

Smart Solutions. Powerful Products.



# PNEUMATIC ACTUATOR SERIES 227

# Features and Benefits

## Thirteen Sizes

## Rack and Pinion Design

## Double Acting and Spring Return

## Break and Seat Combinations

Multiple spring cartridge torque combinations for each body size to better match the valve application.

## Namur Interface

For easy solenoid mounting.

## Mid Body Namur Interface

For easy air and electrical connections.

## Anodized Aluminum Cylinders and Epoxy Coated End-caps

Secured with stainless steel fasteners for corrosion resistance.

## Large Piston Guides and Rings

To provide minimum cylinder wear and optimum contact between the rack and pinion.

## Dual Travel Stops

## Specifications

Pressure Range	40 to 142 psi
Temperature Range	-4 to 176° F High temp and low temp configurations available.
Stroke	90° ± 5°
Media	Dry or lubricated air.
Lubrication	All moving parts are factory lubricated. No additional lubrication required.
Construction	Suitable for indoor and outdoor installation.
Mounting Dimension	ABZ standard for direct valve mounting. ABZ-210, ABZ-240, and ABZ-270 are designed to ISO mount standards. See dimensions charts on pages 5 & 6.

## Double Acting Torque Chart (inch pounds)

Model	40PSI	60PSI	80PSI	100PSI	120PSI	Weight		Volume Cu. In.	
						LBS	KG	CW	CCW
ABZ-50DA	77	115	154	192	231	2.9	1.3	7.9	6.2
ABZ-63DA	136	203	272	340	409	3.5	1.6	16.0	10.8
ABZ-75DA	269	404	539	673	808	6.4	2.9	29.5	21.2
ABZ-88DA	424	636	847	1060	1272	9.3	4.2	45.8	35.9
ABZ-100DA	614	921	1227	1534	1842	12.3	5.6	65.0	50.0
ABZ-115DA	997	1494	1992	2490	2989	20.0	9.1	105.0	79.8
ABZ-125DA	1282	1922	2562	3202	3844	22.0	10.0	137.9	103.7
ABZ-145DA	2016	3023	4031	5039	6047	30.4	13.8	224.5	165.8
ABZ-160DA	2630	3944	5259	6574	7889	46.9	21.3	288.8	213.7
ABZ-180DA	3551	5326	7101	8877	10652	59.0	26.8	420.0	279.4
ABZ-210DA	4929	7394	9858	12323	14789	80.8	36.7	569.6	382.0
ABZ-240DA	10342	15513	20684	25855	31025	133.0	60.0	769.0	989.0
ABZ-270DA	14336	21504	28671	35839	43007	190.0	86.0	1080.0	1391.0

