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.

The H1 range 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**
- One design concept
- Single piece swash plate

**Installation and packaging benefits**
- Length optimized pump
- Minimum one clean side
- Higher corner HP / package size ratio
- Standardized connector interface
- Expanded functionality through PLUS+1®

**Wide range of controls**
- Electro-hydraulic controls:
  - Electrical Displacement Control (EDC)
  - Forward-Neutral-Reverse (FNR)
  - Non-Feedback Proportional Electric (NFPE)
- Automotive Control (AC)
- Fan Drive Control (FDC)
- Manual Displacement Control (MDC)
- Common control across entire family

**Expanded functionality**
- PLUS+1® Compliant control and sensor options
- Integral filtration available with integrated filter bypass sensors and switch

**Greater total efficiency**
- Minimized control losses
- Improved charge circuit
- Lower control pressure for less power consumption

Comprehensive technical literature online at powersolutions.danfoss.com
### Technical Specifications

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Size 147</th>
<th>Size 165</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Displacement cm³ [in³]</strong></td>
<td>147.2 [8.98]</td>
<td>165.1 [10.08]</td>
</tr>
<tr>
<td><strong>Input speed min⁻¹ (rpm)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Rated</td>
<td>3000</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>3100</td>
<td></td>
</tr>
<tr>
<td><strong>System pressure bar [psi]</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. working*</td>
<td>450 [6525]</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>480 [6962]</td>
<td></td>
</tr>
<tr>
<td>Min. low loop</td>
<td>10 [150]</td>
<td></td>
</tr>
<tr>
<td><strong>Case pressure bar [psi]</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated</td>
<td>3.0 [40]</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>5.0 [75]</td>
<td></td>
</tr>
<tr>
<td><strong>Weight (without PTO and filter), kg [lb]</strong></td>
<td>96 [211]</td>
<td></td>
</tr>
</tbody>
</table>

*Pressures above max. working pressure requires Danfoss approval.

### Schematic

A, B – System ports, Ø31.5 – 450 bar, split flange boss per ISO 6162

MA, MB – System gauge ports, 9/16-18

M3, M6 – Charge gauge port, 9/16-18

M4, M5 – Servo gauge ports, 7/16-20

All ports per ISO 11926-1; max. clearance dia for fitting.

M14 – Case gauge port, 7/16-20

L2, L4 – Case drain ports, 1 5/16-12

S – Charge inlet port, 1 5/8-12

2 – Connector DEUTSCH

Optional: Integrated charge pressure filtration

Detailed technical information are available in the Technical Information H1 Axial Piston Single Pumps, Size 147/165, BC00000061.