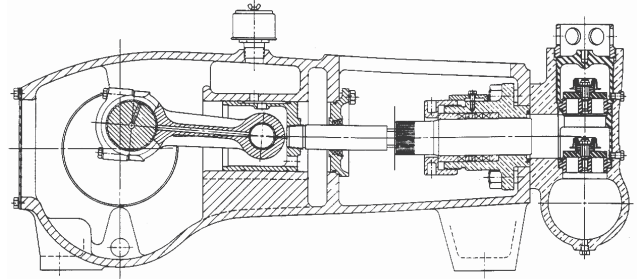


# MYERS® APLEX SERIES

## RO-358

### QUINTUPLEX PLUNGER PUMP



#### REVERSE OSMOSIS SERVICE ONLY

|                          |           |           |
|--------------------------|-----------|-----------|
| No. of plungers.....     | 5         |           |
| Maximum rated speed..... | 450 rpm   |           |
| Stroke length.....       | 4.25 in.  | 107.95 mm |
| Maximum rated power..... | 260 HP    | 193.7 KW  |
| Maximum rod load .....   | 9,688 lb. | 43.01 kN  |
| Weight .....             | 3240 lbs. |           |

#### ENGLISH UNITS

#### RO-358

| PLUNGER SIZE<br>IN. | STUFFING BOX BORE<br>IN. | MAX PSI. | * GALLON<br>PER/REV. | 250 RPM<br>US GPM | 300 RPM<br>US GPM | 350 RPM<br>US GPM | 400 RPM<br>US GPM | 450 RPM<br>US GPM |
|---------------------|--------------------------|----------|----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 3.500               | 4.500                    | 1007     | 0.885                | 221.3             | 265.5             | 309.8             | 354.0             | 398.3             |
| 3.375               | 4.500                    | 1083     | 0.823                | 205.7             | 246.9             | 288.0             | 329.2             | 370.3             |
| 3.250               | 4.500                    | 1168     | 0.763                | 190.8             | 228.9             | 267.1             | 305.3             | 343.4             |
| 3.125               | 4.500                    | 1263     | 0.706                | 176.4             | 211.7             | 246.9             | 282.2             | 317.5             |
| 3.000               | 4.000                    | 1371     | 0.650                | 162.6             | 195.1             | 227.6             | 260.1             | 292.6             |
| 2.875               | 4.000                    | 1492     | 0.597                | 149.3             | 179.2             | 209.0             | 238.9             | 268.7             |

*HP REQUIRED @ RPM\*\**

144.5    173.4    202.3    231.2    260.0

#### METRIC UNITS

#### RO-358

| PLUNGER SIZE<br>MM. | STUFFING BOX BORE<br>MM. | MAX PRESS.<br>BAR | * LITER<br>PER/REV. | 250 RPM<br>LPM | 300 RPM<br>LPM | 350 RPM<br>LPM | 400 RPM<br>LPM | 450 RPM<br>LPM |
|---------------------|--------------------------|-------------------|---------------------|----------------|----------------|----------------|----------------|----------------|
| 88.9                | 114.3                    | 69.4              | 3.351               | 837.6          | 1005.2         | 1172.7         | 1340.2         | 1507.7         |
| 85.7                | 114.3                    | 74.7              | 3.115               | 778.9          | 934.6          | 1090.4         | 1246.2         | 1401.9         |
| 82.5                | 114.3                    | 80.5              | 2.889               | 722.1          | 866.6          | 1011.0         | 1155.4         | 1299.9         |
| 79.4                | 114.3                    | 87.1              | 2.671               | 667.8          | 801.3          | 934.8          | 1068.4         | 1201.9         |
| 76.2                | 101.6                    | 94.5              | 2.462               | 615.4          | 738.5          | 861.6          | 984.7          | 1107.8         |
| 73.0                | 101.6                    | 102.9             | 2.606               | 651.5          | 781.8          | 912.1          | 1042.4         | 1172.7         |

