High Pressure Gear Pumps and Gear Motors for today’s demanding mobile and industrial applications.

The PZG and MZG Series of Pumps and Motors are built to run continuously to pressures of up to 3600 PSI. Parker’s new series was developed for reliable, high efficiency operation at lower noise levels than previously available.

The aluminum front and rear covers are a very dense gravity casting and the center section is a high strength extrusion. This construction allows us to provide a pump and motor that can withstand the most demanding operating conditions and environments.

Free moving pressure balanced bushings maintain ideal running clearances, yielding a very high operating efficiency. Volumetric efficiencies are as high as 98%. High capacity "DU" bushings are standard and provide long life and dependable operation.

The result is a pump and motor built to exacting standards for years of trouble free service.

Features

- Very Low Noise Operation.
- High Operating Pressures
  - Up to: 3600 PSI Continuous and 4000 PSI Intermittent.
- Rugged Housing Assembly.
- Special Seal Technology.
- Very High Efficiencies:
  - Volumetric Efficiency to 98%
  - Mechanical Efficiency to 95%
- High Tolerance to Contamination.
- Long Life "DU" PTFE Lined Bushings.
- Reversible Motors are Standard.

Options

- Straight Keyed or Spline Shafts.
- Buna-N or Viton Seals.

Application Information

- For maximum pump and system life, a fluid cleanliness level of ISO 16/13 is recommended.
- For ratings on other fluids, such as water glycols and transmission fluid, please consult factory.
- Intermittent operation is defined as 10% of the duty cycle with a maximum time of 5 seconds per incident.
- Operating fluid viscosity range is 80-1000 SSU. Maximum start-up viscosity is 4000 SSU.
- Fluid should have maximum anti-wear properties, rust and oxidation inhibitors.
- Pump inlet vacuum should not exceed 10 in. Hg. (0.35 bar) at 1800 RPM or 5 in. Hg. (0.17 bar) at pump rated speed. Maximum positive inlet pressure is 10 PSI (0.69 bar).
- Pump and prime mover shaft alignment must be within 0.007 inches total indicator reading.
- For applications with side load conditions, such as belt driven pumps, please contact the Parker Hydraulic Pump/Motor Division.
- For information not specified in this brochure please contact your nearest Parker Distributor or the Hydraulic Pump/Motor Division.
**PZG1A**

Instructions: To size a pump...

1. Where RPM intersects displacement read GPM.
2. Where GPM intersects PSI read HP.

**Example:** An electric motor operating at 1725 RPM with a 4.1cc pump would produce a flow of 1.9 GPM. At 3600 PSI this would require a 5 HP electric motor.
**Series PZG Gear Pumps**

**Series MZG Gear Motors**

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### PZG2A

**Instructions:** To size a pump...

1. Where RPM intersects displacement read GPM.
2. Where GPM intersects PSI read HP.

**Example:** An electric motor operating at 1725 RPM with a 14.0cc pump would produce a flow of 6.4 GPM. At 3600 PSI this would require a 15 HP electric motor.

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### PZG2A TYPE

<table>
<thead>
<tr>
<th>Code</th>
<th>cc's/rev. (cu.in.)</th>
<th>GPM (Liters) @ RPM</th>
<th>PSI (bar) Operating Pressure</th>
<th>PSI (bar) Intermittent Pressure</th>
<th>RPM Maximum Speed</th>
<th>DIMENSIONS Inches (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>M</td>
<td>1725 RPM</td>
<td>3450 RPM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>7.0 (0.4)</td>
<td>3.19 (12.1)</td>
<td>6.38 (24.2)</td>
<td>3600 (248)</td>
<td>4000</td>
<td>1.87 (47.5) 3.90 (99.1)</td>
</tr>
<tr>
<td>095</td>
<td>9.5 (0.6)</td>
<td>4.33 (16.4)</td>
<td>8.66 (32.8)</td>
<td>3600 (248)</td>
<td>4000</td>
<td>1.95 (49.5) 4.06 (103.1)</td>
</tr>
<tr>
<td>113</td>
<td>11.3 (0.7)</td>
<td>5.15 (19.5)</td>
<td>10.30 (39.0)</td>
<td>3600 (248)</td>
<td>4000</td>
<td>2.01 (51.1) 4.17 (105.9)</td>
</tr>
<tr>
<td>140</td>
<td>14.0 (0.9)</td>
<td>6.38 (24.2)</td>
<td>12.76 (48.3)</td>
<td>3600 (248)</td>
<td>4000</td>
<td>2.09 (53.1) 4.33 (110.0)</td>
</tr>
<tr>
<td>178</td>
<td>17.8 (1.1)</td>
<td>8.11 (30.7)</td>
<td>16.22 (61.4)</td>
<td>3400 (234)</td>
<td>3800 (262)</td>
<td>2.21 (56.1) 4.57 (116.1)</td>
</tr>
<tr>
<td>208</td>
<td>20.8 (1.3)</td>
<td>9.48 (35.9)</td>
<td>18.96 (71.8)</td>
<td>3000 (207)</td>
<td>3400 (234)</td>
<td>2.30 (58.4) 4.76 (120.9)</td>
</tr>
<tr>
<td>279</td>
<td>27.9 (1.7)</td>
<td>12.71 (48.1)</td>
<td>—</td>
<td>2600 (179)</td>
<td>3000 (207)</td>
<td>2.52 (64.0) 5.20 (132.1)</td>
</tr>
</tbody>
</table>

