

ENGINEERING  
TOMORROW



# Power and control for all your work function needs

Series 45 Open Circuit Axial Piston Pumps

**60+**

countries served  
by our global  
manufacturing  
facilities ensures  
market proximity



[powersolutions.danfoss.com](http://powersolutions.danfoss.com)



# Series 45

## Total customer experience

Danfoss Series 45 Open Circuit Axial Piston Pumps are designed to offer you innovative solutions for all of your vehicles' needs.

Expert system and product engineers are working every day to exceed your expectations. Fast response, product knowledge and industry experience give you an advantage over your competitors.

### Global product, local support

Expanding operations are consistently bringing your products closer to you. Series 45 has manufacturing locations in North America, Europe and Asia Pacific serving over 60 countries. Serving you as an industry leader in off-highway Open Circuit Piston Pump technology, Danfoss continues to provide successful applications on many major OEM vehicles spanning all market segments and regions. Our 'open-door' policy ensures superior customer service with globally-located experts just around the corner available to assist you.

### Reliability, performance, delivery

More than 50 years of industry experience verified by customer testing and field use, results in the industry-leading products like Series 45 Open Circuit Piston Pumps that OEM's in the agriculture, construction, road building, material handling, forestry and turf care industries rely on today.



Innovative manufacturing systems, and state-of-the-art testing and verification labs across the globe support our high expectations for quality resulting in the best, most reliable products for your machine.

### Innovation

With the Danfoss spirit of innovation and continuous improvement, Series 45 is working on the next generation of high efficiency open circuit solutions.

Looking ahead, you can continue to count on the high quality products and services you expect worldwide.

*The Series 45 family*



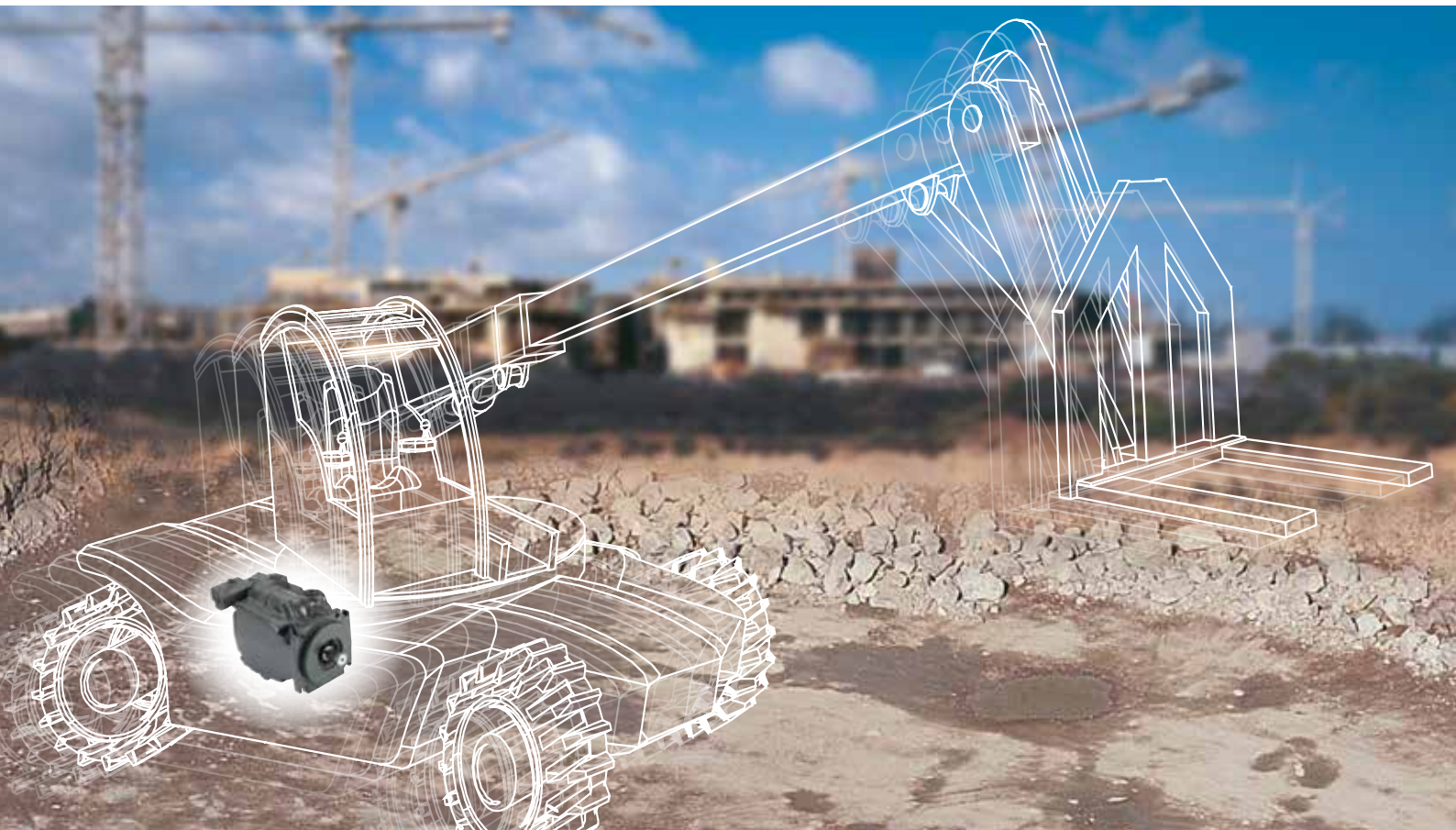
- **Global manufacturing serving over 60 countries**
- **Wide range of displacements, controls, pressures and configurations**
- **Simple system integration for off-the-shelf implementation**
- **Modular design allows for fast and flexible delivery**
- **Easy access to Danfoss product and system experts**