*KW REQUIRED @ RPM\*\**

107.8    129.3    150.9    172.4    193.9

*\*Displacement based on 100% Volumetric Efficiency*

*\*\*Power based on 90% Mechanical Efficiency*

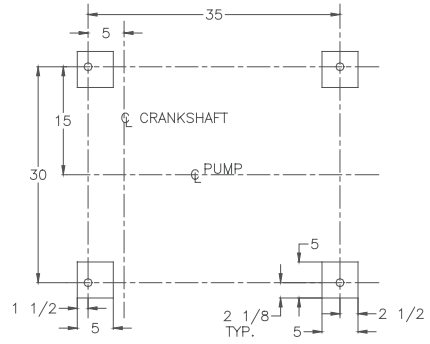
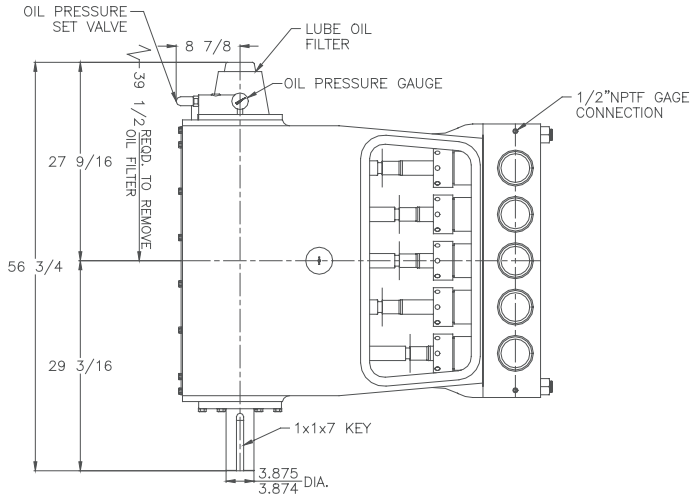
$$IHP = \frac{USGPM \times (\text{Discharge psig} - 1/2 \text{ Suction psig})}{1542}$$

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

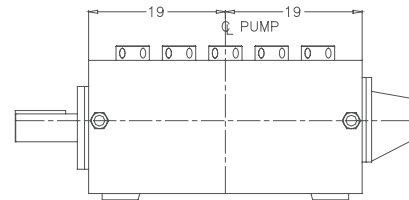
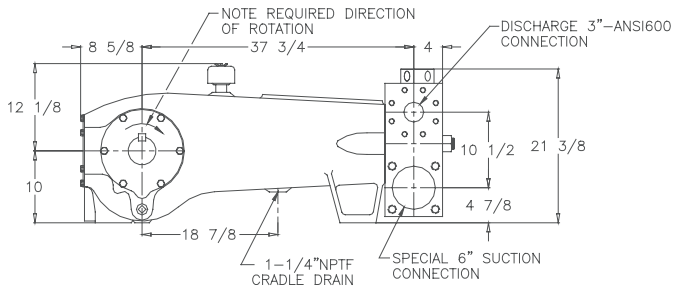
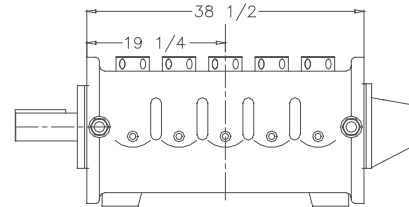
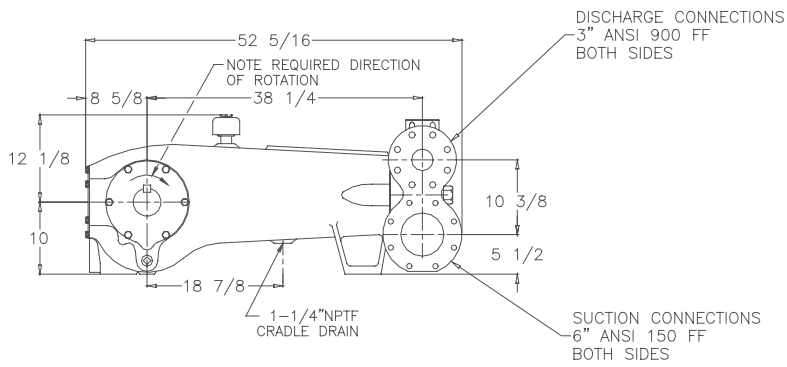
$$PUMP \text{ RPM} = \frac{USGPM \text{ Desired}}{USGPM \text{ per Revolution of Selected Plunger}}$$

