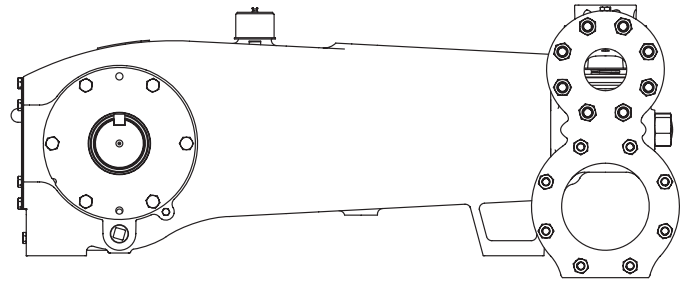


## MYERS® APLEX SERIES

# MA-300L

## QUINTUPLEX PLUNGER PUMP



Number of Plungers.....	5
Maximum Rated Speed.....	400 RPM
Stroke Length.....	5.00 inches – 127 mm
Maximum Rated Power.....	300.0 HP – 224 kW
Maximum Rod Load.....	10,700 lbs. – 47.6 kN
Weight.....	5,000 lbs.

### English Units

PLUNGER SIZE IN.	STUFFING BOX BORE IN.	MAX. PSI	*GALLONS PER REV.	200 RPM US GPM	250 RPM US GPM	300 RPM US GPM	350 RPM US GPM	400 RPM US GPM
4.000	5.000	851	1.3600	272.0	340.0	408.0	476.0	544.0
3.875	5.000	907	1.2763	255.3	319.1	382.9	446.7	510.5
3.750	5.000	969	1.1953	239.1	298.8	358.6	418.4	478.1
3.625	5.000	1037	1.1170	223.4	279.2	335.1	390.9	446.8
3.500	4.500	1112	1.0413	208.3	260.3	312.4	364.4	416.5
3.375	4.500	1196	0.9682	193.6	242.1	290.5	338.9	387.3
3.250	4.500	1290	0.8978	179.6	224.5	269.3	314.2	359.1
3.125	4.000	1395	0.8301	166.0	207.5	249.0	290.5	332.0
3.000	4.000	1480	0.7650	153.0	191.3	229.5	267.8	306.0
<i>HP REQUIRED @ RPM**</i>				150	188	225	263	300

### Metric Units

PLUNGER SIZE mm	STUFFING BOX BORE mm	MAX. PRESS. BAR	*LITERS PER REV.	200 RPM LPM	250 RPM LPM	300 RPM LPM	350 RPM LPM	400 RPM LPM
101.6	127.0	58.7	5.1482	1029.6	1287.0	1544.4	1801.9	2059.3
98.4	127.0	62.5	4.8314	966.3	1207.9	1449.4	1691.0	1932.6
95.3	127.0	66.8	4.5247	904.9	1131.2	1357.4	1583.7	1809.9
92.1	127.0	71.5	4.2281	845.6	1057.0	1268.4	1479.8	1691.2
88.9	114.3	76.7	3.9416	788.3	985.4	1182.5	1379.5	1576.6
85.7	114.3	82.5	3.6650	733.0	916.3	1099.5	1282.8	1466.0
82.6	114.3	88.9	3.3986	679.7	849.6	1019.6	1189.5	1359.4
79.4	101.6	96.2	3.1422	628.4	785.5	942.7	1099.8	1256.9
76.2	101.6	102.0	2.8958	579.2	724.0	868.8	1013.5	1158.3
<i>kW REQUIRED @ RPM**</i>				112	140	168	196	224

