

Data Sheet

Axial Piston Motors

L and K Frame



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 L/K 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 L/K motor family consists of five base displacements which all fit in one package size. Two different configurations are available, an SAE-B two-bolt, or a cartridge style motor.

These motors are a two-position, variable displacement, with smooth, shift-on-the-go capability. The working displacement range of 3.4:1 with a minimum angle option to Zero degree provides exceptional versatility in the application of L/K motors. The motor is spring biased to maximum displacement and can be hydraulically shifted to minimum angle



Features

Wide range of options

- Integral loop flush valve with relief plus orifice
- Minimum angle option to Zero degrees
- Speed sensor with zero rpm and direction sensing capability
- Single and Two line control available for SAE mount motors. Single line control available for cartridge motors
- Twin radial (side) or axial (end) porting is available
- Multiple minimum displacement options available
- Reduced maximum displacement options
- Tapered input shaft with shaft seal dust protector for fan drive applications

Installation and Packaging benefits

- SAE-B two-bolt, and cartridge mounting
- Three clean sides with superior clearance and access to mounting bolts
- Short and compact: fits into wheel end and compact installations with improved porting
- The cartridge motor fits through a 178 mm [7 Inch] mounting hole of a gearbox pilot for subassembly installation of motor to gearbox
- High Efficiency - nine piston rotating groups with an 18 degree maximum angle
- Low control pressure requirement (14 bar for servo) - no undue parasitic power loss. Smooth two-speed shift from minimum to maximum angle

Designed for Durability and Flexibility

- Versatility - working displacement range of 3.4:1 with a minimum angle option to Zero degrees. SAE-B two-bolt, and cartridge mounting available
- Five displacements allow the optimum selection of hydraulic motor for the lowest possible installed cost
- Reliability - uses existing technology
- Suitable for closed and open circuit applications
- Designed for maximum system pressures up to 420 bar [6100 psi]

Comprehensive technical literature is online at www.danfoss.com

Technical specifications

Specifications

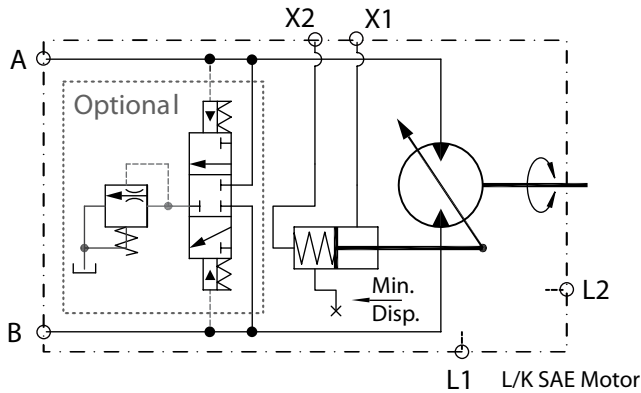
Parameter	Unit	L25	L30	L35	K38	K45
Displacement (maximum)	cm ³ [in ³]	25 [1.50]	30 [1.83]	35 [2.14]	38 [2.32]	45 [2.75]
Weight (cartridge and SAE-B)	kg [lb]	15.4 [34]				
Mass moment of inertia of rotating components	kg·m ² [slug·ft ²]	0.0017 [0.0012]	0.0016 [0.0012]	0.0015 [0.0011]	0.0023 [0.0017]	0.0023 [0.0017]
Theoretical torque	N·m/bar [lbf·in/1000psi]	0.40 [244]	0.48 [293]	0.56 [347]	0.60 [366]	0.72 [439]

Operating parameters

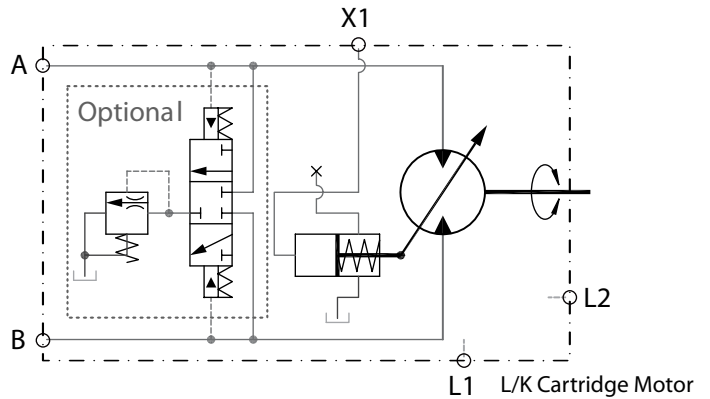
Parameter		Unit	L25	L30	L35	K38	K45
System pressure	maximum working	bar [psi]	400 [5800]	350 [5075]	300 [4350]	350 [5075]	300 [4350]
	maximum		420 [6090]	375 [5440]	325 [4715]	415 [6020]	350 [5075]
Speed limit (at max. disp.)	rated	min ⁻¹ (rpm)	3400	3500	3600	3600	3500
	maximum		3950	4150	4300	4000	3900
Speed limit (at min. disp., including Zero degrees)	rated		4400	4450	4500	4650	4500
	maximum		5000	5150	5300	5200	5050
Case pressure	maximum working	bar [psi]	2 [29]				
	maximum		6 [87]				

