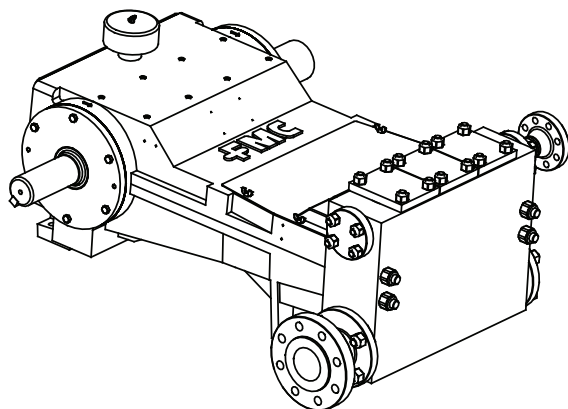


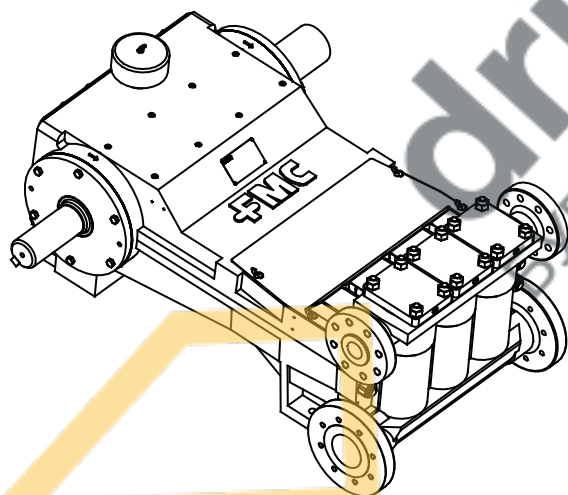
## M16 Plunger Pump Data

117 BHP Continuous Duty (142 BHP Intermittent Duty)

### Forged ISO Drawing



### Cast ISO Drawing



### Specifications

|                                       |                                        |
|---------------------------------------|----------------------------------------|
| Pump Model                            | M16                                    |
| Design Standard                       | API-674, Second Edition                |
| Configuration                         | Horizontal Triplex Plunger             |
| Number of Plungers                    | 3                                      |
| Stroke Length                         | 4.0 Inches                             |
| Frame Load Rating                     | 9,800 lbs                              |
| Forged Fluid Cylinder Pressure Rating | 10,000 psi                             |
| Cast Fluid Cylinder Pressure Rating   | 3,000 psi                              |
| Pump Weight (Average)                 | 2,400 lbs                              |
| Intermittent Duty Speed Rating        | 425 RPM                                |
| Continuous Duty Speed Rating          | 350 RPM                                |
| API-674 Max Recommended Speed         | 350 RPM                                |
| Minimum Speed *                       | 100 RPM                                |
| Mechanical Efficiency                 | 90%                                    |
| Lubrication System (Standard)         | Splash, Gravity Return                 |
| Lubrication System (Optional)         | Pressurized, Motor or Crank Driven     |
| Lube Oil Capacity                     | 10 Gallons                             |
| Lube Oil Type                         | SAE 30                                 |
| Maximum Fluid Temperature             | 200 °F (400 °F Capability)             |
| Minimum Fluid Temperature             | -20 °F (-50 °F Capability)             |
| Valve Types                           | Disc Valves, Abrasion Resistant Valves |

\* Slower RPM can be achieved with the addition of a pressurized lubrication system

| Forged Fluid End Material   | Cast Fluid End Material     |
|-----------------------------|-----------------------------|
| A105 Carbon Steel           | Ductile Iron                |
| A350-LF2 Carbon Steel       | Nickel Aluminum Bronze      |
| 316L Stainless Steel        | 316L Stainless Steel        |
| 2205 Duplex Stainless Steel | 2205 Duplex Stainless Steel |
| Alloy Steel                 |                             |

\* Special Materials available on request

| Standard Connection Sizes | Suction | Discharge |
|---------------------------|---------|-----------|
| M1609-M1618               | 3.0     | 1.5       |
| M1618-M1636               | 4.0     | 2.0       |
| M1628-M1636               | 6.0     | 3.0       |

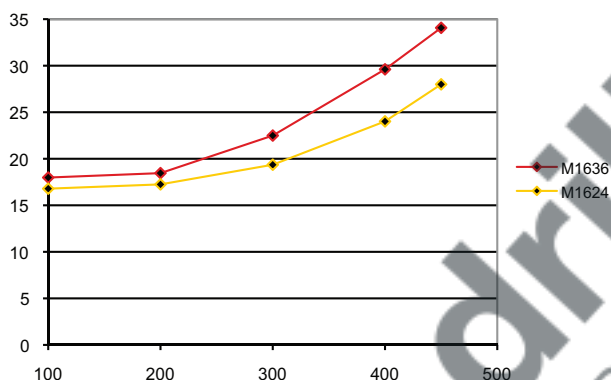
\* NPT Connections Available

- Consult FMC for specific exceptions to API-674 and NACE standards.
- Consult FMC for any application where inlet pressures will exceed 10% of rated discharge pressure.
- Horsepower based on 90% mechanical efficiency. Actual application horsepower requirements can be calculated using the equation:  $BHP = (GPM * PSI) / (1714 * 0.90)$
- Direction of rotation is the top of the crankshaft towards the fluid head.

