

ENGINEERING
TOMORROW

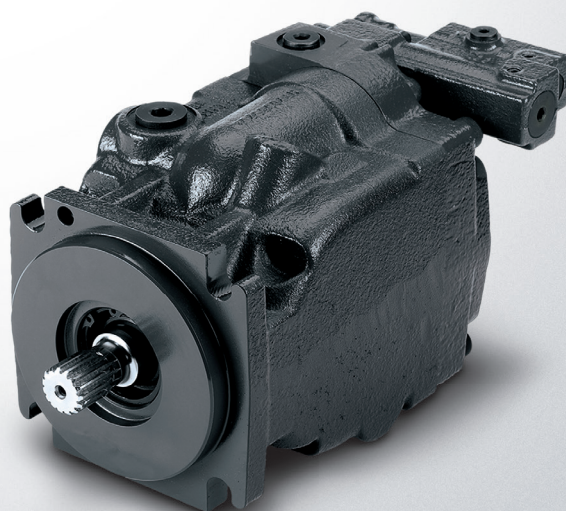
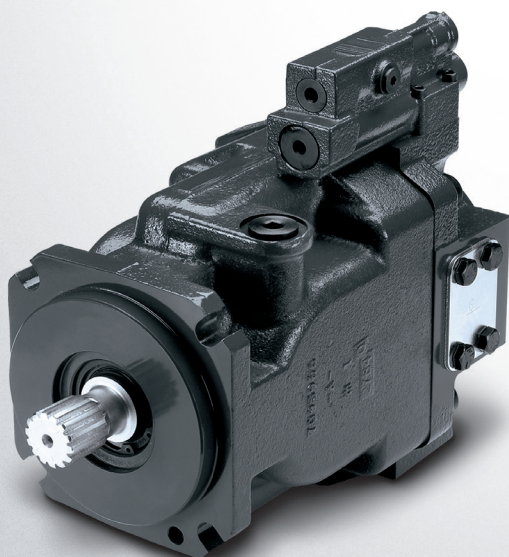
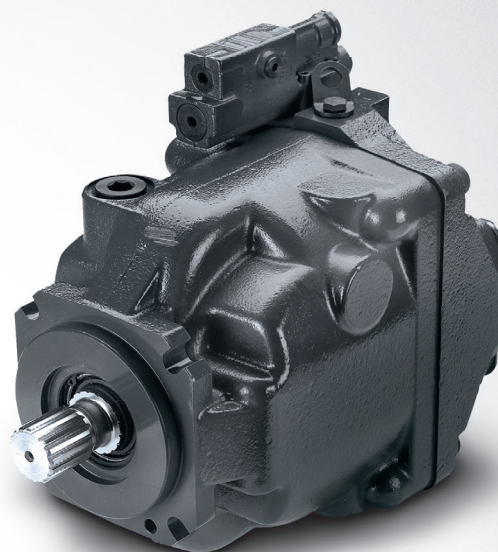
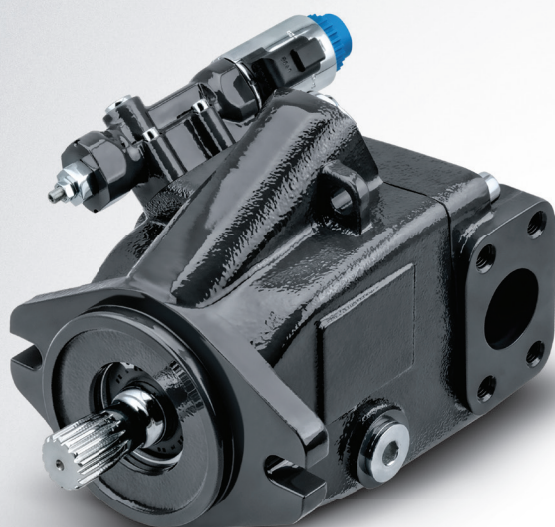
Danfoss

Efficient, integrated solutions for all your system function needs

Series 45 Open Circuit Axial Piston Pumps

Featuring a
displacement range of

25-147 cc



At Danfoss, **we strive to make an impact** where it matters most

Our off-highway mobile hydraulic solutions, including our open circuit axial piston pump technology, work more efficiently to maximize performance. Danfoss continues to design and implement complete system solutions for a broad range of vehicles and partners, from major OEMs to small niche manufacturers — spanning all market segments and regions. Our expert system and product engineers are working every day to exceed your expectations for innovation, performance and reliability to help you provide your customers with a more competitive solution. Series 45 offers a full line of displacements, controls, pressures and configurations that have been engineered to fit your multiple application needs.

