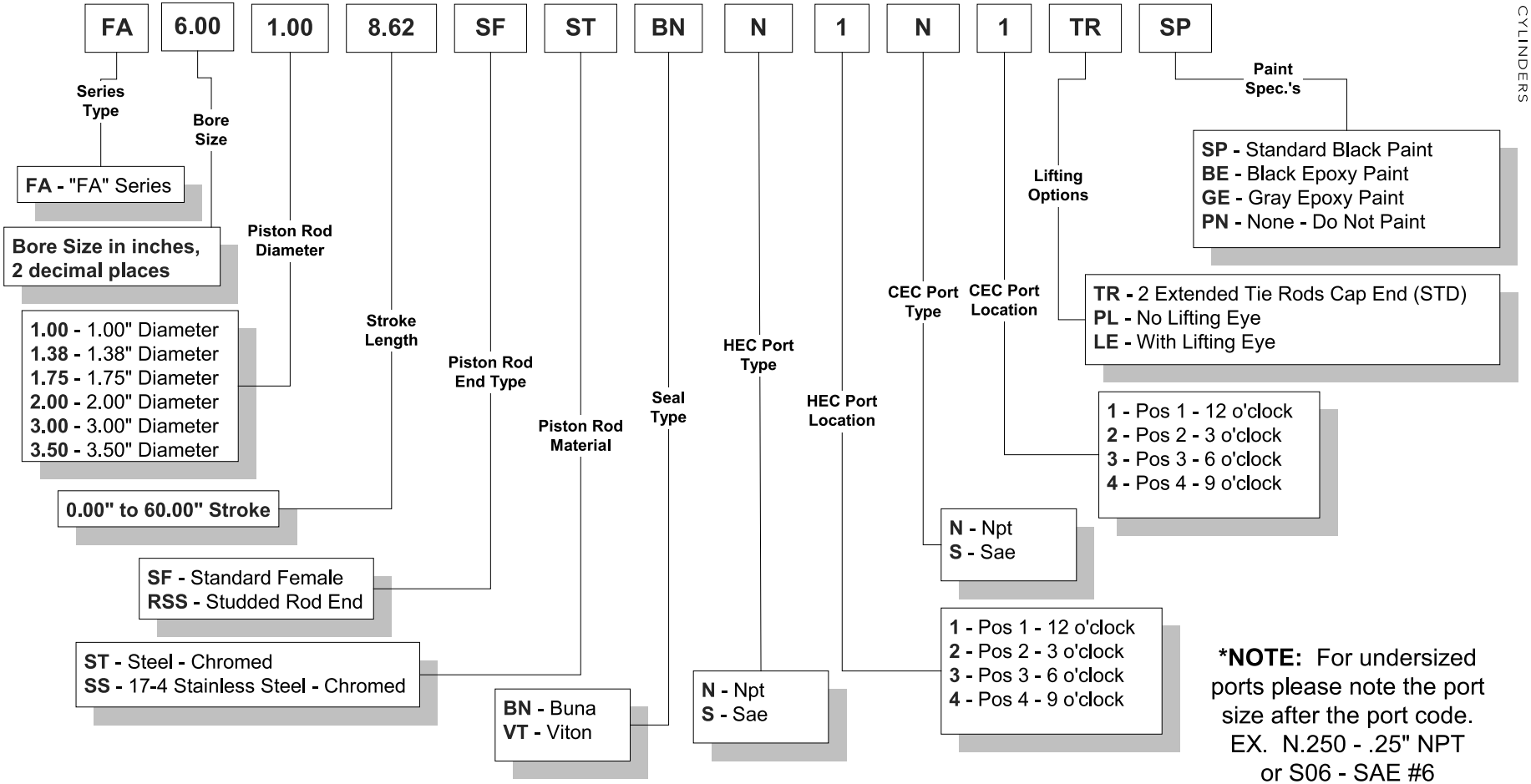
Quincy
ORTMAN CYLINDERS

FA SERIES KNIFE GATE PNEUMATIC CYLINDERS 8

ORDERING INFORMATION

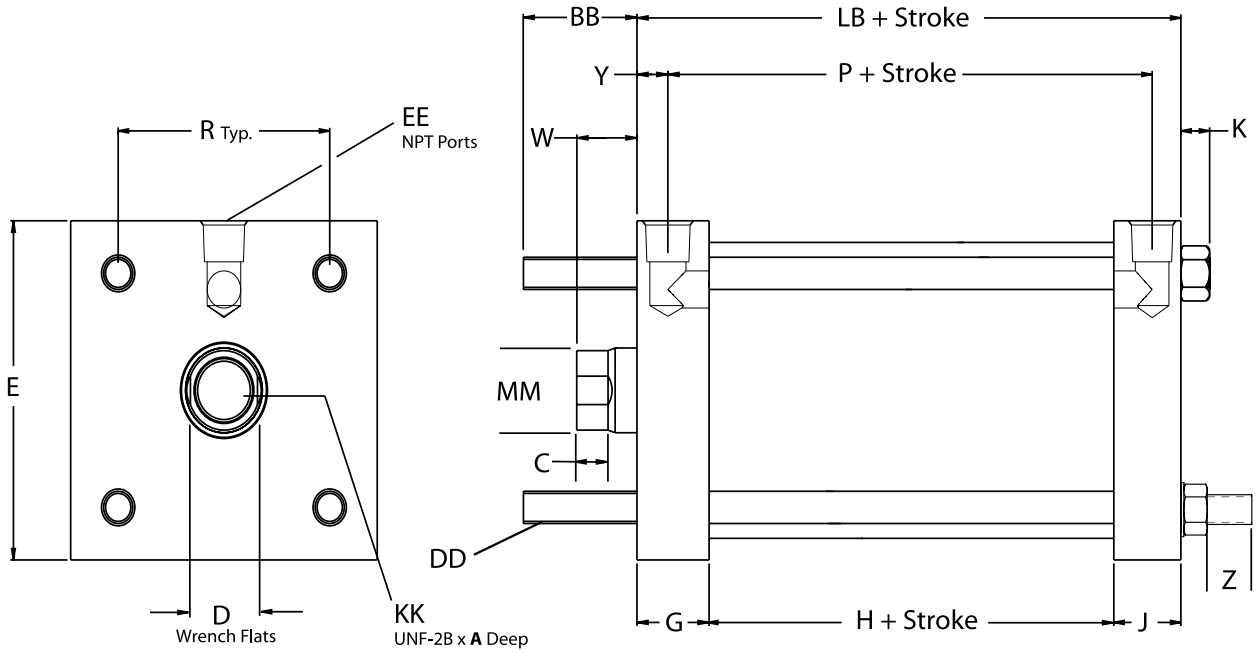


***NOTE:** For undersized ports please note the port size after the port code. EX. N.250 - .25" NPT or S06 - SAE #6

FA6.00-1.00-8.62-SF-ST-BN-N1N1-TR-SP

For Rod End Dimensions see back cover foldout…

Series FA
Dimensional Information



FA SERIES DIMENSIONS																			
BASIC DIMENSIONS																	PLUS STROKE		
BORE	**MM**	**A**	**C**	**D**	**KK**	**BB**	**DD**	**E**	**EE**	**G**	**J**	**R**	**W**	**K**	**Y**	**Z**	**P**	**H**	**LB**
2.5	0.62	0.75	0.25	0.50	.44"-20	1.12	.31"-24	3.00	.25"-18	0.88	0.88	2.19	0.62	0.31	0.38	0.56	1.75	0.75	2.50
3.25	1.00	1.12	0.38	0.88	.75"-16	1.38	.38"-24	4.00	.25"-18	0.88	0.88	2.76	0.75	0.38	0.38	0.75	1.75	0.75	2.50
4	1.00	1.12	0.38	0.88	.75"-16	1.38	.38"-24	4.50	.38"-18	1.00	1.00	3.32	0.75	0.38	0.44	0.75	2.12	1.00	3.00
