

# Valvsys, LLC

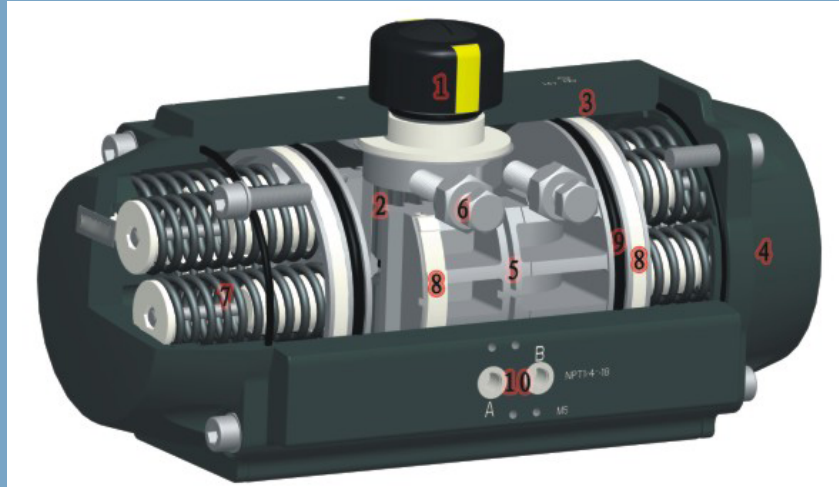
## P Series Pneumatic Actuators



421 Breden Dr #15 Monroe, OH 45050 513-539-1234

[www.valvsys.com](http://www.valvsys.com)

## Features



### -Indicator

Indicator according to VID/VIE3845 is made to easily mount NAMUR accessories like limit switches and positioners.

### -Actuator Body

Hard anodized coated high quality aluminum alloy with epoxy polyester painting. Other coloring upon request.

### -Pinion

The nickel-alloy steel design is to ISO 5211 and DIN3337 standards. Other outputs upon request.

### -End Cap

Die cast aluminum with hard anodizing and epoxy painted. Nickel plating and other coloring available upon request.

### -Pistons

Die cast aluminum with hard anodizing and epoxy painted. The symmetric design and simple installation allows for the actuator to be converted to a reverse action quickly.

### -Adjusting Bolt

The external stainless steel stop bolts allow for  $\pm 5^\circ$  adjustment at both ends of travel.

### -Spring

Spring return units have high quality spring steel that are epoxy coated for corrosion resistance. The springs can be easily removed to allow for variable torque requirements.

### -Piston Ring

Low friction material with an installation design that allows for quick replacement.

### -O-ring

Standard NBR rubber provides trouble free operation at standard ranges. For high temperature and low temperature other materials can be quoted.

### -Air Connection

Direct mount solenoid connections according to NAMUR standards.

## Torque (In-lbs)

Model	Double Acting Torque Output (inlbs) at Operating Pressure - Psig				
	40	60	80	100	120
P016	78	120	160	206	248
P030	146	216	286	358	426
P060	276	418	558	714	844
P090	437	644	868	1098	1320
P130	635	975	1272	1607	1905
P215	1049	1574	2099	2623	3116
P270	1301	1990	2728	3418	4101
P420	1970	3150	4202	5343	6305
P560	2832	4159	5575	6903	8145
P770	3665	5553	7460	9175	10710
P1060	5091	7712	10480	12884	15203
P1790	8725	13087	17480	21800	25600
P2900	14072	21064	28322	35934	42483

Model Number	Basic	# of Springs	Air Torque(inlbs) Output at Operating Pressure - Psig											
			Output		40		60		80		100		120	
			Start	End	Start	End	Start	End	Star	End	Start	End	Start	End
P016SR		5	27	42	51	36	93	78	133	118	179	164	221	206
		6	34	50	44	28	86	70	126	110	172	156	214	198
		7	40	59	38	19	80	61	120	101	166	147	208	189
		8	47	69			73	51	113	91	159	137	201	179
		9	53	77			67	43	107	83	153	129	195	171
		10	59	85					101	75	147	121	189	163
		11	66	95					94	65	140	111	182	153
		12	73	104					87	56	133	102	175	144
P030S		5	50	76	96	70	166	140	236	210	308	282	376	350
		6	60	92	86	54	156	124	226	194	298	266	366	334
		7	70	108	76	38	146	108	216	178	288	250	356	318
		8	81	122			135	94	205	164	277	236	345	304
		9	91	138			125	78	195	148	267	220	335	288
		10	102	154			114	62	184	132	256	204	324	272
		11	112	170					174	116	246	188	314	256
		12	121	185					165	101	237	173	305	241
P060S		5	102	159	174	117	316	259	456	399	612	555	742	685
		6	119	190	157	86	299	228	439	368	595	524	725	654
		7	139	221	137	55	279	197	419	337	575	493	705	623
		8	159	252			259	166	399	306	555	462	685	592
		9	178	283			240	135	380	275	536	431	666	561
		10	197	314			221	104	361	244	517	400	647	530
		11	217	345					341	213	497	369	627	499
		12	236	376					322	182	478	338	608	468

