



**Series 79P (Aluminum)**

### Specifications - Series 79P

**Type:** Double Piston, Double Rack and Pinion

**Bodies:** Aluminum, Glass-filled Polyamide, and 316 ss

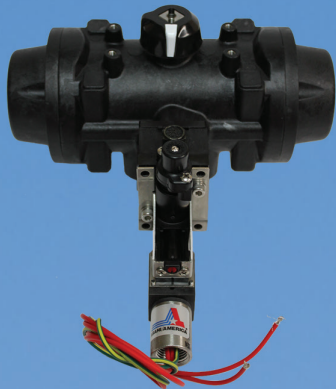
**Torque:** 59 to 40,710 in-lbs.

**Models:** Air-Air  
Spring Return (Fail Open)  
Spring Return (Fail Closed)

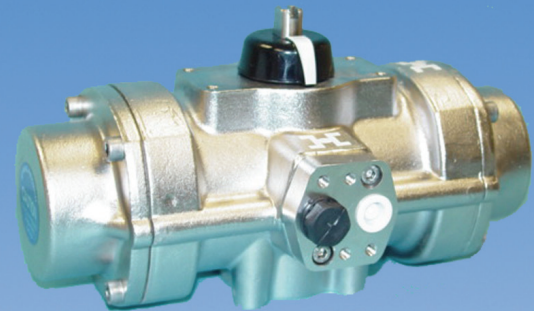
**Air Supply:** 60psi - 120psi

**Air Connections:** 1/4" NPT

**Mounting Dim.:** ISO and NAMUR



**Series 79P (Glass-filled Polyamide) with solenoid valve**



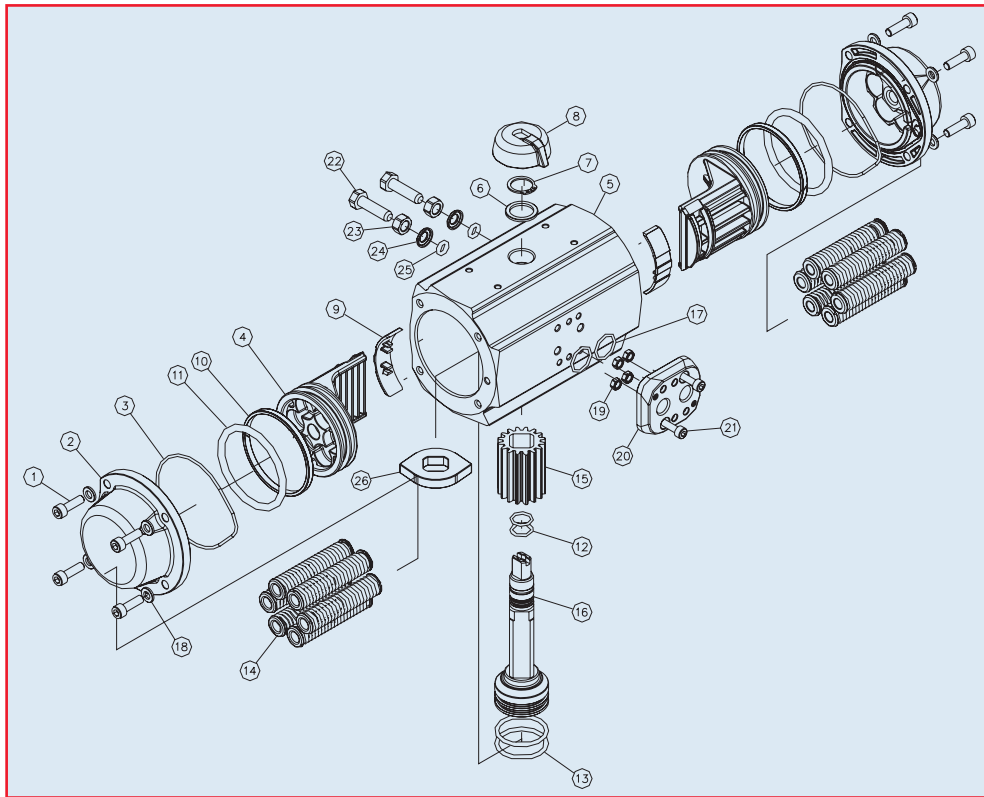
**Series 79P (316 Stainless Steel)**

### Standard Features

- Actuator body and end caps constructed of glass-filled polyamide (PAG), aluminum encompassed in a two-part cathaphoresis and Rilsan finish, or 316 stainless steel
- Double piston, double rack and pinion
- ISO valve mounting pattern
- ISO Female star output drive
- NAMUR accessory mounting pattern
- 80psi (recommended) to 120psi (maximum) filtered air supply range
- Can be cycled with air, water or non-combustable gas
- Spring return models have cathaphoresis coating, or chromium passivation for spring protection
- Available in air-to-air (double acting) and air-to-spring (single acting, or spring return fail safe) models
- Position indication through visible indicator knob
- Actuator shaft constructed of cathaphoresis coated steel or stainless steel with double O-ring seals top and bottom
- End position adjustable travel stops (aluminum [B79P-E79P, G79P-M79P] and 316 stainless steel [CS79P-FS79P] models only)
- Polyacetal or PTFE/bronze piston guides
- Self-lubricating BUNA-N O-ring seals
- -25° F - 195° F temperature range
- 1/4" NPT air connections

