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 powersolutions.danfoss.com
## Technical specifications

### Physical properties

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>L25 (1.50)</th>
<th>L30 (1.83)</th>
<th>L35 (2.14)</th>
<th>K38 (2.32)</th>
<th>K45 (2.75)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displacement maximum</td>
<td>cm³ [in³]</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>38</td>
<td>45</td>
</tr>
<tr>
<td>Weight (cartridge and SAE-B)</td>
<td>kg [lb]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15.4 [34]</td>
</tr>
<tr>
<td>Mass moment of inertia of rotating components</td>
<td>kg•m² [slug•ft²]</td>
<td>0.001666 [0.001229]</td>
<td>0.001582 [0.001167]</td>
<td>0.001530 [0.001128]</td>
<td>0.002326 [0.001716]</td>
<td>0.002286 [0.001687]</td>
</tr>
<tr>
<td>Theoretical torque</td>
<td>N•m/bar [lbf•in/1000psi]</td>
<td>0.40 [244]</td>
<td>0.48 [293]</td>
<td>0.56 [347]</td>
<td>0.60 [366]</td>
<td>0.72 [439]</td>
</tr>
</tbody>
</table>

### Operating parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>L25</th>
<th>L30</th>
<th>L35</th>
<th>K38</th>
<th>K45</th>
</tr>
</thead>
<tbody>
<tr>
<td>System pressure ¹</td>
<td>bar [psi]</td>
<td>400</td>
<td>350</td>
<td>300</td>
<td>350</td>
<td>300</td>
</tr>
<tr>
<td>Speed limit (at max. disp)</td>
<td>min⁻¹ (rpm)</td>
<td>3400</td>
<td>3500</td>
<td>3600</td>
<td>3600</td>
<td>3500</td>
</tr>
<tr>
<td>Speed limit (at min. disp) ²</td>
<td>min⁻¹ (rpm)</td>
<td>4400</td>
<td>4450</td>
<td>4500</td>
<td>4650</td>
<td>4500</td>
</tr>
<tr>
<td>Case pressure</td>
<td>bar [psi]</td>
<td>2</td>
<td>6</td>
<td></td>
<td>14</td>
<td>69</td>
</tr>
<tr>
<td>Shift pressure (single line control)</td>
<td>bar [psi]</td>
<td></td>
<td></td>
<td></td>
<td>14</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>

¹ Refer to bulletin S20L0627 for pressure definitions
² Limit when motor angle is 12 degrees or less

### Schematics

**SAE Motor schematic, two line control**

![SAE Motor schematic, two line control](image)

**Cartridge motor schematic, single line control**

![Cartridge motor schematic, single line control](image)