





# APLEX SERIES MA-155M (L)(H) Triplex Plunger Pump

## METRIC UNITS

## MA-155L

PLUNGER SIZE mm	STUFFING BOX BORE mm	MAX PRESS. BAR	* LITER PER/ REV.	250 RPM LPM	300 RPM LPM	350 RPM LPM	400 RPM LPM	450 RPM LPM
101.6	127.0	49.9	2.780	695.0	834.0	973.0	1112.0	1251.0
98.4	127.0	53.2	2.610	652.5	783.0	913.5	1044.0	1174.5
95.3	127.0	56.7	2.444	610.9	733.0	855.2	977.4	1099.6
92.1	127.0	60.7	2.283	570.9	685.0	799.2	913.4	1027.5
88.9	114.3	65.2	2.129	532.1	638.5	745.0	851.4	957.8
85.7	114.3	70.1	1.979	494.8	593.7	692.6	791.6	890.6
82.6	114.3	75.6	1.835	458.8	550.6	642.3	734.1	825.8
79.4	101.6	81.7	1.697	424.2	509.0	593.8	678.6	763.5
76.2	101.6	88.6	1.564	391.0	469.1	547.3	625.5	703.7
73.0	101.6	96.5	1.436	359.0	430.9	502.7	574.5	646.3
kW Required @ rpm				64.3	77.1	90.0	102.8	115.6

## ENGLISH UNITS

## MA-155H

PLUNGER SIZE IN.	STUFFING BOX BORE IN.	MAX psi.	*GALLON PER/ REV.	250 RPM US GPM	300 RPM GPM	350 RPM GPM	400 RPM GPM	450 RPM GPM
1.875	3.000	3289	0.161	40.3	48.4	56.5	64.5	72.6
1.750	3.000	3776	0.141	35.1	42.2	49.2	56.2	63.3
1.625	2.500	4379	0.121	30.3	36.4	42.4	48.5	54.5
1.500	2.500	5000	0.103	25.8	31.0	36.1	41.3	46.5
hp Required @ rpm				86.0	103.3	120.5	137.7	155.0

## METRIC UNITS

## MA-155H

PLUNGER SIZE mm	STUFFING BOX BORE mm	MAX PRESS. BAR	* LITER PER/ REV.	250 RPM LPM	300 RPM LPM	350 RPM LPM	400 RPM LPM	450 RPM LPM
47.6	76.2	226.71	0.611	152.8	183.3	213.8	244.4	274.9
44.4	76.2	226.3	0.532	133.1	159.7	186.3	212.9	239.5
41.2	63.5	301.9	0.459	114.7	137.6	160.6	183.5	206.5
38.1	63.5	344.7	0.391	97.8	117.3	136.8	156.4	176.0
kW Required @ rpm				64.1	77.0	89.9	102.7	115.6