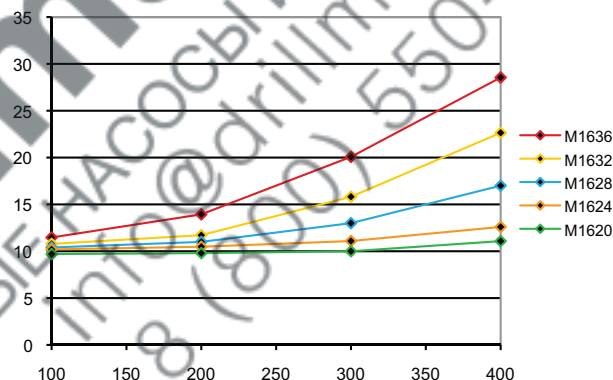
## M16 Performance Table

| Pump Model | Plunger Diameter (in) | Displacement (GAL/REV) | Maximum Pressure (PSI) | Pump Capacity (GPM) @ Input Speed (RPM) |         |        |        |        |        |
|------------|-----------------------|------------------------|------------------------|-----------------------------------------|---------|--------|--------|--------|--------|
|            |                       |                        |                        | 100 RPM                                 | 200 RPM | 300RPM | 350RPM | 400RPM | 425RPM |
| M1609      | 1.125                 | 0.0516                 | 10,000                 | 5.2                                     | 10.3    | 15.5   | 18.1   | 20.6   | 21.9   |
| M1610      | 1.250                 | 0.0637                 | 8,000                  | 6.4                                     | 12.7    | 19.1   | 22.3   | 25.5   | 27.1   |
| M1612      | 1.500                 | 0.0918                 | 5,500                  | 9.2                                     | 18.4    | 27.5   | 32.1   | 36.7   | 39.0   |
| M1614      | 1.750                 | 0.1249                 | 4,065                  | 12.5                                    | 25.0    | 37.5   | 43.7   | 50.0   | 53.1   |
| M1616      | 2.000                 | 0.1632                 | 3,115                  | 16.3                                    | 32.6    | 49.0   | 57.1   | 65.3   | 69.4   |
| M1618      | 2.250                 | 0.2065                 | 2,460                  | 20.7                                    | 41.3    | 62.0   | 72.3   | 82.6   | 87.8   |
| M1620      | 2.500                 | 0.2550                 | 1,990                  | 25.5                                    | 51.0    | 76.5   | 89.3   | 102    | 108    |
| M1622      | 2.750                 | 0.3085                 | 1,650                  | 30.9                                    | 61.7    | 92.6   | 108    | 123    | 131    |
| M1624      | 3.000                 | 0.3672                 | 1,385                  | 36.7                                    | 73.4    | 110    | 128    | 147    | 156    |
| M1626      | 3.250                 | 0.4309                 | 1,180                  | 43.1                                    | 86.2    | 129    | 151    | 172    | 183    |
| M1628      | 3.500                 | 0.4998                 | 1,015                  | 50.0                                    | 100     | 150    | 175    | 200    | 212    |
| M1630      | 3.750                 | 0.5737                 | 885                    | 57.4                                    | 115     | 172    | 201    | 229    | 244    |
| M1632      | 4.000                 | 0.6528                 | 775                    | 65.3                                    | 131     | 196    | 228    | 261    | 277    |
| M1634      | 4.250                 | 0.7369                 | 650                    | 73.7                                    | 147     | 221    | 258    | 295    | 313    |
| M1636      | 4.500                 | 0.8262                 | 570                    | 82.6                                    | 165     | 248    | 289    | 330    | 351    |

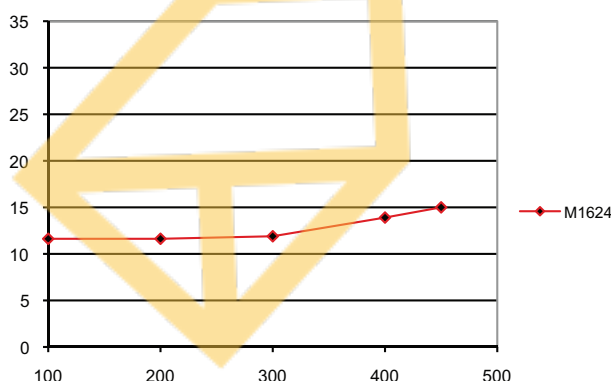
### M16 NPSHr values for Disc Valves with 2-springs



