

## Data Sheet

# MP1 Axial Piston Pumps

## 28/32 cm<sup>3</sup>, 38/45 cm<sup>3</sup>

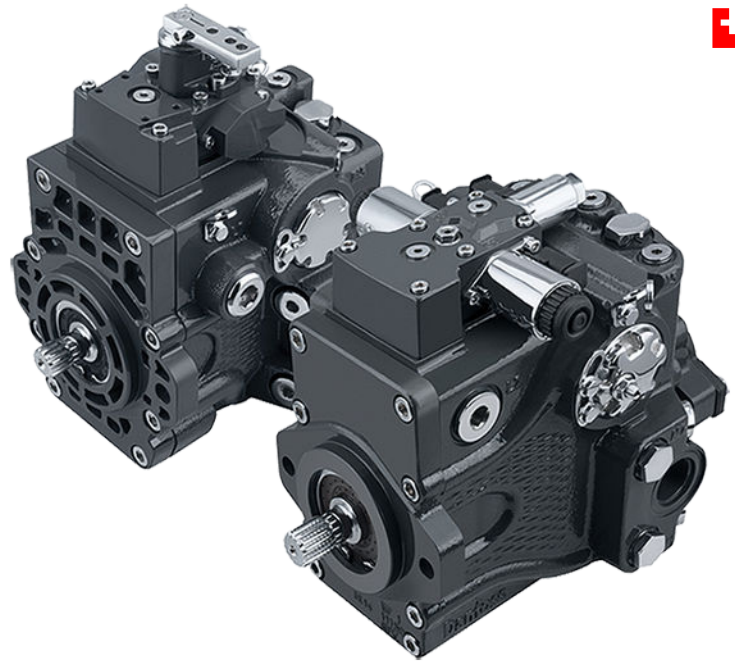


For more than 40 years, Danfoss has been developing state-of-the-art components and systems for mobile machinery used in off-highway operations around the world. We have become a preferred supplier by offering the best of what really matters: The hardware inside your vehicle application.

The Future is here - MP1 Pumps. (MP1) This is just the beginning of a new generation of Danfoss pumps that will change the way you do business with Danfoss.

The MP1 pump has built off years of experience to capture the reliability, modularity and controllability of products you know well. Additionally the MP1 pump has added features while maintaining a competitive package size. The result is a pump that is fit for the future.

All controls related to electric options are PLUS+1<sup>®</sup> Compliant. PLUS+1<sup>®</sup> allows you to rapidly develop and customize electronic machine control.



### Features

#### Designed for Quality and Reliability

- Uniform design concept across frame sizes
- Single piece housing to minimize leaks
- Technologically advanced kit and servo system
- Predictable, low friction swashplate bearing for precise machine control

#### Machine Integration Benefits

- Industry leading pump length
- Clean side for easier machine integration
- Metric and Inch O-ring boss and Split flange (38/45 only) system port interfaces
- Standard connection interfaces

#### Greater Total Efficiency

- Increased pump efficiency
- Lower control pressure for less power consumption

#### Control Options

- Electro-hydraulic control options include
  - Electrical Displacement Control (EDC)
  - Forward-Neutral-Reverse (FNR)
  - Non-Feedback Proportional Electric (NFPE)
- Manual displacement control (MDC)
- Non-Feedback Proportional Hydraulic (NFPH)
- Common control across entire family

#### Expanded Functionality

- PLUS+1<sup>®</sup> Compliant control and options
- Easy integration with Telematics
- Integrated Flushing valve available (28/32 and 38/45)

#### Modularity

- Common control, charge pump and auxiliary pad options
- Easy and quick conversion to the right configuration

Comprehensive technical literature is online at [www.danfoss.com](http://www.danfoss.com)

**Technical Specification**

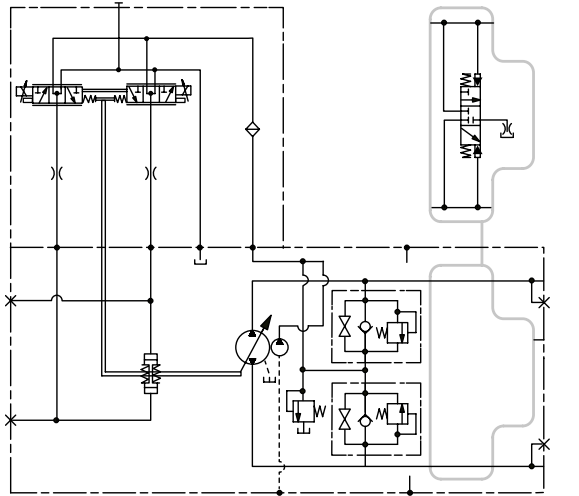
*Physical properties*

| Features     | Unit            | 28   | 32   | 38   | 45   |
|--------------|-----------------|------|------|------|------|
| Displacement | cm <sup>3</sup> | 28.0 | 31.8 | 38.0 | 45.1 |
| Weight (dry) | kg              | 29.6 |      | 38.0 |      |