\*Displacement based on 100% Volumetric Efficiency

Power based on 90% Mechanical Efficiency

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

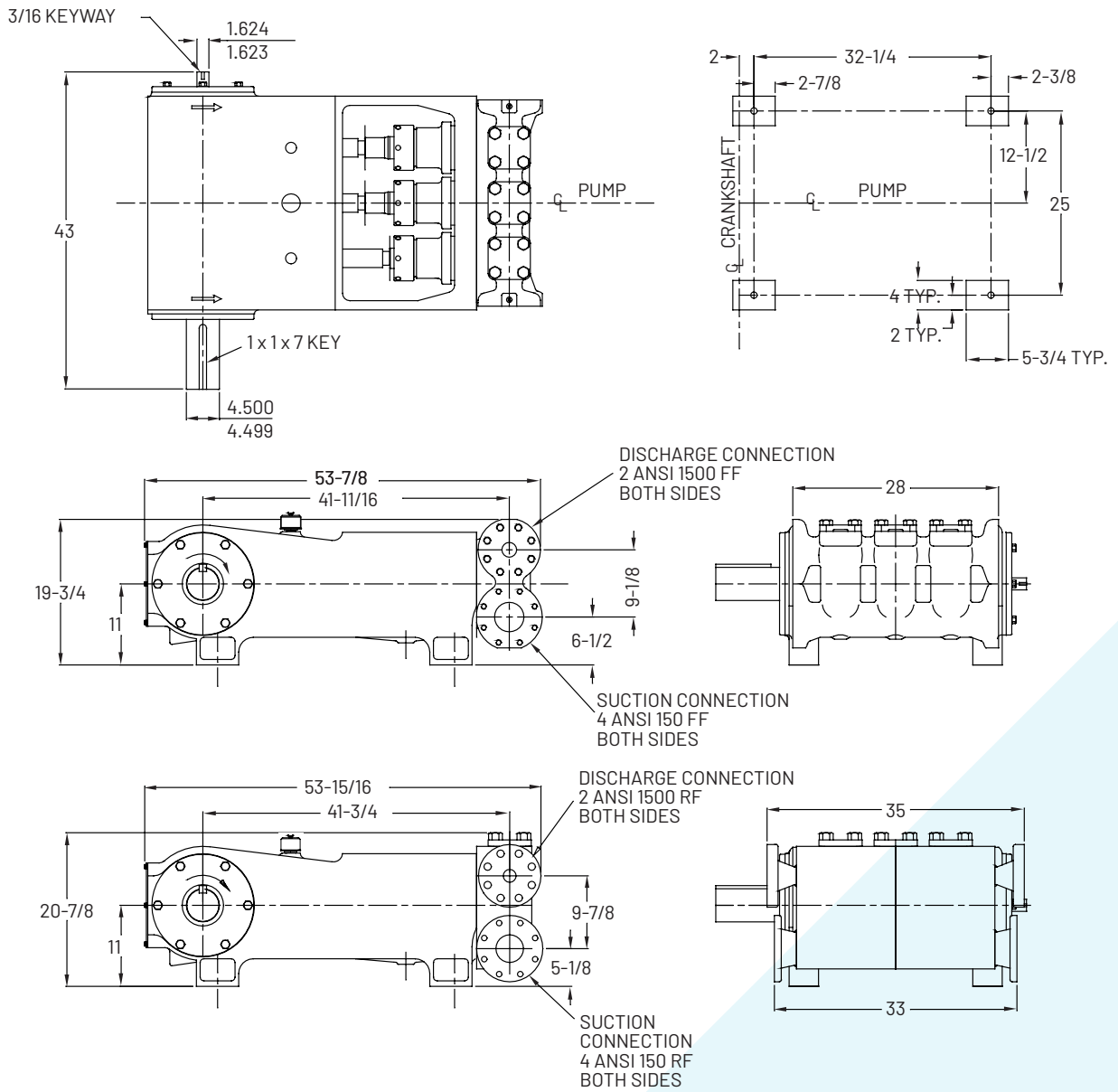
$$\text{Pump rpm} = \frac{USGPM \text{ Desired}}{USG \text{ per Revolution of Selected Plunger}}$$

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

$$\text{Pump rpm} = \frac{M/HR \text{ Desired}}{M' \text{ per Revolution of Selected Plunger}}$$

