



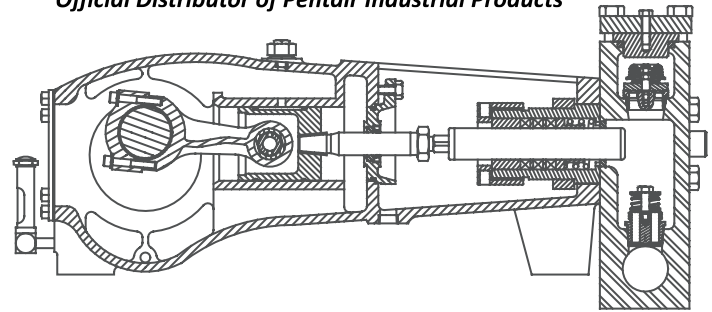
POWER ZONE
EQUIPMENT, INC.

Official Distributor of Pentair Industrial Products

MYERS® APLEX SERIES

MA-45H

QUINTUPLEX PLUNGER PUMP



No. of plungers.....	5
Maximum rated speed.....	600 rpm
Stroke length.....	2.25 in. 57.15 mm
Maximum rated power.....	45.0 HP 33.5 KW
Maximum rod load	2376 lb. 10.54 kN
Weight	720 lbs.

ENGLISH UNITS

MA-45H

PLUNGER SIZE IN.	STUFFING BOX BORE IN.	MAX PSI	* GALLON REV.	PER/ REV.	200 RPM US GPM	300 RPM US GPM	400 RPM US GPM	500 RPM US GPM	600 RPM US GPM
1.000	1.750	3024	0.038		7.7	11.5	15.3	19.1	23.0
.875	1.500	3950	0.029		5.9	8.8	11.7	14.6	17.6
.750	1.500	5000	0.022		4.3	6.5	8.6	10.8	12.9
<i>HP REQUIRED @ RPM**</i>					15.0	22.5	30.0	37.5	45.0

METRIC UNITS

MA-45H

PLUNGER SIZE MM.	STUFFING BOX BORE MM.	MAX PRESS. BAR	* LITER REV.	PER/ REV.	200 RPM LPM	300 RPM LPM	400 RPM LPM	500 RPM LPM	600 RPM LPM
25.4	44.5	208.4	0.145		29.0	43.5	58.0	72.5	87.0
22.2	38.1	272.3	0.111		22.2	33.3	44.4	55.5	66.5
19.0	38.1	344.7	0.081		16.3	24.4	32.6	40.7	48.8
<i>KW REQUIRED @ RPM**</i>					11.1	16.8	22.4	28.0	33.6

*Displacement based on 100% Volumetric Efficiency

**Power based on 90% Mechanical Efficiency

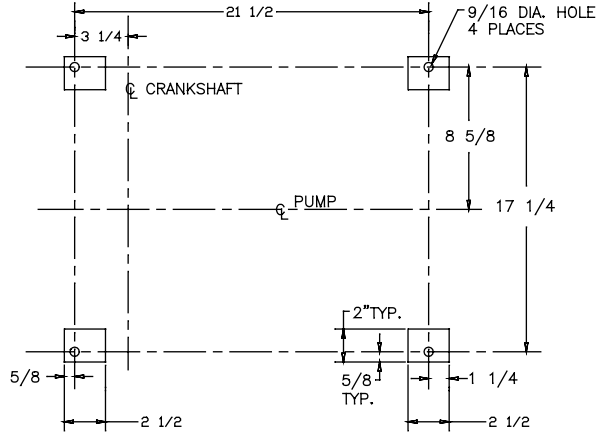
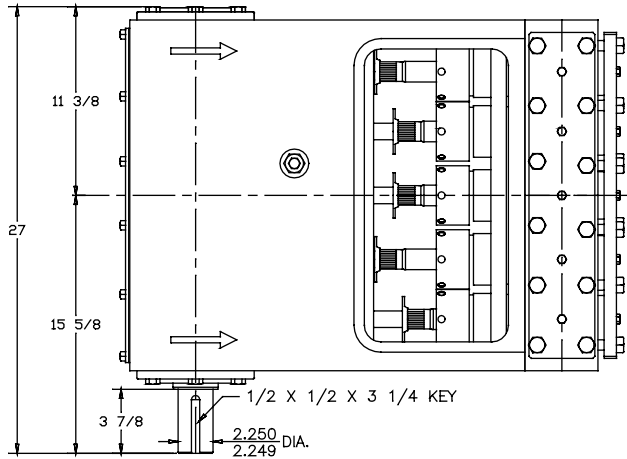
$$IHP = \frac{USGPM \times (\text{Discharge psig} - 1/2 \text{ Suction psig})}{1542}$$