Schematics

SAE Motor schematic, two line control

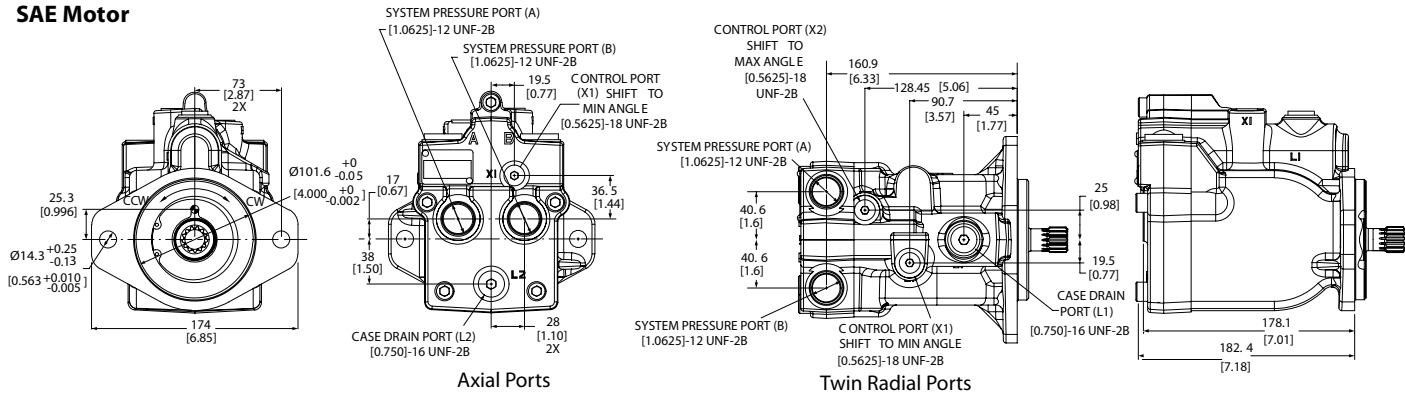


Cartridge motor schematic, single line control

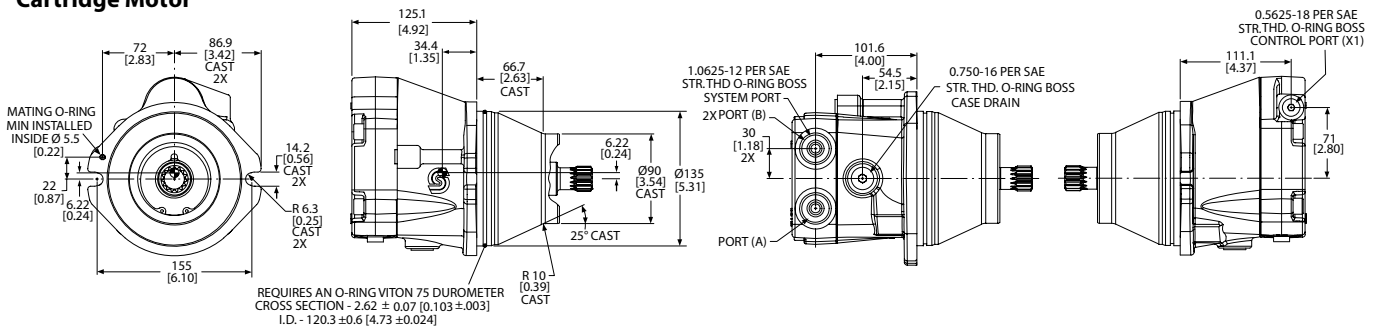


Dimensions

SAE Motor



Cartridge Motor



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