

# Small things matter.

Danfoss Cartridge valves.  
A market leading portfolio.

ENGINEERING  
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*Danfoss*





# Small things matter.

## Danfoss Cartridge valves. A market leading portfolio.

Whatever your application, we've got you covered with our portfolio of over 500 cartridge valves. Setting us apart is a dynamic mix of technical expertise and application know-how, enabling us to provide solutions tailored uniquely for you, all while maintaining the unparalleled quality and reliability you've come to expect from Danfoss.

Appearances may be deceiving. These small components hold the power to control even the

biggest machines smoothly, and precisely. Our cartridge valves are each designed to enhance your machines for the better.

Combine cartridge valves seamlessly into a Hydraulic Integrated Circuit (HIC) manifold to match your application needs. With our EasyManifold configurator, designing tailored hydraulic solutions is effortless, regardless of size.

Check Valves

Directional  
Control Valves

Shuttle Valves

Logic Elements

Sequence and  
Unloading Valves

Motion Control Valves

Relief Valves

Solenoid Valves

Pressure Reducing  
Valves

Proportional Valves

Flow Control Valves

Coils and Electronics

HIC

Easy Manifold 3D



# Check Valves

## Robust design

Explore our extensive check valve collection, featuring cartridge-style options (both standard and reverse direction) and in-line varieties. Our pilot-operated check valves aren't just compact and economical – they deliver optimal load holding performance. With numerous sizes and schematic options, we tailor our valves to meet your specific flow and pressure application needs. Rest easy with our robust, low-leakage designs, ensuring you can confidently apply them to your machine with unmatched reliability.

Check Valves at Danfoss.com

**Flow rate**  
Up to 310 l/min  
[82 US gpm]

**Pressure rating**  
Up to 420 bar  
[6000 psi]

### Product range

- Normal Direction Check Valves
- In-line Check Valves
- Reverse Direction Check Valves
- Pilot to Open Check Valves
- Pilot to Close Check Valves
- Dual Pilot Operated Check Valves





# Shuttle Valves

Reliable performance

Discover the perfect solution for your hydraulic circuit needs with our diverse line of shuttle valves. Whether you're looking for efficiency in load-sensing or loop flushing, we have you covered. Choose from a range of sizes and types, providing versatile options to suit your unique application requirements. Elevate your hydraulic systems with our reliable and efficient shuttle valves.

Shuttle Valves at Danfoss.com

**Flow rate**  
Up to 90 l/min  
[24 US gpm] [82 US gpm]

**Pressure rating**  
Up to 450 bar  
[6500 psi]

Product range

- Load Shuttle Valves - Cartridge
- Load Shuttle Valves - In-line
- Hot Oil Shuttle Valves





# Sequence and Unloading Valves

## Controlled operation

Craft a powerful circuit solution for your application with our range of sequence and unloading valves. Enhance function timing, boost efficiency, and ensure top-notch circuit safety. Our products are designed to offer controlled operation that takes your application to the next level.

Sequence and Unloading Valves at Danfoss.com

**Flow rate**  
Up to 250 l/min  
[66 US gpm]

**Pressure rating**  
Up to 350 bar  
[5000 psi]

### Product range

- Direct Acting Pressure Sequence Valves
- Pilot Operated Pressure Sequence Valves
- 2-Way Directional Sequence Valves
- 3-Way Directional Sequence Valves
- Unloading Valves





# Relief Valves

Precise control

Discover our complete line of relief valve solutions. From various sizes to diverse schematic types, we’ve got you covered. Our models are engineered to deliver a quick response, reduce noise, and enhance accuracy. Danfoss relief valves are reliable solutions to meet all your pressure control needs.

Relief Valves at Danfoss.com

**Flow rate**  
Up to 380 l/min  
100 US gpm]

**Pressure rating**  
Up to 400 bar  
[5800 psi]

Product range

- Direct Acting Poppet Relief Valves
- Direct Acting Spool Relief Valves
- Differential Area Relief Valves
- Pilot Operated Relief Valves
- Bi-Directional Relief Valves
- Cross Over Relief HIC





# Pressure Reducing Valves

Stable and accurate performance

Ensure optimal pressure for your hydraulic functions with our range of pressure reducing valves. Whether you prefer standard reducing or reducing/relieving valves, we've got you covered. Tailor your circuits effortlessly with our versatile selection, designed to meet your unique needs. Experience precision and reliability with our pressure reducing valves for peak hydraulic performance.

Pressure Reducing Valves at Danfoss.com

**Flow rate**  
Up to 200 l/min  
[52 US gpm]

**Pressure rating**  
Up to 350 bar  
[5000 psi]

**Product range**

Pressure Reducing/Relieving Valves

Pressure Reducing Valves (Non-Relieving)





# Flow Control Valves

Go with the flow

Dive into a world of flow control possibilities with our extensive range of valves, covering everything from needle valves to flow dividing/combining solutions. Experience reliable performance with pressure compensation, ensuring a consistent flow for your work functions, no matter the load. Choose with confidence between standard and high-pressure options – Danfoss Flow Control Valves are engineered to meet all your application needs.

