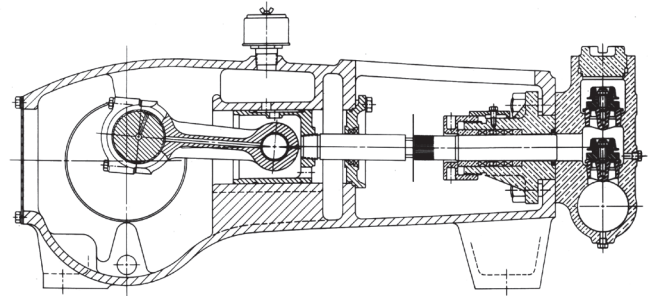


# MYERS® APLEX SERIES

## MA-240M

### QUINTUPLEX PLUNGER PUMP



Number of Plungers.....	5
Maximum Rated Speed.....	450 RPM
Stroke Length.....	4.25 inches – 108.0 mm
Maximum Rated Power.....	240.0 HP – 178.8 kW
Maximum Rod Load.....	8,937 lbs. – 89.3 kN
Weight.....	3,580 lbs.

#### English Units

PLUNGER SIZE IN.	STUFFING BOX BORE IN.	MAX. PSI	*GALLON PER REV.	250 RPM US GPM	300 RPM US GPM	350 RPM US GPM	400 RPM US GPM	450 RPM US GPM
2.250	3.250	2248	0.3568	91.4	109.7	128.0	146.3	164.6
2.125	3.250	2520	0.3263	81.6	97.9	114.2	130.5	146.8
2.000	2.875	2845	0.2890	72.2	86.7	101.2	115.6	130.1
1.875	2.875	3237	0.2540	63.5	76.2	88.9	101.6	114.3
<i>HP REQUIRED @ RPM**</i>				133.0	157.2	186.2	212.8	240.0

#### Metric Units

PLUNGER SIZE mm	STUFFING BOX BORE mm	MAX. PRESS. BAR	*LITERS PER REV.	250 RPM LPM	300 RPM LPM	350 RPM LPM	400 RPM LPM	450 RPM LPM
57.2	82.6	155.0	1.3508	337.7	405.2	472.8	540.3	607.9
54.0	82.6	173.7	1.2354	308.9	370.6	432.4	494.2	555.9
50.8	73.0	196.1	1.0942	273.6	328.3	383.0	437.7	492.4
47.6	73.0	223.2	0.9616	240.4	288.5	336.6	384.6	432.7
<i>kW REQUIRED @ RPM**</i>				99.0	117.0	138.7	158.5	178.8

\*Displacement based on 100% Volumetric Efficiency

\*\*Power based on 90% Mechanical Efficiency

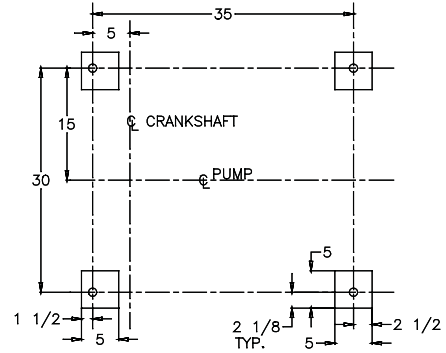
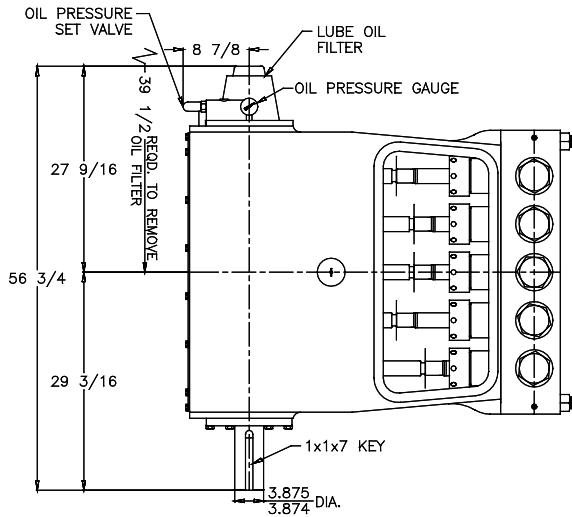
$$1 \text{ HP} = \frac{\text{US GPM} \times (\text{Discharge psig} - 1/2 \text{ Suction psig})}{1542}$$

$$1 \text{ kW} = \frac{\text{M}^3/\text{HR} \times (\text{Discharge Bar} - 1/2 \text{ Suction Bar})}{17.99}$$

