

Data Sheet

# MP1 Axial Piston Motors

## Size 20/24, 28/32



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 four displacements in two package sizes. Three different configurations are available, an SAE A, B and cartridge style two-bolt configuration.



### Features

#### Wide Range of Options

- Four displacements in two package options
- 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

#### Greater Total Efficiency

- Increased motor efficiency

#### Expanded Functionality

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

#### Machine Integration Benefits

- Industry leading motor length
- Metric and Inch O-ring boss system port interfaces
- Optional axial O-ring boss system ports and radial split flange system ports available to MP1M28/32

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

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**Technical Specification**

*Physical Properties*

Features	Unit	20	24	28	32
Model Configuration		Fixed			
Displacement	cm <sup>3</sup> [in <sup>3</sup> /rev]	20.0 [1.22]	24.0 [1.46]	28.0 [1.71]	31.8 [1.94]
Mass (Weight) dry	kg [lb]	5.6 [12]		8.0 [17.6]	

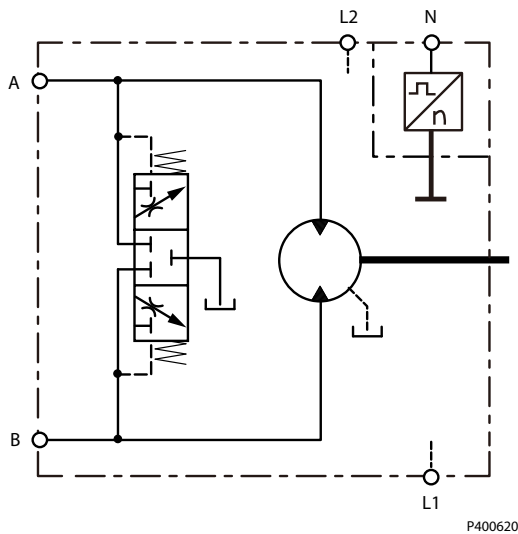
*Operating Parameters*

Parameter			Unit	20/24	28/32
Speed limit	Close Circuit	Rated	min <sup>-1</sup> (rpm)	4200	3900
		Maximum		4700	4400
	Open Circuit	Rated		3400	3100
		Maximum		3800	3500
System pressure	Maximum working pressure*		bar [psi]	350 [5000]	
	Maximum pressure			380 [5429]	
Case pressure	Rated		bar [psi]	2 [29]	
	Maximum			6 [87]	

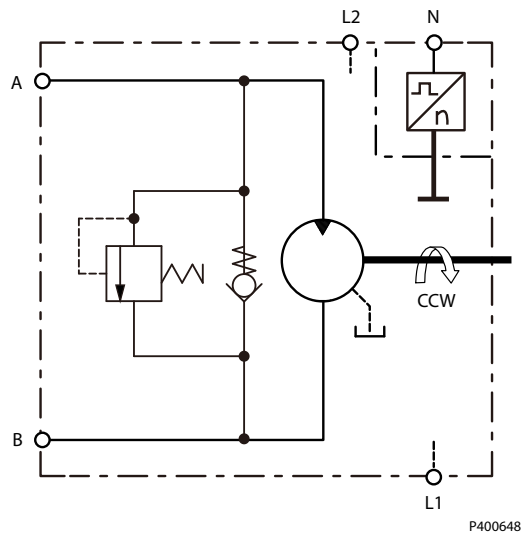
\* Applied pressures above maximum working pressure requires Danfoss application approval.