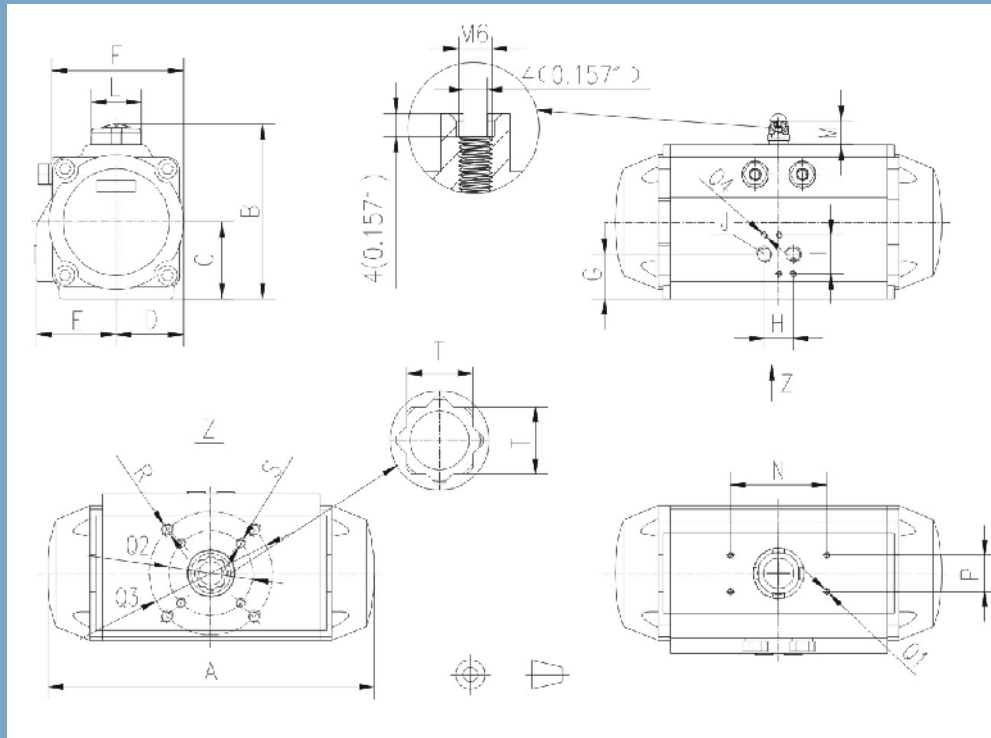
## Torque (In-lbs)

Model Number Basic	Spring Torque # of Springs	Air Torque(inlbs) Output at Operating Pressure - Psig											
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
P090SR	5	166	266	271	171	478	378	702	602	932	832	1154	1054
	6	199	317	238	120	445	327	669	551	899	781	1121	1003
	7	232	368	205	69	412	276	636	500	866	730	1088	952
	8	264	420			380	224	604	448	834	678	1056	900
	9	296	471			348	173	572	397	802	627	1024	849
	10	328	522			316	122	540	346	770	576	992	798
	11	361	574					507	294	737	524	959	746
	12	394	625					474	243	704	473	926	695
P130SR	5	222	345	413	290	753	630	1050	927	1385	1262	1683	1560
	6	267	415	368	220	708	560	1005	857	1340	1192	1638	1490
	7	312	485	323	150	663	490	960	787	1295	1122	1593	1420
	8	358	555			617	420	914	717	1249	1052	1547	1350
	9	403	625			572	350	869	647	1204	982	1502	1280
	10	447	694			528	281	825	578	1160	913	1458	1211
	11	492	764					780	508	1115	843	1413	1141
	12	538	834					734	438	1069	773	1367	1071
P215SR	5	363	580	687	470	1211	994	1736	1519	2260	2044	2670	2410
	6	435	696	614	354	1139	878	1663	1403	2188	1928	2592	2291
	7	508	812	541	238	1066	762	1591	1287	2115	1812	2525	2153
	8	581	928			993	646	1518	1171	2043	1696	2451	2038
	9	653	1044			921	530	1446	1055	1970	1580	2387	1942
	10	726	1160					1373	939	1898	1464	2235	1724
	11	798	1276					1300	823	1825	1348		
	12	871	1392							1753	1232		
P270SR	5	451	717	850	584	1539	1273	2277	2011	2967	2701	3650	3384
	6	544	867	757	434	1446	1123	2184	1861	2874	2551	3557	3234
	7	637	1009	664	292	1353	981	2091	1719	2781	2409	3464	3092
	8	735	1159			1255	831	1993	1569	2683	2259	3366	2942
	9	828	1310			1162	680	1900	1418	2590	2108	3273	2791
	10	920	1460			1070	530	1808	1268	2498	1958	3181	2641
	11	1013	1602					1715	1126	2405	1816	3088	2499
	12	1111	1752					1617	976	2307	1666	2990	2349