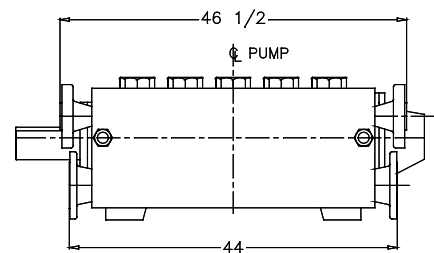
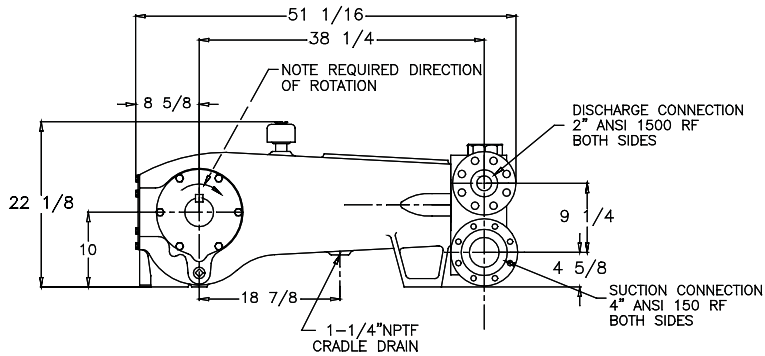
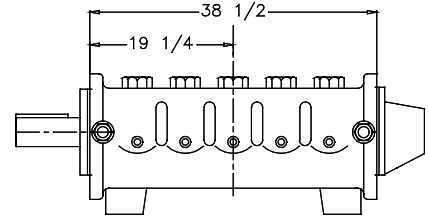
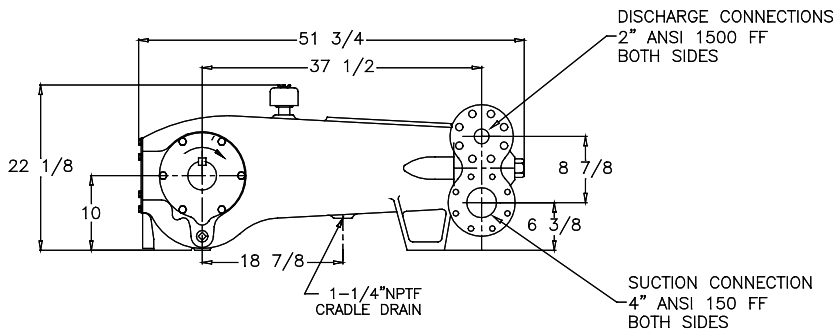
$$\text{PUMP RPM} = \frac{\text{US GPM Desired}}{\text{US GPM per Revolution of Selected Plunger}}$$