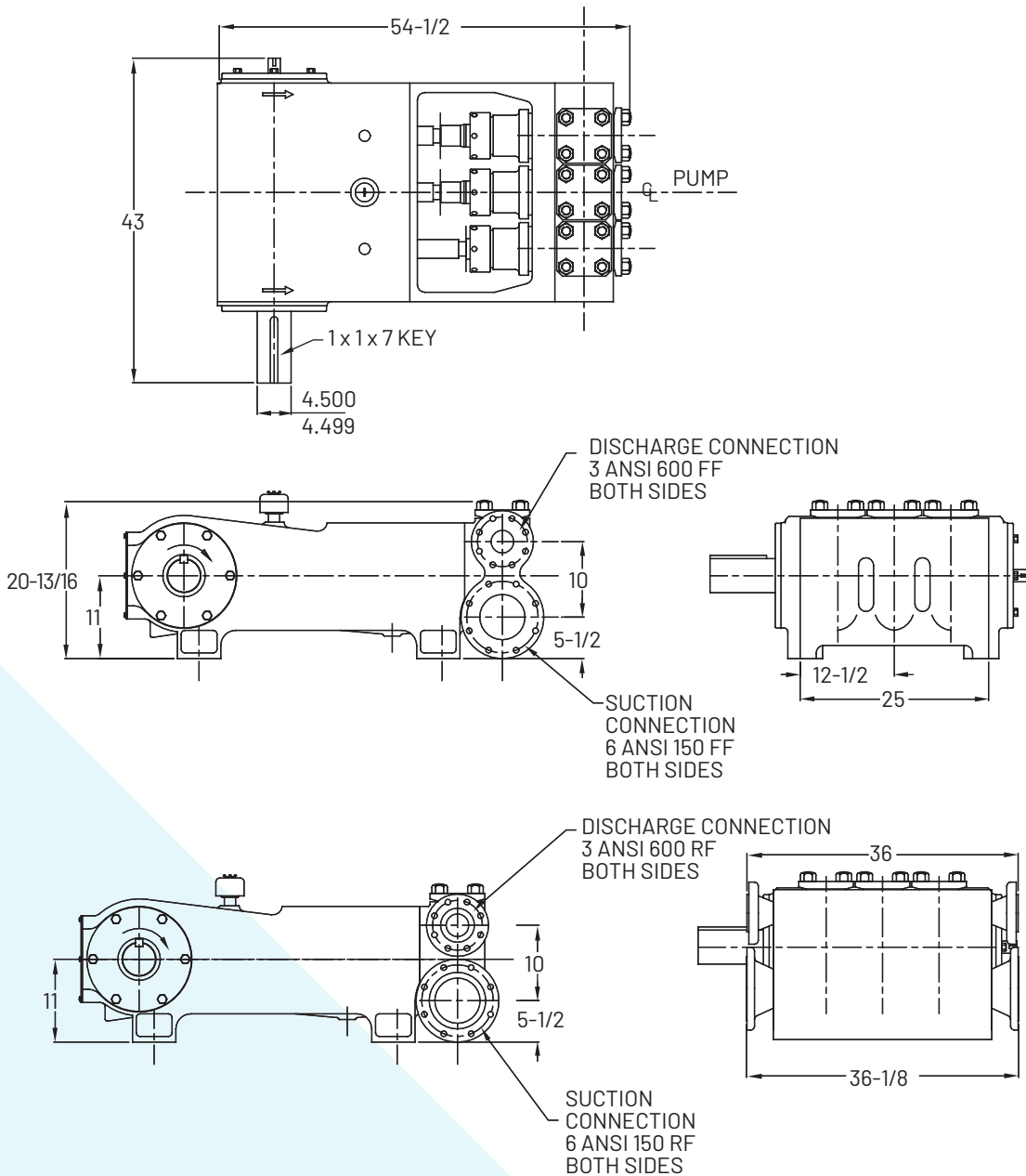
# APLEX SERIES MA-155M (L)(H) Triplex Plunger Pump