SERIES

45

Global product, local support

Expanding operations are bringing our products closer to you. Series 45 has manufacturing locations in North America, Europe and Asia Pacific, serving over 60 countries. Our commitment to superior customer service is supported by product and system experts located around the globe.



Reduced time to market

By utilizing proven, common components; the expertise of our system and applications engineers; and existing production sources for Series 45, Danfoss offers rapid prototyping and off-the-shelf solutions. These options allow you to reduce your time to market and provide a more competitive, reliable product to your customers.

Complete System Solutions

Our extensive portfolio of pumps, valves, motors, steering, displays, telematics, electronic controls and software solutions are designed to work together, as optimized systems, so your vehicles provide maximum productivity and efficiency.



Danfoss knows how to truly be a partner that listens

At our Application Development Centers, or ADCs, our integrated systems experts work to discover new ways to advance machines like yours. With decades of applications expertise and experience, we understand your unique needs and use our tools to help you create innovative solutions with new or existing products. When you work with us at a Danfoss ADC, you'll see how we follow a proven process to not only improve your machines, but also verify and document those improvements through rigorous testing. We'll work with you to integrate the solution into your machine — and utilize the ADC to demonstrate how the solution provides increased value for you and your customers.

► APPLICATION DEVELOPMENT CENTERS

Contact your Danfoss Sales Representative and let us get to work with you to find the solutions you need at powersolutions.danfoss.com



PLUS+1® Compliance

Our PLUS+1® compliance ties our advanced mobile control technology together, ensuring all our electrohydraulic products integrate seamlessly in the customized control system developed using PLUS+1 GUIDE. With the Danfoss PLUS+1 GUIDE programming environment and our Series 45 open circuit axial piston pumps, you can develop customized controls faster than ever while reducing the cost and development time normally associated with programming — ultimately resulting in faster time to market. PLUS+1 is the recommended way to higher performance, longer service life and lower costs. Our pumps are also designed to work seamlessly with PVG valves, which provide electronic control, load-sensing and a flexible, modular design — assuring optimum performance.



K2: The **best combination** of package **size and weight** on the market

The K2 axial piston pump is the newest offering in the Series 45 pumps portfolio from Danfoss.

