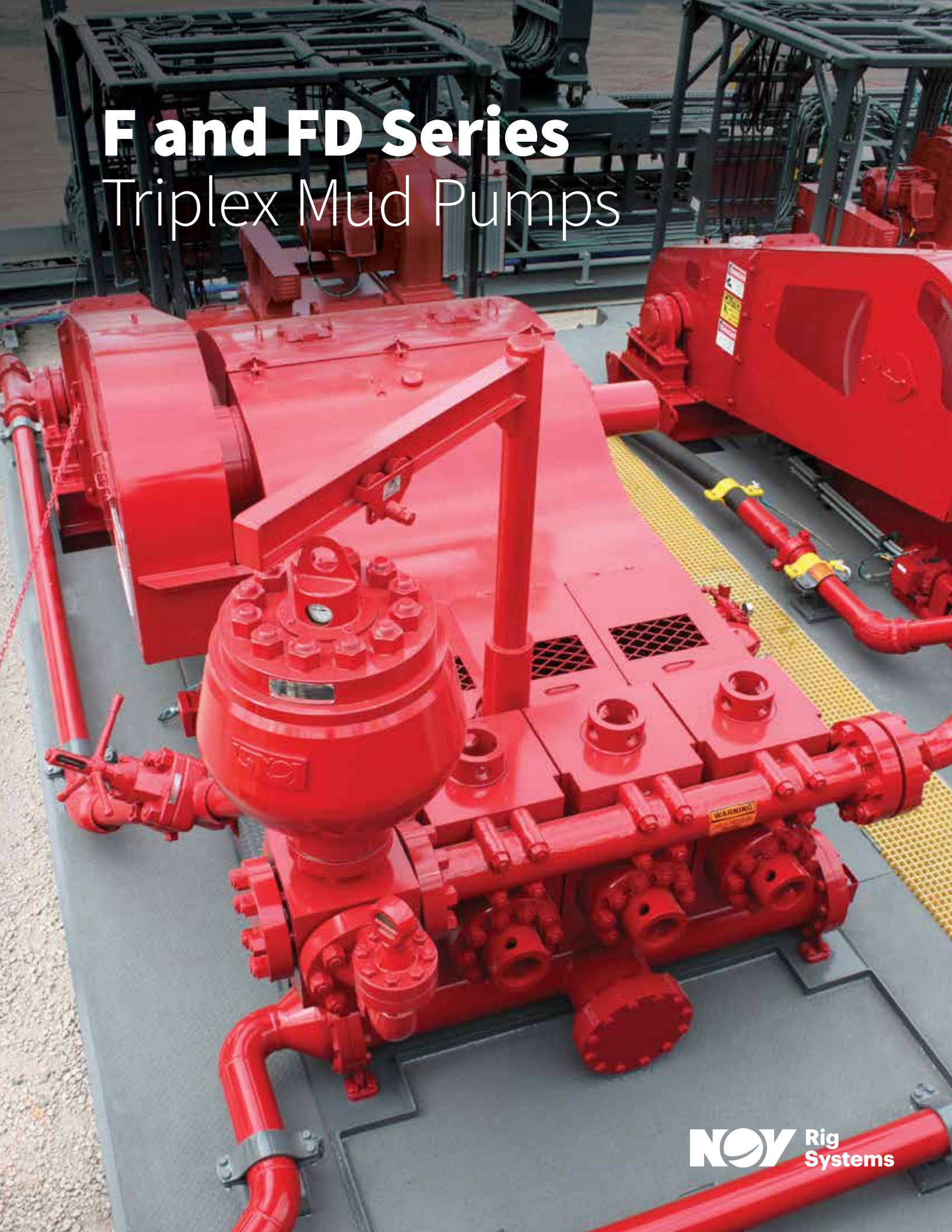


F and FD Series Triplex Mud Pumps



Introduction

Responsible for pumping mud throughout your system and as the heart of your rig, quality mud pumps are essential parts of your equipment suite. Rated at 1000 HP and 1600 HP, the F-1000 and FD-1600/FD-1600HP mud pumps, respectively, operate with high performance, easy maintenance and durability in mind to meet your toughest demands.