## MA-155M Triplex Pump (Measurements shown in inches)



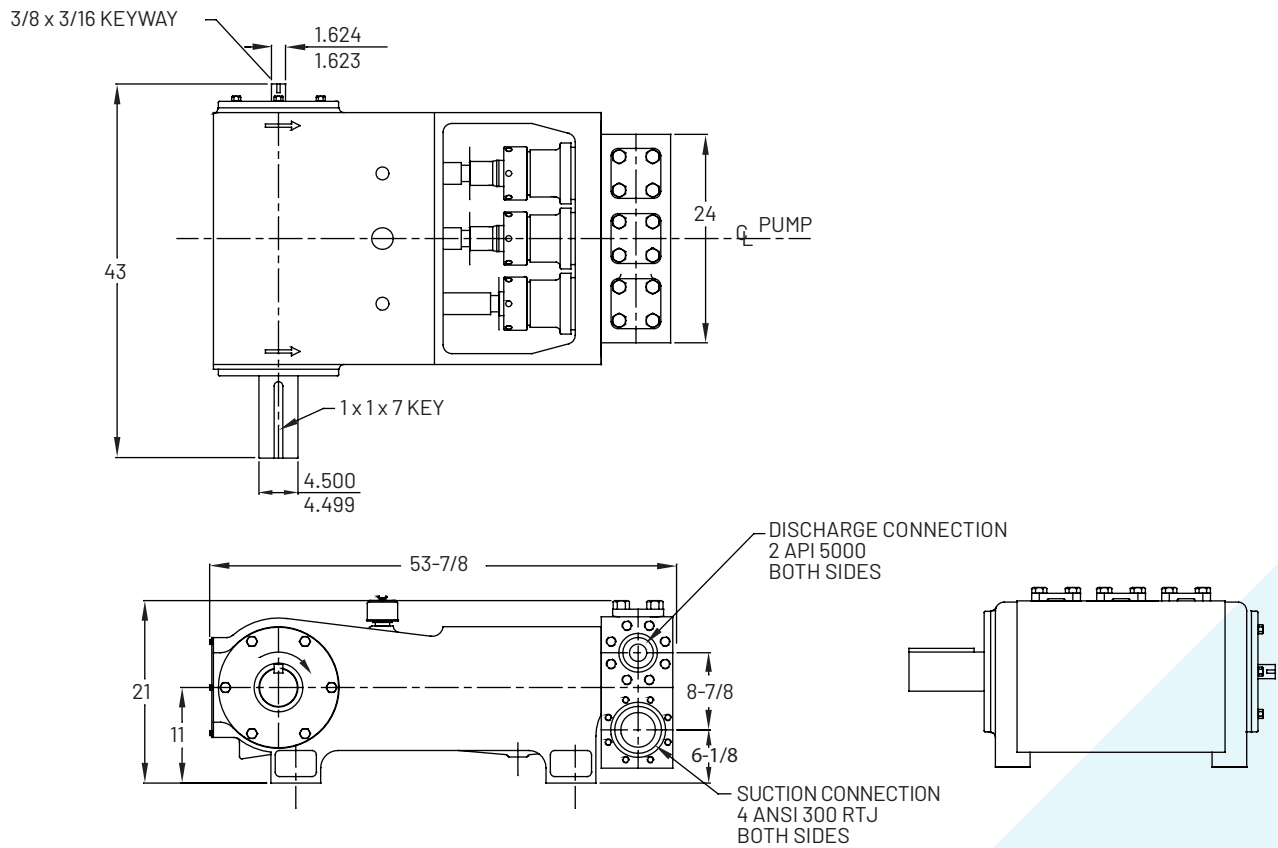
# APLEX SERIES MA-155M (L)(H) Triplex Plunger Pump

## MA-155L Triplex Pump (Measurements shown in inches)



## APLEX SERIES MA-155M (L)(H) Triplex Plunger Pump

### MA-155H Triplex Pump (Measurements shown in inches)





# APLEX SERIES MA-155M (L)(H) Triplex Plunger Pump

## POWER END ENGINEERING DATA

Max. Input hp @ Speed .....	175 @ 450 rpm
Rated Continuous Plunger Load .....	10,259 lbs.
Normal Continuous Speed Range .....	150 to 420 rpm
Minimum Speed .....	100 rpm
Oil Capacity .....	22 U.S. Qts
Power End Oiling System .....	Splash
Power Frame, One-Piece .....	Cast Iron
Crosshead, Full Cylindrical .....	Cast Iron
Dia. x Length .....	7-5/8 x 6-3/4 in.
Crankshaft .....	AISI 4140 Steel , Nitrided
Crankshaft Diameters:	
At Tapered Roller Bearings .....	4-3/4 in.
At Crankpin Bearings, Dia. x Length .....	4-1/2 x 3-3/4 in.
Crosshead (Wrist) Pin, Case-Hardened and Ground .....	AISI 8620
Wrist Pin Bushing, SAE 660, Dia. x Width .....	2.66 x 1.81 in.
Main Bearings, Tapered Roller .....	Timken
Crankpin Bearings, Precision Automotive .....	Steel Backed, Babbitt-Lined
Extension (Pony) Rod .....	17-4 PH SST
Connecting Rod, Automotive Type .....	Ductile Iron
Average Crosshead Speed @ 450 rpm .....	338 fpm
Minimum Life Expectancy, Main Bearings, L <sub>10</sub> .....	60,000+ hr.