# Danfoss commitment to **continuous improvement**

By continuously improving functionality and design with your applications in mind, Series 45 maintains industry-leading performance levels to provide you with maximum efficiency and productivity. Danfoss product experts are consistently working

with customers to find new, innovative ways to improve the industry as a whole. By partnering with Danfoss and Series 45, you will find new, innovative solutions for your application needs to help differentiate your product in the market.



## **Industry leading functionality**

A complete line of industry standard pump interfaces along with highly responsive on-demand flow complements our extensive portfolio of control options.

## **Durability & quality commitment**

Housing in a one-piece rugged iron frame eliminates the need for gaskets, while high temperature shaft seals reduce the number of potential leak paths.

## **Operator comfort**

One-piece iron housing and valve plate design allows for superior sound deadening characteristics that offer a more comfortable experience for the operator and help meet industry regulations.

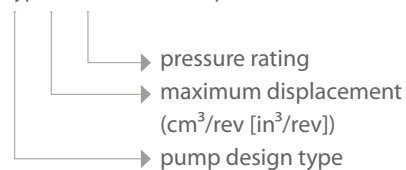


### Pump overview

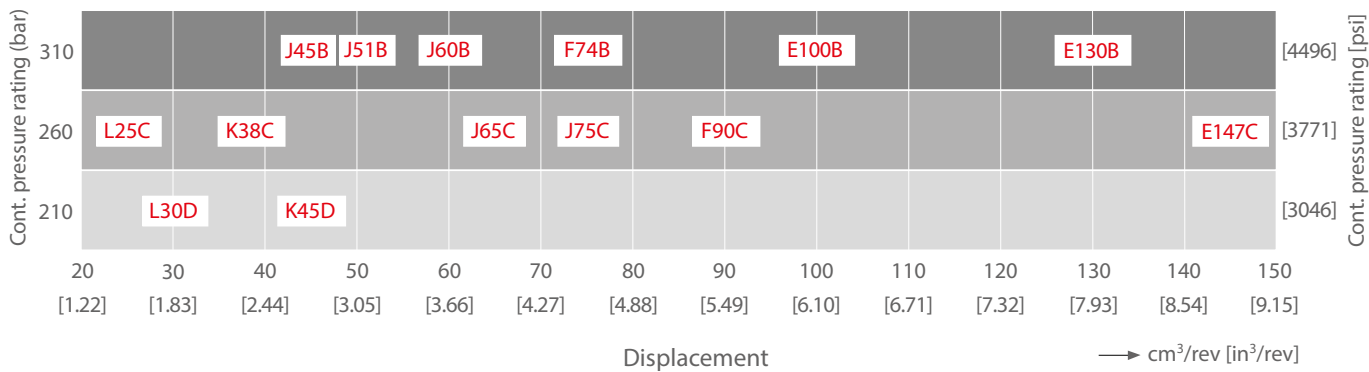
Series 45 offers a full line of displacements and pressures that have been designed to fit your multiple application needs.

### L 25 C

Type code in the example below:



This chart shows how the displacements are arranged with respect to pressure rating



### Controllability

Fast responding pumps designed for use in a wide variety of applications utilize customizable hydro-mechanical and electric controls powered by Danfoss PLUS+1® solutions.

### Reduced downtime

Danfoss has product and system support experts in all regions around the globe ready to help you. These quick-responding experts will help you resolve any issues that arise.