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

# MA-240M Quintuplex Pump



FOUNDATION PLAN



# Engineering Data

## MA-240M Quintuplex Pump

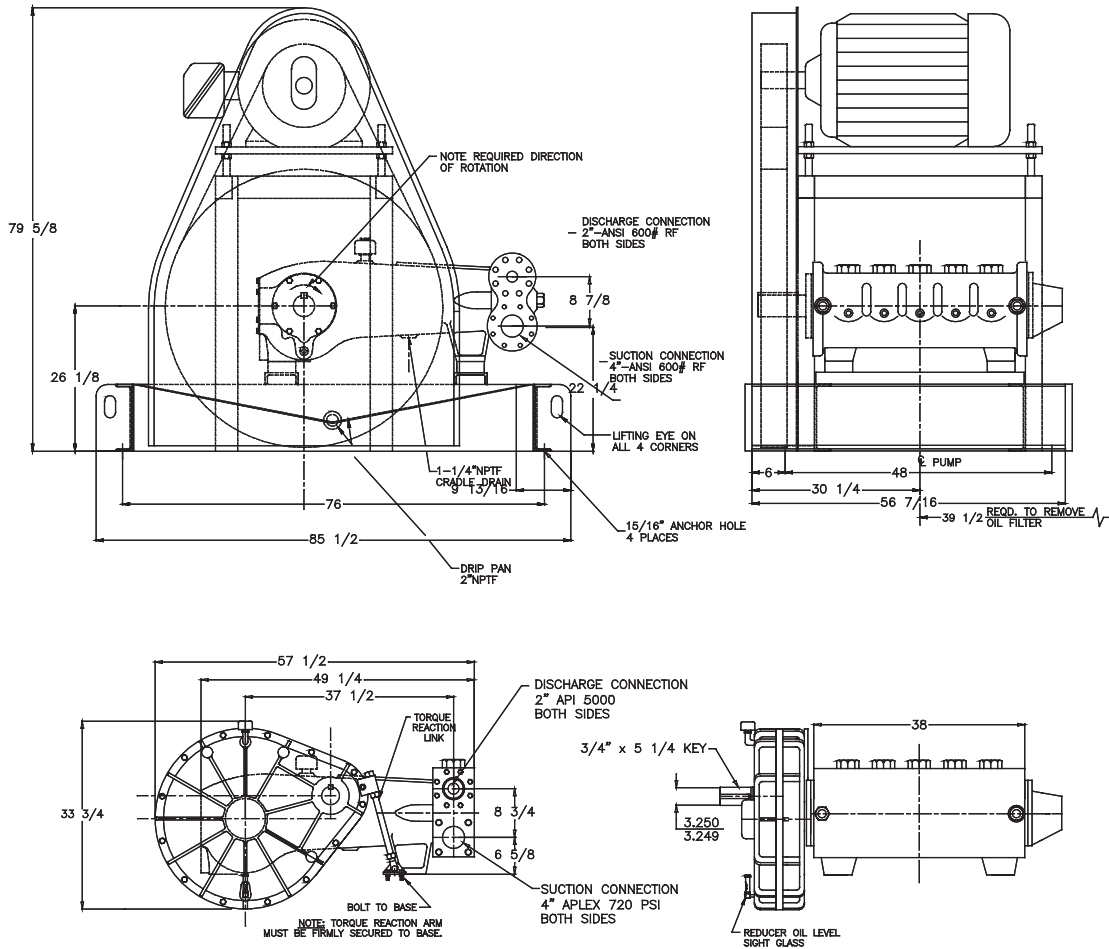
### **Power End Engineering Data**

Maximum Input HP @ Speed.....	240 HP @ 450 RPM
Rated Continuous Plunger Load .....	8,937 lbs.
Maximum Rated Continuous Speed.....	450 RPM
Normal Continuous Speed Range.....	150 to 420 RPM
Minimum Speed .....	100 RPM
Oil Capacity.....	54 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 inches
At Crankpin Bearings, Diameter x Length .....	4 x 3 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 .....	316 SS
Connecting Rod, Automotive Type .....	Ductile Iron
Average Crosshead Speed @ 450 RPM .....	300 fpm
Minimum Life Expectancy, Main Bearings, L <sub>10</sub> .....	75,000+ hrs.

### **Liquid End Engineering Data**

Maximum Continuous Working Pressure.....	3,237 psi
Hydrostatic Test.....	4,855 psi
Available Liquid End Materials, ASTM:	
Stainless Steel Block .....	Various Grades
Nickel Aluminum Bronze Casting.....	B148-C955
Forged Steel Block .....	A105
Plunger Type Rokide (Chromium Oxide-Coated) .....	316 SS
Stuffing Boxes, Field-Removable and Replaceable:	
Nickel Aluminum Bronze .....	B148-C954
Carbon Steel .....	1020
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 8921K
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 Area .....	2.35 square inches
Average Liquid Velocity with 2¼" Plungers @ 450 RPM:	
Through Valves .....	9.0 fps
Through Suction Manifold.....	4.19 fps
Through Discharge Manifold.....	16.7 fps

# MA-240M Quintuplex Pump



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