Data Sheet

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 [in³]</td>
<td>250 [15.25]</td>
</tr>
<tr>
<td><strong>Weight</strong> (with Electric Proportional Control)</td>
<td>kg [lb]</td>
<td>87.7 [193]</td>
</tr>
</tbody>
</table>

#### Operating Parameters

<table>
<thead>
<tr>
<th>Output Speed min-1 [rpm]</th>
<th>Rated (at max. displacement)</th>
<th>Minimum (at 0º displacement)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2200</td>
<td>4050</td>
</tr>
<tr>
<td></td>
<td>3650</td>
<td>4500</td>
</tr>
<tr>
<td></td>
<td>4200</td>
<td>4900</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>System Pressure bar [psi]</th>
<th>Working</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>450 [6527]</td>
<td>480 [6960]</td>
</tr>
</tbody>
</table>

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

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