### Reduced time-to-market

By offering compatibility with all Danfoss products, as well as PLUS+1 Compliance, Danfoss with the Series 45 is your strongest partner in mobile hydraulics.

# Applications, integrations and controls

## Pressure compensator

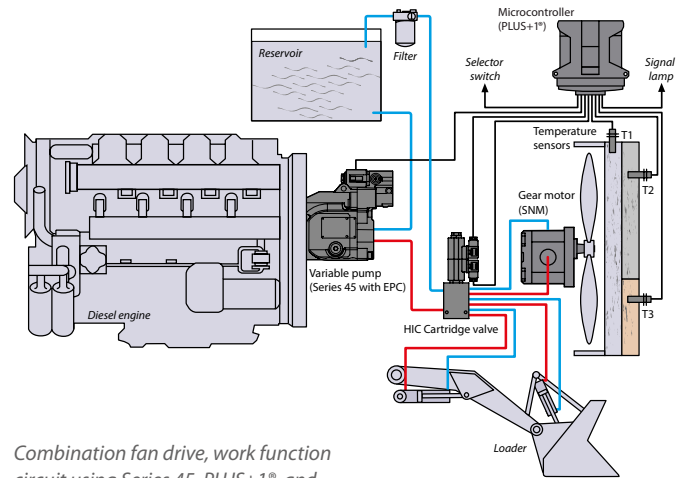
Maintains system pressure at or below the specified pressure setting. Ideal for applications such as on/off fan drives and constant force cylinders.

## Remote pressure

Allows multiple PC settings, for applications such modulating fan drives, and electronic load sense.

## Load sensing

Adjusts the system flow to maintain a constant margin pressure. Improves overall system efficiency by varying pressure and flow.



Combination fan drive, work function circuit using Series 45, PLUS+1®, and other Danfoss components



**Danfoss and the Series 45 offer a wide range of displacements and controls. The ability to integrate Series 45 with PVG and PLUS+1® solutions offers an infinite number of control combinations and gives you the ability to tune them to fit your specific needs.**

## Efficient, electric controls

### **PLUS+1® Compliance**

Optimizing systems around electronic controls is the future of mobile machinery. When combined, Series 45 and the PLUS+1 system allow for easy integration with other PLUS+1 Compliant Danfoss products, allowing you to quickly build customized applications while reducing the cost and development time normally associated with programming.

With electronic control, load-sensing and a flexible, modular design, PVG valves enable you to meet these challenges.

### **Electric on/off normally open and normally closed with pressure compensating**

Operates as a PC-type control with the ability to switch to low pressure standby. Ideal for unloading the hydraulic system during engine start up.

### **Electric on/off normally closed with pressure compensating and load sensing**

Operates as a PC/LS control with the ability to override the PC control to operate in low pressure standby. Ideal for unloading the hydraulic system during engine start up while maintaining an LS system.

### **Electronic proportional pressure control, normally closed and normally open**

Control operating pressure proportionally with an infinite range between low pressure standby and high pressure setting, ideal for modulating fan drives.



*Legend:  
Electronic Proportional Pressure Control (EPC),  
Pressure Compensating (PC), Load Sensing (LS)  
Normally Closed (NC), Normally Open (NO),*

## About Danfoss Power Solutions

**Danfoss Power Solutions** is a global manufacturer and supplier of high-quality hydraulic and electronic components. We specialize in providing state-of-the-art technology and solutions that excel in the harsh operating conditions of the mobile off-highway market. Building on our extensive applications expertise, we work closely with you to ensure exceptional performance for a broad range of off-highway vehicles. We help OEMs around the world speed up system development, reduce costs and bring vehicles to market faster.

Danfoss Power Solutions – your strongest partner in mobile hydraulics.

### Products we offer:

- Bent Axis Motors
- Closed Circuit Axial Piston Pumps and Motors
- Displays
- Electrohydraulic Power Steering
- Electrohydraulics
- Hydraulic Power Steering
- Integrated Systems
- Joysticks and Control Handles
- Microcontrollers and Software
- Open Circuit Axial Piston Pumps
- Orbital Motors
- PLUS+1® GUIDE
- Proportional Valves
- Sensors
- Steering
- Transit Mixer Drives

Wherever off-highway vehicles are at work, so is Danfoss Power Solutions. We offer you expert worldwide support for ensuring the best possible solutions for outstanding performance. And with an extensive network of Global Service Partners, we also provide you with comprehensive global service for all of our components.

Go to [www.powersolutions.danfoss.com](http://www.powersolutions.danfoss.com) for further product information.

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