**Schematic**

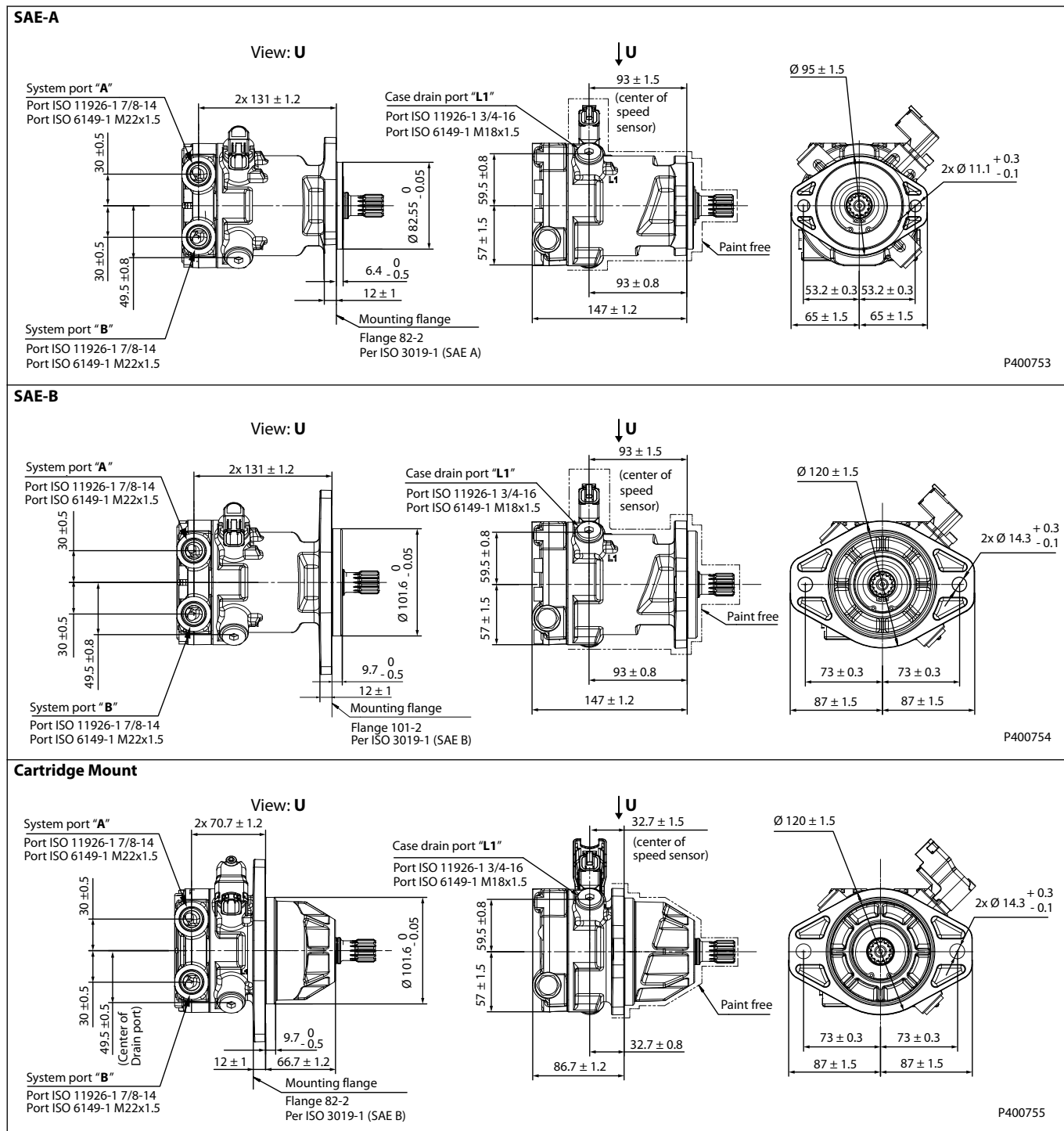
*Closed Circuit*



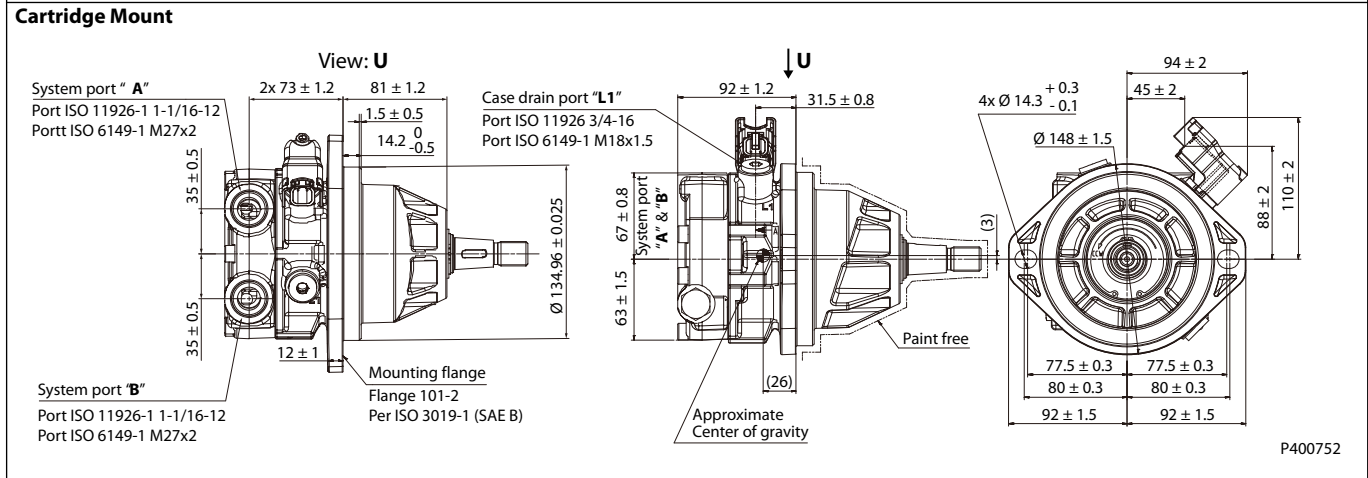
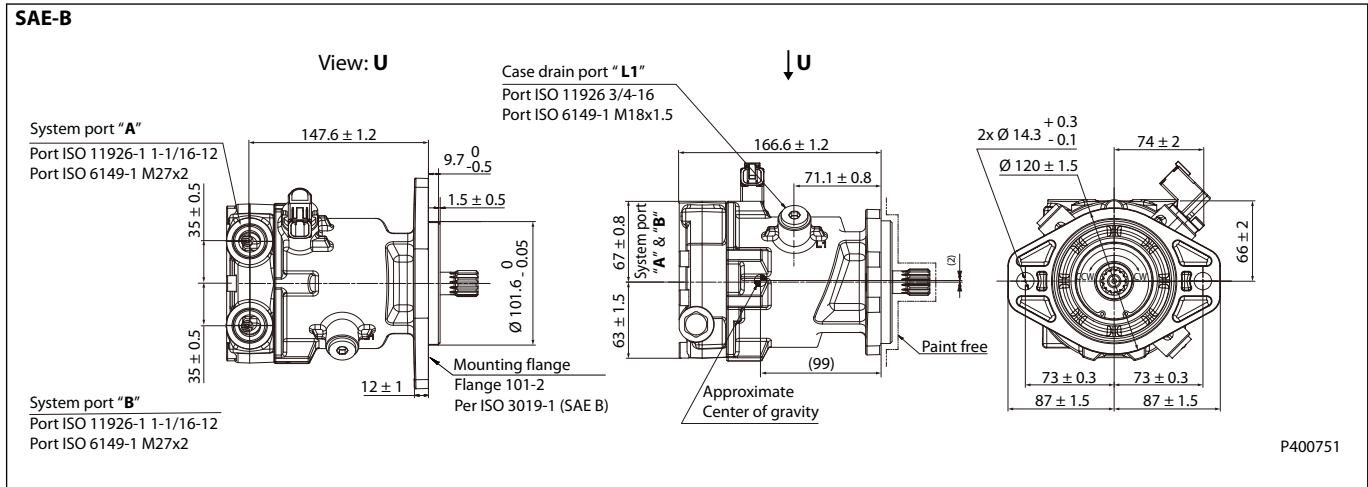
*Open Circuit*



