Axial piston variable pump
A4VSO

Data sheet

Series 10, 11 and 30
Size 40...1000
Nominal pressure 350 bar
Peak pressure 400 bar
Open circuit

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Features

- Axial piston pump in swash plate design for hydrostatic drives in open circuit operation
- The flow is proportional to the input drive speed and displacement. By adjusting the swash plate angle it is possible to infinitely vary the output flow.
- Excellent suction characteristics
- Low noise level
- Long service life
- Modular design
- Short response times
- Variable through drive options
- Visual swivel angle indicator
- Optional mounting position
- Operation on HF-fluids under reduced operational data possible
  A special version is available for operation with HFC-fluid see data sheet RE 92053

For the descriptions of the control devices see the separate RE data sheets
RE 92056,   RE 92060,   RE 92064,
RE 92072,   RE 92076,   RE 92080,   RE 92088
## Type code for Standard program

<table>
<thead>
<tr>
<th>A4VS</th>
<th>O</th>
<th>/</th>
<th>07</th>
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<tr>
<td>01</td>
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</tbody>
</table>

### Hydraulic fluid / Version

<table>
<thead>
<tr>
<th>40</th>
<th>71</th>
<th>125</th>
<th>180</th>
<th>250</th>
<th>355</th>
<th>500</th>
<th>750</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral oil and HFD-fluids (no code)</td>
<td>● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●</td>
<td>● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●</td>
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</tr>
<tr>
<td>HFA-, HFB- and HFC-Fluids</td>
<td>● ● – – – – ● – – ● – –</td>
<td>● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●</td>
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</tr>
<tr>
<td>For operation on HFC-special performance version see RE 92053 (HFA and HFB see RE 90223)</td>
<td>● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●</td>
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</tr>
<tr>
<td>High-Speed-Version</td>
<td>– – – – ● ● ● – –</td>
<td>● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●</td>
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### Axial piston unit

02 Swash plate design, variable

03

- without boost pump (no code) | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
- with boost pump (Impeller) | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
- only with port plate 25 (service port connections) | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |

### Boost pump (Impeller)

### Type of operation

04 Pump, open circuit

### Size

<table>
<thead>
<tr>
<th>40</th>
<th>71</th>
<th>125</th>
<th>180</th>
<th>250</th>
<th>355</th>
<th>500</th>
<th>750</th>
<th>1000</th>
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</thead>
<tbody>
<tr>
<td>Displacement $V_{\text{g, max}}$ [cm$^3$]</td>
<td>40</td>
<td>71</td>
<td>125</td>
<td>180</td>
<td>250</td>
<td>355</td>
<td>500</td>
<td>750</td>
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</tbody>
</table>

### Control devices

#### Pressure control

- DR

#### Pressure control for parallel operation

(RE 92060)

- DP

#### Flow control

- FR

#### Pressure and flow control

- DFR

#### Power control with hyperbolic curve

(RE 92064)

- LR

#### Manual control

(RE 92072)

- MA

#### Electric motor control

(RE 92072)

- EM

#### Hydraulic control, control volume dependent

- HM

#### Hydr. control, with servo/proportional valve

(RE 92076)

- HS

#### Electronic control

- EO

#### Hydraulic control, pilot pressure dependent

(RE 92080)

- HD

#### Secondary speed control

(RE 92056)

- DS1

#### Electro-hydraulic control system DFE1

(RE 92088)

- DSE1

#### System solution SYHDFEE

(RE 30035)

- SYHDFEE

### Series

07 ● ● – – – – – – – – – – – 10(11)$^2$

- ● available
- ● in preparation
- – not available

- preferred program

---

1) when operating on HF-fluids, observe the limitations as shown in the relevant data sheets of the control devices and the mounted valves

2) Versions with HD-controls only in series 11
## Type code for Standard program

<table>
<thead>
<tr>
<th></th>
<th>A4VS</th>
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<td>11</td>
<td>12</td>
<td>13</td>
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</tbody>
</table>