5	1.00	1.12	0.38	0.88	.75"-16	1.81	.50"-20	5.50	.38"-18	1.00	1.00	4.10	0.75	0.44	0.44	0.75	2.12	1.00	3.00
6	1.00	1.12	0.38	0.88	.75"-16	1.81	.50"-20	6.50	.38"-18	1.00	1.00	4.88	0.88	0.44	0.44	0.75	2.38	1.25	3.25
7	1.00	1.12	0.38	0.88	.75"-16	2.00	.62"-18	8.00	.38"-18	1.00	1.00	5.73	0.88	0.56	0.44	0.75	2.62	1.50	3.50
8	1.00	1.12	0.38	0.88	.75"-16	2.00	.62"-18	9.00	.38"-18	1.00	1.00	6.44	0.88	0.56	0.44	0.75	2.62	1.50	3.50
10	1.00	1.12	0.38	0.88	.75"-16	2.25	.75"-16	11.00	.50"-14	1.25	1.25	7.92	1.00	0.69	0.56	1.00	3.00	1.62	4.12
12	1.38	1.62	0.50	1.12	1.00"-14	2.25	.75"-16	12.75	.50"-14	1.25	1.25	9.40	1.00	0.69	0.56	1.00	3.00	1.62	4.12
14	1.38	1.62	0.50	1.12	1.00"-14	2.50	.88"-14	14.75	.75"-14	1.50	1.50	10.90	1.00	0.81	0.69	1.12	3.38	1.75	4.75
16	1.75	1.62	0.62	1.50	1.00"-14	2.75	1.00"-14	17.00	.75"-14	1.50	1.50	12.59	1.25	0.88	0.69	1.12	3.62	2.00	5.00
18	2.00	2.25	0.75	1.69	1.50"-12	3.25	1.12"-12	19.00	.75"-14	1.75	1.75	14.14	1.50	1.00	0.94	1.25	3.88	2.25	5.75