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

# RO-358 Quintuplex Pump



FOUNDATION PLAN



# ENGINEERING DATA

## RO-358 Quintuplex Pump

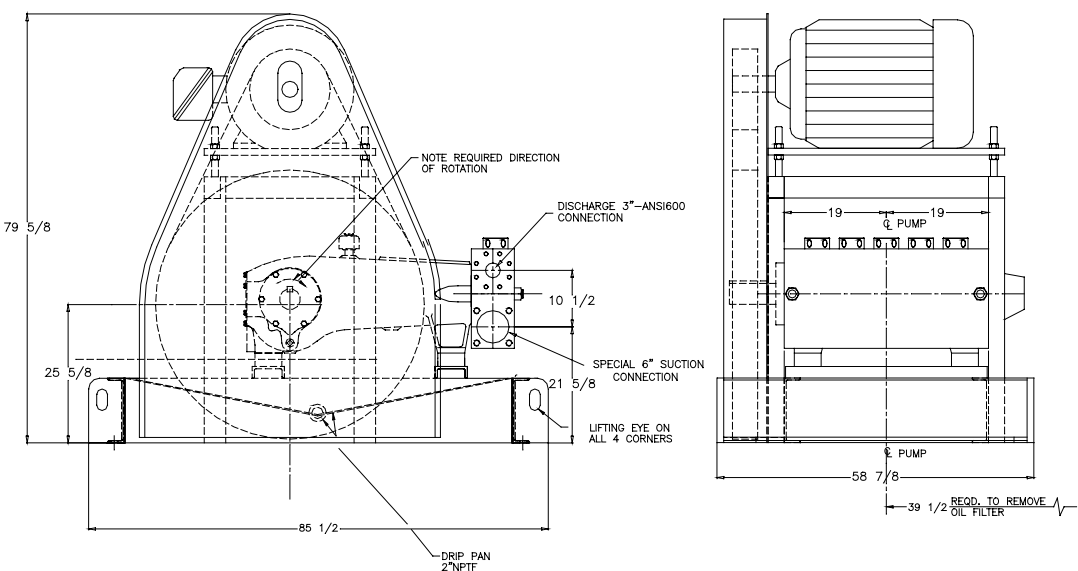
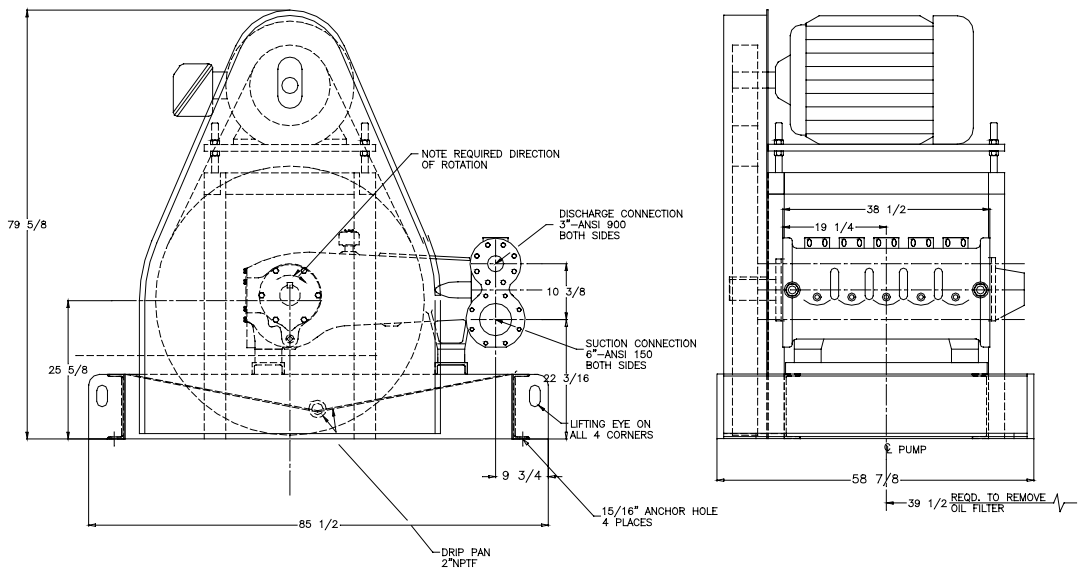
### POWER END ENGINEERING DATA