Reduced size and weight

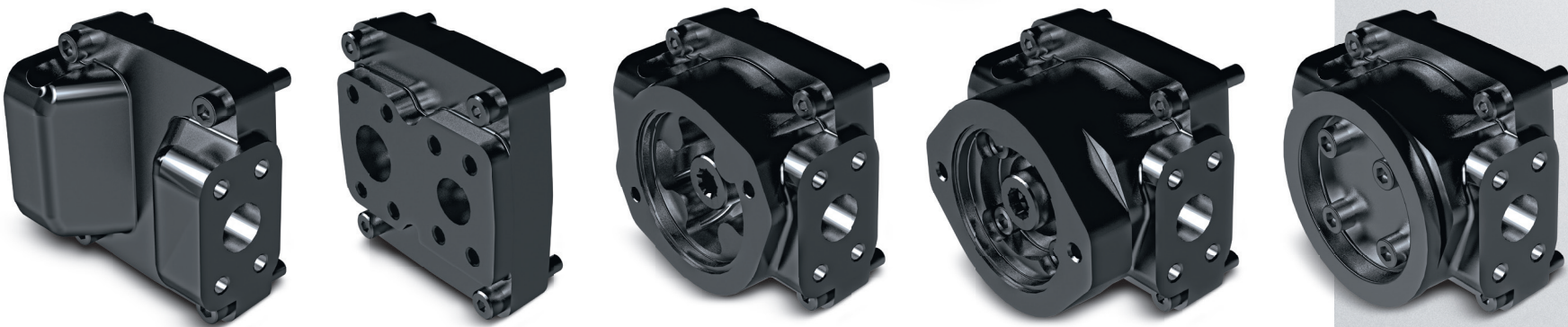
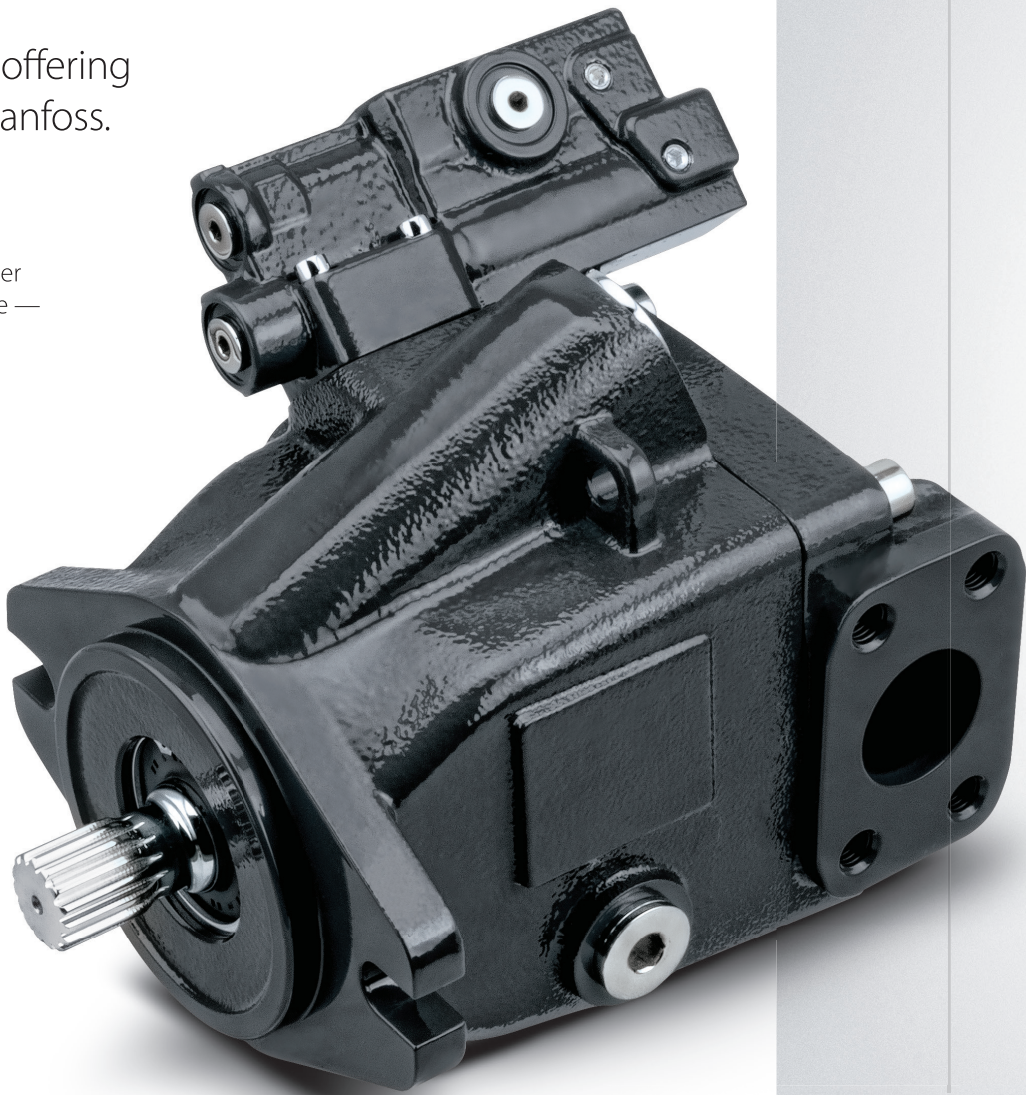
With an optimized package, the K2 frame responds to customer needs by significantly reducing pump weight and package size — while improving performance with increased rated pressure and higher-rated speed capabilities. The result is the best combination of package size and weight on the market.

The redesigned K2 offers numerous improvements:

