DURABLE, SPACE-SAVING PERFORMANCE

Muncie clutch pumps provide hydraulic power at the flip of a switch. Clutch pumps can be used in situations where a PTO aperture is unavailable or difficult to access. Although normally belt driven, clutch pumps may also be shaft driven from the engine crankshaft.

KEY FEATURES

- All cast iron construction
- Speeds up to 4,000 RPM
- Pressures to 3,500 PSI
- Solid, one-piece shaft
- Integral mounting pad
- Both side and rear ports
- Full one-year warranty

PUMP SPECIFICATIONS

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>DISPLACEMENT CUBIC IN (CC)</th>
<th>MAX* RPM</th>
<th>MIN* RPM</th>
<th>FB/SB MAX. PSI (BAR)</th>
<th>FY MAX. PSI (BAR)</th>
<th>MAX. OIL TEMP.</th>
<th>MAX INLET VACUUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH1-03</td>
<td>0.62 (10)</td>
<td>4,000</td>
<td>800</td>
<td>3,500 (241)</td>
<td>3,500 (241)</td>
<td>200°F (93°C)</td>
<td>5 IN.HG. (.17 BAR)</td>
</tr>
<tr>
<td>PH1-05</td>
<td>1.24 (20)</td>
<td>4,000</td>
<td>800</td>
<td>3,500 (241)</td>
<td>3,500 (241)</td>
<td>200°F (93°C)</td>
<td>5 IN.HG. (.17 BAR)</td>
</tr>
<tr>
<td>PH1-07</td>
<td>1.55 (25)</td>
<td>3,600</td>
<td>800</td>
<td>3,000 (207)</td>
<td>3,500 (241)</td>
<td>200°F (93°C)</td>
<td>5 IN.HG. (.17 BAR)</td>
</tr>
<tr>
<td>PH1-09</td>
<td>2.17 (36)</td>
<td>3,000</td>
<td>800</td>
<td>2,600 (179)</td>
<td>2,900 (200)</td>
<td>200°F (93°C)</td>
<td>5 IN.HG. (.17 BAR)</td>
</tr>
<tr>
<td>PH1-11*</td>
<td>2.48 (41)</td>
<td>3,000</td>
<td>800</td>
<td>2,000 (138)</td>
<td>2,500 (172)</td>
<td>200°F (93°C)</td>
<td>5 IN.HG. (.17 BAR)</td>
</tr>
<tr>
<td>PK1-13</td>
<td>2.96 (48)</td>
<td>2,500</td>
<td>600</td>
<td>N/A</td>
<td>3,000 (207)</td>
<td>200°F (93°C)</td>
<td>5 IN.HG. (.17 BAR)</td>
</tr>
</tbody>
</table>

*Model PH1-11 tested at 2,000 PSI (138 BAR). Flow Rate Tested at 2,500 PSI (172 BAR). PK1-13 pump not tested.
MOUNTING DIMENSIONS

FB/SB SERIES

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIM A IN (MM)</th>
<th>DIM B IN (MM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH1-03</td>
<td>7.4 (188.0)</td>
<td>0.90 (22.9)</td>
</tr>
<tr>
<td>PH1-05</td>
<td>7.9 (200.7)</td>
<td>1.40 (35.6)</td>
</tr>
<tr>
<td>PH1-07</td>
<td>8.2 (208.3)</td>
<td>1.65 (41.9)</td>
</tr>
<tr>
<td>PH1-09</td>
<td>8.6 (218.4)</td>
<td>2.15 (54.6)</td>
</tr>
<tr>
<td>PH1-11</td>
<td>8.9 (226.1)</td>
<td>2.40 (61.0)</td>
</tr>
</tbody>
</table>

Note: Basis pump dimensions for all models are the same no matter which clutch is installed. Clutches require 6 amps @ 12-VDC. Minimum 12.0-V required at clutch.

Approx. Shipping Weight: 34 lbs. (15.4)

FY SERIES

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIM A IN (MM)</th>
<th>DIM B IN (MM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH1-03</td>
<td>9.9 (251.5)</td>
<td>5.40 (137.2)</td>
</tr>
<tr>
<td>PH1-05</td>
<td>10.4 (264.2)</td>
<td>5.90 (149.9)</td>
</tr>
<tr>
<td>PH1-07</td>
<td>10.6 (269.2)</td>
<td>6.15 (156.2)</td>
</tr>
<tr>
<td>PH1-09</td>
<td>11.1 (281.9)</td>
<td>6.65 (168.9)</td>
</tr>
<tr>
<td>PH1-11</td>
<td>11.4 (289.6)</td>
<td>6.90 (175.3)</td>
</tr>
<tr>
<td>PK1-13</td>
<td>11.7 (297.2)</td>
<td>7.19 (182.6)</td>
</tr>
</tbody>
</table>

Note: Basis pump dimensions for all models are the same no matter which clutch is installed. Clutches require 6 amps @ 12-VDC. Minimum 12.0-V required at clutch.

Approx. Shipping Weight: 56 lbs. (25.4)

MODEL NUMBER CONSTRUCTION

Clutch Type
- FB - Fanbelt, 32 HP (24KW)
- FBH - Fanbelt, 45 HP (34KW)
- SB - Serpentine Type 6-Groove Poly Belt
- SB8 - Serpentine Type 8-Groove Poly Belt
- FY - Flange Yoke

Pump

Series
- K Series (Flange Yoke Only)
- H Series

Design Number

Rotation
- R — Right Hand (CW)
  (Standard FB & SB drive)
- L — Left Hand (CCW)
  (Front Mount FY Drive)

Port Type (Side & Rear)
- P — Pipe Thread (N.P.T.)
  (1-¼" inlet, ¾" outlet)
- S — Straight Thread (O.D.T.)
  (1-¼", ¾" Straight Thread)

GPM (LPM) @ 1,000 RPM

H Series: 03 (11), 05 (19), 07 (26), 09 (34), 11 (42)
K Series: 13 (49)

OIL RECOMMENDATIONS

Muncie does not promote specific manufacturers’ brands of oil. Recommendations below are guidelines; consult oil manufacturer for exact application needs.

Viscosity Range:
- Viscosity Minimum: 50-60 SUS (7.5-10.5 cST)
- Viscosity Optimum Continuous: 60-100 SUS (10.5-21.6 cST)
- Viscosity Maximum @ Startup: 7500 SUS (1600 cST)
- Viscosity Index: 90 Minimum
- Aniline Point: 175 Minimum

Pour Point: 15°F (-10°C) Maximum

Foam Resistance: Recommended
Rust Resistance Inhibitors: Recommended
Corrosion Resistance: Recommended
Oxidation Stability: Recommended
Anti-Wear Additive: .06% Zinc Minimum*

Note: Cold weather operation requires special oil considerations. Viscosity should not exceed 7500 SUS (1600 cST) at lowest startup temperature. Continuous operation should range between 60-1000 SUS (10.5-216 cST) for all temperature ranges. Never use diesel fuel or kerosene to thin oil.

*Anti-Wear Additives may be recommended by some motor manufacturers. However, they are optional and typically not required for gear pump or gear motors.