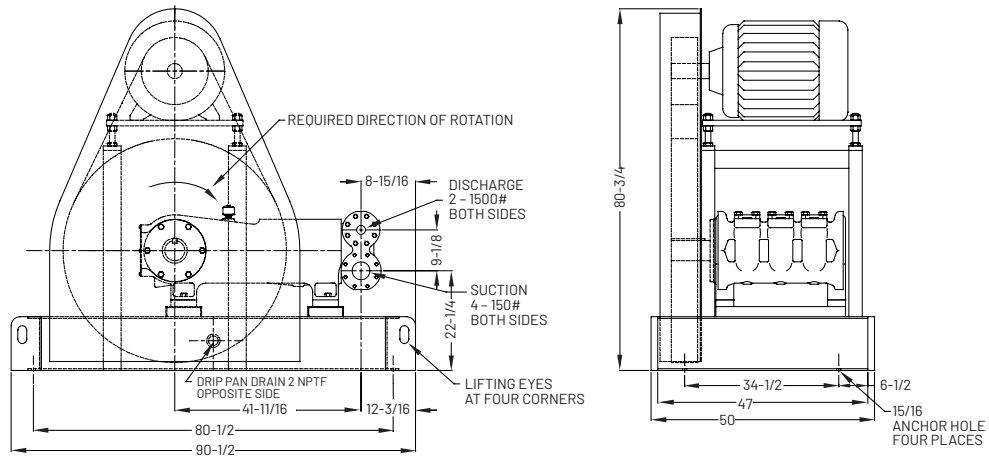
## LIQUID END ENGINEERING DATA

Max. Continuous Working Pressure 155M .....	3,600 psi
155L .....	1,580 psi
155H .....	5,000 psi
Hydrostatic Test 155M .....	5,400 psi
155L .....	2,370 psi
155H .....	7,500 psi
Available Liquid End Materials, A.S.T.M.	
Stainless Steel Block 155M, 155L .....	Various Grades
Nickel Aluminum Bronze Casting .....	B148-C955
Carbon Steel Block .....	Various Grades
Plunger Type Rokide (Chromium Oxide-Coated) .....	(Other types available include Tungsten Carbide, Ceramic)
Stuffing Boxes, Field-Removable and Replaceable	
Nickel Aluminum Bronze 155M, 155L .....	B148-C955
Stainless Steel .....	Various Grades
Carbon Steel .....	1020
Packing Types Available	
Gland-Loaded, Non-Adjustable .....	Style 838
Spring-Loaded, Braided PTFE Coating & Aramid Fiber .....	Style 140, 0141, 8921K
Spring-Loaded, Cup-Type .....	Style 120X
Valve Cover .....	Dependant on Fluid End Material
Seals, Stuffing Boxes, Valve Covers .....	Nitrile
Disc Valve Types:	
Standard Disc Type, Acetal Resin, 155M, 155L .....	Acetal
Optional Disc type, Hardened and Lapped Stainless Steel .....	17-4 PH S.ST.
Optional, Abrasion Resistant, Wing Guided .....	17-4 PH S.ST.
Valve Spring Material .....	Inconel
Valve Seat, Liquid Passage Areas Disc Valves, 155M .....	3.9 sq.in.
155L .....	6.54 sq.in.
155H .....	2.3 sq.in.
Avg. Liquid Velocity @ 450 rpm	
thru Valves 155M .....	8.5 fps
155L .....	10.8 fps
155H .....	6.75 fps
thru Suction Manifold 155M .....	3.9 fps
155L .....	3.7 fps
155H .....	1.9 fps
thru Discharge Manifold 155M .....	16.0 fps
155L .....	15.0 fps
155H .....	7.4 fps