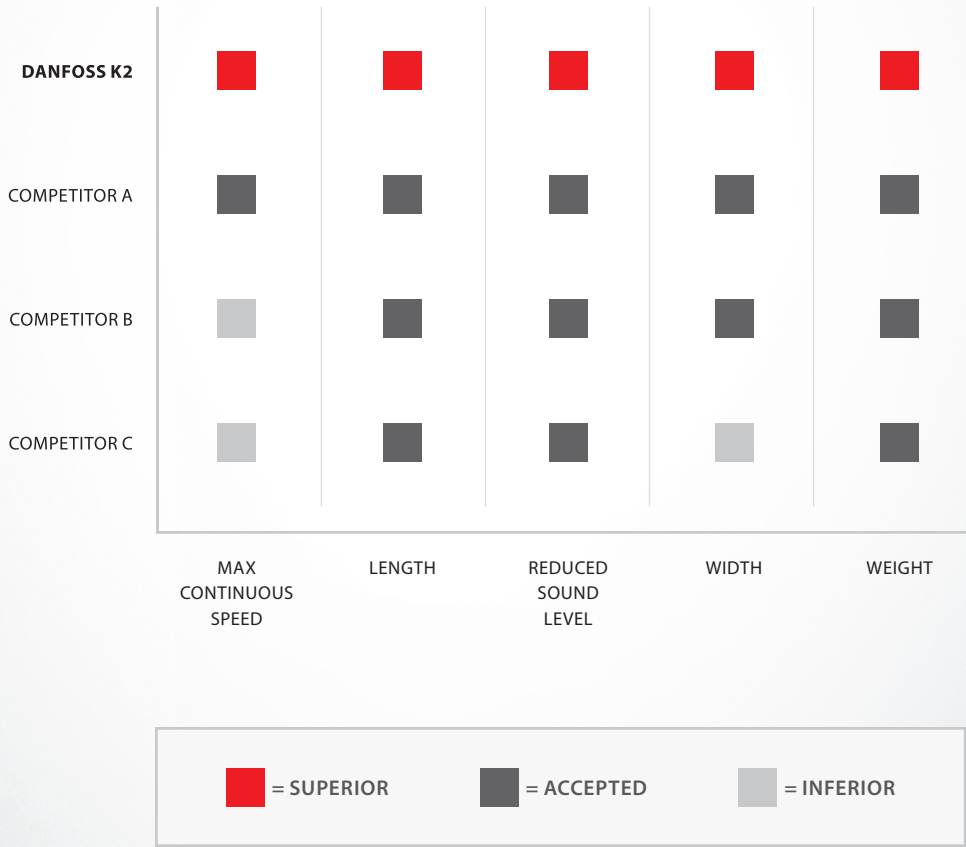
- Reduced length up to 20 percent
- Reduced width up to 10 percent
- Overall weight reduction up to 30 percent
- Greater efficiency with fan drive control
- Improved overall sound level
- Proven reliability
- Common Series 45 control options

Even quieter pump design

With improved low sound level thanks to additional features inside the housing that allow for dissipation of noise and vibration, the K2 maintains the Danfoss advantage of quiet pump design. In combination with one-piece iron housing and valve plate design, K2 allows for superior sound-deadening characteristics that offer a more comfortable experience for the operator and help meet industry regulations.



Competitive **Analysis**



Results based on testing performed by Danfoss.

Modular endcaps offer flexibility

New endcap styles are optimized for size and weight. Multiple configuration options offer customers greater flexibility in installation and reduce the complexity within their supply chain.

K2

► ENGINEERED TO FIT YOUR MULTIPLE APPLICATION NEEDS

Series 45 Open Circuit Axial Piston Pumps

Series 45 offers a full line of displacements and controls that have been designed to fit your multiple application needs. Our Series 45 pumps provide a range of options, configurations and controls to help improve machine efficiency, power and performance.

TECHNICAL SPECS

PHYSICAL PROPERTIES

Parameter		Unit	K25C	K30C	K38C	K45C
Displacement (max.)		cm ³ [in ³]	25 [1.53]	30 [1.83]	38 [2.32]	45 [3.97]
Working pressure		bar [psi]	260 [3771]			
Rated input speed	Minimum	min ⁻¹ rpm	500			
	Continuous		3060	2900	2500	2500
	Maximum		3360	3200	2800	2800
Weight (axial ports)		kg [lb]	16.35 [36.86]			

F74B	F90C
74 [4.52]	90 [5.49]
310 [4495]	260 [3770]
500	
2400	2200
2800	2600
52 [114]	56 [124]

J45B	J51B	J60B	J65C	J75C
45 [2.75]	51 [3.11]	60 [3.66]	65 [3.97]	75 [4.58]
310 [4495]			260 [3770]	
500				
2800	2700	2600	2500	2400
3360	3240	3120	3000	2880
23.1 [51]				