F-1000 Triplex Mud Pump



FD-1600 Triplex Mud Pump



FD-1600HP Triplex Mud Pump

High Performance

- Suction desurger built into the suction manifold for reduction of pressure surges
- Low weight-to-horsepower ratio
- Single or dual motor drives both support 1600 HP for FD-1600/FD-1600HP mud pump

Easy Maintenance

- Forged steel cylinders are identical and interchangeable
- One-piece piston rod
- Discharge strainer
- Pistons/piston rods are removed/replaced through the front of the pumps
- One-piece interchangeable eccentric straps

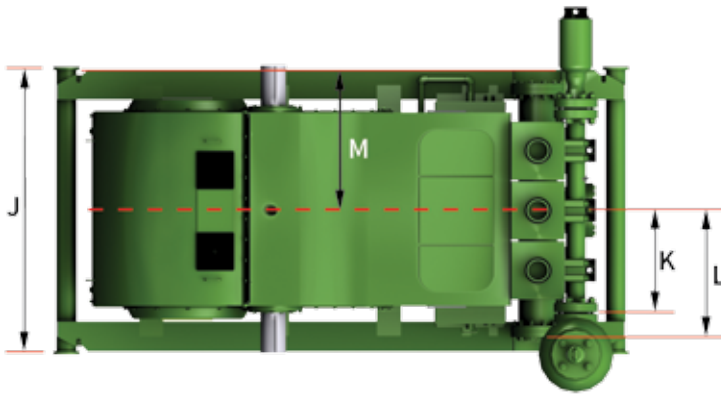
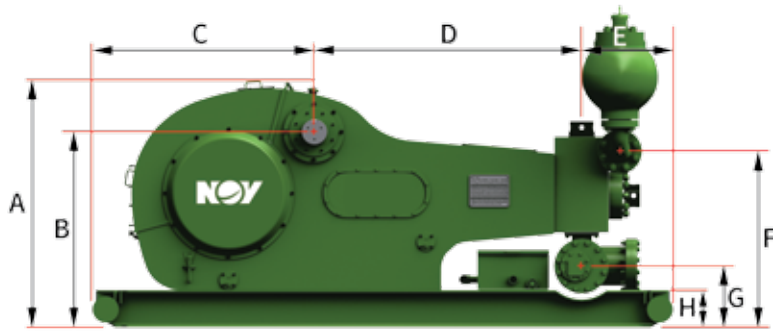
Durability

- Rugged Fabriform™ construction
- Gear and pinion are machined from alloy steel forgings

Additional Accessories

- Belt drive
- Drilling motors
- Mud gauge
- Pulsation dampener
- Relief valve

F-1000 Mud Pumps



Dimensions

| | | | | | |
|----------|--------|-----------|----------|--------|-----------|
| A | 5' 11" | (1803 mm) | G | 1' 6¾" | (476 mm) |
| B | 4' 9¼" | (1454 mm) | H | 1' 0" | (305 mm) |
| C | 5' 1¼" | (1556 mm) | J | 7' 10" | (2388 mm) |
| D | 6' 1½" | (1867 mm) | K | 3' 0" | (914 mm) |
| E | 2' 1¼" | (641 mm) | L | 3' 10" | (1168 mm) |
| F | 4' 5½" | (1359 mm) | M | 3' 8½" | (1130 mm) |

Specifications F-1000

| | |
|--|--|
| Normal Horsepower Rating, HP (kW) @ 140 SPM | 1,000 (746) |
| Size, Maximum Liner by Stroke, in (mm) | 6¾" x 10" (171 mm x 254 mm) |
| Gear Ratio | 4.32:1 |
| Discharge Outlet, in (mm) | 5" (127 mm) 5000 psi (352 kg/cm²) API Flange |
| Lubrication | Pressure and splash to all moving parts |
| Valve Pot | Valve-over-valve, API #6 |
| Valve Pot Cover | Screw Type |
| Cylinder Head | Screw Type |
| Liner Lock | Metal-to-metal |
| Crosshead Guide | Replaceable |