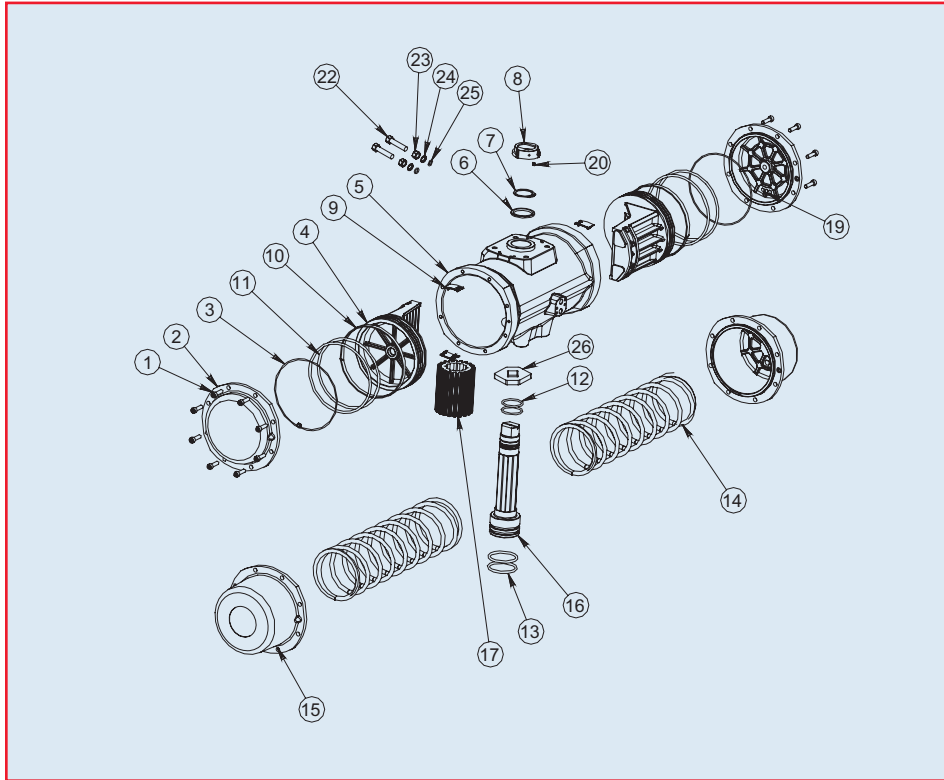
### Options

- Sizing for low air supply pressure (60psi)
- Direct mount NAMUR solenoids in various type and voltage ratings (solenoids piped in a closed loop design)
- NAMUR double limit switches in various type and voltage ratings
- NAMUR pneumatic positioners (3-15psi)
- NAMUR electro-pneumatic positioners (4-20mA)
- Limit switch or transmitter available for positioners
- Bus systems



### Parts List (Typical PA Series Actuator)

PARTS		
NO.	DESCRIPTION	MATERIAL
1	End Cap Bolt	304 Stainless Steel
2	End Cap	Cataphoresis AND Polyurethane Coated Aluminum Alloy
3	End Cap O-Ring	NBR
4	Piston	Cataphoresis Coated Aluminum Alloy and Rilsan
5	Actuator Body	PA Cataphoresis Coated Aluminum Alloy
6	Washer	Polyamide 6
7	Shaft Retaining Ring	Steel
8	Position Indicator	Polyacetal
9	Piston Guide	Polyacetal
10	Guide Ring	Polyacetal
11	Piston O-Ring	NBR
12	Upper Shaft O-Ring	NBR
13	Lower Shaft O-Ring	NBR
14	Spring Set	DIN 17223 - C With Chromium Passivation
15	Pinion Gear	Ball Burnished Aluminum Alloy
16	Shaft	Cataphoresis Coated Steel
17	Air Connection Plate O-Ring	NBR
18	End Cap Washer	304 Stainless Steel
19	Nut for Air Connection Plate	304 Stainless Steel
20	Air Connection Plate	Polyamide
21	Bolt for Air Connection Plate	304 Stainless Steel
22	Adjustment Bolt	Steel With Chromium Passivation
23	Adjustment Locknut	304 Stainless Steel
24	Bushing	Stainless Steel (303, 304, or 316)
25	Travel Stop O-Ring	NBR
26	Travel Stop Cam	Cataphoresis Coated Steel



## Parts List (Typical P Series Actuator)

PARTS		
NO.	DESCRIPTION	MATERIAL
1	End Cap Bolt	304 Stainless Steel
2	Double Acting End Cap	Cataphoresis and Rilsan Coated Aluminum Alloy
3	End Cap O-Ring	NBR
4	Piston	Cataphoresis Coated Aluminum Alloy
5	Actuator Body	PA Cataphoresis Coated Aluminum Alloy
6	Washer	Polyamide 6
7	Shaft Retaining Ring	Cataphoresis Coated Steel
8	Position Indicator	Polyamide
9	Piston Guide	Teflon & Bronze
10	Guide Ring	Teflon & Bronze
11	Piston O-Ring	NBR
12	Upper Shaft O-Ring	NBR
13	Lower Shaft O-Ring	NBR
14	Spring Set	DIN 17223 - C With Cataphoresis
15	Spring Return End Cap	Cataphoresis and Rilsan Coated Aluminum Alloy
16	Shaft	Cataphoresis Coated Steel
17	Pinion Gear	Ball Burnished Aluminum Alloy
19	End Cap Gasket	NBR
22	Adjustment Bolt*	Steel With Chromium Passivation
23	Adjustment Locknut*	304 Stainless Steel
24	Bushing*	304 Stainless Steel
25	Travel Stop O-Ring*	NBR
26	Cam*	Cataphoresis Coated Steel

\*Optional at time of order.