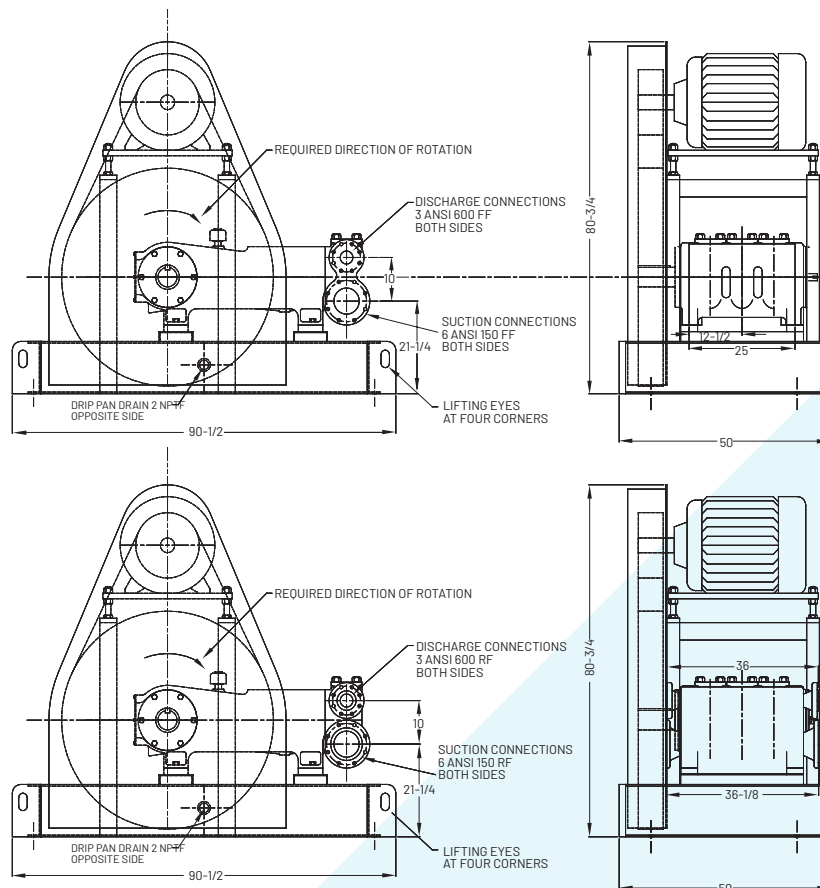
All drawings and specifications subject to change without notice.

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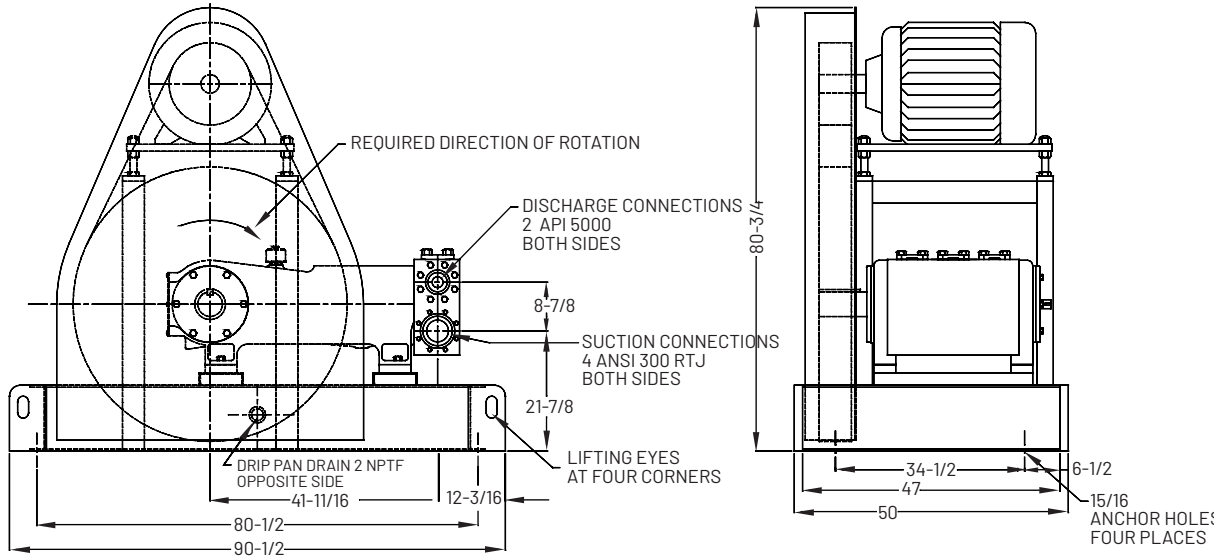
**MA-155M Triplex Pump**  
(Measurements shown in inches)



**MA-155L Triplex Pump**  
(Measurements shown in inches)



**MA-155L Triplex Pump**  
 (Measurements shown in inches)



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