



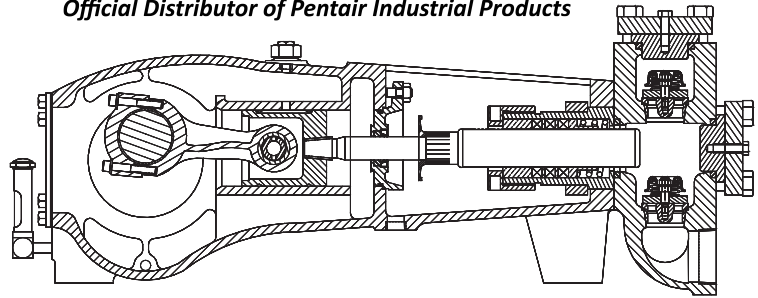
**POWER ZONE**  
EQUIPMENT, INC.

Official Distributor of Pentair Industrial Products

# MYERS® APLEX SERIES

## MA-45M

### 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.....	710 lbs.

**ENGLISH UNITS**

**MA-45M**

PLUNGER SIZE IN.	STUFFING BOX BORE IN.	MAX PSI	* GALLON PER/REV.	200 RPM US GPM	300 RPM US GPM	400 RPM US GPM	500 RPM US GPM	600 RPM US GPM
1.875	2.500	860	0.134	26.9	40.3	53.8	67.2	80.7
1.750	2.500	988	0.117	23.4	35.1	46.9	58.6	70.3
1.625	2.500	1146	0.101	20.2	30.3	40.4	50.5	60.6
1.500	2.500	1344	0.086	17.2	25.8	34.4	43.0	51.6
1.375	2.250	1600	0.072	14.5	21.7	28.9	36.2	43.4
1.250	2.250	1936	0.060	12.0	17.9	23.9	29.9	35.9
1.125	1.750	2390	0.048	9.7	14.5	19.4	24.2	29.0
1.000	1.750	3024	0.038	7.7	11.5	15.3	19.1	23.0

HP REQUIRED @ RPM\*\* 15.0 22.5 30.0 37.5 45.0

**METRIC UNITS**

**MA-45M**

PLUNGER SIZE MM.	STUFFING BOX BORE MM.	MAX PRESS. BAR	* LITER PER/REV.	200 RPM LPM	300 RPM LPM	400 RPM LPM	500 RPM LPM	600 RPM LPM
47.6	63.5	59.3	0.509	101.8	152.7	203.6	254.6	305.5
44.5	63.5	68.1	0.443	88.7	133.0	177.3	221.7	266.0
41.3	63.5	79.0	0.382	76.5	114.7	152.9	191.1	229.4
38.1	63.5	92.7	0.326	65.2	97.8	130.4	163.0	195.5
34.9	57.2	110.3	0.274	54.7	82.1	109.5	136.8	164.2
31.8	57.2	133.5	0.226	45.3	67.9	90.6	113.2	135.8
28.6	44.5	164.8	0.183	36.6	55.0	73.3	91.6	109.9
25.4	44.5	208.5	0.145	29.0	43.5	58.0	72.5	87.0