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

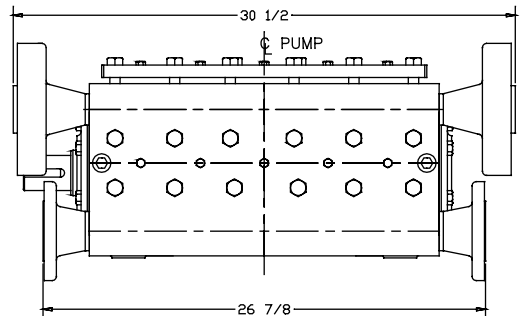
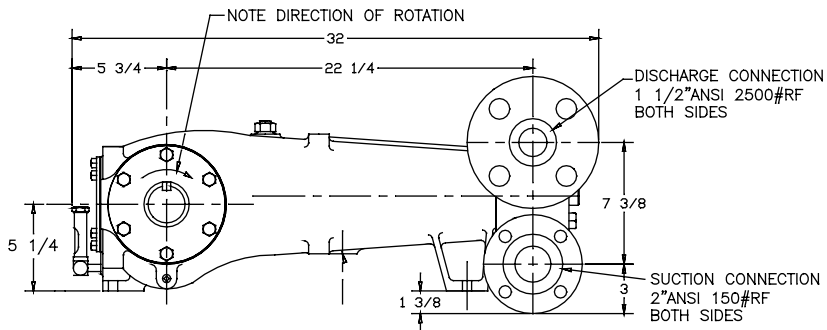
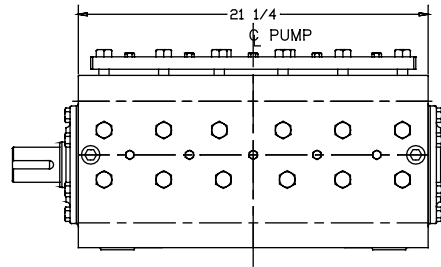
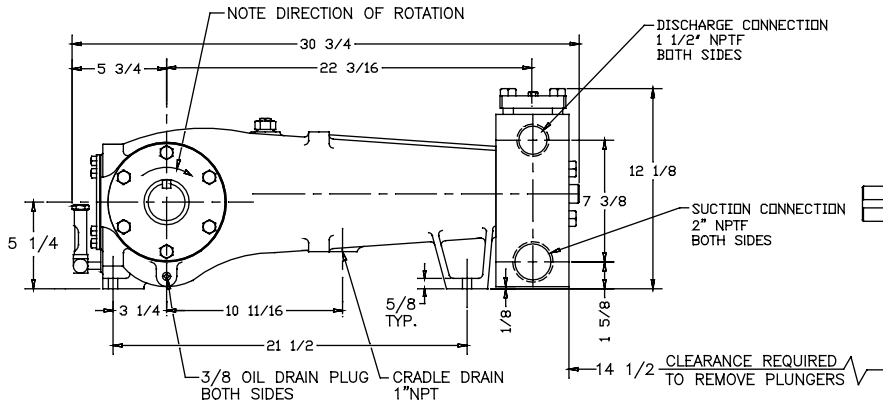
$$PUMP \text{ RPM} = \frac{USGPM \text{ Desired}}{USGPM \text{ per Revolution of Selected Plunger}}$$