### Direction of rotation

- **08** with view on shaft end
  - right hand: R
  - left hand: L

### Seals

- **09** NBR (Nitrile-rubber), Shaft seal FKM (Fluoro-rubber)
  - available: ●
  - in preparation: ○
  - preferred program: □

- **09** FKM (Fluoro-rubber) / for operation on HFD
  - available: ●
  - in preparation: ○
  - preferred program: □

- **09** HFC-special performance version see RE 92053
  - available: ●
  - in preparation: ○
  - preferred program: □

### Shaft end

- **10** Keyed parallel shaft to DIN 6885
  - available: ●
  - in preparation: ○
  - preferred program: □

- **10** Splined shaft to DIN 5480
  - available: ●
  - in preparation: ○
  - preferred program: □

### Mounting flange

- **11** similar to ISO 3019-2 metric
  - 4-hole
    - available: ●
    - in preparation: ○
    - preferred program: □
  - 8-hole
    - available: ●
    - in preparation: ○
    - preferred program: □

### Service line connections

- **12** Port B and S: SAE flange on side, 90° offset, metric fixing screws
  - available: ●
  - in preparation: ○
  - preferred program: □

- **12** Port B and S: SAE flange on side, 90° offset, metric fixing screws
  - 2. pressure port B, opposite B – closed with blanking plate on delivery
  - available: ●
  - in preparation: ○
  - preferred program: □

---

1) only with through drive code N00 and K..

continuation of type code see page 4
## Type code for Standard program

<table>
<thead>
<tr>
<th>A4VS</th>
<th>O</th>
<th>/</th>
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<th>01</th>
<th>02</th>
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<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
</table>

### Through drive

- **without auxiliary pump, without through drive**
- **with through drive for mounting an axial piston unit or radial piston pump**
- **Universal through drive, can be adapted**