\*Displacement based on 100% Volumetric Efficiency

\*\*Power based on 90% Mechanical Efficiency

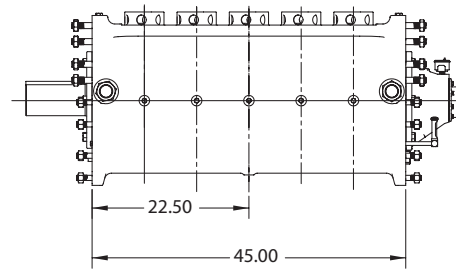
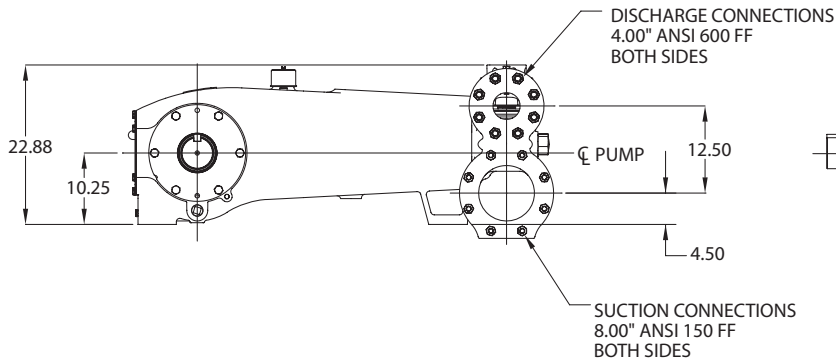
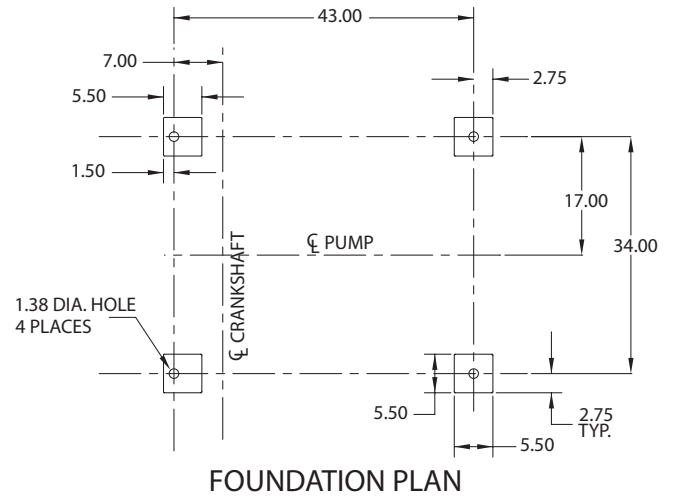
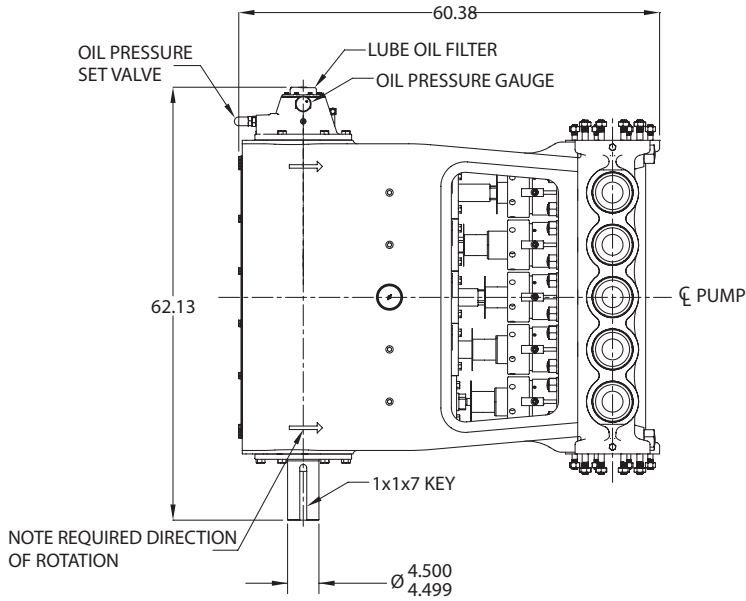
$$\text{HP} = \frac{\text{US GPM} \times (\text{Discharge psig} - 1/2 \text{ Suction psig})}{1542}$$

$$\text{kW} = \frac{\text{M}^3/\text{HR} \times (\text{Discharge Bar} - 1/2 \text{ Suction Bar})}{32.4}$$

$$\text{PUMP RPM} = \frac{\text{US GPM Desired}}{\text{US GPM per Revolution of Selected Plunger}}$$

$$\text{PUMP RPM} = \frac{\text{M}^3/\text{HR Desired}}{\text{M}^3 \text{ per Revolution of Selected Plunger}}$$

# MA-300L Quintuplex Pump



# Engineering Data

## MA-300L Quintuplex Pump

### **Power End Engineering Data**

Maximum Input HP @ Speed.....	300 @ 400 RPM
Rated Continuous Plunger Load .....	10,700 lbs.
Maximum Rated Continuous Speed.....	400 RPM
Normal Continuous Speed Range.....	150 to 400 RPM
Minimum Speed .....	100 RPM
Oil Capacity.....	66 U.S. Quarts
Power End Oiling System.....	Pressure Lubrication System
Power Frame, One-Piece.....	Cast Iron
Crosshead, Full Cylindrical.....	Cast Iron
Crosshead, Diameter x Length.....	5-3/4 x 6-3/16 inches
Crankshaft.....	Ductile Iron
Crankshaft Diameters:	
At Tapered Roller Bearings .....	4-3/4 inches
At Crankpin Bearings, Diameter x Length .....	4-1/2 x 3-3/4 inches
Crosshead (Wrist) Pin, Case-Hardened and Ground.....	AISI 8620
Main Bearings, Tapered Roller.....	Timken®
Crankpin Bearings, Precision Automotive .....	Steel Backed, Babbitt-Lined
Extension (Pony) Rod, Integral with Plungers .....	17-4 PH SS
Connecting Rod, Automotive Type .....	Ductile Iron
Average Crosshead Speed @ 450 RPM .....	333 fpm
Minimum Life Expectancy, Main Bearings, L <sub>10</sub> .....	65,000+ hr.

### **Liquid End Engineering Data**

Maximum Continuous Working Pressure.....	1,480 psi
Hydrostatic Test.....	2,220 psi
Available Liquid End Materials, ASTM	
Nickel Aluminum Bronze Casting.....	B148-C955
Carbon Steel Block. ....	A105
Stainless Steel Block .....	Various Grades
Plunger Type "Rokide" (Chromium Oxide-Coated).....	316 SS
Stuffing Boxes, Field-Removable and Replaceable .....	Nickel, Aluminum, Bronze, Optional Carbon Steel
Packing Types Available:	
Gland-Loaded, Non-Adjustable.....	Style 838
Spring-Loaded, Braided Teflon® & Kevlar® .....	Style 140
Spring-Loaded, Cup-Type .....	Style 120X
Spring-Loaded, Garlock .....	Style 892IK
Valve Cover and Cylinder Head Plugs.....	316 SS
Retainer Plates, Ductile Iron, ASTM.....	A536 80-55-06
Seals, Stuffing Boxes, Valve Covers, Cylinder Heads .....	Buna-N
Disc Valve Types:	
Regularly Furnished, Acetal Resin .....	Delrin®
Optional, Hardened and Lapped .....	17-4 PH SS
Valve Spring Material.....	Inconel®
Valve Seat, Liquid Passage Areas .....	6.54 square inches
Average Liquid Velocity with 4" plungers @ 400 RPM	
Through Valves .....	10.7 fps
Through Suction Manifold.....	3.5 fps
Through Discharge Manifold.....	13.9 fps



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