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 MP1 motor is designed for use primarily in mobile equipment using existing and proven technology. These motors have been optimized with regard to options, life, package size and installed cost.

The MP1 motor is a fixed displacement axial piston motor and is intended for closed and open circuit medium power applications. These motors are designed primarily to be combined with other products in closed and open circuit systems to transfer and control hydraulic power.

The MP1 motors consists of two displacements in one package size. Three different configurations are available, an SAE A, B and cartridge style two-bolt configuration.

Features

**Wide Range of Options**

- Two displacements in a single package
- SAE A, B, and cartridge style two-bolt mounting configuration
- Tapered shaft with shaft seal dust protector for fan drive applications
- Proven reliability and performance
- Worldwide sales and service

**Machine Integration Benefits**

- Industry leading motor length
- Metric and Inch O-ring boss system port interfaces

Greater Total Efficiency

- Increased motor efficiency

Expanded Functionality

- PLUS+1® Compliant speed sensor option
- Integrated loop flushing valve option
- Anti-cavitation and shock valve option available

Comprehensive technical literature is online at [www.danfoss.com](http://www.danfoss.com)
Data Sheet
MP1 Axial Piston Motors Size 20/24

Technical Specification

Physical properties

<table>
<thead>
<tr>
<th>Features</th>
<th>Unit</th>
<th>20</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Configuration</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Displacement</td>
<td>cm³ [in³/rev]</td>
<td>20.0 [1.22]</td>
<td>24.0 [1.46]</td>
</tr>
<tr>
<td>Mass (Weight) dry</td>
<td>kg [lb]</td>
<td>5.6 [12]</td>
<td></td>
</tr>
</tbody>
</table>

Operating parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>20</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed limit</td>
<td>min⁻¹(rpm)</td>
<td>4200</td>
<td>4200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4700</td>
<td>4700</td>
</tr>
<tr>
<td>Close Circuit</td>
<td>Rated</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Circuit</td>
<td>Rated</td>
<td>3400</td>
<td>3400</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>3800</td>
<td>3800</td>
</tr>
<tr>
<td>System pressure</td>
<td>bar [psi]</td>
<td>350 [5000]</td>
<td>380 [5429]</td>
</tr>
<tr>
<td></td>
<td>Maximum working pressure*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case pressure</td>
<td>bar [psi]</td>
<td>2 [29]</td>
<td>6 [87]</td>
</tr>
<tr>
<td></td>
<td>Rated</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Applied pressures above maximum working pressure requires Danfoss application approval.

Schematic

**Closed Circuit**

![Schematic of Closed Circuit]

**Open Circuit**

![Schematic of Open Circuit]
**Dimensions**

**SAE-A**

- System port "A"
  - Per ISO 11926-1 7/8-14
  - Per ISO 6149-1 M22x1.5

- System port "B"
  - Per ISO 11926-1 7/8-14
  - Per ISO 6149-1 M22x1.5

- Case drain port "L1"
  - Per ISO 11926-1 3/4-16
  - Per ISO 6149-1 M18x1.5

**SAE-B**

- System port "A"
  - Per ISO 11926-1 7/8-14
  - Per ISO 6149-1 M22x1.5

- System port "B"
  - Per ISO 11926-1 7/8-14
  - Per ISO 6149-1 M22x1.5

- Case drain port "L1"
  - Per ISO 11926-1 3/4-16
  - Per ISO 6149-1 M18x1.5

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Data Sheet

MP1 Axial Piston Motors Size 20/24

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Al300608691405en-000101 | 3
Dimensions

Cartridge Mount

System port "A"
- Per ISO 11926-1 7/8-14
- Per ISO 6149-1 M22x1.5

System port "B"
- Per ISO 11926-1 7/8-14
- Per ISO 6149-1 M22x1.5

Case drain port "L1"
- Per ISO 11926-1 3/4-16
- Port ISO 6149-1 M18x1.5

Paint free

(centre of speed sensor)