The new Series 45 Pressure Compensating/Load Sensing with Electronic Torque Limiting control (PC/LS with ETL), offers the next generation in system performance, efficiency, and innovation. Specifically designed with Tier 4 engines in mind this newly-developed proprietary system allows operators to maximize the total performance potential of their machine.

The Series 45 Electronic Torque Limiting control is designed to be fitted into existing pressure compensated/load sensing or mechanical torque control (MTC) systems. ETL unlocks total system performance potential by allowing infinite adjustment of torque limit settings through the electronic proportional control. PLUS+1® Compliant, available with GUIDE programmable software and precompiled electronic controls, this system solution can be quickly and easily implemented into current or new applications.

A flexible, modular product line allows for either the standalone pump to be purchased, or the entire system. Full system integration can be achieved quickly and easily with the Danfoss pre-programmed controllers and GUIDE software blocks. Ready to operate hardware and software significantly reduces machine development and testing time, keeping time to market at a minimum by quickly fitting the system to your specific needs.

Features

Pressure compensator/load sensing pump with electronic torque limiting control (PC/LS with ETL)
- Available in 12/24 volt configurations
- Normally closed control (NC), removal of signal to control or angle sensor defaults system to regular PC/LS functionality, allows for maximum uptime
- Similar hardware configuration as current electric controls
- Can be easily implemented into PC/LS systems

Angle sensor
- Measures real time swashplate angle (displacement) of the pump with high resolution
- Proven hardware with no interference parts
- Redundant (dual) integrated sensors
  - Improved measurement accuracy
  - Easy sensor fault detection
- PLUS+1® compliance block
  - Easy calibration of sensor and diagnostics

- Also available with other common control configurations (PC, PC/LS, RP, ON/OFF)
- IP67 and IP69K Rating with a 4 pin DEUTSCH connector
- Same package size as current electrical controls

Comprehensive technical literature is online at www.danfoss.com
Optional features

• GUIDE Programmable Electronic Torque Limiting Software
  ‐ Optimized ETL software package for plug & perform functionality
  ‐ Available in the work function control library
  ‐ Easy to program software blocks with GUIDE, ideal for adding to existing GUIDE blocks
  ‐ Simple for integration of user inputs, outputs and additional sensors
  ‐ Incorporates Danfoss dual path propel expertise
  ‐ Available for use with other PLUS+1® applications.

Preprogrammed MC12 electronic controller

• Easy to follow service screens for programming
• 12 Pin connector can be added to current machine
• Easy tuning/calibrations with CANBus integration for plug and perform operation
• Free downloadable and easy to follow simple service tool allows for fast prototyping and improved time to production

Technical specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Unit</th>
<th>Frame J</th>
<th>Frame F</th>
<th>Frame E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum displacement</td>
<td>cm³</td>
<td>[in³]</td>
<td>[in³]</td>
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<tr>
<td>Continuous working</td>
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<td>[psi]</td>
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<td>[psi]</td>
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<td>[psi]</td>
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<td>Continuous input speed</td>
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<td>[US gal/min]</td>
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<tr>
<td>Weight</td>
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<td>Axial [lb]</td>
<td>Radial [lb]</td>
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</tr>
</tbody>
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*Weight values based on CAD geometry without auxiliary flange and PC/LS control
Frame E

Outlet port

36 [1.42]

59.4 [2.34]

126.9 [5]

36 [1.42]

(120) [4.39]
approximate wire length
131.5 [5.18]

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