C101/C102 CAST IRON PUMP/VALVE COMBINATION

- Rugged Cast Iron Construction
- Interchangeable Parts
- Optional Mountings / Actuators
- High Performance / Low Cost

◆ Dump Pump/Valve Ordering Specification

<table>
<thead>
<tr>
<th>Model series</th>
<th>Maximum psi</th>
<th>GPM @1800 RPM</th>
<th>MAXIMUM SPEED</th>
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<tbody>
<tr>
<td>C101</td>
<td>2500</td>
<td>39</td>
<td>2400</td>
</tr>
<tr>
<td>C102</td>
<td>2500</td>
<td>39</td>
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PHP offers a complete line of rugged cast iron pump / valve combination for the dump truck and trailer industry. Units are available for SAE-B PTO mounting (C102) or remote drive shaft mounting (C101). Units are supplied with full flow adjustable main relief valves to protect the pump and cylinder from overloading and shock loads. A three position valve assembly controls the raising, holding and lowering of a single acting cylinder, control valve can be cab operated using mechanical cable actuation or air shift control. Installation can be either 2 line or three line type using the sleeve supplied see page E4.2.
2-line installation
One line to cylinder, one line to the reservoir. For intermittent operation only.

Spool in Neutrol Position:
Oil recirculates internally.

Spool in Raise Position:
Oil is routed through work port to raise the cylinder.

Spool in Lower Position:
Oil flows from the cylinder through the relief valve to return to tank.

3-line installation
One line to cylinder, two lines to the reservoir. For continuous or intermittent operation.

Spool in Neutrol Position:
Oil circulates through the pump and returns to tank

Spool in Raise Position:
Oil is routed through work port to raise the cylinder.

Spool in Lower Position:
Oil flows from the cylinder through the bottom port and returns to tank.

Note: Three line installation is recommended whenever possible by installing the sleeve supplied in the inlet port and connecting the optional return line to tank. This configuration maintains a lower operating temperature and a return line filter can be installed to filter return flow. Two line installations are for intermittent operation only.
C101/C102 CAST IRON PUMP/VALVE COMBINATION

<table>
<thead>
<tr>
<th>ITEM</th>
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<tbody>
<tr>
<td>1</td>
<td>SHAFT SEAL</td>
<td>11</td>
<td>VALVE HOUSING</td>
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<td>CAP SCREWS</td>
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<tr>
<td>2</td>
<td>SHAFT END COVER</td>
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<td>VALVE SPOOL</td>
<td>21</td>
<td>RELIEF VALVE ASSEMBLY</td>
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<tr>
<td>3</td>
<td>SHAFT RING SEALS</td>
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<td>&quot;O&quot; RINGS</td>
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<td>4</td>
<td>ROLLER BEARINGS</td>
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<td>SLEEVE(OPTIONAL)</td>
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PHP HYDRAULICS
C101/C102 CAST IRON
PUMP/VALVE DIMENSIONS

C101
GEAR WIDTH: 2.0" 2.5"
WEIGHT(lbs): 66 69

C102
GEAR WIDTH: 2.0" 2.5"
WEIGHT(lbs): 68 71
**Air Shift Installation Instructions**

- The Air shift mounts on IFP C101 / C102 Dump pumps in place of the detent end cap
- Prepare work area by assuring a clean work environment for assembly & disassembly of the Dump pump spool valve

**Preparing Pump / Valve spool for air shift kit installation**

- Remove snap ring and washer from valve spool
- Remove the detent cap, spring and ball from the valves end cap
- Remove four(4) cap screws and slide detent cap from the spool
- **DO NOT REMOVE "O" RING FROM VALVE HOUSING**

**Installation of air shift Kit**

- Remove retainer cap
- Remove snap ring / spring retainer / spring / washer
- Slide piston assembly from the cylinder body
- Remove setscrew from piston assembly using ¼”hex wrench
- Grease and slide Retainer Cap over valve spool with flat face of cap facing the spool body
- Assemble snap ring / spring retainer / spring / washer on piston
- Slide piston over valve spool and align and insert set screw attaching the piston to the spool
- Grease piston and O Rings
- Slide cylinder body over the piston assembly making sure not to damage the O Rings
- Secure the assembly using the 4 cap screws supplied
G101 / G102 SERIES
COMBINATION PUMP/VALVE

* Rugged Cast Iron Construction
* Interchangeable Parts
"Parker / Commercial - Permco - Muncie"
* Optional Mountings / Actuators
* High Performance / Low Cost

◆ Dump Pump/ Valve Ordering Code

<table>
<thead>
<tr>
<th>G102</th>
<th>2.0</th>
<th>LH</th>
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<tr>
<td>M</td>
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<td>A</td>
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G101 Drive Shaft mount
G102 PTO Direct Mount

- 1.0 - 1.0" Gear Width
- 1.5 - 1.5" Gear Width
- 2.0 - 2.0" Gear Width

RH- C.W. Rotation
LH- C.C.W. Rotation

2 - 2 Line installation
3 - 3 Line installation

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**Model** | **Displ. (in3/rev)** | **Maximum** | **US gpm @ 1800 rpm** | **Maximum Speed** |
----------|----------------------|-------------|------------------------|------------------|
          | 1.0 | 1.5 | 2.0 | PSI | 1.0 | 1.5 | 2.0 | 2.0 |
----------|-----|-----|-----|-----|-----|-----|-----|-----|
G101      | 1.97| 2.96| 3.94| 2500| 9.5 | 21  | 29  | 2400 rpm |
G102      | 1.97| 2.96| 3.94| 2500| 9.5 | 21  | 29  | 2400 rpm |

Offers G101 / G102 rugged cast iron combination gear pump / valve assemblies for the medium size dump and trailer applications. Units are available for SAE-B PTO mounting (G102) or remote drive shaft mounting (G101). Units are supplied with a full flow adjustable main relief valve to protect the pump and cylinder from over pressure and shock loads. A three position valve assembly controls the raising and lowering of a single acting cylinder. The pump / valve comes standard as manually operated & can be actuated by a cable control. The Pump/Valve can also be equipped with an air shift kit for actuation by air pressure. Installation can be either 2 line or 3 line configuration using the sleeve supplied.
G101 / G102 SERIES
DIMENSIONS

**G101**

Weight
- 1.0” Gear Width = 31 lbs
- 1.5” Gear Width = 35 lbs
- 2.0” Gear Width = 38 lbs

Dimensions:
- 10.56 + GW
- 6.88 + GW
- 1.94
- 1.9988/.9984 Dia.
- 5.38
- 1.25
- 0.319 / 0.312 Dia.
- Pin eye

**G102**

Weight
- 1.0” Gear Width = 31 lbs
- 1.5” Gear Width = 35 lbs
- 2.0” Gear Width = 38 lbs

Dimensions:
- 11.38 + GW
- 6.88 + GW
- 1.94
- 6.12
- 4.00
- 4.16
- 4.69 SQ
- 3.536 SQ
- 0.38

**SAE-B SPLINE**
13 TEETH - 16/32 PITCH
FLAT ROOT FIT

Dimensions - inch
G101 / G102 SERIES
INSTALLATION INSTRUCTIONS

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