Gear pumps
Series GPA and GP1
Fixed displacement

Catalogue HY30-3400/UK
February 2007
Content

- General Information .................................................. 3
- Light/medium duty pumps ......................................... 3
- Features ..................................................................... 3
- Dimensions, torque and flow diagrams ............... 4
  GPA-008/-012/-016/-019 3-bolt ................................... 4
  GPA-008/-012/-016/-019 4-bolt .................................. 4
- Dimensions, torque and flow diagrams ............... 5
  GP1-016/-019/-023/-029/-036/-041/-046 3-bolt ... 5
  GP1-016/-019/-023/-029/-036/-041/-046 4-bolt ... 5
- Dimensions, torque and flow diagrams ............... 6
  GP1-050/-060/-070/-080/-100 4-bolt ..................... 6
- Ordering Information .................................................. 7

Conversion factors

- 1 bar .............................................................. 14.5 psi
- 1 cm³ ............................................................ 0.061 cu in
- 1 kg ............................................................... 2.20 lb
- 1 kW ............................................................ 1.34 hp
- 1 l .............................................................. 0.264 US gallons
- 1 mm .......................................................... 0.039 in
- 1 N ................................................................. 0.225 lbf
- 1 Nm .............................................................. 0.738 lbf ft
- $9/5 \degree C + 32$ ......................................................... ${}^\circ F$
Light/medium duty pumps
Parker's truck gear pumps are ideal for operators of light trucks for their hydraulic power needs.

The GPA/GP1 series gear pumps are available to suit most applications. They are light and compact, and can be installed in either rear or side mount configuration thanks to their unique dual port layout.

The smaller GPA series is built with an extruded aluminum housing for minimum weight.

The larger GP1 pumps are built with compact cast iron housings for strength.

The gear pumps complement our heavy duty piston pumps and vane pumps.

The performance and characteristics are ideal for many light and/or intermittent applications, including the famous Parker reliability, and they are engineered with a long, trouble-free service life.

Series GPA characteristics (aluminum body; 3- and 4-bolt)

<table>
<thead>
<tr>
<th>Frame size</th>
<th>008</th>
<th>012</th>
<th>016</th>
<th>019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displacement [cm³/rev]</td>
<td>8</td>
<td>12</td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>Max continuous pressure [bar]</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>230</td>
</tr>
<tr>
<td>Max intermittent pressure [bar]</td>
<td>270</td>
<td>270</td>
<td>270</td>
<td>250</td>
</tr>
<tr>
<td>Max peak pressure [bar]</td>
<td>290</td>
<td>290</td>
<td>290</td>
<td>270</td>
</tr>
<tr>
<td>Speed [rpm] (at max continuous pressure)</td>
<td>500</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>max</td>
<td>2000</td>
<td>2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>4.6</td>
<td>4.8</td>
<td>5.1</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Series GP1 characteristics (cast iron body; 3- and 4-bolt)

<table>
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<th>023</th>
<th>029</th>
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<th>080</th>
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<td>16</td>
<td>19</td>
<td>23</td>
<td>29</td>
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<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>100</td>
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<tr>
<td>Max continuous pressure [bar]</td>
<td>270</td>
<td>260</td>
<td>250</td>
<td>240</td>
<td>230</td>
<td>210</td>
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<td>300</td>
<td>280</td>
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<td>Max intermittent pressure [bar]</td>
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<td>290</td>
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<td>260</td>
<td>250</td>
<td>310</td>
<td>290</td>
<td>250</td>
<td>210</td>
<td>180</td>
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<tr>
<td>Max peak pressure [bar]</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>290</td>
<td>270</td>
<td>260</td>
<td>250</td>
<td>320</td>
<td>300</td>
<td>260</td>
<td>220</td>
<td>190</td>
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<tr>
<td>Speed [rpm] (at max continuous pressure)</td>
<td>500</td>
<td>500</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>max</td>
<td>2000</td>
<td>2000</td>
<td>2000</td>
<td>1800</td>
<td>1700</td>
<td>1600</td>
<td>1400</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Weight [kg]</td>
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<td>6.3</td>
<td>6.7</td>
<td>7.1</td>
<td>7.5</td>
<td>7.8</td>
<td>8.1</td>
<td>12.5</td>
<td>13.0</td>
<td>13.5</td>
<td>14.0</td>
<td>15.0</td>
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</tbody>
</table>
## Gear pumps
### Series GPA and GP1