20	2.00	2.25	0.75	1.69	1.50"-12	3.25	1.25"-12	21.00	.75"-14	2.00	2.00	15.77	1.50	1.12	1.19	1.25	4.12	2.50	6.50
22	3.00	3.50	0.75	2.62	2.25"-12	3.50	1.25"-12	23.00	.75"-14	2.00	2.00	17.15	2.25	1.12	1.19	1.25	5.12	3.50	7.50
24	3.50	3.50	0.75	3.00	2.50"-12	3.50	1.25"-12	25.25	.75"-14	2.50	2.50	18.74	2.25	1.12	1.50	1.25	5.50	3.50	8.50

Available options:

Double rod end	Spring extend or retract
Adjustable stroke	Proximity switches
Stainless steel piston rod	Viton seals
Water-fitted	Epoxy or special paints

Series FA
Cylinder Options

Cylinder Construction

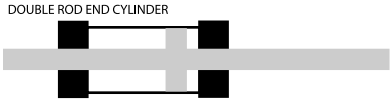
Quincy Ortman Cylinders offers a number of variations in cylinder construction. Descriptions of the more common variation are described below, however Quincy Ortman's engineering staff is capable of designing many more special applications at your request.

Duplex Cylinders

Duplex cylinders are two independent cylinders combined together back-to-back. Duplex cylinders share common tie rods.