## Torque Air-to-Air (Inch-Pounds)

Model	Supply Pressure (psi)				
	40	60	80	100	120
A79PA	70	100	137	175	203
B79PA	117	162	230	297	342
B579PA	208	286	401	517	594
C79PA	291	404	575	741	853
C579PA	489	669	940	1,212	1,393
D79PA	688	947	1,336	1,724	1,982
D579PA	1,240	1,682	2,344	3,008	3,486
E79PA	2,005	2,720	3,794	4,868	5,584
F79P	5,155	6,917	9,558	12,204	13,965
G79PA	8,832	11,983	16,718	21,452	24,603
L79PA	14,496	19,868	27,922	35,975	41,347
M79PA	21,143	28,966	40,710	52,454	60,286

## Cycle Time (Seconds)

Model	Air to Air		Air to Spring	
	Open Port A	Open Port B	Open Port A	Open Port B
A79PA	0.10	0.10	0.15	0.15
B79PA	0.15	0.15	0.20	0.20
B579PA	0.20	0.20	0.25	0.25
C79PA	0.25	0.25	0.30	0.30
C579PA	0.30	0.30	0.40	0.40
D79PA	0.40	0.40	0.50	0.50
D579PA	0.50	0.50	0.80	0.80
E79PA	0.60	0.60	1.20	1.20
F79P	1.20	1.20	2.00	2.00
G79PA	3.00	2.50	4.00	3.00
L79PA	3.00	3.00	6.00	5.00
M79PA	4.00	4.00	8.00	6.00

## Air Consumption (Cubic Inches)

Model	Air to Air		Air to Spring	
	Open Port A	Closed Port B	Open Port A	Closed Port B
A79PA	4.58	6.71	4.58	-
B79PA	9.15	10.98	9.15	-
B579PA	17.09	22.58	17.09	-
C79PA	21.36	27.46	21.36	-
C579PA	39.66	50.04	39.66	-
D79PA	48.82	70.17	48.82	-
D579PA	91.53	123.26	91.53	-
E79PA	125.09	183.06	125.09	-
F79P	323.41	323.41	323.41	-
G79PA	640.71	427.14	640.71	-
L79PA	1,189.89	1,263.11	1,189.89	-
M79PA	1,891.62	1,830.60	1,891.62	-

## Weight (lbs.)

Model	Air to Air	Air to Spring
A79PA	2.03	2.20
B79PA	3.09	3.53
B579PA	5.66	6.48
C79PA	6.79	7.67
C579PA	9.26	11.11
D79PA	12.36	14.61
D579PA	20.50	24.91
E79PA	25.57	33.72
F79P	38.79	80.23
G79PA	67.66	128.71
L79PA	106.45	183.37
M79PA	171.69	260.51