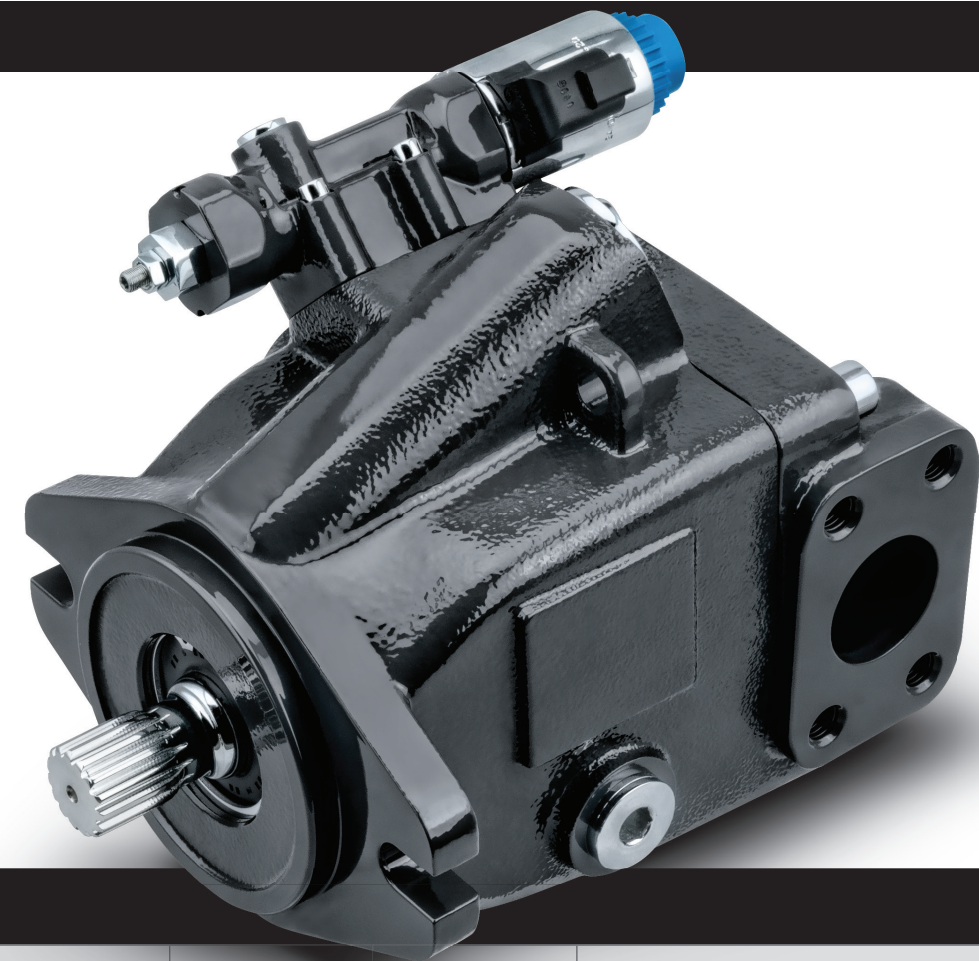
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310 [4495]		260 [3770]
500		
2450	2200	2100
2880	2600	2475
52 [114]		

Fan drive control: Best in the industry for weight, package and serviceability

Danfoss Series 45 axial piston pumps also feature a fan drive control, which offers numerous benefits that improve efficiency and performance:









- Allows for low minimum system pressures
- Better control resolution
- Smaller package size and reduced weight up to 2.2 kilograms/5 pounds

The lower minimum system pressures allowed by the fan drive control results in slower minimum fan speeds, which improves fan drive system efficiency and offers benefits for low cooling requirement conditions. An optimized design makes Danfoss fan drive control the best in the industry for weight, package and serviceability.



CONTROL FEATURES & OPTIONS

SERIES 45

FUNCTION TYPE		PRESSURE COMPENSATION (PC)	LOAD SENSING (LS)	COLD START RELIEF	POWER MANAGEMENT
	Pressure Compensation (PC) Only	■			
	Pressure Compensation/ Load Sensing (PC/LS)	■	■		
	Remote PC	■		■	
	Electronic On/Off	■		■	
	Electronic Dump	■	■	■	
	Electronic Proportional Controls (EPC)	■		■	
	Fan Drive Control* (FDC)	■			
	Electronic Torque Limiting** (ETL)	■	■	■	■

NORMALLY OPEN	NORMALLY CLOSED	12V	24V	DESCRIPTION
				Simplicity at its finest. Pump works to maintain a constant pressure at its outlet.
				Industry standard performance & efficiency to deliver on-demand flow. Pump consumes little power under no demand.
				Supply your own pressure control valve to create your own variable setting pressure control.
	■	■	■	Simplicity of a PC only pump with an added pump unloading valve.
■	■	■	■	Gain performance & efficiency of a load sensing system with the added flexibility of a pump unloading valve.
■	■	■	■	Fully proportional pressure setting capability. Useful for fan drives or other variable pressure requirement systems.
	■	■	■	Dedicated fan drive control in a fully optimized single spool design package. Reduce installed weight & minimum system pressure levels.
	■	■	■	Implement open circuit power management to perfection with electronically variable torque control.

* For fan drive applications only. | ** Not available on K2 frames.

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 powersolutions.danfoss.com for further product information.

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