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**INLET PORT:** 1 1/16-12 UNF (SAE-12) O-RING

**OUTLET PORT:** 7/8-14 UNF (SAE-10) O-RING

**MZG MOTOR DRAIN (BI-ROTATIONAL)** SAE-6 80 PSIG MAX

**MOTORS PORTS (SAE-12)**

© CLOCKWISE ROTATION SHOWN

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Parker Hannifin Corporation
Hydraulic Pump/Motor Division
Greeneville, TN 37745 USA
Instructions: To size a pump…

1/ Where RPM intersects displacement read GPM.
2/ Where GPM intersects PSI read HP.

Example: An electric motor operating at 1725 RPM with a 39.4cc pump would produce a flow of 17.9 GPM. At 3600 PSI this would require a 45 HP electric motor.
### Ordering Information

#### Series PZG Gear Pumps

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Code Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gear Pump</td>
<td>PZG</td>
</tr>
<tr>
<td>Gear Motor</td>
<td>MZG</td>
</tr>
</tbody>
</table>

#### Rotation

<table>
<thead>
<tr>
<th>Code</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Right Hand</td>
</tr>
<tr>
<td>L</td>
<td>Left Hand</td>
</tr>
<tr>
<td>B</td>
<td>Both</td>
</tr>
</tbody>
</table>

#### Displacement (cc's/rev x 10)

- **1A Frame Size**
  - 013: 1.3 (0.08)
  - 020: 2.0 (0.12)
  - 027: 2.7 (0.17)
  - 041: 4.1 (0.25)
  - 051: 5.1 (0.31)
  - 061: 6.1 (0.37)

- **2A Frame Size**
  - 070: 7.0 (0.40)
  - 095: 9.5 (0.60)
  - 113: 11.3 (0.70)
  - 140: 14.0 (0.90)
  - 178: 17.8 (1.10)
  - 208: 20.8 (1.30)
  - 279: 27.9 (1.70)

- **3A Frame Size**
  - 225: 22.5 (1.40)
  - 264: 26.4 (1.60)
  - 337: 33.7 (2.10)
  - 394: 39.4 (2.40)
  - 427: 42.7 (2.60)
  - 514: 51.4 (3.10)
  - 600: 60.0 (3.70)
  - 696: 69.6 (4.20)
  - 776: 77.6 (4.70)
  - 876: 87.6 (5.30)

#### Ports

<table>
<thead>
<tr>
<th>Code Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
</tr>
<tr>
<td>F</td>
</tr>
</tbody>
</table>

* Available on 3A only.

#### Shaft Types

- **1** Straight Keyed
  - 1A = 1/2" Dia.
  - 2A = 5/8" Dia.
  - 3A = 7/8" Dia.
- **2** Splined
  - 1A = 9 Tooth
  - 2A = 9 Tooth
  - 3A = 13 Tooth

#### Seal Types

<table>
<thead>
<tr>
<th>Code Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omit</td>
</tr>
<tr>
<td>V</td>
</tr>
</tbody>
</table>

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**Catalog 1550-001/USA**

**Parker Hannifin Corporation**

Hydraulic Pump/Motor Division

Greeneville, TN 37745  USA