11913	23941	16515	25782	18348	28543	21109	31730	28906											20268	12842
		S06			12179	3257	16772	7859	21374	12453	23125	14294	25977	17055	30101	26720	35173	26251									24331	15409
		S07					14205	3806	18808	8399	20649	10240	23401	13002	28473	24525	32597	22198	37199	26971							28384	17985
		S08							16232	4396	18073	6187	20835	8948	26844	22339	30030	18144	34633	22737	43829	31933					32438	20551
	S09									15506	2133	18268	4894	22861	9488	27484	14090	32057	18684	41262	27879	50458	37076			36492	23118	
	S10															24897	10028	29491	14630	38686	23826	47882	33022	40554			25685	
	S11																			36120	19773	45316	28968	44608			28260	
	S12																					42749	24915	48661			30827	
	RP400SR	S05	12303	283	18976	6957	25649	13630	32323	20304	34987	22968	38996	26977	45669	33650	52343	40324									33084	21065
		S06					21436	7010	28110	13683	30774	16356	34774	20357	41448	27030	48121	33704	54795	40377							39704	25278
		S07							23631	7062	26561	9736	30561	13736	37235	20410	43908	27083	50581	33757	63929	47104					46325	20491
		S08													33022	13798	39659	20472	46369	27145	59715	40492	73063	53830			52936	33704
S09																35483	13851	42156	20525	55503	33692	68850	47216			59556	37925	
S10																		37943	13904	51290	27251	64637	40598			66177	42138	
S11																				47076	20631	60424	33987			72788	46351	
S12																						56211	27366			79409	50564	

RP400SR-1000SR If need other size actuator, Please contact us anytime.

Supply Pressure Model No.	OUTPUT TORQUE OF DOUBLE ACTING (INCH) DOUBLE ACTING TORQUE RATINGS IN (lbf · in)											
	2.5 Bar	3 Bar	3.5 Bar	4 Bar	4.2 Bar	4.5 Bar	5 Bar	5.5 Bar	6 Bar	7 Bar	8 Bar	
RP50DA	73.5	88.5	102.7	117.7	123.9	132.8	146.9	162	176.1	206.2	235.4	
RP63DA	130.1	155.8	181.4	208	217.7	233.7	259.3	285	311.5	362.9	415.1	
RP75DA	256.7	309.8	362.9	411.6	433.7	460.2	513.3	566.4	619.6	716.9	824	
RP88DA	405.4	485.9	567.3	647.9	680.6	729.3	809.8	893.9	973.6	1132.9	1292.2	
RP100DA	588.6	706.3	824	938.2	991.6	1062.1	1177.1	1292.2	1416.1	1646.2	1885.2	
RP125DA	1920.6	1469.2	1717	1964.9	2062.2	2203.8	2451.6	2699.5	2938.4	3434.1	3920.9	
RP145DA	2513.6	2310	2690.8	3080.1	3230.5	3460.6	3850.1	4230.6	4620.1	5390.1	6160.1	
RP160DA	3389.8											



## Customized Service

Top



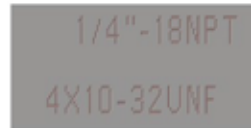
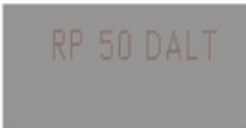
Side



Bottom



The side connection conforms to the VDI/VDE 3845 NAMUR standard.  
 The top connection conforms to VDI/VDE 3845 NAMUR standard.  
 The bottom connection conforms to ISO5211 and DIN3337 standard.

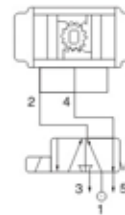


Each actuator is marked with a serial number, air connection and bottom mounting holes are marked for easy track and distinction.

Top mounting pad configuration is in accordance with VDI / VDE 3845 Namur specification in order to permit simple and easy installation of the ancillary like switch boxes and positioners.

PMP can supply many different types of switch boxes and positioners for any application.

Air supply connection is in accordance with VDI / VDE3845 Namur specification to provide simple and easy solenoid valve installation direct mount avoiding piping and fittings. PMP can also supply Namur solenoid valves: 5/2 and 3/2 way in all standard voltages, D.C.or A.C.