*Operating parameters*

| Features        |                        | Unit              | 28/32 | 38/45 |
|-----------------|------------------------|-------------------|-------|-------|
| Input Speed     | Minimum                | min <sup>-1</sup> | 500   | 500   |
|                 | Rated                  |                   | 3400  | 3300  |
|                 | Maximum                |                   | 4000  | 3900  |
| System Pressure | Max. working pressure* | bar               | 350   |       |
|                 | Max. pressure          |                   | 380   |       |
|                 | Min. low loop          |                   | 10    |       |
| Case Pressure   | Rated                  | bar               | 3     |       |
|                 | Maximum                |                   | 5     |       |

**Schematic**

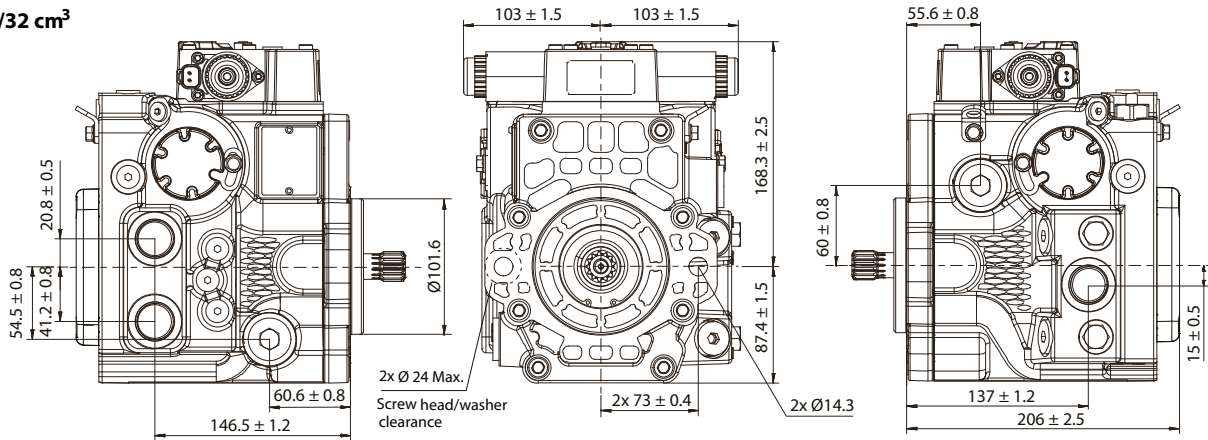


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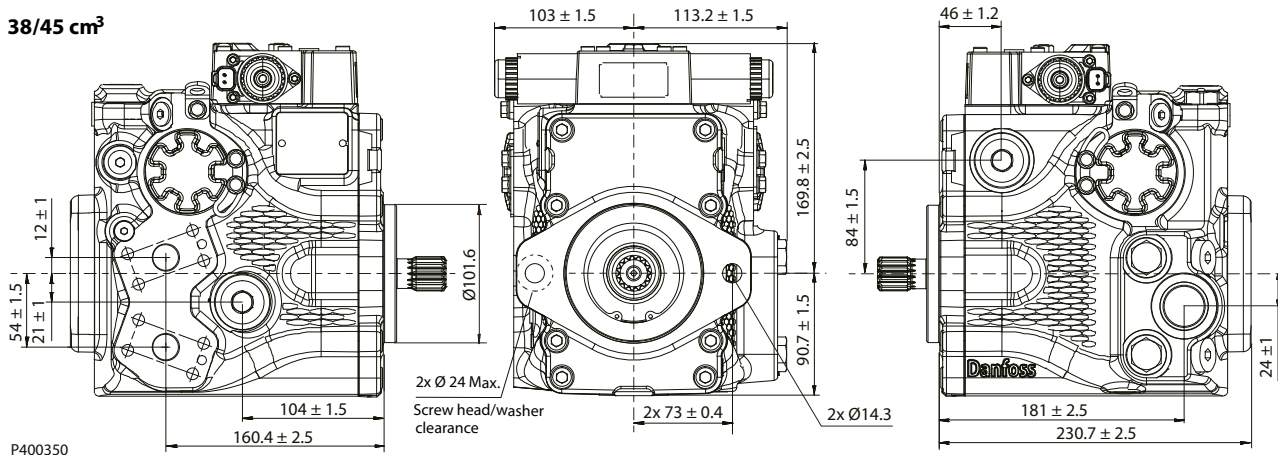
\* Applied pressures above maximum working pressure requires Danfoss application approval.

**Dimension**

**28/32 cm<sup>3</sup>**



**38/45 cm<sup>3</sup>**



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