Air Consumption (scf per 90°) = (Volume/17280) x (Supply Pressure + 14.7) /14.7

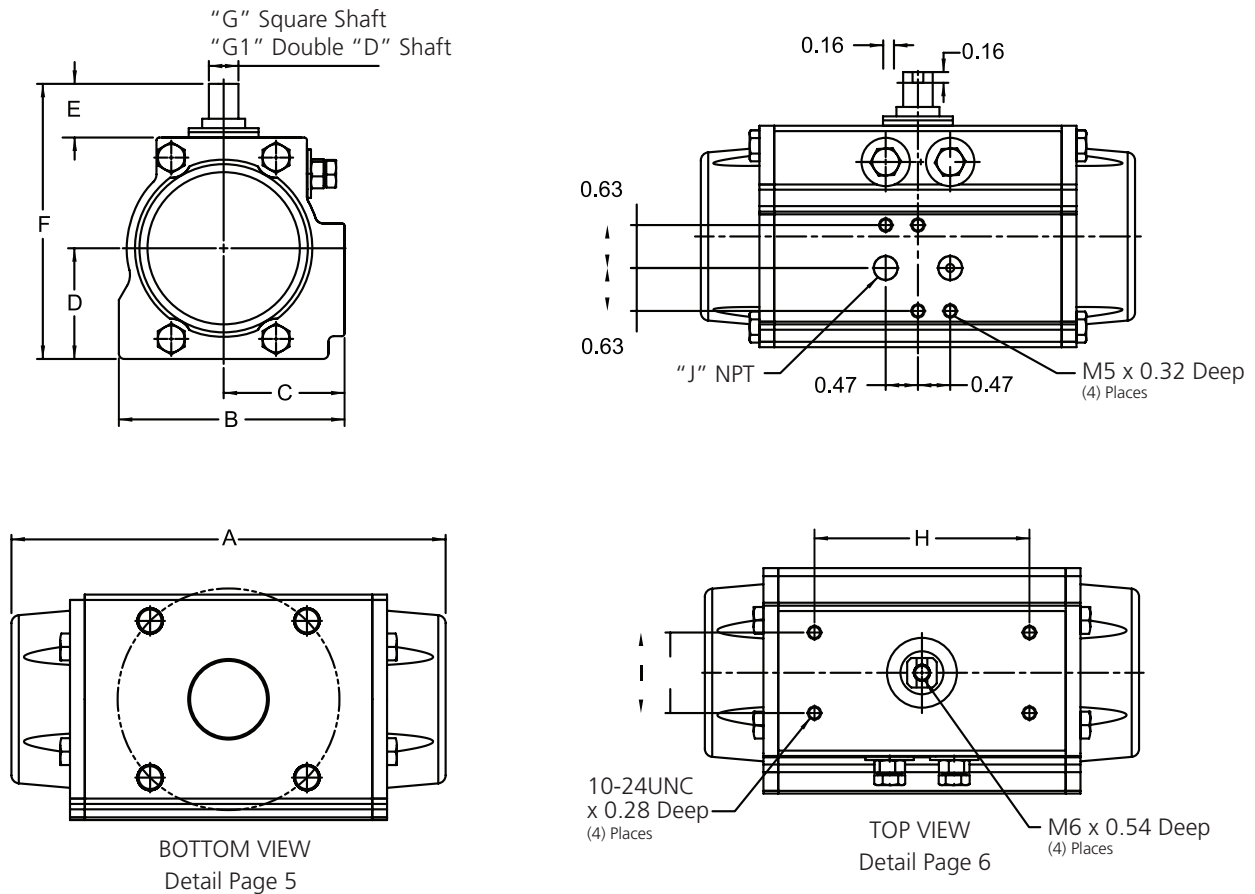
# Spring Return Torque Chart (inch pounds)