# Pneumatic Actuators

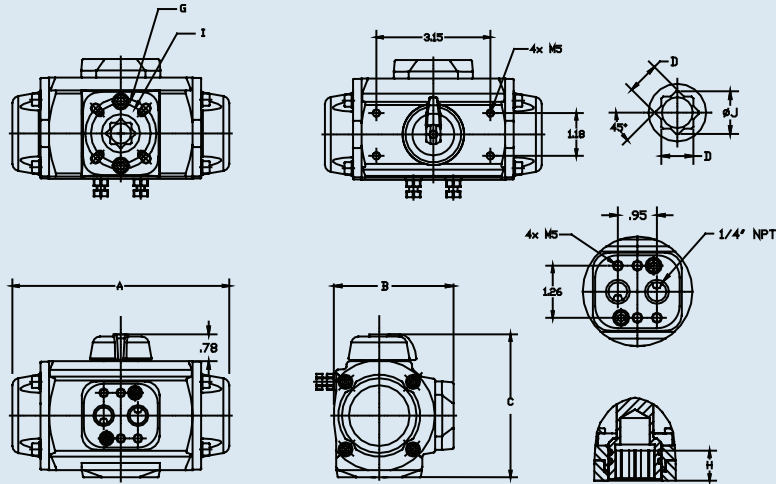
# P/PA Series

## Torque Air-to-Spring (Inch-Pounds)

Model	Spring Set	40 psi		60 psi		80 psi		100 psi		120 psi		Spring Torque	
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
A79PAS	2	49	35	79	65	116	102	-	-	-	-	35	21
	3	38	21	68	51	105	89	143	127	-	-	49	32
	4	29	8	59	38	96	75	135	113	162	141	62	41
	5	-	-	49	25	86	62	124	100	151	127	75	51
	6*	-	-	-	-	78	49	116	87	143	114	89	59
B79PAS	2	81	60	126	104	194	172	261	239	306	284	58	36
	3	59	32	103	76	172	144	239	212	284	257	86	59
	4	-	-	85	50	153	119	220	186	266	231	112	77
	5	-	-	67	22	135	90	203	158	248	203	140	95
	6*	-	-	-	-	118	64	185	131	230	176	166	112
B579PAS	2	139	100	217	178	332	293	-	-	-	-	108	69
	3	108	46	186	124	301	239	417	355	-	-	162	100
	4	85	15	163	93	278	208	394	324	471	401	193	123
	5	-	-	132	47	247	162	363	278	440	355	239	154
	6*	-	-	-	-	216	123	332	239	409	316	278	185
C79PAS	2	200	157	312	269	484	441	-	-	-	-	135	91
	3	155	89	267	202	439	373	604	539	-	-	202	136
	4	110	22	222	135	394	306	559	472	672	584	269	181
	5	-	-	176	67	348	239	513	404	626	517	336	227
	6*	-	-	-	-	303	172	468	337	581	450	404	273
C579PAS	2	344	278	525	458	796	729	-	-	-	-	211	144
	3	272	173	452	353	723	624	995	896	-	-	316	217
	4	199	66	380	247	650	518	922	789	1,104	971	422	289
	5	-	-	307	142	578	412	850	684	1,031	866	527	362
	6*	-	-	-	-	506	307	778	579	959	760	633	434
D79PAS	2	494	379	753	638	1,143	1,027	-	-	-	-	309	194
	3	396	225	656	484	1,045	873	1,433	1,261	-	-	463	291
	4	299	71	558	329	948	719	1,335	1,106	1,594	1,365	618	389
	5	-	-	462	175	851	565	1,239	952	1,497	1,211	772	485
	6*	-	-	-	-	754	410	1,142	797	1,400	1,056	927	582
D579PAS	2	888	704	1,330	1,146	1,992	1,808	-	-	-	-	536	352
	3	712	435	1,154	878	1,816	1,540	2,480	2,204	-	-	804	528
	4	535	167	978	610	1,640	1,272	2,304	1,935	2,782	2,413	1,073	704
	5	-	-	802	342	1,464	1,004	2,128	1,667	2,605	2,145	1,341	881
	6*	-	-	-	-	1,288	735	1,951	1,399	2,429	1,877	1,609	1,057
E79PAS	2	1,427	1,147	2,142	1,863	3,216	2,937	-	-	-	-	856	577
	3	1,138	719	1,854	1,435	2,927	2,509	4,001	3,582	-	-	1,285	866
	4	849	291	1,565	1,007	2,639	2,080	3,712	3,154	4,428	3,870	1,713	1,155
	5	-	-	1,276	579	2,350	1,652	3,423	2,726	4,139	3,441	2,141	1,443
	6	-	-	-	-	2,062	1,225	3,137	2,299	3,853	3,015	2,569	1,732
F79PS	1	3,589	2,719	5,351	4,481	7,995	7,125	-	-	-	-	2,436	1,566
	2	2,371	913	4,133	2,914	6,776	5,559	9,420	8,202	-	-	4,003	2,784
	3	-	-	3,089	1,348	5,732	3,992	8,376	6,636	10,139	8,398	5,569	3,829
	4*	-	-	-	-	4,945	2,774	7,853	5,417	9,616	7,180	6,787	4,351
GP79PAS	2	5,335	2,750	8,485	5,900	13,220	10,635	17,955	15,370	21,105	18,520	6,083	3,498
	3	4,363	1,533	7,786	4,683	12,521	9,418	17,256	14,153	20,406	17,304	7,299	4,197
	4	-	-	6,949	3,224	11,681	7,959	16,416	12,694	19,566	15,844	8,759	5,037
	5	-	-	5,939	1,472	10,674	6,207	15,409	10,941	18,559	14,092	10,511	6,044
	6*	-	-	-	-	9,465	4,104	14,200	8,838	17,350	11,989	12,614	7,253
L79PAS	2	10,416	8,368	15,788	13,744	23,842	21,798	-	-	-	-	6,124	4,089
	3	8,372	5,315	13,744	10,682	21,798	18,735	29,851	26,789	-	-	9,177	6,124
	4	6,337	2,255	11,700	7,624	19,753	15,682	27,816	23,736	33,179	29,099	12,240	8,160
	5	-	-	9,664	4,564	17,718	12,620	25,771	20,674	31,143	26,037	15,302	10,204
	6*	-	-	-	-	15,682	9,558	23,736	17,612	29,099	22,983	18,364	12,240
M79PAS	2	15,921	10,700	23,753	18,532	35,497	30,276	-	-	-	-	10,443	5,222
	3	13,310	5,478	21,143	13,310	32,887	25,054	44,631	36,798	-	-	15,656	7,832
	4	-	-	18,532	8,089	30,276	19,833	42,020	31,577	49,843	39,409	20,877	10,443
	5	-	-	-	-	27,665	14,611	39,409	26,355	47,241	34,188	26,099	13,054
	6*	-	-	-	-	25,054	9,399	36,798	21,143	44,631	28,966	31,320	15,656