5/2 SOLENOID VALVE OPERATION



3/2 SOLENOID VALVE OPERATION

### 1、 Ancillaries installation without multi-function indicator

The actuator can be supplied upon request with a NAMUR that replaces the standard indicator and has the Namur drive slot permitting:

- 1)Accessories such as limit switch and positioner
- 2)Indicating the position of actuator via the Namur slot
- 3)Manual operation in emergency
- 4)Operating at high temperature.



### 2、 External stroke adjustment

A great saving of time is achieved, when mounting the actuator on the valve,through the service friendly adjustment of both end positions with the precise cam system. The rotation angle is easily changeable with a special cam, Safety for emergency cases is possible through blocking of the actuator. This new feature can be used by simply changing the screw into a longer one.



### 3、 Lock-out capability in full-open of full-closed position

The actuator offers an economical solution when is requested to locking the Actuator in the full-open(90°) or fully-closed(0°) position. The actuator can be supplied with a Special bolt and locking device to permanently lock the actuator in position by using a padlock and prevent unwanted operation.





**Imperial Dimension & Technical Data**

(DA/SR)	50	63	75	88	100	125	145	160	180	200	240	265	300
ISO5211	F04	F05	F05/07	F05/07	F07/10	F07/10	F10/12	F10/12	F10/14	F10/14	F12/16	F16	F16
A-120°	1412	1589	2124	2487	2708	3496	4142	4425	4912	5470	6346	7514	8868
A-180°	1744	1960	2642	3080	3377	4390	5178	5541	6098	5709	7904	9444	10948
B	2.72	3.35	4.02	4.53	5	6.18	6.93	7.74	8.66	9.61	11.81	12.99	15.35
C	2.28	2.83	3.41	3.82	4.33	5.33	6.14	6.63	7.52	8.29	9.86	11.75	12.01
D	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M6	M6
E(NPT)	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
F	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	5.12	5.12	5.12	5.12	5.12
G	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18
H	0.79	0.79	0.79	0.79	0.79	1.18	1.18	1.18	1.97	1.97	1.97	1.97	1.97
I	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5
M	1.14	1.42	1.71	1.94	2.18	2.74	3.11	3.46	3.86	4.25	5.14	6.44	6.69
N	1.61	1.85	2.09	2.22	2.64	3.23	3.58	3.88	4.21	4.43	5.14	6.54	7.60
O	0.43	0.55	0.67	0.67	0.87	1.06	1.06	1.06	1.42	1.42	1.81	1.81	2.17
P	1.06	1.14	1.14	1.26	1.46	1.79	2.07	2.05	2.28	2.46	3.07	6.52	7.68
Q	1.65	1.97	1.97	1.97	2.76	2.76	4.02	4.02	4.02	4.02	4.92	6.50	6.50
Q1	—	—	2.76	2.76	4.02	4.02	4.92	4.92	5.51	5.51	6.50	—	—
R	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.77	1.77	1.77
S	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	1.57	1.57	1.57
T	0.47	0.63	0.71	0.71	0.87	1.06	1.26	1.26	1.54	1.54	1.93	2.72	2.72
W	M5	M6	M6	M6	M8	M8	M10	M10	M10	M10	M12	M20	M20
W1	—	—	M8	M8	M10	M10	M12	M12	M14	M14	M16	—	—
ΦZ	1.61	1.61	1.61	1.61	1.61	2.20	2.56	2.56	3.15	3.15	4.53	4.53	4.53

PMP reserves the right to amend the technical parameters.