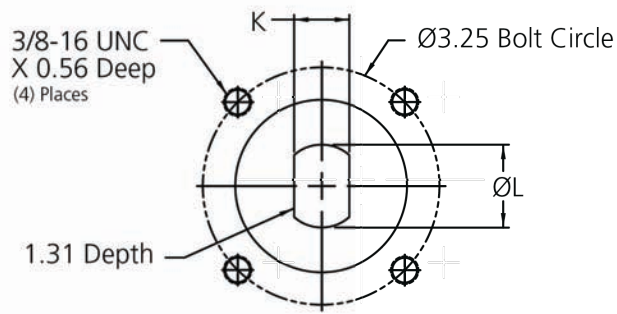
Model	Set	Spring Torque		40PSI		60PSI		80PSI		100PSI		120PSI		Weight		Volume Cu. In.	
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End				
ABZ-50SR	3/3	48	33	44	29	83	67							3.1	1.4	7.9	6.2
	4/4	66	46			70	50	109	89	148	128						
	5/5	82	56					98	72	136	111	166	141				
	6/6	99	68					86	56	124	94	154	124				
ABZ-63SR	3/3	85	59	80	49	148	118							3.7	1.7	16.0	10.8
	4/4	114	76			129	89	198	158	266	226						
	5/5	142	93					180	129	248	198	299	249				
	6/6	170	112					161	101	230	169	281	220				
ABZ-75SR	3/3	175	112	158	95	294	231							7.0	3.2	29.5	21.2
	4/4	233	149			256	172	391	307	526	442						
	5/5	291	186					354	249	488	383	590	485				
	6/6	349	223					316	190	451	325	552	427				
ABZ-88SR	3/3	292	185	239	133	451	345							10.4	4.7	45.8	35.9
	4/4	389	246			390	248	602	461	815	670						
	5/5	486	309					542	364	752	575	912	734				
	6/6	583	370					480	267	691	478	850	637				
ABZ-100SR	3/3	398	256	361	219	670	528							14.1	6.4	65.0	50.0
	4/4	530	340			584	395	884	697	1201	1012						
	5/5	662	427					801	566	1115	880	1347	1111				
	6/6	794	511					715	434	1031	748	1263	979				
ABZ-115SR	3/3	661	413	582	335	1081	834							21.1	9.6	105.0	79.8
	4/4	883	551			942	613	1441	1112	1939	1609						
	5/5	1101	690					1303	891	1802	1390	2176	1764				
	6/6	1320	827					1165	670	1663	1169	2038	1544				
ABZ-125SR	3/3	831	530	754	454	1395	1093							25.3	11.5	137.9	103.7
	4/4	1110	706			1219	818	1859	1458	2499	2099						
	5/5	1387	883					1684	1183	2324	1823	2804	2303				
	6/6	1664	1059					1509	907	2149	1548	2630	2028				
ABZ-145SR	3/3	1302	832	1185	718	2195	1728							37.4	17.0	224.5	165.8
	4/4	1732	1110			1916	1294	2926	2304	3936	3314						
	5/5	2169	1387					2648	1871	3658	2880	4416	3638				
	6/6	2597	1664					2369	1436	3380	2447	4137	3204				
ABZ-160SR	3/3	1673	1134	1496	951	2812	2268							54.0	24.5	288.8	213.7
	4/4	2236	1513			2433	1706	3749	3023	5065	4339						
	5/5	2791	1883					3371	2462	4687	3779	5673	4766				
	6/6	3354	2261					2992	1902	4308	3219	5295	4206				
ABZ-180SR	3/3	2387	1597	1958	1164	3733	2937							70.5	32.0	420.0	279.4
	4/4	3186	2127			3202	2142	4976	3916	6750	5691						
	5/5	3985	2660					4446	3122	6220	4896	7551	6226				
	6/6	4775	3186					3916	2327	5691	4101	7021	5432				
ABZ-210SR	3/3	3178	2143	2790	1756	5257	4224							94.3	42.8	569.6	382.0
	4/4	4237	2858			4542	3164	7009	5631	9476	8098						
	5/5	5296	3573					6295	4571	8762	7039	10612	8889				
	6/6	6356	4287					5579	3511	8048	5979	9898	7830				
ABZ-240SR	3/3	7082	4730	5292	2815	10879	8526	16731	14377					154.0	70.0	769.0	989.0
	4/4	9444	6301			9307	6166	15159	12023	21012	17875						
	5/5	11804	7877			7733	3805	13588	9661	19438	15512	24569	20436				
	6/6	14168	9453					12015	7298	17866	13150	22912	17951				
ABZ-270SR	3/3	9958	6643	7449	3961	15311	11998	23542	20229					225.0	102.0	1080.0	1391.0
	4/4	13278	8859			13091	8676	21322	16908	29555	25139						
	5/5	16597	11073			10880	5355	19111	13587	27342	21818	34559	28744				
	6/6	19917	13287					16900	10266	25131	18497	32228	25250				