### M16 NPSHr values for AR Valves with 1-spring



### M16 NPSHr values for Disc Valves with 1-spring



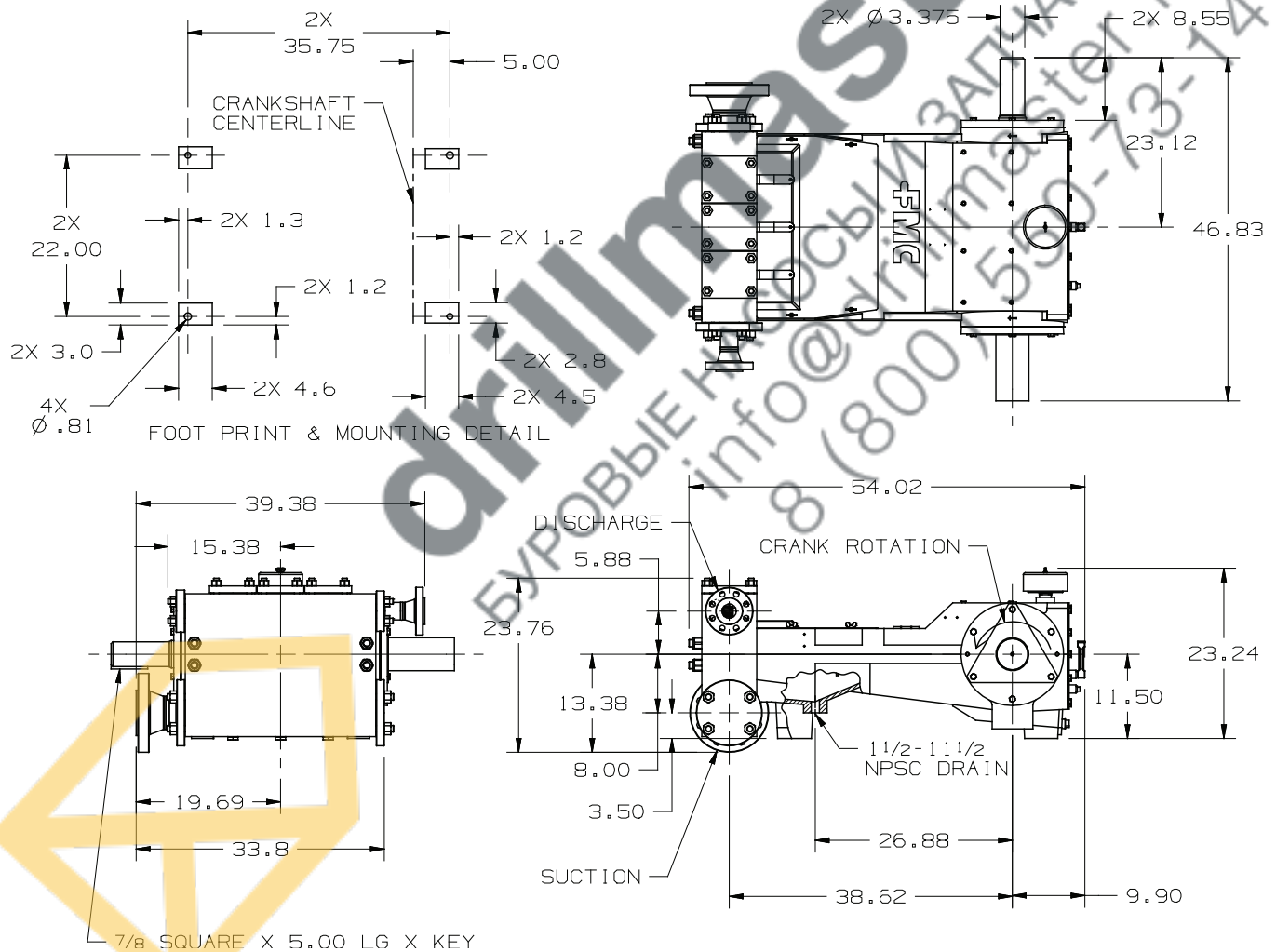
- Pump capacities shown are based on 100% volumetric efficiency.
- FMC recommends NPSHa (available) exceeds NPSHr (required) by 5 feet of water.
- Take special consideration when calculating NPSHa. Recalculate NPSHa after pump model has been selected for more accurate values.
- NPSHr values are in feet of water. If you are pumping a different liquid than water, convert the required NPSH from water to the liquid being pumped by dividing the published NPSHr value by the specific gravity of the liquid being pumped.
- FMC published NPSHr values are based on test data collected on specific pumps at the factory and are estimated values. Actual NPSHr values for an ordered pump can only be determined by a factor test. For NPSH critical applications, contact the factory for additional information and request an NPSHr test performed on your pump before shipment.