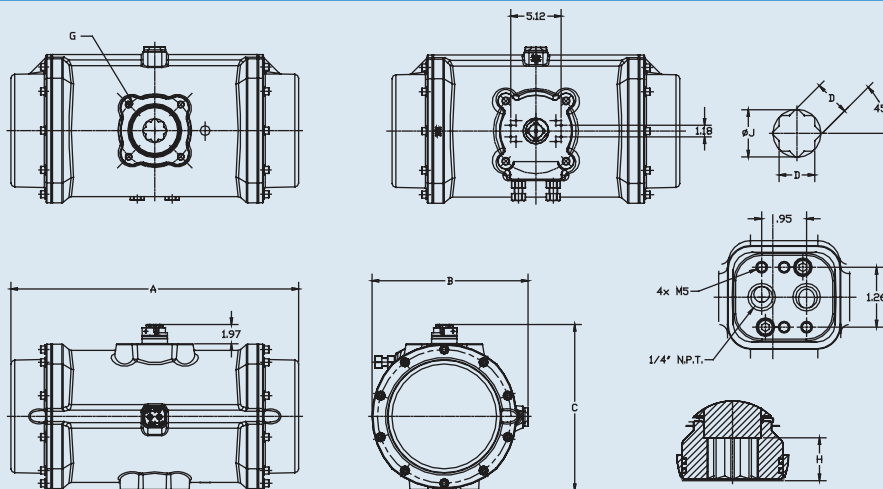
# Pneumatic Actuators

# P/PA Series



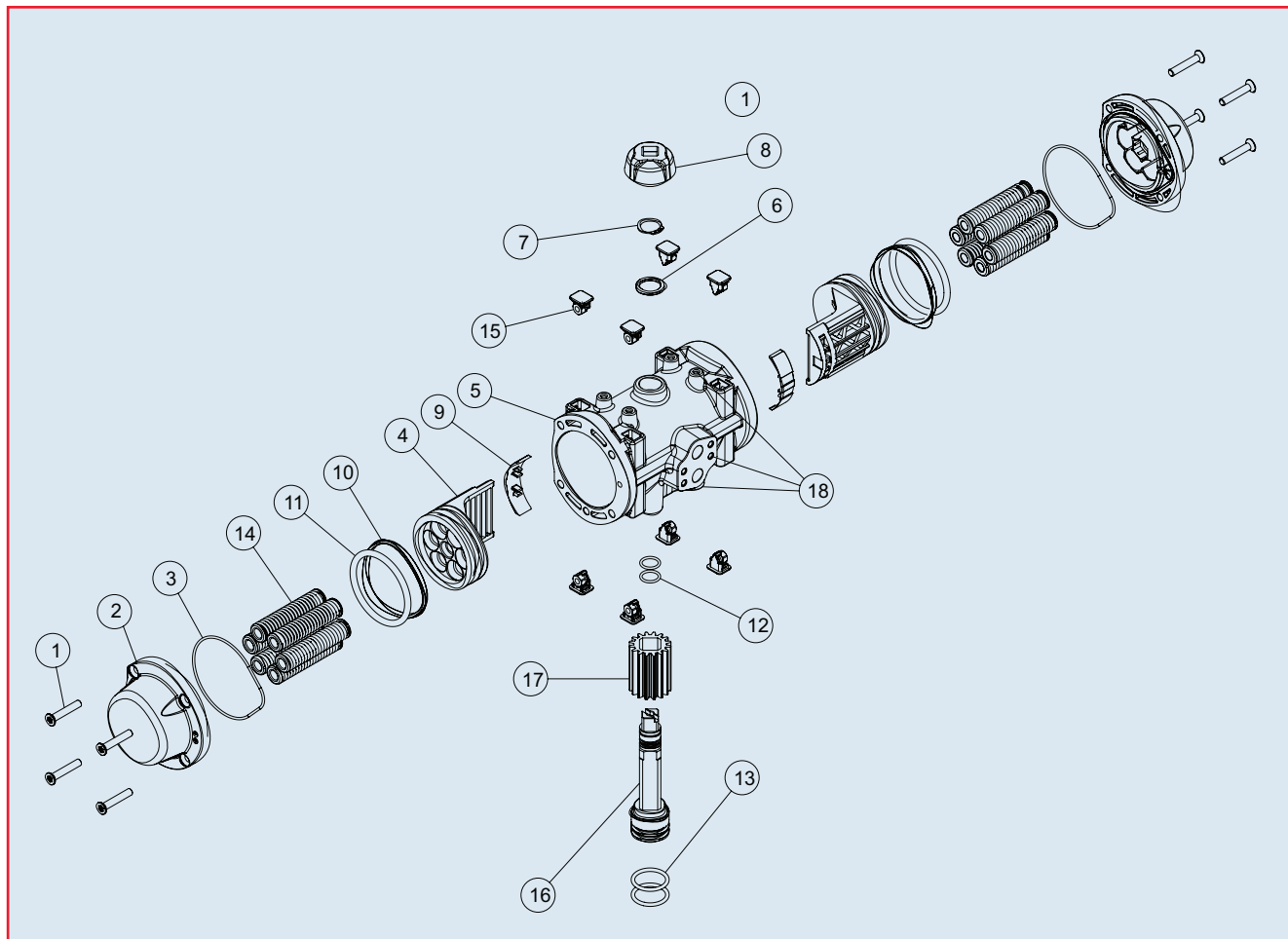
Conforming to standards: ISO 5211, DIN 3337, VDE 3845, NAMUR

Model	A		B	C	D	G	H	I	J		
	A-S	A-A									
A79PA	5.52		3.00	3.50	0.43	ø1.65	M5 X 8 DEEP	0.63	ø1.42	M5 X 8 DEEP	0.56
B79PA	6.10		3.31	4.02	0.55	ø1.97	M6 X 10 DEEP	0.63	ø1.65	M5 X 10 DEEP	0.75
B579PA	7.91		4.02	4.68	0.67	ø2.76	M8 X 14 DEEP	0.75	ø1.97	M6 X 9 DEEP	0.91
C79PA	8.90		4.08	4.85	0.67	ø2.76	M8 X 14 DEEP	0.75	ø1.97	M6 X 9 DEEP	0.91
C579PA	10.43		4.70	5.47	0.67	ø2.76	M8 X 14 DEEP	0.75	ø1.97	M6 X 9 DEEP	0.91
D79PA	12.28		5.00	5.79	0.87	ø2.76	M8 X 14 DEEP	0.75	ø1.97	M6 X 9 DEEP	1.14
D579PA	14.09		6.02	6.90	1.06	ø2.76	M8 X 14 DEEP	1.14	-	-	1.44
E79PA	16.90		6.65	7.52	1.06	ø4.02	M10 X 15 DEEP	1.14	-	-	1.44
G79PA	27.32		10.57	12.17	1.41	ø5.51	M16 X 25 DEEP	1.54	-	-	1.93
L79PA	26.40		13.57	14.49	1.81	ø6.50	M20 X 25 DEEP	1.89	-	-	2.40
M79PA	29.23		15.85	16.85	1.81	ø6.50	M20 X 25 DEEP	1.89	-	-	2.40



Conforming to standards: ISO 5211, DIN 3337, VDE 3845, NAMUR

ACTUATOR	A		B	C	D	G	H	J	
	A-S	A-A							
F79P	23.53	17.48	8.90	10.71	1.41	ø4.92	M12 X 18 DEEP	1.50	1.93



## Parts List (Typical PAG Series Actuator)

PARTS		
No	Description	Material
1	End Cap Bolt	304 Stainless Steel
2	End Cap	Polyamide
3	End Cap O-Ring	NBR
4	Piston	Polyarilamide
5	Actuator Body	Polyamide
6	Washer	Polyamide 6
7	Shaft Retaining Ring	Stainless Steel
8	Position Indicator	Polyamide
9	Piston Guide	Polyacetal
10	Guide Ring	Polyacetal
11	Piston O-Ring	NBR
12	Upper Shaft O-Ring	NBR
13	Lower Shaft O-Ring	NBR
14	Spring Set	DIN-17223-C with Chromium Passivation
15	Nut Protector	Polyamide
16	Shaft	303 Stainless Steel
17	Pinion Gear	Aluminum Alloy
18	Thread Inserts	304 Stainless Steel