|   |                             |
|---|-----------------------------|
| Max. Input Power @ Speed .....                                | 260 HP @ 450 rpm            |
| Rated Continuous Plunger Load .....                           | 9,688 lb.                   |
| Normal Continuous Speed Range .....                           | 300 to 420 rpm              |
| Minimum Speed .....   | 100 rpm                     |
| Oil Capacity .....  | 64 U.S. Qrts                |
| Power End Oiling System .....                                 | Pressure Lubrication System |
| Power Frame, One-Piece .....                                  | Cast Iron                   |
| Crosshead, Full Cylindrical .....                             | Cast Iron                   |
| Crosshead, Dia. x Length .....                                | 5 3/4 x 6 3/16 in.          |
| Crankshaft .....  | Ductile Iron                |
| Crankshaft Diameters:   |                             |
| At Tapered Roller Bearings .....                              | 4 in.                       |
| At Center Bearings .....                                      | 9 3/8 in.                   |
| At Crankpin Bearings, Dia. x Length .....                     | 4 x 3 in.                   |
| Crosshead (Wrist) Pin, Case-Hardened and Ground .....         | AISI 8620                   |
| Crosshead pin S.A.E.660 Dia. x Length .....                   | 2 x 3 in.                   |
| Main Bearings, Tapered Roller .....                           | Timken®                     |
| Crankpin Bearings, Precision Automotive .....                 | Steel Backed, Babbitt-Lined |
| Extension (Pony) Rod Diameter .....                           | 2 in.                       |
| Connecting Rod, Automotive Type .....                         | Ductile Iron                |
| Average Crosshead Speed @ 450 rpm .....                       | 300 fpm                     |
| Minimum Life Expectancy, Main Bearings, L <sub>10</sub> ..... | 100,000+ hr.                |

### LIQUID END ENGINEERING DATA

|   |                        |
|---|------------------------|
| Max. Continuous Working Pressure .....              | 2,190 psi              |
| Hydrostatic Test, Discharge .....                   | 3,285 psi              |
| Hydrostatic Test, Suction, psi .....                | 425                    |
| Available Liquid End Materials, A.S.T.M.            |                        |
| Nickel Aluminum Bronze .....                        | B148-C955              |
| Stainless Steel Block .....                         | 2205 Duplex S.ST.      |
| Stainless Steel Block .....                         | 316 S.ST.              |
| Plunger Type "Rokide" (Chromium Oxide-Coated) ..... | 316 S.ST.              |
| Stuffing Boxes, Field-Removable and Replaceable:    |                        |
| Nickel Aluminum Bronze .....                        | B148-C955              |
| Stainless Steel .....                               | 316 S.ST.              |
| Gland, Stuffing Box .....                           | Nickel Aluminum Bronze |
| Packing Types Available:                            |                        |
| Spring-loaded, cup-type .....                       | Style 120X             |
| Spring-loaded, Garlock .....                        | Style 892IK            |
| Seals, Stuffing Boxes and Valve Covers, .....       | Buna-N                 |
| Available Valve Types:                              |                        |
| Standard, acetal resin .....                        | Delrin®                |
| Optional, Hardened and Lapped .....                 | 17-4 PH S.S.           |
| Valve Spring Material .....                         | Inconel®               |
| Valve Seat, Liquid Passage Areas .....              | 6.26 sq.in.            |
| Avg. Liquid Velocity @ 450 rpm:                     |                        |
| thru Valve .....                                    | 7.68 fps               |
| thru Suction Manifold .....                         | 4.42 fps               |
| thru Discharge Manifold .....                       | 18.1 fps               |

# RO-358 Quintuplex Pump



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