Performance of F-1000 Triplex Mud Pump

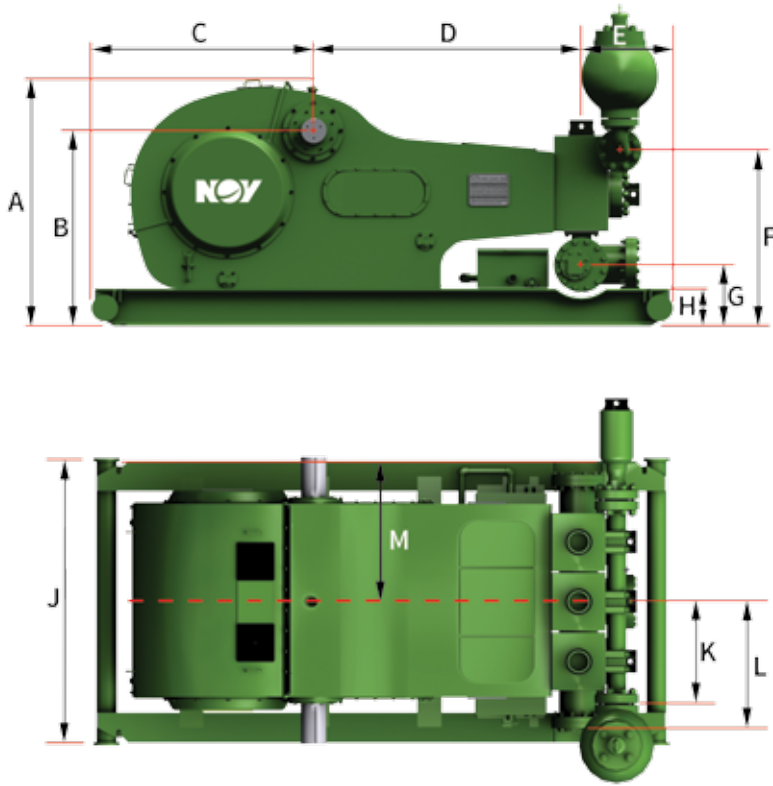
| | | | Liner Size and Pressure Rating | | | | | | | | | |
|--|-------------------|-----------|--------------------------------------|--------|------|---------|------|---------|------|--------|------|--------|
| | | | 6¾" | 171 mm | 6½" | 165 mm | 6" | 152 mm | 5" | 127 mm | 4½" | 114 mm |
| | | | 2370 | 167 | 2558 | 180 | 3010 | 212 | 4330 | 304 | 5000 | 352 |
| | | | psi | kg/cm² | psi | kg/cm² | psi | kg/cm² | psi | kg/cm² | psi | kg/cm² |
| Strokes Per Minute | Horsepower Rating | KW Rating | Volume - Gallons (Liters) per Minute | | | | | | | | | |
| 140 | 1000 | 746 | 651 | (2464) | 603 | (2282) | 514 | (1945) | 357 | (1351) | 289 | (1094) |
| 130 | 929 | 693 | 604 | (2286) | 560 | (2120) | 477 | (1805) | 331 | (1253) | 268 | (1014) |
| 120 | 857 | 639 | 558 | (2112) | 517 | (1957) | 440 | (1665) | 306 | (1158) | 248 | (939) |
| 110 | 786 | 586 | 511 | (1934) | 474 | (1794) | 404 | (1529) | 280 | (1060) | 227 | (859) |
| 100 | 714 | 532 | 465 | (1760) | 431 | (1631) | 367 | (1389) | 255 | (965) | 207 | (783) |
| 80 | 571 | 426 | 372 | (1407) | 345 | (1306) | 293 | (1109) | 204 | (772) | 165 | (625) |
| 60 | 429 | 320 | 279 | (1055) | 258 | (977) | 220 | (833) | 153 | (579) | 124 | (469) |
| Gallons (Liters) per Revolution | | | 4.65 | (17.6) | 4.31 | (16.31) | 3.67 | (13.89) | 2.55 | (9.65) | 2.07 | (7.83) |

Based on 100% volumetric efficiency and 90% mechanical efficiency.

Typical liners are shown. Other data is available upon request.

F and FD Series Triplex Mud Pumps

FD-1600 Mud Pumps



Dimensions

| | | | | | |
|----------|---------|-----------|----------|---------|-----------|
| A | 6' 10" | (2083 mm) | G | 1' 9¾" | (552 mm) |
| B | 5' 5¾" | (1670 mm) | H | 1' 0" | (305 mm) |
| C | 6' 1¾" | (1864 mm) | J | 8' 0" | (2438 mm) |
| D | 7' 4¾" | (2245 mm) | K | 3' 2⅞" | (979 mm) |
| E | 2' 6¼" | (768 mm) | L | 3' 6¾" | (1076 mm) |
| F | 4' 11¼" | (1518 mm) | M | 3' 11½" | (1207 mm) |