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

MA-45H Quintuplex Pump



FOUNDATION PLAN



ENGINEERING DATA

MA-45H Quintuplex Pump

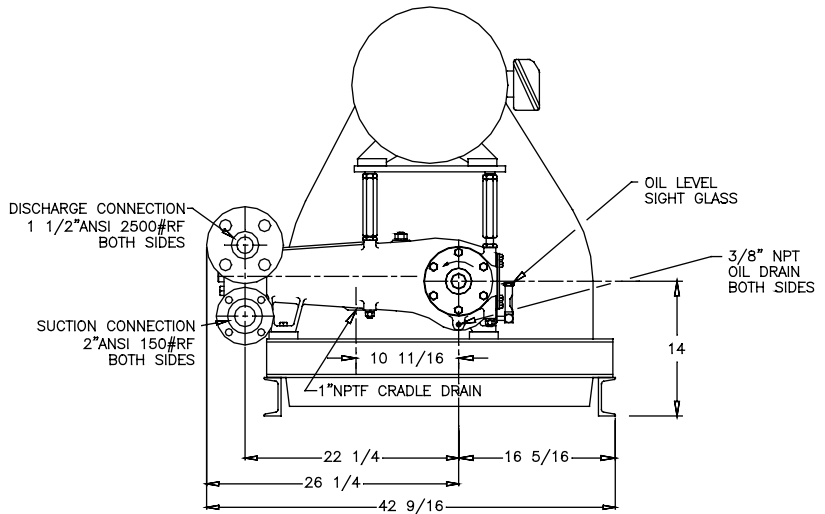
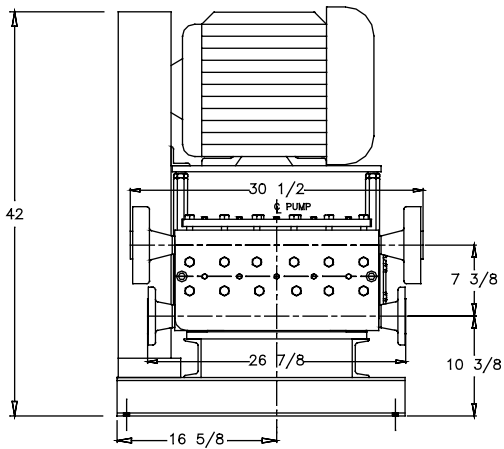
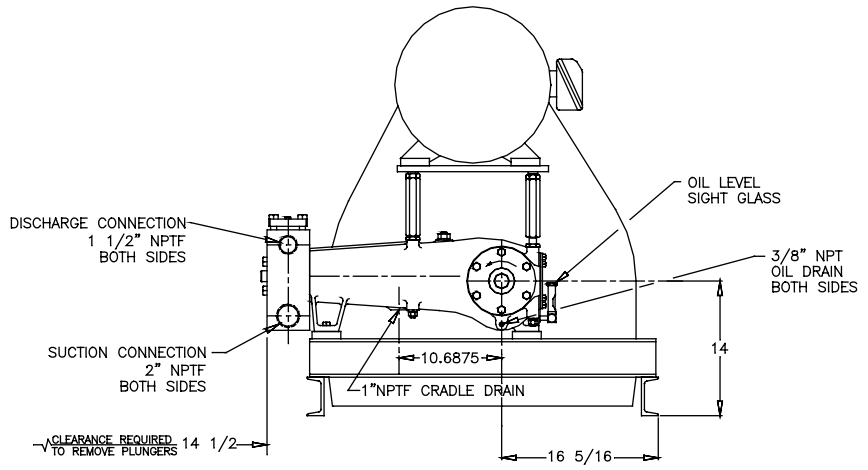
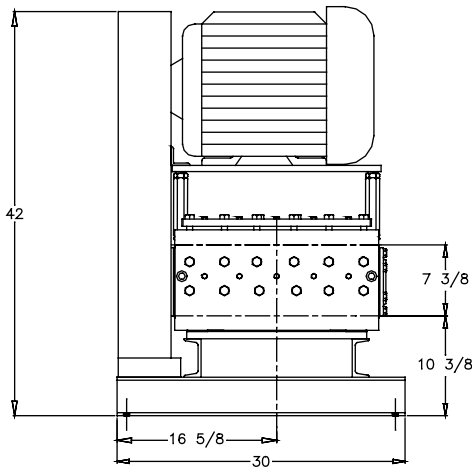
POWER END ENGINEERING DATA

Max. Input Power @ Speed	45 HP @ 600 rpm
Rated Continuous Plunger Load	2,376 lb.
Max. Rated Continuous Speed	600 rpm
Normal Continuous Speed Range	150 to 500 rpm
Minimum Speed	100 rpm
Oil Capacity	8 U.S. Qrts
Power End Oiling System	Splash & Scoop
Power Frame, One-Piece	Cast Iron
Crosshead, Full Cylindrical	Cast Iron
Crosshead, Dia. x Length	3 1/4 x 3 5/8 in.
Crankshaft	Ductile Iron
Crankshaft Diameters:	
At Tapered Roller Bearings	3.15 in.
At Center Bearings	4.91 in.
At Crankpin Bearings, Dia. x Length	2 1/4 x 1 5/8 in.
Crosshead (Wrist) Pin, Case-Hardened and Ground	AISI 8620
Main Bearings, Tapered Roller	Timken®
Center Bearings, Two, Precision	Steel Backed, Babbitt-Lined
Crankpin Bearings, Precision Automotive	Steel Backed, Babbitt-Lined
Extension (Pony) Rod, Integral w/ Plungers	316 S.S.
Connecting Rod, Automotive Type	Ductile Iron
Average Crosshead Speed @ 600 rpm	169 fpm
Minimum Life Expectancy, Main Bearings, L ₁₀	75,000+ hr.

LIQUID END ENGINEERING DATA

Max. Continuous Working Pressure	5,000 psi
Hydrostatic Test	7,500 psi
Available Liquid End Materials, A.S.T.M.	
Stainless Steel Block	15-5PH
Carbon Steel Block	4140
Plunger Type "Rokide" (Chromium Oxide-Coated)	316 S.S.
Stuffing Boxes, Field-Removable and Replaceable	
Stainless Steel	17-4PH
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 892IK
Valve Cover and Cyl. Head Plugs	416 or 316 S.S.
Retainer Plates, Ductile Iron, A.S.T.M.	A536 80-55-06
Seals, Stuffing Boxes, Valve Covers, Cyl. Heads	Buna-N
Valve Types	
Disc, Hardened and Lapped	17-4 PH S.S.
Valve Spring material	Inconel®
Valve Seat, Liquid Passage Areas	1.4 sq.in.
Avg. Liquid Velocity @ 600 rpm	
thru Valves.....	2.1 fps
thru Suction Manifold	1.9 fps
thru Discharge Manifold	3.8 fps

MA-45H Quintuplex Pump



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