# Dimensions

Model	Dimensions										
	A	B	C	D	E	F	G	G1	H	I	J
ABZ-50	5.43	3.11	1.57	1.54	0.79	3.82	0.43	NA	3.15	1.18	1/8"
ABZ-63	6.43	3.31	1.77	1.62	0.79	4.07	0.43	NA	3.15	1.18	1/8"
ABZ-75	8.17	3.72	2.07	1.91	0.79	4.72	0.67	NA	3.15	1.18	1/8"
ABZ-88	9.56	4.30	2.37	2.22	0.79	5.33	0.67	NA	3.15	1.18	1/4"
ABZ-100	10.60	4.88	2.72	2.52	0.79	5.89	0.67	NA	3.15	1.18	1/4"
ABZ-115	12.09	5.41	2.87	2.85	0.79	6.52	0.67	NA	3.15	1.18	1/4"
ABZ-125	13.37	5.69	3.15	3.11	1.18	7.38	1.06	NA	5.12	1.18	1/4"
ABZ-145	15.84	6.63	3.54	3.52	1.18	8.23	1.06	NA	5.12	1.18	1/4"
ABZ-160	16.97	7.34	3.94	3.82	1.18	8.74	1.06	NA	5.12	1.18	1/4"
ABZ-180	18.74	8.03	4.02	4.37	1.18	9.92	NA	1.18 x 1.67 dia.	5.12	1.18	1/4"
ABZ-210	21.13	8.78	4.39	4.80	1.18	10.79	NA	1.18 x 1.67 dia.	5.12	1.18	1/4"
ABZ-240	26.63	10.43	5.22	5.75	1.18	12.52	NA	1.18 x 1.67 dia.	5.12	1.18	1/4"
ABZ-270	30.00	12.04	6.02	6.36	1.18	13.90	NA	1.18 x 1.67 dia.	5.12	1.18	1/4"

Shown in inches.

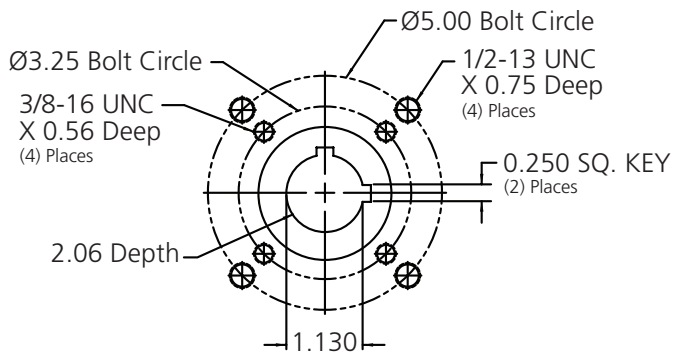




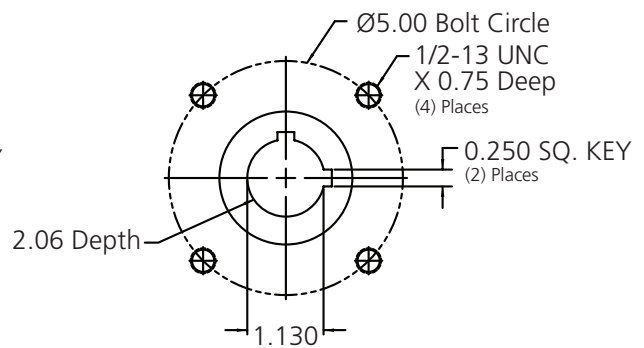
Model	Dimensions	
	K	L
ABZ-50	0.378	0.568
ABZ-63	0.378	0.568
ABZ-75	0.503	0.755
ABZ-88	0.503	0.755
ABZ-100	0.503	0.755

Shown in inches.