### Flange

- **splined shaft coupler ¹ to mount**

<table>
<thead>
<tr>
<th>Type</th>
<th>Size</th>
<th>Flange</th>
<th>Adapter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>125, 4-hole (ISO ²)</td>
<td>32x2x14x9g</td>
<td>A4VSO/G 40</td>
<td>–</td>
<td>K...</td>
</tr>
<tr>
<td>140, 4-hole (ISO ²)</td>
<td>40x2x18x9g</td>
<td>A4VSO/G 71</td>
<td>–</td>
<td>33</td>
</tr>
<tr>
<td>160, 4-hole (ISO ²)</td>
<td>50x2x24x9g</td>
<td>A4VSO/G 125</td>
<td>–</td>
<td>34</td>
</tr>
<tr>
<td>160, 4-hole (ISO ²)</td>
<td>50x2x24x9g</td>
<td>A4VSO/G 180</td>
<td>–</td>
<td>34</td>
</tr>
<tr>
<td>224, 4-hole (ISO ²)</td>
<td>60x2x28x9g</td>
<td>A4VSO/G, A4CSG 250</td>
<td>–</td>
<td>35</td>
</tr>
<tr>
<td>224, 4-hole (ISO ²)</td>
<td>70x3x22x9g</td>
<td>A4VSO/G, A4CSG 355</td>
<td>–</td>
<td>77</td>
</tr>
<tr>
<td>315, 8-hole (ISO ²)</td>
<td>80x3x25x9g</td>
<td>A4VSO/G, A4CSG 500</td>
<td>–</td>
<td>43</td>
</tr>
<tr>
<td>400, 8-hole (ISO ²)</td>
<td>90x3x28x9g</td>
<td>A4VSO/G, A4CSG 750</td>
<td>–</td>
<td>76</td>
</tr>
<tr>
<td>400, 8-hole (ISO ²)</td>
<td>100x3x32x9g</td>
<td>A4VSO/G 1000</td>
<td>–</td>
<td>88</td>
</tr>
<tr>
<td>80, 2-hole (ISO ²)</td>
<td>3/4in 19-4 (SAE A-B)</td>
<td>A10VSO 10/52, 18/31</td>
<td>o</td>
<td>B2</td>
</tr>
<tr>
<td>100, 2-hole (ISO ²)</td>
<td>7/8in 22-4 (SAE B)</td>
<td>A10VSO 28/31</td>
<td>o</td>
<td>B3</td>
</tr>
<tr>
<td>100, 2-hole (ISO ²)</td>
<td>1in 25-4 (SAE A-B)</td>
<td>A10VSO 45/31</td>
<td>o</td>
<td>B4</td>
</tr>
<tr>
<td>125, 2-hole (ISO ²)</td>
<td>1 1/4in 32-4 (SAE A-C)</td>
<td>A10VSO 71/31</td>
<td>o</td>
<td>B5</td>
</tr>
<tr>
<td>160, 2-hole (ISO ²)</td>
<td>1 1/4in 32-4 (SAE A-C)</td>
<td>A10VSO 71/32</td>
<td>o</td>
<td>B8</td>
</tr>
<tr>
<td>125, 2-hole (ISO ²)</td>
<td>1 1/2in 38-4 (SAE C-C)</td>
<td>A10VSO 100/31</td>
<td>o</td>
<td>B6</td>
</tr>
<tr>
<td>180, 4-hole (ISO ²)</td>
<td>1 1/2in 38-4 (SAE A-C)</td>
<td>A10VSO 100/32</td>
<td>o</td>
<td>B9</td>
</tr>
<tr>
<td>180, 4-hole (ISO ²)</td>
<td>1 3/4in 44-4 (SAE D)</td>
<td>A10VSO 140/31/32</td>
<td>o</td>
<td>B7</td>
</tr>
<tr>
<td>82-2 (SAE A)</td>
<td>5/8in 16-4 (SAE A)</td>
<td>AZ-PF-1X-004...022</td>
<td>o</td>
<td>01</td>
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<tr>
<td>82-2 (SAE A)</td>
<td>3/4in 19-4 (SAE A-B)</td>
<td>AZ-PN-1X-020...032, A10V 10, 18/31/52(3)</td>
<td>o</td>
<td>52</td>
</tr>
<tr>
<td>101-2 (SAE B)</td>
<td>7/8in 22-4 (SAE B)</td>
<td>AZ-PN-1X-020...032, A10V 28/31/52(3)</td>
<td>o</td>
<td>68</td>
</tr>
<tr>
<td>101-2 (SAE B)</td>
<td>1in 25-4 (SAE B-B)</td>
<td>PGH4, A10VO45/31</td>
<td>o</td>
<td>04</td>
</tr>
<tr>
<td>127-2 (SAE C)</td>
<td>1 1/4in 32-4 (SAE A-C)</td>
<td>A10V 71/31</td>
<td>o</td>
<td>07</td>
</tr>
<tr>
<td>127-2 (SAE C)</td>
<td>1 1/2in 38-4 (SAE A-C)</td>
<td>A10V 100/100/31</td>
<td>o</td>
<td>24</td>
</tr>
<tr>
<td>152-4 (SAE D)</td>
<td>1 3/4in 44-4 (SAE A-D)</td>
<td>A10V 140/31</td>
<td>o</td>
<td>17</td>
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<tr>
<td>Ø 63, metr.4-hole for keyed shaft Ø 25</td>
<td>R4</td>
<td>o</td>
<td>57</td>
<td></td>
</tr>
</tbody>
</table>

### Filtration (only with HS- and DS-control)

- **without filter**
- **Sandwich plate filter (with HS- and DS-control see RE 92076 and RE 92056)**

1) Keyed shaft coupler on K/U 57 through drive  
2) to ISO 3019-2 metric

### Combination pumps

1. Combination pumps consisting of axial piston units – ordering example see page 38; overview mounting options see page 39
2. If delivery with mounted gear or radial piston pump is desired, please consult us.

- available  
- in preparation  
- not available  

= preferred program