## M16 Plunger Pump Data

117 BHP Continuous Duty (142 BHP Intermittent Duty)

### Forged Pump Engineering Dimensional Outline

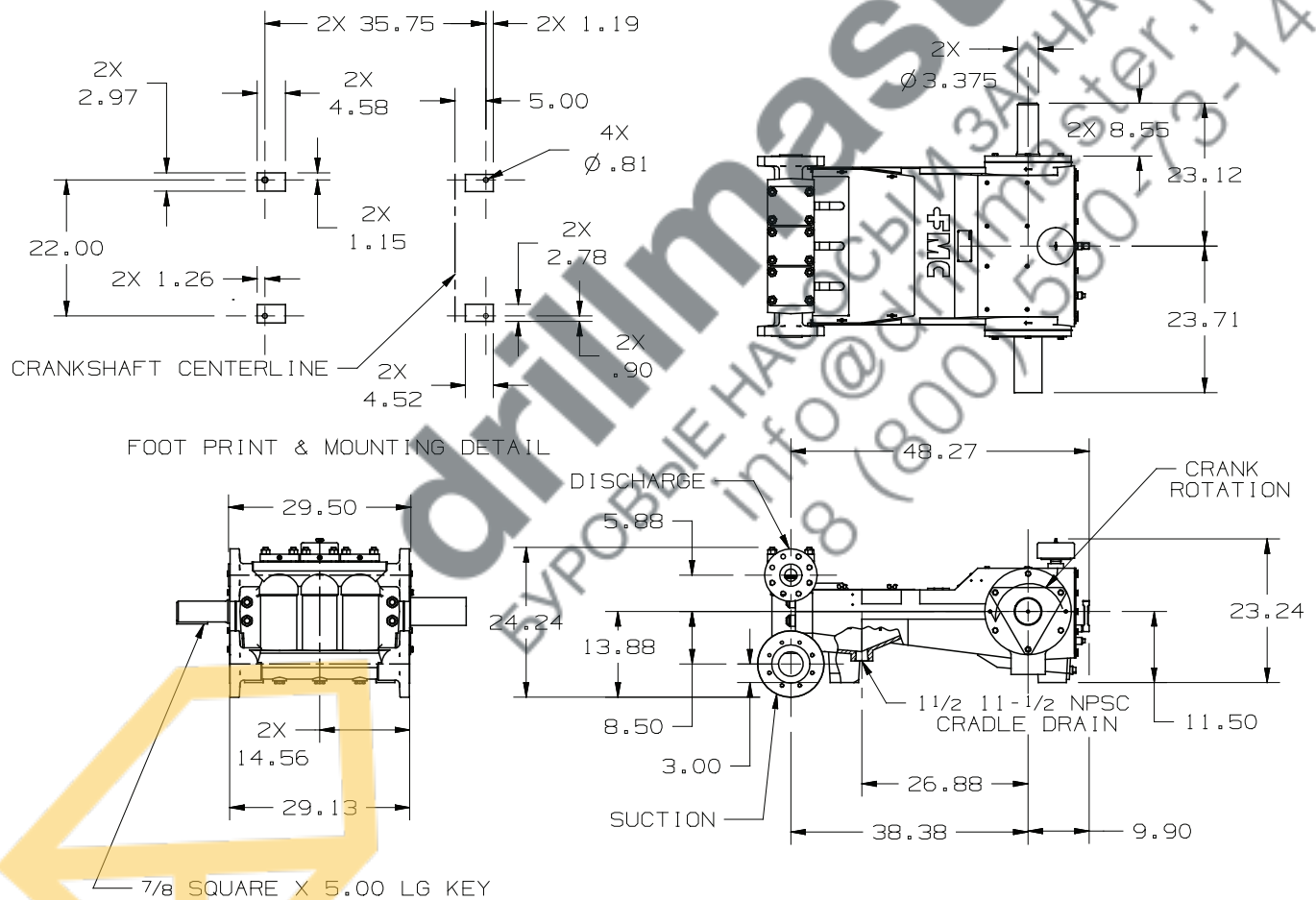


**Customer Service**  
(800) 772-8582  
2825 W. Washington St.  
Stephenville, TX 76401  
[www.FMCPumps.com](http://www.FMCPumps.com)

## M16 Plunger Pump Data

117 BHP Continuous Duty (142 BHP Intermittent Duty)

## Cast Pump Engineering Dimensional Outline



- Dimensions shown are for general sizing purposes and should not be used of construction. Contact FMC for actual dimensions of pump ordered.
- FMC reserves the right to modify this information without prior notice.
- Pump drawing dimensions in inches.