Radial piston pumps are a type of hydraulic pump. They consist of valve-controlled pump cylinders that are arranged radially. The radial piston pump type R, RG and RZ has a closed pump housing. Therefore, besides use as a motor pump outside an oil tank, installation in the container of a hydraulic power pack is also possible. The radial piston pump is available with several pressure outlets which enable the same or several different volumetric flows. Type RZ is a classic dual-stage pump consisting of a radial piston pump and a gear pump. The radial piston pump type RG has plain bearings which have a longer storage life. This type is therefore used in extreme operating conditions. Extremely high volumetric flows can be achieved by arranging up to 6 radials in parallel. When the radial piston pump is used in the hydraulic power pack, it is suitable for use as a highly compact control system. Connection blocks and valve banks can be mounted on the cover plate of the hydraulic power packs.

**Features and benefits:**
- High level of efficiency
- Compact design
- Max. 14 separate pressure outlets
- Available from the modular product range as a hydraulic power pack with valve banks

**Intended applications:**
- Press construction
- Jig construction
- Testing and laboratory devices
- Lubricating systems

**Design and order coding example**

<table>
<thead>
<tr>
<th>RZ 0,9</th>
<th>/ 2 - 16</th>
</tr>
</thead>
</table>

**Sizes**
Delivery flow gear pump [lpm]

**Basic type, delivery flow [lpm]**
- Type R (version with roller bearing)
- Type RG (version with plain bearing)
- Type RZ (dual-stage pump)

**Additional versions:**
- With several pressure ports
- With separate ports for the flow of one or two pump elements ($Q_{max} = 4.4$ lpm)
  e.g. as control oil supply
**Function**

<table>
<thead>
<tr>
<th>Function</th>
<th>Single pump type R and RG</th>
<th>Single pump type RZ</th>
<th>Single pump type RZ</th>
<th>Pump with several pressure outlets (example for an Single pump)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>only high-pressure section, low-pressure section is installed by customer</td>
<td>High and low-pressure section</td>
<td></td>
</tr>
</tbody>
</table>

**General parameters and dimensions**

**Single pump type R and RG**

![Diagram of Single pump type R and RG](image1)

**Single pump type RZ**

![Diagram of Single pump type RZ](image2)
### Gear pump

<table>
<thead>
<tr>
<th>Size</th>
<th>Delivery flow $Q_{pu}$ [lpm] and max. pressure $p_{max}$ [bar]</th>
<th>Dimensions [mm]</th>
<th>m [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 bar</td>
<td>80 bar</td>
<td>40 ... 60 bar</td>
<td>L1</td>
</tr>
<tr>
<td>/1</td>
<td>5,2</td>
<td>8,8</td>
<td>11,3</td>
</tr>
<tr>
<td>/2</td>
<td>12,3</td>
<td>16</td>
<td>37</td>
</tr>
<tr>
<td>/3</td>
<td>24</td>
<td>110</td>
<td>135</td>
</tr>
</tbody>
</table>

- The data listed represent only a selection of the various different versions
1) Standard motor, design IM B 35 for motor pumps or IM B 5 for hydraulic power packs
**Circuit example:**

R 4.0/B 50 A 700 - VB 11 DM - HRHR - 1 - G 24 - V 5.5

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**Associated technical data sheets:**
- Radial piston pump type R and RG: D 6010
- Motor pump and hydraulic power pack type R and RG: D 6010 H
- Radial piston pumps with several pressure connections type R, RG: D 6010 D, D 6010 DB
- Radial piston pump type R and RG with one main pressure connection and one or two ancillary pressure connections: D 6010 S

**Directly mountable valve banks:**
- Valve bank (directional seated valve) type VB: D 7302
- Valve bank (directional seated valve) type BWN and BWH: D 7470 B/1
- Directional spool valve type SW: D 7451