# Torque (In-lbs)

Model Number Basic	Spring Torque # of Springs	Air Torque(inlbs) Output at Operating Pressure - Psig												
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	
P420SR	5	717	1124	1253	846	2433	2026	3485	3078	4626	4219	5588	5181	
	6	867	1354	1103	616	2283	1796	3335	2848	4476	3989	5438	4951	
	7	1018	1584	952	386	2132	1566	3184	2618	4325	3759	5287	4721	
	8	1159	1814			1991	1336	3043	2388	4184	3529	5146	4491	
	9	1310	2036			1840	1114	2892	2166	4033	3307	4995	4269	
	10	1460	2266			1690	884	2742	1936	3883	3077	4845	4039	
	11	1602	2496					2600	1706	3741	2847	4703	3809	
	12	1744	2726					2458	1476	3599	2617	4561	3579	
	5	974	1460	1858	1372	3185	2699	4601	4115	5929	5443	7171	6685	
	6	1177	1752	1655	1080	2982	2407	4398	3823	5726	5151	6968	6393	
	7	1381	2053	1451	779	2778	2106	4194	3522	5522	4850	6764	6092	
	P560SR	8	1584	2345			2575	1814	3991	3230	5319	4558	6561	5800
9		1779	2646			2380	1513	3796	2929	5124	4257	6366	5499	
10		1983	2938			2176	1221	3592	2637	4920	3965	6162	5207	
11		2186	3239					3389	2336	4717	3664	5959	4906	
12		2381	3531					3194	2044	4522	3372	5764	4614	
5		1381	2115	2284	1550	4172	3438	6079	5345	7794	7060	9329	8595	
P770SR	6	1664	2531	2001	1134	3889	3022	5796	4929	7511	6644	9046	8179	
	7	1947	2947	1718	718	3606	2606	5513	4513	7228	6228	8763	7763	
	8	2230	3372			3323	2181	5230	4088	6945	5803	8480	7338	
	9	2505	3788			3048	1765	4955	3672	6670	5387	8205	6922	
	10	2788	4204			2765	1349	4672	3256	6387	4971	7922	6506	
	11	3062	4620			2491	933	4398	2840	6113	4555	7648	6090	
P1060S	12	3346	5036			2207	517	4114	2424	5829	4139	7364	5674	
	5	1912	2815	3179	2276	5800	4897	8568	7665	10972	10069	13291	12388	
	6	2283	3372	2808	1719	5429	4340	8197	7108	10601	9512	12920	11831	
	7	2655	3930	2436	1161	5057	3782	7825	6550	10229	8954	12548	11273	
	8	3027	4478			4685	3234	7453	6002	9857	8406	12176	10725	
	9	3408	5027			4304	2685	7072	5453	9476	7857	11795	10176	
	10	3788	5585			3924	2127	6692	4895	9096	7299	11415	9618	
	11	4160	6134			3552	1578	6320	4346	8724	6750	11043	9069	
	12	4540	6691			3172	1021	5940	3789	8344	6193	10663	8512	
	5	3230	4664	5495	4061	9857	8423	14250	12816	18570	17136	22370	20936	
	P1790SR	6	3885	5593	4849	3131	9211	7493	13604	11886	17924	16206	21724	20006
		7	4531	6540	4203	2201	8565	6563	12958	10956	17276	15276	21078	19076
8		5186	7479			7919	5633	12312	10026	16632	14346	20432	19146	
9		5815	8400			7273	4703	11666	9096	15986	13416	19786	17216	
10		6470	9310					11020	8166	15340	12486	19140	16286	
11		7125	10249					10374	7236	14694	11556	18494	15356	
12	7780	11214							14046	10626	17848	14426		
5	4797	7080	9275	6992	16267	13984	23525	21242	31137	28854	37686	35403		
P2900SR	6	5780	8452	8310	5576	15302	12568	22560	19826	30172	27438	36721	33987	
	7	6726	9877	7345	4160	14337	11152	21595	18410	29207	26022	35756	32571	
	8	7656	11285			13372	9736	20630	16994	28242	24606	34791	31155	
	9	8674	12745			12407	8320	19665	15578	27277	23190	33826	29739	
	10	9612	14125					18700	14162	26313	21774	32861	28323	
	11	10558	15524					17735	12746	25347	20358	31896	26907	
	12	11505	16905							24382	18942	30931	25491	