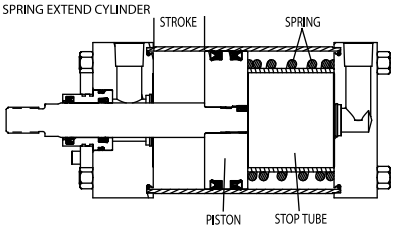
Double Rod End Cylinders

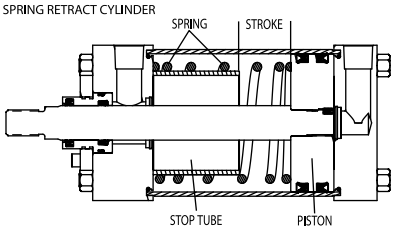
Double rod end cylinders have two rods exiting at either end of the cylinder attached to a single piston. The advantage of double rod end cylinders is that they produce equal force and equal speed in either direction, while performing two operations with one stroke.



Spring-Loaded Cylinders

Spring-loaded cylinders are offered in spring extend or spring retract orientations. Spring extend cylinders position the spring behind the piston to force the piston and rod out of the cylinder to full extension. In spring retract cylinders the spring is captured between the head end cover and the piston to maintain the rod in a fully retracted state. Spring-loaded cylinders are single acting, generally used in failsafe applications or auto return operations. When requesting spring-loaded cylinders it is important to specify the force required to overcome the load in the application.





Other FA Options

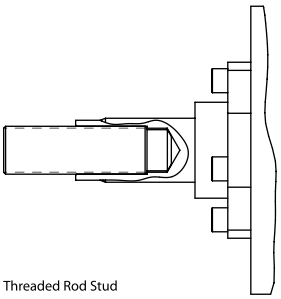
Metallic Rod Scrapers

Metallic rod scrapers should be used in place of synthetic wiper seals in applications where contaminants may cling or stick to the extended piston rod—such as pot ash applications. Metallic rod scrapers are available upon request.

Stainless Steel Piston Rods

In applications where the piston rod may be subjected to water, special wash-downs, or weather, stainless steel piston rods should be considered. Quincy Ortman stocks, but is not limited to, 303 and 17-4 ph stainless steel rod stock. Other commonly used stainless materials, such as 304 and 316, are available upon request.

Studded Rod Ends



Threaded Rod Stud

Quincy Ortman offers studded rod ends for applications held in high tension where it may be possible to break or shear standard machined rod ends. For rod sizes $^{5}/_{8}$" to 2 fi", a rolled thread stud can be threaded into a standard female rod end. Studded rod ends offer higher resistance to thread shear and are more economical to replace in case of fracture.

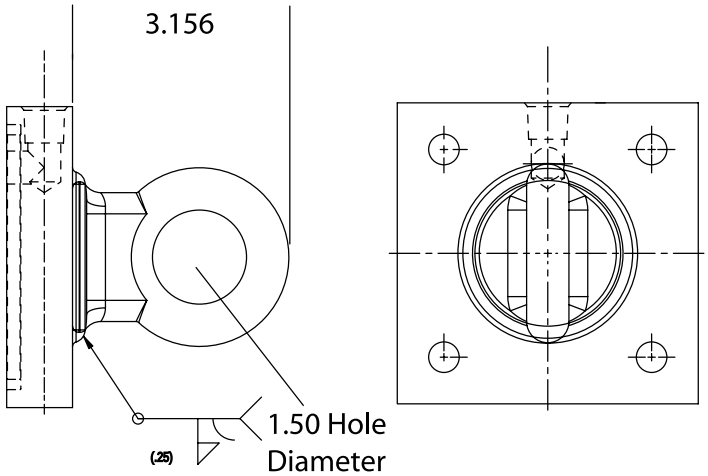
Plated Finishes and Coatings

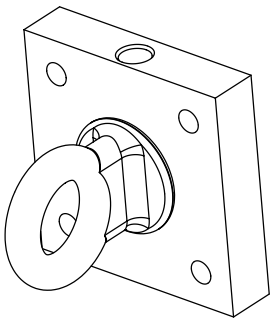
Quincy Ortman Cylinders are also available in a number of plated finishes, such as NiCoTef®, Electroless Nickel, Flash Chrome, and Cad plating. Additionally we are prepared to handle most primer, paint and epoxy coating requirements. Contact the sales staff or an authorized distributor near you for details.