## Torque Air to Spring (Inch-Pounds)

Model	Spring Set	40 psi		60 psi		80 psi		100 psi		120 psi		Spring Torque	
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
AP79PAS	2	49	35	79	65	116	102					35	21
	3	38	21	68	51	105	89	143	127			49	32
	4	29	8	59	38	96	75	135	113	162	141	62	41
	5			49	25	86	62	124	100	151	127	75	51
	6*					78	49	116	87	143	114	89	59
BP79PAS	2	81	60	126	104	194	172	261	239	306	284	58	36
	3	59	32	103	76	172	144	239	212	284	257	86	59
	4			85	50	153	119	220	186	266	231	112	77
	5			67	22	135	90	203	158	248	203	140	95
	6*					118	64	185	131	230	176	166	112
CP79PAS	2	200	157	312	269	484	441					135	91
	3	155	89	267	202	439	373	604	539			202	136
	4	110	22	222	135	394	306	559	472	672	584	269	181
	5			176	67	348	239	513	404	626	517	336	227
	6*					303	172	468	337	581	450	404	273
DP79PAS	2	494	379	753	638	1,143	1,027					309	194
	3	396	225	656	484	1,045	873	1,433	1,261			463	291
	4	299	71	558	329	948	719	1,335	1,106	1,594	1,365	618	389
	5			462	175	851	565	1,239	952	1,497	1,211	772	485
	6*					754	410	1,142	797	1,400	1,056	927	582

\*Number of springs in standard unit.

## Torque Air-to-Air (Inch-Pounds)

Model	Supply Pressure (psi)				
	40	60	80	100	120
AP79P	70	100	137	175	203
BP79P	118	162	230	297	342
CP79P	291	404	575	741	853
DP79P	688	947	1336	1724	1982

## Cycle Time (Seconds)

Model	Air-to-Air		Air-to-Spring	
	Open Port A	Closed Port B	Open Port A	Closed Port B
AP79P	0.10	0.10	0.15	0.15
BP79P	0.15	0.15	0.20	0.20
CP79P	0.25	0.25	0.30	0.30
DP79P	0.40	0.40	0.50	0.50

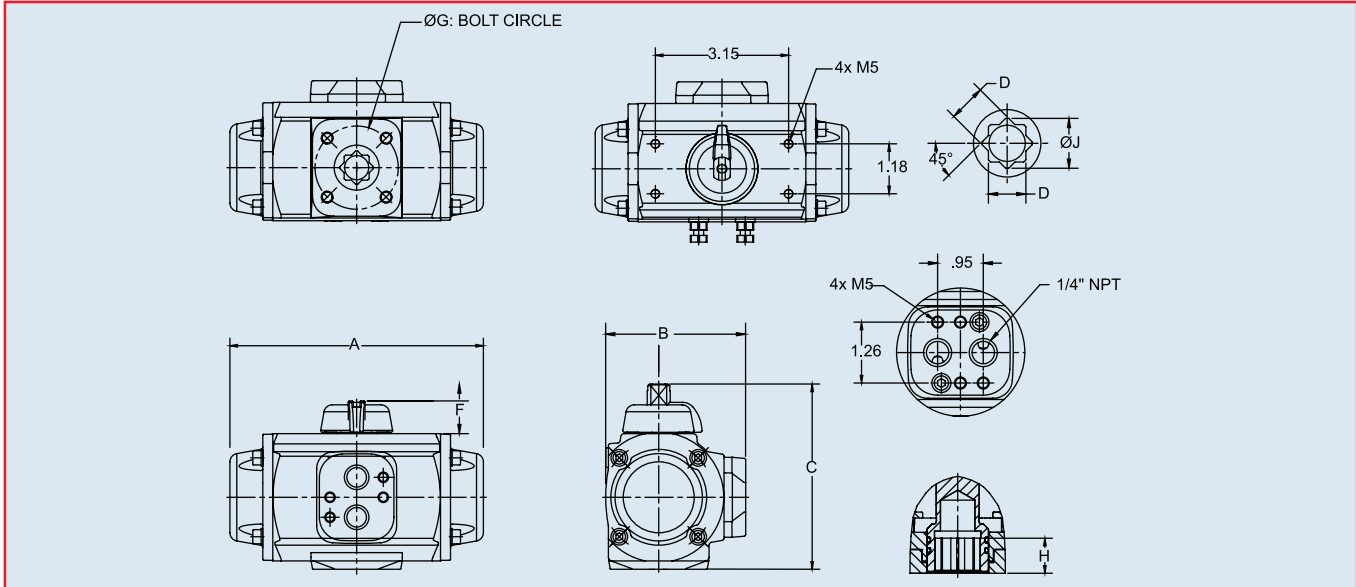
## Air Consumption (Cubic Inches)

Model	Air-to-Air		Air-to-Spring	
	Open Port A	Closed Port B	Open Port A	Closed Port B
AP79P	4.58	3.05	4.58	-
BP79P	9.15	10.98	9.15	-
CP79P	21.36	27.46	21.36	-
DP79P	48.82	70.17	48.82	-

## Weight (lbs.)

Model	Air-to-Air	Air-to-Spring
AP79PA	1.04	1.21
BP79PA	1.83	2.20
CP79PA	3.64	4.48
DP79PA	7.10	9.30