# Dimensions (in)



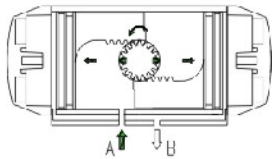
	P016	P030	P060	P090	P130	P215	P270	P420	P560	P770	P1060	P1790	P2900
<b>A</b>	5.83	6.26	8.39	9.8	10.67	12.4	13.62	16.22	17.44	19.37	21.54	24.17	28.7
<b>B</b>	3.62	4.25	4.92	5.43	5.94	6.89	7.48	8.25	9.06	9.96	10.91	13.7	15.31
<b>C</b>	1.35	1.67	2.01	2.27	2.5	2.85	3.09	3.46	3.87	4.33	4.8	5.75	6.33
<b>D</b>	1.12	1.42	1.71	1.91	2.2	2.52	2.72	3.15	3.46	3.88	4.29	5.14	5.79
<b>E</b>	1.61	1.14	2.07	2.22	2.6	3.03	3.23	3.54	3.87	4.15	4.41	5.16	5.78
<b>F</b>	2.28	2.83	3.39	3.8	4.17	5	5.12	5.85	6.28	7.07	7.64	9.09	9.99
<b>G</b>	1.02	1.18	1.03	1.26	1.46	1.67	1.8	2.17	2.04	2.37	2.6	2.76	3.54
<b>H</b>	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	1.57	1.57
<b>I</b>	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.77	1.77
<b>J</b>	1/4NPT	1/4NPT	1/4NPT	1/4NPT	1/4NPT	1/4NPT	1/4NPT	1/4NPT	1/4NPT	1/4NPT	1/4NPT	3/8NPT	3/8NPT
<b>L</b>	Ø1.57	Ø1.57	Ø1.57	Ø1.57	Ø1.57	Ø2.36	Ø2.36	Ø2.36	Ø2.36	Ø3.15	Ø3.15	Ø3.15	Ø3.15
<b>M</b>	0.79	0.79	0.79	0.79	0.79	1.18	0.79	1.18	1.18	1.18	1.18	1.97	1.97
<b>N</b>	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	5.12	5.12	5.12
<b>P</b>	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
<b>Q1</b>	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5
<b>Q2</b>	Ø1.65	Ø1.97	Ø1.97	Ø1.97	Ø2.76	Ø2.76	Ø2.76	Ø4.02	Ø4.02	Ø4.02	Ø4.02	Ø4.92	
<b>Q3</b>	Ø1.97	Ø2.76	Ø2.76	Ø2.76	Ø4.02	Ø4.02	Ø4.02	Ø4.92	Ø4.92	Ø5.51	Ø5.51	Ø6.5	Ø6.5
<b>Q4</b>	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M6	M6
<b>R</b>	M6	M8	M8	M8	M10	M10	M10	M12	M12	M16	M16	M20	M20
<b>S</b>	M5	M6	M6	M6	M8	M8	M8	M10	M10	M10	M10	M12	
<b>T</b>	0.43	0.55	0.55	0.67	0.67	0.87	0.87	1.06	1.06	1.42	1.42	1.81	1.81

# Air Flow

## OPERATIONS

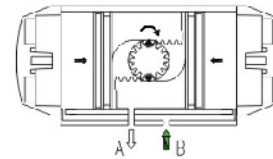
The standard rotation is clockwise to close, counter-clockwise rotation is obtained when port A is pressurized.

### Double Acting operation function (standard rotation) Top View.



**CCW**

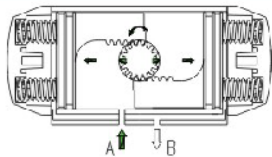
Air supplied to Port A forces the pistons apart and toward end positions, with exhaust air exiting at Port B, a counter-clockwise rotation is obtained.



**CW**

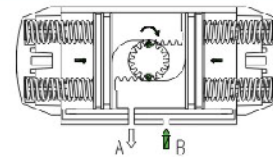
Air supplied to Port B forces the pistons together with exhaust air exiting at Port A, a clockwise rotation is obtained.

### Single Acting operation function (standard rotation) Top View.



**CCW**

Air supplied to Port A forces the pistons apart and toward end positions, compressing the springs with exhaust air exiting at Port B, a counter-clockwise rotation is obtained.



**CW**

On loss of air pressure (air or electric failure) at Port A allow the springs to force the pistons to the centre position with exhaust air exiting at Port A, a clockwise rotation obtained.