Variable displacement axial piston pump type V30E

Variable displacement axial piston pumps operate according to the bent axis principle. They adjust the geometric output volume from maximum to zero. As a result they vary the flow rate that is provided to the loads.

The axial piston pump type V30E is designed for open circuits in mobile hydraulics and operate according to the swash plate principle. They are available with the option of a thru-shaft for operating additional hydraulic pumps in series. The sturdy pump is particularly suitable for continuous operation in challenging applications. The range of pump controllers allows the axial piston pump to be used in a variety of applications.

**Features and benefits:**
- Low noise emissions
- Wide controller options
- Full torque available at the second pump in tandem pump applications

**Intended applications:**
- Machines for forestry and agricultural purposes
- Cranes and lifting equipment
- Construction machines

### Design and order coding example

<table>
<thead>
<tr>
<th>V30E</th>
<th>- 095</th>
<th>R</th>
<th>S</th>
<th>F</th>
<th>N</th>
<th>- 1</th>
<th>- 2</th>
<th>XX</th>
<th>/LSP</th>
<th>/120</th>
<th>- 200</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Pressure specification [bar]**

**Torque setting [Nm]**

**Controllers**
- See section "Controller"

**Release**
- swash plate angle indicator: With/without swash plate angle indicator

**Housing version**
- With/without thru-shaft

**Seal material**
- NBR (N)
- EPDM (E)
- FKM (V, C)

**Flange version**
- Flange ISO 3019-2 (G)
- Flange SAE J744 (F, W)

**Shaft version**
- Spline shaft DIN 5480 (D)
- Parallel key (K)
- Spline shaft SAE J744 (S, U)

**Rotating direction**
- Anti-clockwise (L), clockwise (R)

**Nominal size**

**Basic type**
**Function**

<table>
<thead>
<tr>
<th>Single pump</th>
<th>Multiple pump</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

**Controller**

**Pressure controller:**
- Pressure controller (P, Pb)
- Electro-proportional pressure controller (P-PMVPS)

**Flow controller**
- Load-sensing controller with integrated pressure limitation (LSP, LSPb)
- Load-sensing controller with integrated pressure limitation and electric pump direction switching (LSP-BVPM)
- Electro-hydraulic flow controller with integrated pivoting angle pick-up and control electronics for adjustment of setpoint and actual value (EM.CH)

**Power controller:**
- Power controller (L)
- Power controller (Lf, Lf1)
General parameters and dimensions

Parameters

<table>
<thead>
<tr>
<th>Geom. delivery volume</th>
<th>Nominal pressure</th>
<th>Max. rotation speed</th>
<th>Dimensions [mm] approx.</th>
<th>m [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_g$ [cm³/rev]</td>
<td>$p_{nom}$ ($p_{max}$) [bar]</td>
<td>$n$ [rpm]</td>
<td>L</td>
<td>L1</td>
</tr>
<tr>
<td>V30E - 095</td>
<td>95</td>
<td>350 (420)</td>
<td>2500</td>
<td>296</td>
</tr>
<tr>
<td>V30E - 160</td>
<td>160</td>
<td>2100</td>
<td>332</td>
<td>75</td>
</tr>
<tr>
<td>V30E - 270</td>
<td>270</td>
<td>1800</td>
<td>399</td>
<td>88</td>
</tr>
</tbody>
</table>

Ports

<table>
<thead>
<tr>
<th>Pressure connection</th>
<th>Suction port</th>
<th>Drain port</th>
</tr>
</thead>
<tbody>
<tr>
<td>V30E - 095</td>
<td>1 1/4&quot; SAE J518</td>
<td>2 1/2&quot; SAE J518</td>
</tr>
<tr>
<td>V30E - 160</td>
<td>1 1/4&quot; SAE J518</td>
<td>2 1/2&quot; SAE J518</td>
</tr>
<tr>
<td>V30E - 270</td>
<td>1 1/2&quot; SAE J518</td>
<td>3&quot; SAE J518</td>
</tr>
</tbody>
</table>
Associated technical data sheets:
- Variable displacement axial piston pump type V30E: D 7960 E

Similar products:
- Variable displacement axial piston pump type V30D: D 7960
- Variable displacement axial piston pump type V60N: D 7960 N
- Fixed displacement axial piston pump type K60N: D 7960 K
- Variable displacement axial piston pump V80M: D 7962 M

Suitable proportional directional spool valve:
- Type EDL: D 8086
- Type PSL/PSV size 2, 3 and 5: D 7700-2, D 7700-3, D 7700-5
- Type PSLF/PSVF size 3, 5 and 7: D 7700-5, D 7700-5F, D 7700-7F

Suitable accessories:
- Proportional amplifier type EV1M3: D 7831/2
- Proportional amplifier type EV2S: D 7818/1
- Proportional amplifier type EV1D: D 7831 D

Circuit example:
V30E-270-LSFN-2-103-LSP-320