KW REQUIRED @ RPM\*\* 11.2 16.8 22.4 28.0 33.6

\*Displacement based on 100% Volumetric Efficiency

\*\*Power based on 90% Mechanical Efficiency

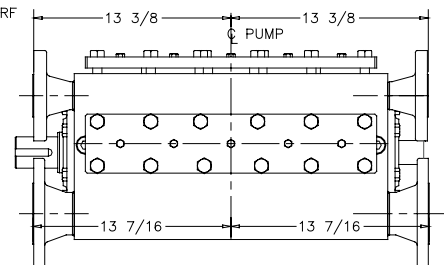
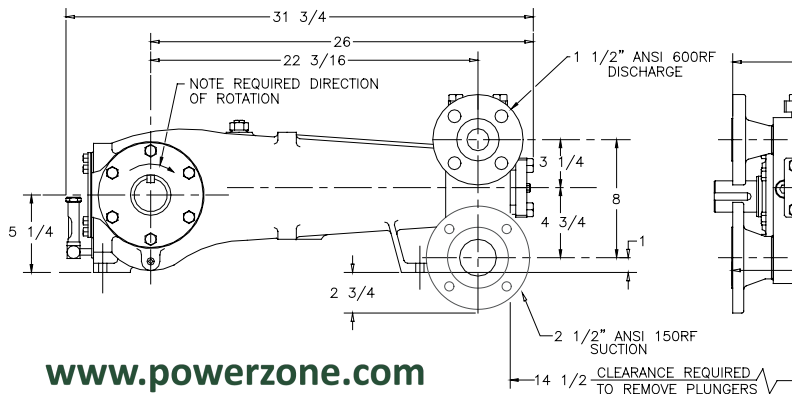
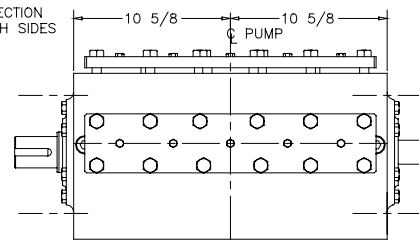
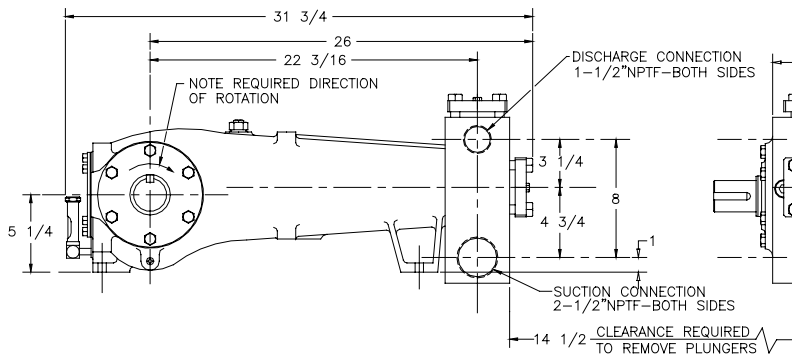
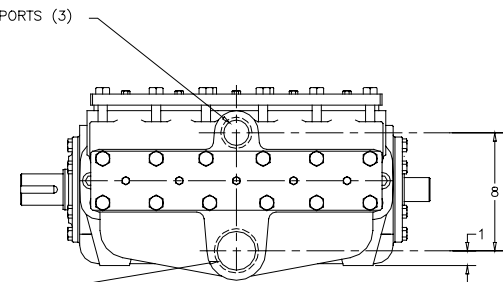
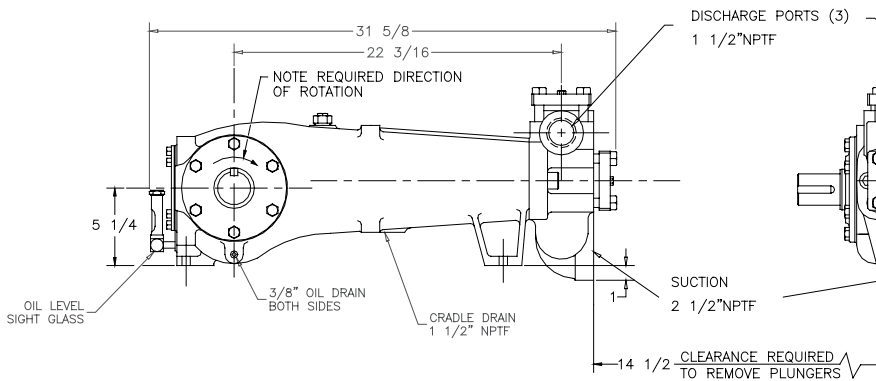
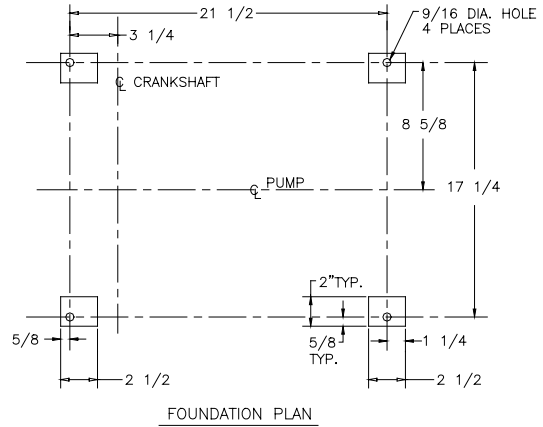
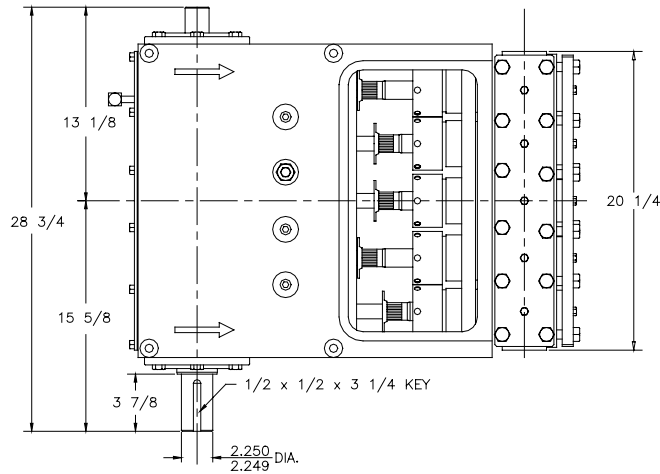
$$IHP = \frac{USGPM \times (\text{Discharge psig} - 1/2 \text{ Suction psig})}{1542}$$