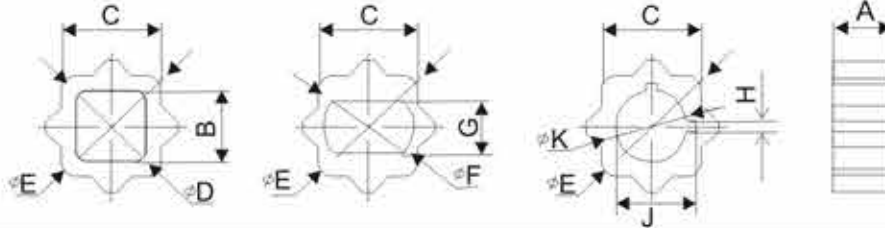
Model Type	RP50DA		RP63DA		RP72DA		RP88DA		RP100DA		RP125DA		RP180DA		RP260DA		
	120° X	180° X	120° X	180° X	120° X	180° X	120° X	180° X	120° X	180° X	120° X	180° X	120° X	180° X	120° X	180° X	
Cylinder bore	mm		50	63	75	85	100	128	180	200							
Travelling schedule adjustment	(lead to connect)		1/8turn	1/6turn	1/6turn	1/5turn	1/5turn	1/4turn	1/4turn	1/4turn							
Open to bleed cylinder volume	(L)		0.11	0.17	0.2	0.29	0.39	0.56	0.63	0.92	0.9	1.3	1.9	2.9	3.9	5.7	4.4
Close to bleed cylinder volume	(L)		0.18	0.27	0.32	0.47	0.61	0.88	0.97	1.4	1.42	2.9	4.2	6.2	8.8	11.8	
Open times	(S/Sec)		0.26	0.31	0.33	0.39	0.39	0.47	0.52	0.63	0.65	0.79	1.17	1.41	1.95	2.36	3.51
Close times	(S/Sec)		0.33	0.39	0.39	0.47	0.52	0.63	0.65	0.79	0.91	1.10	1.56	1.88	2.34	2.83	4.55
Approximate weight	(Kg)		1.2	1.5	2.25	3.4	4.4	4.66	6.6	8.1	12.3	15.4	24.6	29.5	44		
Cylinder bore	(inch)		1.97	1.97	2.48	2.48	2.95	2.95	3.35	3.35	3.94	3.94	4.92	4.92	6.30	6.30	7.87
Travelling schedule adjustment	(lead to connect)		1/8turn	1/6turn	1/6turn	1/5turn	1/5turn	1/4turn	1/4turn	1/4turn							
Open to the air cylinder volume	(L)		6.7	10.4	12.2	17.7	23.8	34.2	38.5	58.2	54.4	79.4	117.3	171.1	239.6	348.3	452.5
Close to bleed cylinder volume	(L)		11	16.5	19.6	28.7	37.3	53.8	29.3	85.6	84.3	122.2	178.4	256.7	257.8	537.8	721.1
Open times	(S/Sec)		0.26	0.31	0.33	0.39	0.39	0.47	0.52	0.63	0.65	0.79	1.17	1.41	1.95	2.36	3.51
Close times	(S/Sec)		0.33	0.39	0.39	0.47	0.52	0.63	0.65	0.79	0.91	1.10	1.56	1.88	2.34	2.83	4.56
Approximate weight	(Lb)		2.6	3.3	4.4	4.5	7.4	9.6	10.1	13.1	14.4	17.7	26.9	33.7	53.8	64.5	96.3

PMP reserves the right to amend the technical parameters.

(A) The above indicated moving time of the actuator are obtained in the following test conditions: (1)Room Temperature.(2)Actuator Stroke 120° and 180° (3)Solenoid Valve with orifice of 4mm and a flow capacity Qn 400L/min.(4)Inside pipe diameter 8mm.(5)Medium clean air.(6)Air supply pressure 5.5 bar(79.75psi). (7)Actuator without external resistance load.

Cautions: obviously on the field applications when one or more parameter varies, the operating time will be different.