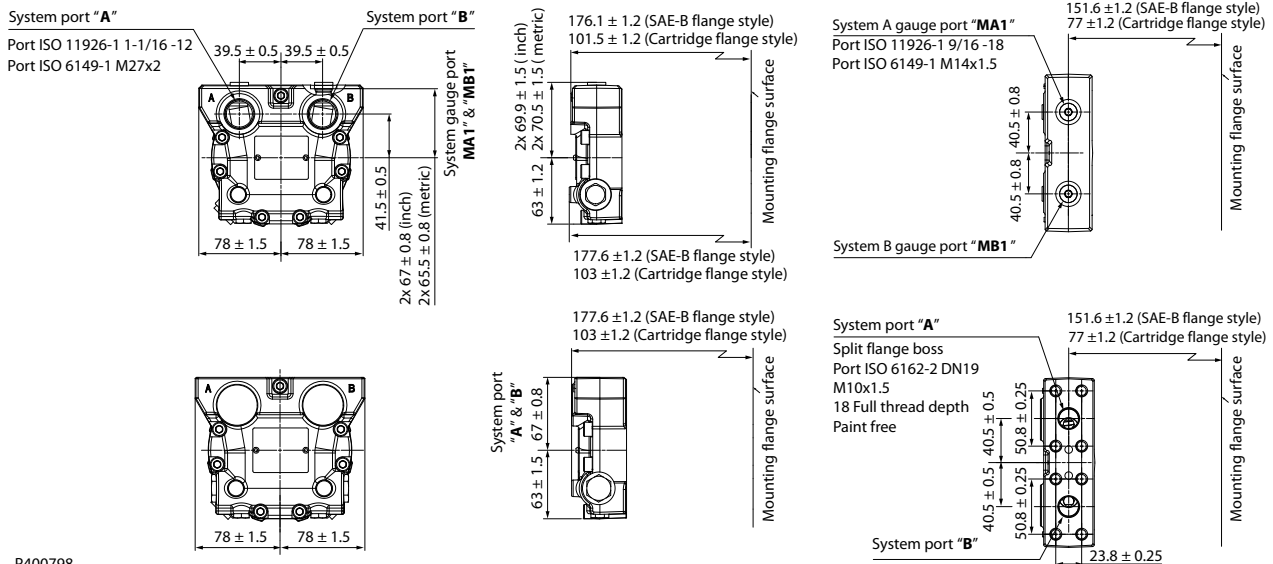
Size 20/24 Dimensions



**Size 28/32 Dimensions**



*MP1M 28/32 only: Axial System Port Style (above) & Split Flange System Port Style (below)*



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