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

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

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

# MA-45M Quintuplex Pump



# ENGINEERING DATA

## MA-45M Quintuplex Pump

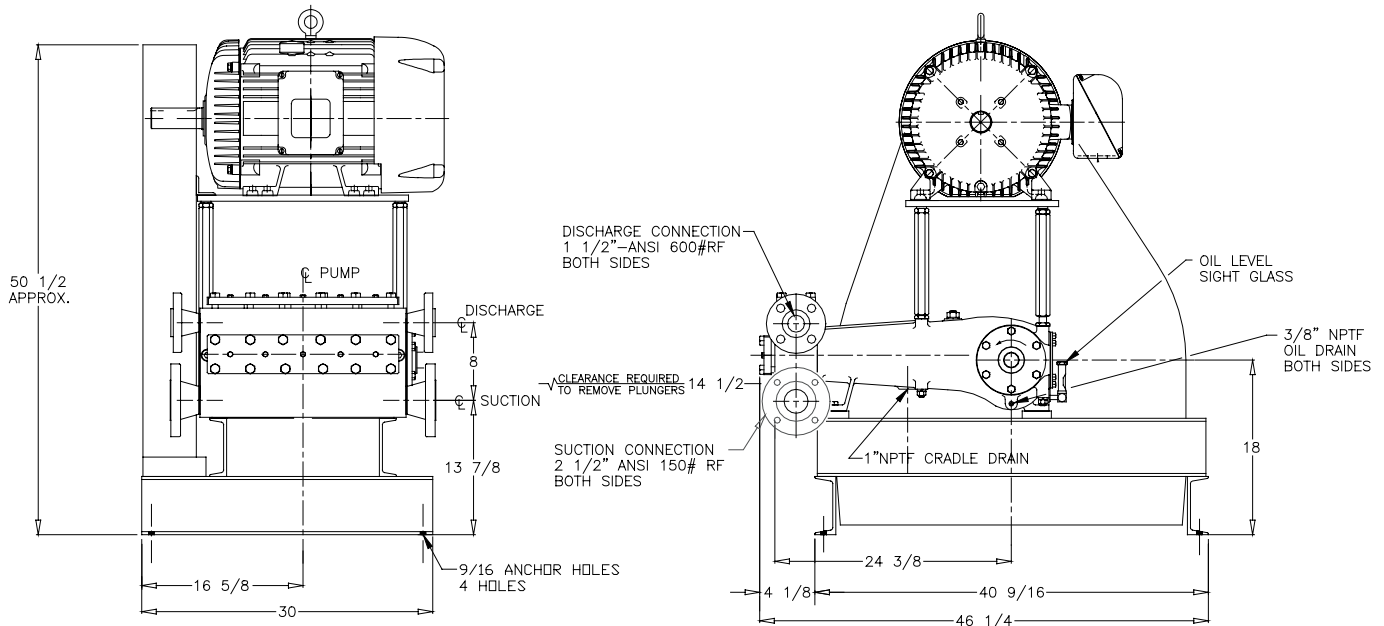
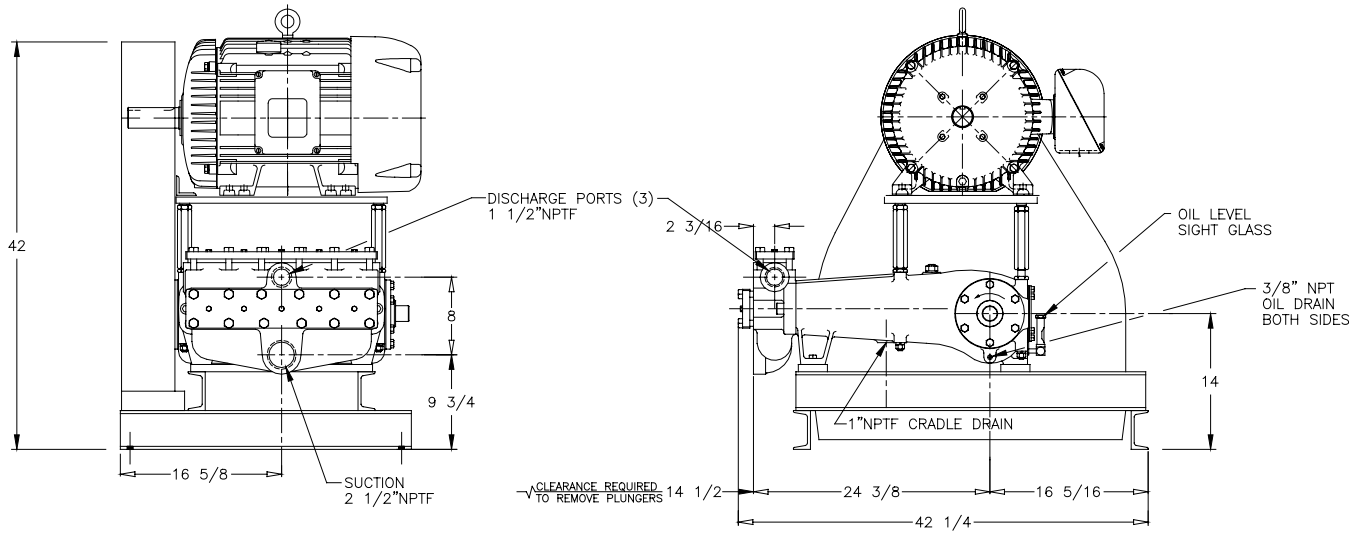
### POWER END ENGINEERING DATA