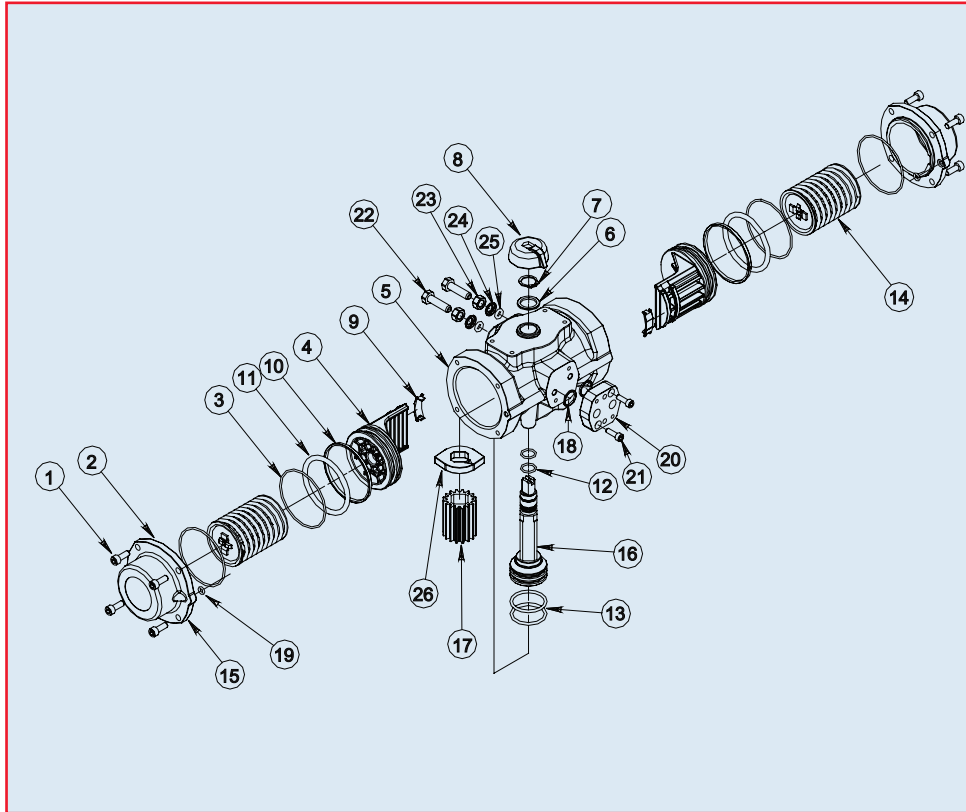




Conforming to standards: ISO 5211, DIN 3337, VDE 3845, NAMUR

## Dimensions (in.)

Model	A	B	C	D	F	G		H	J
AP79PA	5.67	2.76	3.50	0.43	0.78	φ 1.65	M5 X 7 DEEP	0.63	0.56
BP79PA	6.18	3.11	4.02	0.55	0.78	φ 1.97	M6 X 15 DEEP	0.63	0.75
CP79PA	9.05	3.82	4.84	0.67	0.78	φ 2.76	M8 X 18 DEEP	0.75	0.91
DP79PA	12.32	4.80	5.79	0.87	0.78	φ 2.76	M8 X 18 DEEP	0.75	1.41



**Parts List (Typical SS Series Actuator)**

PARTS		
NO.	DESCRIPTION	MATERIAL
1	End Cap Bolt	316 Stainless Steel
2	End Cap	316 Stainless Steel
3	End Cap O-Ring	NBR
4	Piston	Cataphoresis Coated Aluminum
5	Actuator Body	316 Stainless Steel
6	Washer	Polyamide 6
7	Shaft Retaining Ring	Stainless Steel
8	Position Indicator	Polyamide
9	Piston Guide	Polyacetal
10	Guide Ring	PTFE/ Bronze
11	Piston O-Ring	NBR
12	Upper Shaft O-Ring	NBR
13	Lower Shaft O-Ring	NBR
14	Spring Set (Captive)	Cataphoresis Coated DIN-17223-C
16	Shaft	316 Stainless Steel
17	Pinion Gear	Cataphoresis Coated Aluminum
18	Air Connection Plate O-Ring	NBR
19	End Cap Gasket	NBR
20	Air Connection Plate	316 Stainless Steel
21	Bolt for Air Connection Plate	316 Stainless Steel
22	Adjustment Bolt	316 Stainless Steel
23	Adjustment Locknut	316 Stainless Steel
24	Bushing	316 Stainless Steel
25	Travel Stop O-Ring	NBR
26	Cam	304 Stainless Steel

## Torque Air-to-Spring (Inch-Pounds)

Model	Spring Set	40 psi		60 psi		80 psi		100 psi		120 psi		Spring Torque	
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
BS79PS	1	60	42	100	81	159	140	-	-	-	-	62	42
	2	37	10	77	50	136	109	196	168	-	-	93	65
	3	-	-	51	27	111	86	170	144	209	184	116	91
	4*	-	-	-	-	102	61	160	119	200	159	141	100
CS79PS	1	176	126	289	238	458	407	-	-	-	-	165	115
	2	-	-	267	157	397	325	566	494	-	-	248	175
	3	-	-	-	-	319	215	488	383	600	496	358	253
	4*	-	-	-	-	287	160	455	328	567	441	412	286
DS79PS	1	466	317	725	577	1113	965	-	-	-	-	371	222
	2	342	95	601	354	989	743	1378	1131	-	-	593	346
	3	-	-	453	132	841	519	1230	908	1489	1167	816	495
	4*	-	-	-	-	767	421	1156	810	1414	1068	914	568
ES79PS	1	1520	1174	2236	1890	3311	2965	-	-	-	-	830	484
	2	1174	689	1890	1405	2965	2478	4038	3553	-	-	1315	830
	3	759	205	1474	921	2549	1996	3622	3069	4,338	3,785	1799	1246
	4*	-	-	1128	298	2203	1373	3276	2446	3,992	3,162	2422	1592
FS79PS	1	3589	2718	5355	4485	7995	7125	-	-	-	-	2436	1566
	2	2370	1152	4136	2918	6776	5558	9420	8202	-	-	4003	2785
	3	-	-	3092	1352	5732	3992	8376	6635	10138	8398	5569	3829
	4*	-	-	-	-	5207	2773	7854	5417	9616	7180	6787	4351