**GPA-008/-012/-016/-019 3-bolt**

![Diagram of GPA-008/-012/-016/-019 3-bolt]

<table>
<thead>
<tr>
<th>Frame size</th>
<th>008</th>
<th>012</th>
<th>016</th>
<th>019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dim. “A”</td>
<td>147</td>
<td>153</td>
<td>159</td>
<td>163</td>
</tr>
<tr>
<td>Dim. “B”</td>
<td>99</td>
<td>102</td>
<td>105</td>
<td>107</td>
</tr>
</tbody>
</table>

**GPA-008/-012/-016/-019 4-bolt**

![Diagram of GPA-008/-012/-016/-019 4-bolt]

<table>
<thead>
<tr>
<th>Frame size</th>
<th>008</th>
<th>012</th>
<th>016</th>
<th>019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dim. “A”</td>
<td>117</td>
<td>123</td>
<td>129</td>
<td>133</td>
</tr>
<tr>
<td>Dim. “B”</td>
<td>69</td>
<td>72</td>
<td>75</td>
<td>77</td>
</tr>
</tbody>
</table>

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### Dimensions

- **Spline B6x21x25 ISO 14 / DIN 5462**
  - BSP 1/2” (14 deep; shown plugged)
  - BSP 1/2” both sides (14 deep)

- **Spline B8x32x36 ISO 14 / DIN 5462**
  - BSP 1/2” (14 deep; shown plugged)
  - BSP 1/2” both sides (14 deep)

---

### Torque vs. Pressure

- **Flow vs. Speed**
- **Diagrams reflect theoretical values**
- **Direction of rotation**: Bi-directional
- **Input pressure**: 0.7 to 3.0 bar (absolute)
- **Fluid temperature**: -25 °C to +80 °C
- **Recommended viscosity**: 12 to 100 mm²/s (cSt)
- **Max viscosity**: 750 mm²/s (cSt)
Gear pumps
Series GPA and GP1

GP1-016/-019/-023/-029/-036/-041/-046 3-bolt

Frame size | 016 | 019 | 023 | 029 | 036 | 041 | 046 |
---|---|---|---|---|---|---|---|
Dim. “A” | 156 | 160 | 166 | 171 | 181 | 188 | 196 |

GP1-016/-019/-023/-029/-036/-041/-046 4-bolt

Frame size | 016 | 019 | 023 | 029 | 036 | 041 | 046 |
---|---|---|---|---|---|---|---|
Dim. “A” | 121 | 125 | 131 | 136 | 146 | 153 | 161 |
Dim. “B” | 69 | 73 | 67 | 74 | 74 | 80 | 84 |

Diagrams reflect theoretical values
Direction of rotation: Bi-directional
Input pressure: 0.7 to 3.0 bar (absolute)
Fluid temperature: -25 °C to +80 °C
Recommended viscosity: 12 to 100 mm²/s (cSt)
Max viscosity: 750 mm²/s (cSt)
**Dimensions**

**GP1-050/-060/-070/-080/-100 4-bolt**

<table>
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<tr>
<th>Frame size</th>
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<th>060</th>
<th>070</th>
<th>080</th>
<th>100</th>
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<tr>
<td>Dim. “A”</td>
<td>167</td>
<td>174</td>
<td>180</td>
<td>187</td>
<td>200</td>
</tr>
<tr>
<td>Dim. “B”</td>
<td>97</td>
<td>104</td>
<td>101</td>
<td>107</td>
<td>111</td>
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</tbody>
</table>

**Torque [Nm]**

- 100 cm³/rev
- 80
- 70
- 60
- 50

**Flow [l/min]**

- 100 cm³/rev
- 80
- 70
- 60
- 50

**Diagrams reflect theoretical values**

**Direction of rotation:** Bi-directional

**Input pressure:** 0.7 to 3.0 bar (absolute)

**Fluid temperature:** -25 °C to +80 °C

**Recommended viscosity:** 12 to 100 mm²/s (cSt)

**Max viscosity:** 750 mm²/s (cSt)
Gear pumps
Series GPA and GP1

Ordering Information

<table>
<thead>
<tr>
<th>Product</th>
<th>Code</th>
<th>Part numbers</th>
<th>Product</th>
<th>Code</th>
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<td>Cast iron 3 bolt</td>
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<td>704 9113 915</td>
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</tbody>
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WARNING

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