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 550 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 .....	225 fpm
Minimum Life Expectancy, Main Bearings, L <sub>10</sub> .....	75,000+ hr.

### LIQUID END ENGINEERING DATA

Max. Continuous Working Pressure .....	3,000 psi
Hydrostatic Test .....	4,500 psi
Available Liquid End Materials, A.S.T.M.	
Nickel Aluminum Bronze Casting .....	B148-C955
Carbon Steel Block .....	A105
Stainless Steel Block .....	Various Grades
Ductile Iron Casting .....	A536 80-55-06
Plunger Type "Rokide" (Chromium Oxide-Coated) .....	316 S.S.
Stuffing Boxes, Field-Removable and Replaceable .....	Stainless 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 Cyl. Head Plugs .....	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:	
Standard, Acetal Resin .....	Delrin®
Optional, Hardened and Lapped .....	17-4 PH S.S.
Dual Stem Guided .....	17-4PH S.S.
Valve Spring material .....	Inconel®
Valve Seat, Liquid Passage Areas	
Plate (disc) Valves, (Delrin or S.S.) .....	1.4 sq.in.
Dual Stem Guided .....	.958 sq.in.
Avg. Liquid Velocity @ 600 rpm with 1 7/8" plungers:	
thru Disc Valves .....	7.4 fps
thru Dual Stem Guided Valves .....	10.81 fps
thru Suction Manifold .....	5.4 fps
thru Discharge Manifold .....	14.65 fps

# MA-45M Quintuplex Pump



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