Data Sheet

H1-The new Generation of Hydrostatics
160 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 160</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displacement</td>
<td>cm³</td>
<td>160 [9.76]</td>
</tr>
<tr>
<td><strong>Weight (with Electric Proportional Control)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAE ISO 3019/1</td>
<td>kg</td>
<td>61.9 [136]</td>
</tr>
<tr>
<td>DIN ISO 3019/2</td>
<td>lb</td>
<td>59.3 [113]</td>
</tr>
<tr>
<td>Cartridge</td>
<td></td>
<td>54.7 [121]</td>
</tr>
</tbody>
</table>

Operating Parameters

- **Output Speed min-1 (rpm)**
  - Rated: at max. displacement 2600
  - at min. displacement (6°) 4250
  - at 0° displacement 4750
  - Maximum: at max. displacement 3300
  - at min. displacement (6°) 5250
  - at 0° displacement 5750

- **System Pressure bar [psi]**
  - Working 450 (6527)
  - Maximum 480 (6960)
  - Min. low loop 7.5 (109)

- **Case Pressure bar [psi]**
  - Rated 3 (44)
  - Maximum 5 (73)
  - Minimum 0.3 (4)

Installation Drawings

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

- **DIN ISO 3019/2 with Electric Proportional Control (de-energized = min. displacement)**

- **Cartridge with Electric Two-Position Control (de-energized = min. displacement)**
  - Pressure Compensator Override, Brake Pressure Defeat

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**Schematic (example)**

- Electric Proportional Control
  - (de-energized = max. displacement)

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