Stainless Steel Construction

For cold atmospheres and harsh corrosive environments, FA cylinders can be constructed from stainless steel material upon request. The head end cover, cap end cover, piston and tube are machined from 316 stainless steel. Piston rod is 17-4 PH stainless rod with hard chrome plating. And the rod bearing is machined from bronze.

Series FA
Quick Reference
Optional Lifting Eye Weldment

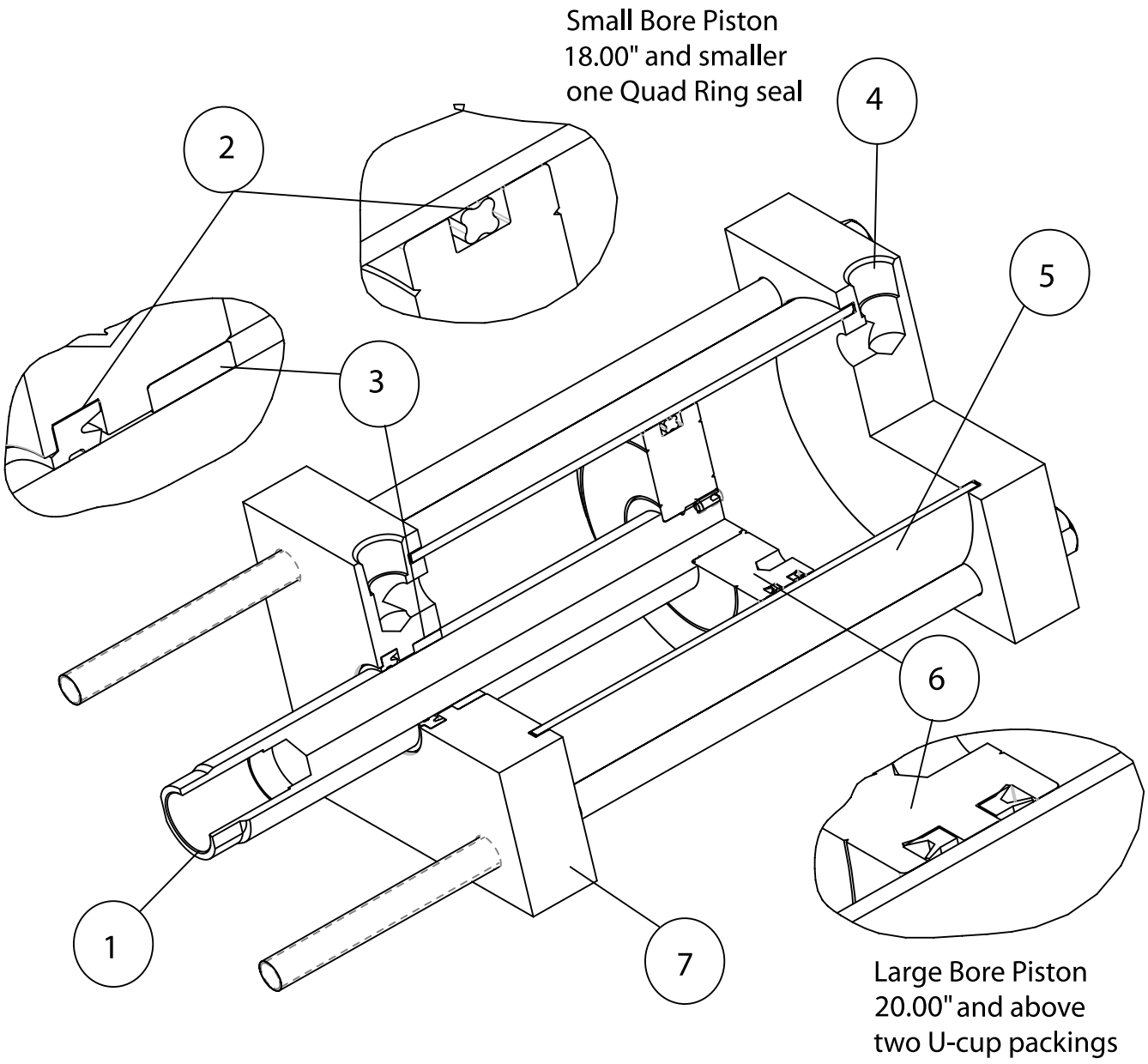




APPROXIMATED WEIGHTS			
BORE	**ROD DIA.**	**WEIGHT AT ZERO STROKE (LBS.)**	**WEIGHT PER INCH OF STROKE (LBS.)**
3.25	1.00	10.2	0.6
4	1.00	15.4	0.8
5	1.00	23.6	1.0
6	1.00	35.3	1.1
7	1.00	51.0	1.6
8	1.00	67.4	2.0
10	1.00	125.8	2.6
12	1.38	173.8	3.3
14	1.38	269.5	3.8
16	1.75	374.0	5.9
18	2.00	491.0	6.9
20	2.00	752.8	10.0
22	3.00	972.2	12.2
24	3.50	1414.1	15.0

QUICK REFERENCE FORCE CHART									
EXTEND FORCES (LBS.)					**RETRACT FORCES (LBS.)**				
BORE SIZE	**PRESSURE (PSI)**				**ROD DIA.**	**PRESSURE (PSI)**			
	60	**80**	**100**	**150**		**60**	**80**	**100**	**150**
2.5	294	393	491	736	0.62	276	368	460	691
3.25	497	663	829	1244	1.00	450	601	751	1126
4	754	1005	1256	1884	1.00	707	942	1178	1766
5	1178	1570	1963	2944	1.00	1130	1507	1884	2826
6	1696	2261	2826	4239	1.00	1649	2198	2748	4121
7	2308	3077	3847	5770	1.00	2261	3014	3768	5652
8	3014	4019	5024	7536	1.00	2967	3956	4946	7418
10	4710	6280	7850	11775	1.00	4663	6217	7772	11657
12	6782	9043	11304	16956	1.38	6693	8924	11156	16733
14	9232	12309	15386	23079	1.38	9143	12190	15238	22856
16	12058	16077	20096	30144	1.75	11913	15884	19856	29783