Accessories Insert



Size		A		B		C		D		E		F		G		H		J		K	
Model		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
RP 50	1	12	0.47	9	0.35	11	0.43	∅122	∅0.48	∅14	∅0.55										
	2																				
	3																				
RP 63	1	14	0.55	9	0.35	14	0.55	∅122	∅0.48	∅18	∅0.71	∅122	∅0.48	9	0.35						
	2	14	0.55	11	0.43	14	0.55	∅15	∅0.59	∅18	∅0.71										
	3																				
RP 75	1	18	0.71	9	0.35	17	0.67	∅122	∅0.48	∅22	∅0.87	∅122	∅0.48	9	0.35	4	0.16	13.8	0.54	∅12	∅0.47
	2	18	0.71	11	0.43	17	0.67	∅15	∅0.59	∅22	∅0.87	∅15	∅0.59	11	0.43						
	3	18	0.71	14	0.55	17	0.67	∅18.5	∅0.73	∅22	∅0.87										
RP 100	1	22	0.87	11	0.43	22	0.87	∅15	∅0.59	∅28	∅1.10	∅122	∅0.48	9	0.35	4	0.16	13.8	0.54	∅12	∅0.47
	2	22	0.87	14	0.55	22	0.87	∅18.5	∅0.73	∅28	∅1.10	∅15	∅0.59	11	0.43	5	0.20	16.3	0.64	∅14	∅0.55
	3	22	0.87	17	0.67	22	0.87	∅23	∅0.91	∅28	∅1.10	∅18.5	∅0.73	14	0.55						
RP 125	1	27	1.06	14	0.55	27	1.06	∅18.5	∅0.73	∅36	∅1.42	∅122	∅0.48	9	0.35	4	0.16	13.8	0.54	∅12	∅0.47
	2	27	1.06	17	0.67	27	1.06	∅23	∅0.91	∅36	∅1.42	∅15	∅0.59	11	0.43	5	0.20	16.3	0.64	∅14	∅0.55
	3	27	1.06	22	0.87	27	1.06	∅29	∅1.14	∅36	∅1.42	∅18.5	∅0.73	14	0.55	6	0.24	20.8	0.82	∅18	∅0.71
RP 180	1	36	1.42	17	0.67	36	1.42	∅23	∅0.91	∅48	∅1.89	∅18.5	∅0.73	14	0.55	6	0.24	20.8	0.82	∅18	∅0.71
	2	36	1.42	22	0.87	36	1.42	∅29	∅1.14	∅48	∅1.89	∅23	∅0.91	17	0.67	6	0.24	24.8	0.98	∅22	∅0.87
	3	36	1.42	27	1.06	36	1.42	∅37	∅1.46	∅48	∅1.89	∅29	∅1.14	22	0.87	8	0.31	31.3	1.23	∅28	∅1.10
RP 240	1	46	1.81	22	0.87	46	1.81	∅29	∅1.14	∅60	∅2.36	∅23	∅0.91	17	0.67	6	0.24	24.8	0.98	∅22	∅0.87
	2	46	1.81	27	1.06	46	1.81	∅37	∅1.46	∅60	∅2.36	∅29	∅1.14	22	0.87	8	0.31	31.3	1.23	∅28	∅1.10
	3	46	1.81	36	1.42	46	1.81	49	∅1.93	∅60	∅2.36	∅37	∅1.46	27	1.06	10	0.39	39.3	1.55	∅36	∅1.42
RP 300	1	55	2.17	27	1.06	55	2.17	37	∅1.46	∅72	∅2.83	∅29	∅1.14	22	0.87	10	0.39	39.3	1.55	∅36	∅1.42
	2	55	2.17	36	1.42	55	2.17	49	∅1.93	∅72	∅2.83	∅37	∅1.46	27	1.06	12	0.47	45.3	1.78	∅42	∅1.65
	3	55	2.17	46	1.81	55	2.17	62	∅2.44	∅72	∅2.83	∅49	∅1.93	36	1.42	14	0.55	51.8	2.04	∅48	∅1.89

## Accessories

### YT-850 Limit Switch Box

- Visual position indicator
- Splined and spring loaded cams
- Multipoint terminal strip
- 1/2" conduit entries
- Captive cover bolts
- ISO mounting brackets

### WT-8551

- Compact spool valve with threaded port connections.
- Standard manual override
- DIN, Watertight and Explosionproof available
- Single and dual solenoid constructions
- Various voltages



### YT-1000R Electro-Pneumatic Positioner

The Electro-Pneumatic Positioner is used for operation of pneumatic rotary actuators by means of electrical controller or control system with analog output signal of DC 4 to 20mA or split ranges.



### YT-1200R Pneumatic-Pneumatic Positioner

The Pneumatic Positioner is used for pneumatic rotary valve actuators by means of pneumatic controller or control systems with an output signal of 3 to 5 psi or split ranges.







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