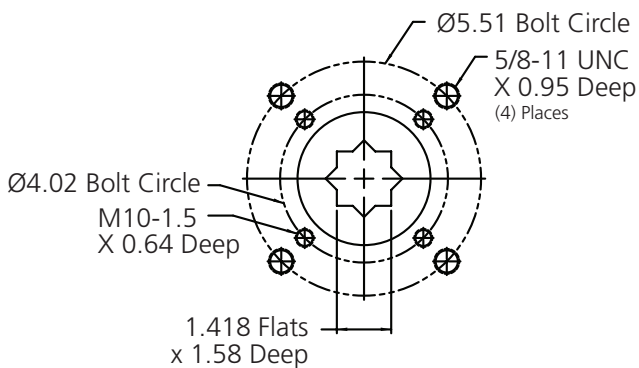
ACTUATOR MOUNTING  
Models 50 thru 100



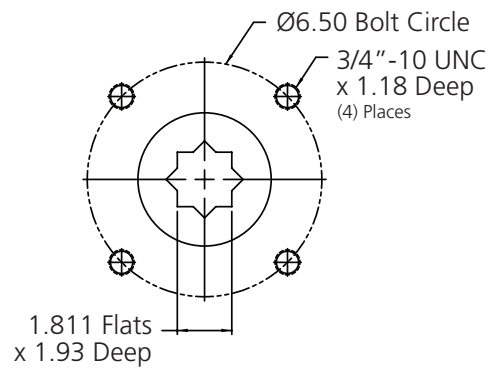
ACTUATOR MOUNTING  
Models 115 thru 160



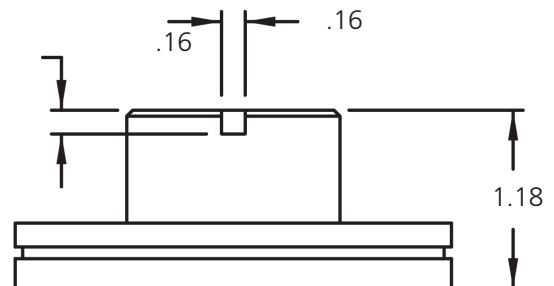
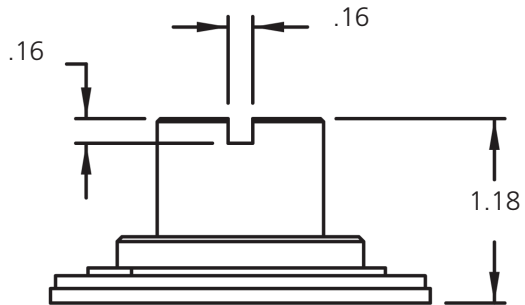
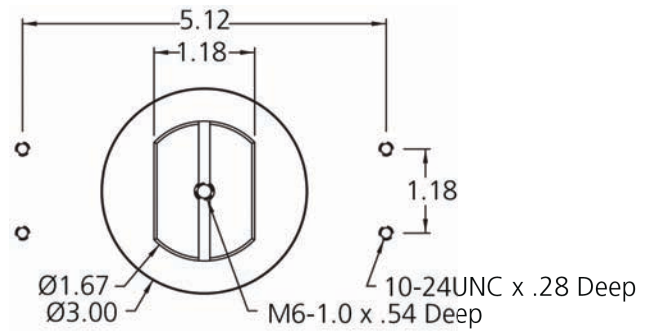
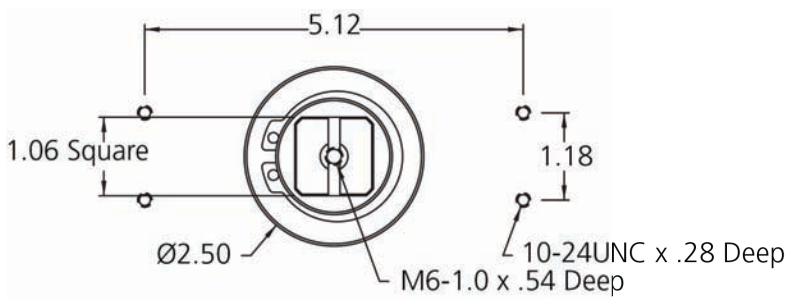
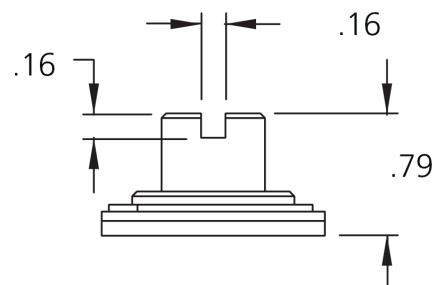
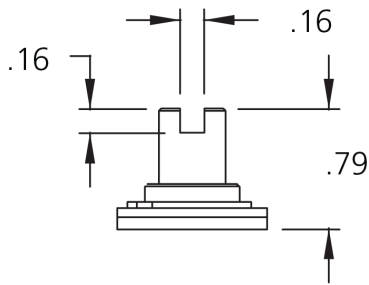
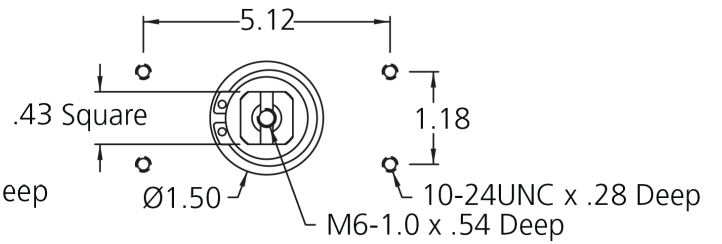
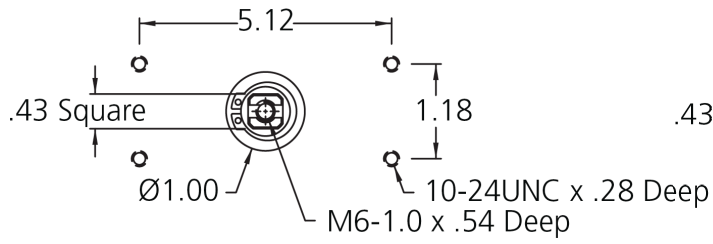
ACTUATOR MOUNTING  
Model 180