18	15260	20347	25434	38151	2.00	15072	20096	25120	37680
20	18840	25120	31400	47100	2.00	18652	24869	31086	46629
22	22796	30395	37994	56991	3.00	22373	29830	37288	55931
24	27130	36173	45216	67824	3.50	26553	35404	44254	66382

Series FA
Features



Series FA section 8

1. Piston Rods—.625" through 3.500" diameters are medium carbon steel with 100,000 psi minimum yield in accordance with ASTM A108. All piston rods are hard chrome plated and highly polished to resist nicks and dents.

2. Seals—rod packing/wiper, and piston seals are made of Buna-N rubber compound for leak-proof performance at low breakaway pressures.

3. Rod Bearing—bearing offers a durable wear surface for long lasting service.

4. Ports—unrestricted ports permit maximum flow with minimum pressure drop. Heads may be rotated independently at 90° intervals for convenient port location.

5. Tubing—2.50" through 8.00" bores steel tubing per ASTM A519 chrome plated and microhoned is used, on 10.00" through 24.00" bores. Composite tubing is used to assure a smooth operation with minimum friction.

6. Piston—are made from high-grade alloy iron. Pistons are one piece, pilot fitted to the piston rod and locked in place.

7. Tie Rods and Nuts—tie rods are made from 100,000 psi minimum yield, medium carbon steel. They are pre-stressed at assembly with high strength alloy hex nuts to minimize the possibility of tie rod elongation.

8. Head and Cap End Covers—rolled steel material per ASTM A108. Our heads and caps are machined to assure perfect alignment of the rod bearing, piston rod, piston, and tube.