Specifications FD-1600

| | |
|--|---|
| Normal Horsepower Rating, HP (kW) @ 140 SPM | 1,600 (1,193) |
| Size, Maximum Liner by Stroke, in (mm) | 7" x 12" (178 mm x 305 mm) |
| Gear Ratio | 4.31:1 |
| Discharge Outlet, in (mm) | 5" (127 mm) 5000 psi (352 kg/cm ²) API Flange |
| (352 kg/cm²) API Flange | Pressure and splash to all moving parts |
| Lubrication | Pressure and splash to all moving parts |
| Valve Pot | Valve-over-valve, API #7 |
| Valve Pot Cover | Screw Type |
| Cylinder Head | Screw Type |
| Liner Lock | Metal-to-metal |
| Crosshead Guide | Replaceable |

Performance of FD-1600 Triplex Mud Pump

| | | | Liner Size and Pressure Rating | | | | | | | | | | | |
|--|-------------------|-----------|--------------------------------------|--------------------|------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|
| | | | 7" | 178 mm | 6¾" | 171 mm | 6½" | 165 mm | 6" | 152 mm | 5½" | 140 mm | 5" | 127 mm |
| | | | 3423 | 240 | 3688 | 259 | 3981 | 280 | 4665 | 328 | 5000 | 352 | 5000 | 352 |
| | | | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² |
| Strokes Per Minute | Horsepower Rating | KW Rating | Volume - Gallons (Liters) per Minute | | | | | | | | | | | |
| | | | 120 | 1600 | 1193 | 720 | (2724) | 669 | (2533) | 621 | (2349) | 529 | (2002) | 444 |
| 110 | 1467 | 1094 | 660 | (2497) | 613 | (2322) | 569 | (2153) | 485 | (1835) | 407 | (1542) | 337 | (1274) |
| 100 | 1333 | 994 | 600 | (2270) | 558 | (2111) | 517 | (1958) | 441 | (1668) | 370 | (1402) | 306 | (1158) |
| 90 | 1200 | 895 | 540 | (2043) | 502 | (1900) | 465 | (1762) | 397 | (1501) | 333 | (1261) | 275 | (1042) |
| 80 | 1067 | 796 | 480 | (1816) | 446 | (1689) | 414 | (1566) | 353 | (1334) | 296 | (1121) | 245 | (927) |
| 70 | 933 | 696 | 420 | (1589) | 390 | (1478) | 362 | (1370) | 308 | (1168) | 259 | (981) | 214 | (811) |
| 60 | 800 | 597 | 360 | (1362) | 335 | (1267) | 310 | (1175) | 264 | (1001) | 222 | (841) | 184 | (695) |
| Gallons (Liters) per Revolution | | | 6.00 | (22.70) | 5.58 | (21.11) | 5.17 | (19.58) | 4.41 | (16.68) | 3.70 | (14.02) | 3.06 | (11.59) |

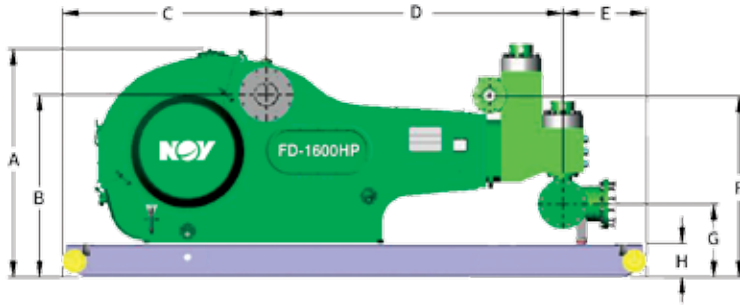
Based on 100% volumetric efficiency and 90% mechanical efficiency.

Typical liners are shown. Other data is available upon request.

