H1-The new Generation of Hydrostatics
250 cm³ Bent Axis Variable Motor

For more than 40 years, Danfoss has been developing state-of-the-art components and systems for mobile machinery used in off-highway operations around the world.

We have become a preferred supplier by offering the best of what really matters: The hardware inside your vehicle application.

H1 - our new generation of servo-controlled hydrostatic pumps and bent axis variable motors is no exception.

The H1 product is built around an advanced control and available in a wide range of displacements. It is designed for quality and reliability and offers expanded functionality, greater total efficiency, and easy installation.

All H1 control and sensor options are PLUS+1® Compliant. PLUS+1® allows you to rapidly develop and customize electronic machine control. It opens up the future by combining machine controls and diagnostics in an integrated operating network.

Features

- Designed for quality and reliability
  - Proven and optimized 9 piston rotating group
  - Single piece housing
  - Electric components with IP67 & IP69K rating

- Installation and packaging benefits
  - Optimized for shortest length
  - Standardized connector interface
  - Integrated loop flushing device
  - Radial or axial high pressure ports

- Wide range of controls
  - Electric Two-position Control
  - Electric Proportional Control
  - Hydraulic Two-position Control
  - Hydraulic Proportional Control
  - Pressure Compensator Override
  - Proportional Pressure Compensator Override
  - Brake Pressure Defeat option
  - Common controls across the entire motor family
  - PLUS+1® Compliant control and sensor options

- Expanded functionality
  - Zero degree capability together with a high performance 32 degree maximum angle
  - Enhanced control functions with proportional controls de-energized at minimum or maximum displacement
  - Optional integrated speed sensor with
    - Dual redundant speed sensing
    - Direction indication
    - Temperature sensing
    - Wire fault detection

- Greater total efficiency
  - Minimized losses
  - Improved at high flow conditions
**Technical specifications**

**Physical Properties**

<table>
<thead>
<tr>
<th>Features</th>
<th>Units</th>
<th>Size 250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displacement</td>
<td>cm³</td>
<td>250 [15.25]</td>
</tr>
</tbody>
</table>

**Weight (with Electric Proportional Control)**

- SAE ISO 3019/1 kg [lb] 87.7 [193]

**Operating Parameters**

<table>
<thead>
<tr>
<th>Output Speed min-1 (rpm)</th>
<th>Rated</th>
<th>at max. displacement 2200</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>at min. displacement (6°) 3650</td>
<td></td>
</tr>
<tr>
<td></td>
<td>at 0° displacement 4050</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>at max. displacement 2800</td>
<td></td>
</tr>
<tr>
<td></td>
<td>at min. displacement (6°) 4500</td>
<td></td>
</tr>
<tr>
<td></td>
<td>at 0° displacement 4900</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>System Pressure bar [psi]</th>
<th>Working 450 [6527]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum 480 [6960]</td>
</tr>
<tr>
<td></td>
<td>Min. low loop 7.5 [109]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case Pressure bar [psi]</th>
<th>Rated 3 [44]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum 5 [73]</td>
</tr>
<tr>
<td></td>
<td>Minimum 0.3 [4]</td>
</tr>
</tbody>
</table>

**Installation Drawings**

- SAE ISO 3019/1 with Electric Proportional Control (de-energized = max. displacement)

- SAE ISO 3019/1 with Electric Two-Position Control (de-energized = min. displacement)

- Pressure Compensator Override, Brake Pressure Defeat

**Schematic (example)**

**Electric Proportional Control**

(de-energized = max. displacement)

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