ACTUATOR MOUNTING  
Model 210



ACTUATOR MOUNTING  
Model 240 thru 270



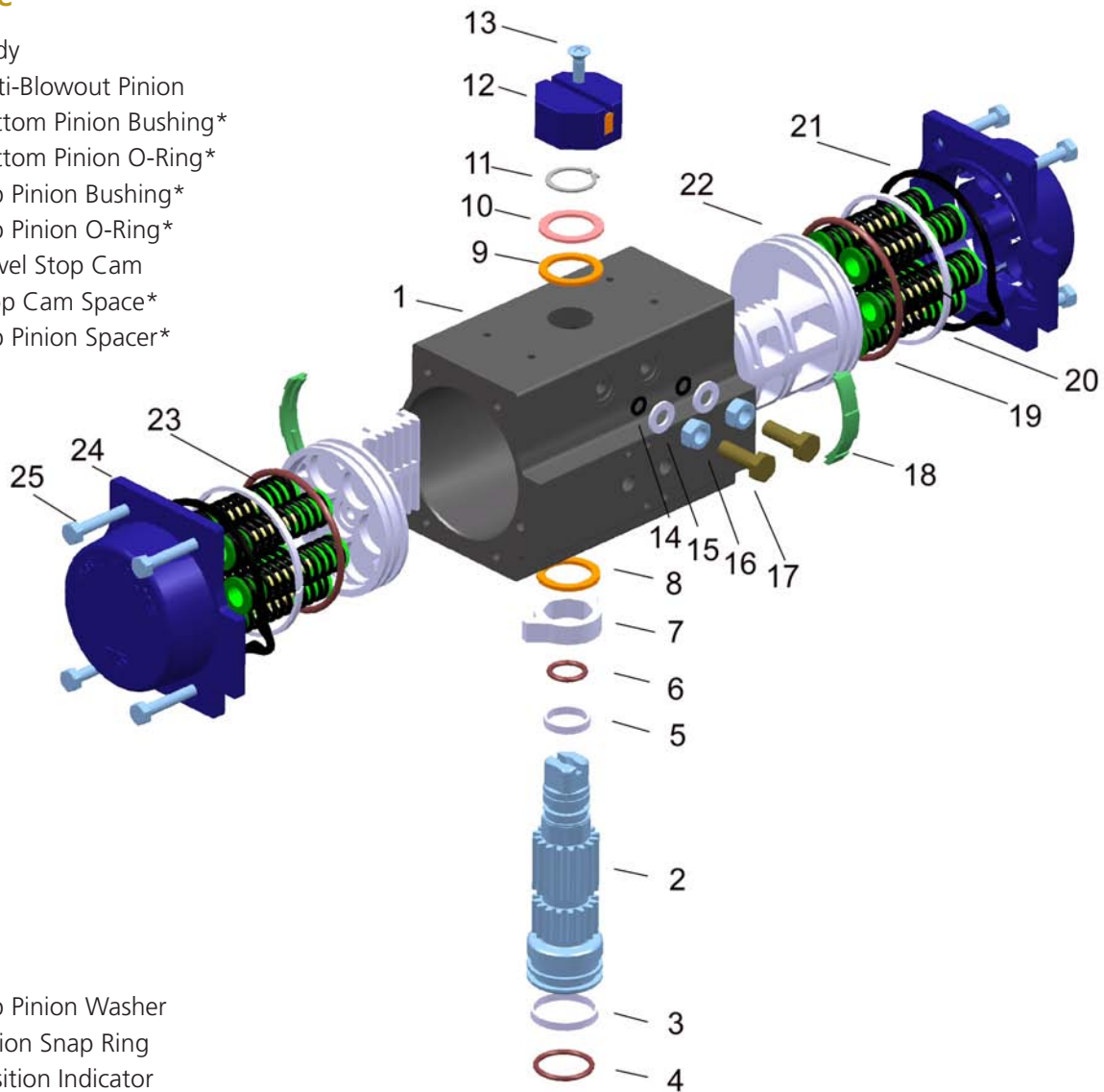
Models 125 thru 160

Models 180 thru 270

# Parts List

## No. Name

- 1. □ Body
- 2. ○ Anti-Blowout Pinion
- 3. ▽ Bottom Pinion Bushing\*
- 4. ▼ Bottom Pinion O-Ring\*
- 5. ▽ Top Pinion Bushing\*
- 6. ▼ Top Pinion O-Ring\*
- 7. ▲ Travel Stop Cam
- 8. ▽ Stop Cam Space\*
- 9. ▽ Top Pinion Spacer\*



- 10. ▲ Top Pinion Washer
- 11. ▲ Pinion Snap Ring
- 12. ★ Position Indicator
- 13. ▲ Cap Screw (Indicator)
- 14. ▼ Travel Stop O-Ring
- 15. ▲ Travel Stop Washer
- 16. ▲ Travel Stop Nut
- 17. ▲ Travel Stop Bolt
- 18. ▽ Piston Guide Plate
- 19. ▼ Piston O-Ring
- 20. ▽ Piston Guide Ring
- 21. ▼ End Cap Seals
- 22. ● Piston
- 23. △ Spring Cartridge
- 24. ■ End Cap
- 25. ▲ End Cap Bolts

## Materials of Construction

- Extruded Aluminium alloy ..... Hard Anodized
- Die Cast Alumium.....Blue Epoxy Coated
- Steel .....Nickel Plated
- Die Cast Alumium alloy..... Natural
- ▽ POM..... Natural
- ▼ NBR70..... Natural
- △ Spring Steel .....Electrophoretic
- ▲ Stainless Steel ..... Natural
- ★ Nylon..... Natural

\*Recommended Spare Parts Kit

Our goal is to become the leading provider of valves, valve related products and services in terms of customer satisfaction, safety and financial performance.

Our experienced management team and employees are dedicated to solving our customers' problems. We invest in long term relationships and cooperate on product development with our clients, we consider them our partners.

## OUR CORE VALUES

**No one gets hurt:** The safety of our employees and customers is our first priority coupled with a healthy respect for the environment.

**Integrity:** In everything we do, in every interaction, both internally and externally, we strive to operate with the utmost integrity and mutual respect.

**Customer focused:** Our products enhance our customer's performance and we listen to their needs and work with them to solve their challenges.

**Good place to work:** We are committed to creating a workplace that fosters innovation, teamwork and pride. Every team member is integral to our success and is treated equally and fairly.



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