\*Number of springs in standard unit

## Torque Air-to-Air (Inch-Pounds)

Model	Supply Pressure (psi)				
	40	60	80	100	120
BS79P	103	142	202	261	300
CS79P	291	404	573	741	853
DS79P	688	947	1335	1724	1982
ES79P	2005	2720	3795	4868	5584
FS79P	5155	6917	9560	12204	13967

## Cycle Time (Seconds)

Model	Air to Air		Air to Spring	
	Open Port A	Closed Port B	Open Port A	Closed Port B
BS79P	0.15	0.15	0.20	0.20
CS79P	0.25	0.25	0.30	0.30
DS79P	0.40	0.40	0.50	0.50
ES79P	0.60	0.60	1.20	1.20
FS79P	1.20	1.20	2.00	2.00

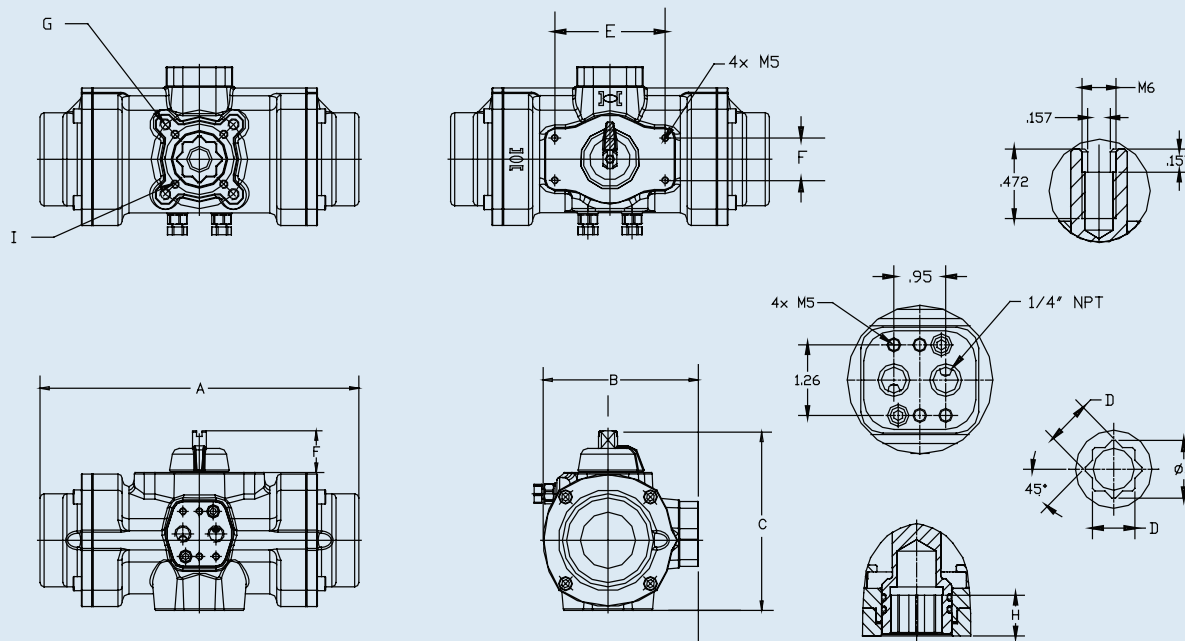
## Air Consumption (Cubic Inches)

Model	Air to Air		Air to Spring	
	Open Port A	Closed Port B	Open Port A	Closed Port B
BS79P	9.15	6.10	9.15	-
CS79P	21.36	19.53	21.36	-
DS79P	48.82	42.71	48.82	-
ES79P	125.09	115.94	125.09	-
FS79P	323.41	323.41	323.41	-

## Weight (lbs.)

Model	Air to Air	Air to Spring
BS79P	4.85	5.73
CS79P	10.36	12.34
DS79P	13.00	21.82
ES79P	39.45	55.98
FS79P	84.66	127.00

CONFORMING TO STANDARDS: ISO 5211, DIN 3337, VDE-3845, NAMUR



## Dimensions (in.)

Model	A		B	C	D	E	F	G	H	I		J	
	A-A	A-S											
BS79P	5.47	6.30	3.58	4.38	0.55	3.15	1.18	∅ 1.97	M6 X 10 DEEP	0.63	-	-	0.57
CS79P	7.80	9.10	4.41	4.96	0.67	3.15	1.18	∅ 2.76	M8 X 14 DEEP	0.74	∅ 1.97	M6 X 9 DEEP	0.59
DS79P	10.12	12.13	5.47	6.29	0.87	3.15	1.18	∅ 2.76	M8 X 14 DEEP	0.74	∅ 1.97	M6 X 9 DEEP	0.91
ES79P	13.78	18.82	7.32	8.31	1.06	3.15	1.18	∅ 4.02	M10 X 15 DEEP	1.14	∅ 2.76	M8 X 14 DEEP	1.14
FS79P	23.54		8.78	10.71	1.41	5.12	1.97	∅ 4.92	M12 X 18 DEEP	1.50	∅ 4.02	M10 X 15 DEEP	1.38