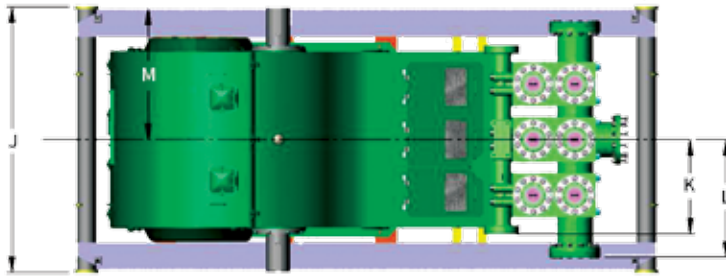
F and FD Series Triplex Mud Pumps

FD-1600HP Mud Pumps

Dimensions



| | | | | | |
|----------|-------------------------------------|-----------|----------|-------------------------------------|-----------|
| A | 6' 10" | (2083 mm) | G | 2' 2 ³ / ₈ " | (670 mm) |
| B | 5' 5 ³ / ₄ " | (1670 mm) | H | 1' 0" | (305 mm) |
| C | 6' 1 ³ / ₈ " | (1864 mm) | J | 8' 0" | (2438 mm) |
| D | 8' 10 ⁷ / ₈ " | (2715 mm) | K | 2' 10" | (864 mm) |
| E | 2' 6 ¹ / ₈ " | (765 mm) | L | 3' 6 ³ / ₈ " | (1076 mm) |
| F | 5' 5 ³ / ₈ " | (1661 mm) | M | 3' 11 ¹ / ₂ " | (1207 mm) |



Specifications FD-1600HP

| | |
|--|---|
| Normal Horsepower Rating, HP (kW) @ 120 SPM | 1,600 (1,193) |
| Size, Maximum Liner by Stroke, in (mm) | 7" x 12" (178 mm x 305 mm) |
| Gear Ratio | 4.31:1 |
| Discharge Outlet, in (mm) | 5" (127 mm) 7500 psi (527 kg/cm ²) API Flange |
| Lubrication | Pressure and splash to all moving parts |
| Valve Pot | Valve-over-valve, API #7 |
| Valve Pot Cover | Screw Type |
| Cylinder Head | Screw Type |
| Liner Lock | Metal-to-metal |
| Crosshead Guide | Replaceable |

Performance of FD-1600HP Triplex Mud Pump

| | | | Liner Size and Pressure Rating | | | | | | | | | | | | | |
|--|-------------------|-----------|--------------------------------------|--------------------|---------------------------------|--------------------|---------------------------------|--------------------|------|--------------------|---------------------------------|--------------------|------|--------------------|---------------------------------|--------------------|
| | | | 7" | 178 mm | 6 ³ / ₄ " | 171 mm | 6 ¹ / ₂ " | 165 mm | 6" | 152 mm | 5 ¹ / ₂ " | 140 mm | 5" | 127 mm | 4 ¹ / ₂ " | 114 mm |
| | | | 3429 | 241 | 3688 | 259 | 3977 | 280 | 4668 | 328 | 5555 | 391 | 6722 | 473 | 7500 | 527 |
| | | | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² |
| Strokes Per Minute | Horsepower Rating | KW Rating | Volume - Gallons (Liters) per Minute | | | | | | | | | | | | | |
| 120* | 1600* | 1193* | 720 | (2724) | 669 | (2533) | 621 | (2349) | 529 | (2002) | 444 | (1682) | 367 | (1390) | 297 | (1126) |
| 110 | 1467 | 1094 | 660 | (2497) | 613 | (2322) | 569 | (2153) | 485 | (1835) | 407 | (1542) | 337 | (1274) | 273 | (1032) |
| 100 | 1333 | 994 | 600 | (2270) | 558 | (2111) | 517 | (1958) | 441 | (1668) | 370 | (1402) | 306 | (1158) | 248 | (938) |
| 90 | 1200 | 895 | 540 | (2043) | 502 | (1900) | 465 | (1762) | 397 | (1501) | 333 | (1261) | 275 | (1042) | 223 | (844) |
| 80 | 1067 | 796 | 480 | (1816) | 446 | (1689) | 414 | (1566) | 353 | (1334) | 296 | (1121) | 245 | (927) | 198 | (751) |
| 70 | 933 | 696 | 420 | (1589) | 390 | (1478) | 362 | (1370) | 308 | (1168) | 259 | (981) | 214 | (811) | 174 | (657) |
| 60 | 800 | 597 | 360 | (1362) | 335 | (1267) | 310 | (1175) | 264 | (1001) | 222 | (841) | 184 | (695) | 149 | (563) |
| Gallons (Liters) per Revolution | | | 6.00 | (22.70) | 5.58 | (21.11) | 5.17 | (19.58) | 4.41 | (16.68) | 3.70 | (14.02) | 3.06 | (11.58) | 2.48 | (9.38) |

Based on 100% volumetric efficiency and 90% mechanical efficiency. * Rated maximum input horsepower and speed

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