[Flow Control Valves at Danfoss.com](#)

**Flow rate**  
Up to 380 l/min  
[100 US gpm]

**Pressure rating**  
Up to 450 bar  
[6500 psi]

### Product range

Needle Valves

Restrictive Type Pressure Compensated Flow Control Valves

Priority Type Pressure Compensated Flow Control Valves

Flow Divider / Combiner Valves

Velocity Fuses





# Directional Controls Valves

## Complete control

Gain complete control of your hydraulic system's flow with Danfoss directional control valves. Tailor your design with ease by choosing from our array of manual control options – be it rotary, lever, push and pull – or opt for hydraulic pilot-operated control. Your design preferences, your control – it's all in your hands with Danfoss directional control valves.

[Directional Controls Valves at Danfoss.com](#)

### Flow rate

Up to 265 l/min  
[70 US gpm]

### Pressure rating

Up to 450 bar  
[6500 psi]

### Product range

Manual Rotary Valves

Manual Lever Valves

Manual Push/Pull Valves

Hydraulically Piloted 2-Way Valves

Hydraulically Piloted 3-Way and 4-Way Valves

Brake Release Valves





# Logic Elements

## Versatile performance

Unlock efficiency and effectiveness in your hydraulic integrated circuits (HICs) with our versatile Logic Elements. These elements can be seamlessly applied to design pressure, flow, and directional control circuits. Covering a wide range of pressure ratings and applications, our logic element valves serve as the foundation for engineering creative and tailored HIC solutions to perfectly meet your application needs.

Logic Elements at Danfoss.com

**Flow rate**  
Up to 400 l/min  
[106 US gpm]

**Pressure rating**  
Up to 350 bar  
[5000 psi]

### Product range

- Pressure Compensators, Restrictive Type
- Pressure Compensators, Priority Type
- Logic Elements, Poppet Type
- Logic Elements, Spool Type
- Logic Elements, With Pilot Valve Adaptor





# Motion Control Valves

Extensive, stable offering

Elevate your machinery with our Motion Control Valves, enhancing stability and efficiency while eliminating bothersome valve noise. Explore the market’s most extensive selection of motion control vavles, featuring standard, part-balanced, fully-balanced, and zero-differential designs, catering to all your hydraulic system needs.

Motion Control Valves at Danfoss.com

**Flow rate**  
Up to 300 l/min  
[80 US gpm]

**Pressure rating**  
Up to 430 bar  
[6200 psi]

- Product range
- Overcenter Valves, Standard

Overcenter Valves, Part Balanced

Overcenter Valves, Fully Balanced

Overcenter Valves, Two Stage Counterbalance

Overcenter Valves, Zero Differential

Overcenter Valve Assemblies





# Solenoid Valves

Maximum flexibility and complete control

Even in the harshest environments, you can count on industry-leading Danfoss solenoid valves to meet nearly every flow, pressure and directional control challenge. With superior ingress protection and unsurpassed performance, our solenoid valves give you maximum flexibility and complete control over your hydraulic systems.

Solenoid Valves at Danfoss.com

**Flow rate**  
Up to 230 l/min  
[60 US gpm]

**Pressure rating**  
Up to 350 bar  
[5000 psi]

- Product range
- Poppet Type Solenoid Valves

Spool Type 2-Way, 2-Position Solenoid Valves

Spool Type 3-Way, 2-Position Solenoid Valves

Spool Type 4-Way, 2-Position Solenoid Valves

Spool Type 4-Way, 3-Position Solenoid Valves

Spool Type 5-Way, 3-Position Solenoid Valves





# Proportional Valves

Precise proportional control

Elevate your control capabilities with smooth, accurate control of pressure and flow applications with our range of Danfoss proportional cartridge valves. Combine them with Danfoss logic element valves and other screw-in cartridge valves (SiCV) in a custom manifold assembly to build an efficient and reliable hydraulic system.

[Proportional Valves at Danfoss.com](#)

**Flow rate**  
Up to 180 l/min  
[48 US gpm]

**Pressure rating**  
Up to 350 bar  
[5000 psi]

Product range

- Proportional Directional Valves
- Proportional Poppet Flow Control Valves
- Proportional Spool Flow Control Valves (Non-Compensated)
- Proportional Spool Flow Control Valves (Compensated)
- Proportional Pressure Relief Valves
- Proportional Pressure Reducing Valves





# Coils and Electronics

## Robust performance

Discover the perfect fit for your valves with our coils, available for all sizes and in a variety of connector types and voltages. Beyond our standard range, our robust and tough coils are built to withstand extremes – from voltage and temperature variations to water ingress caused by power spray or submersion. What's more, our coils are PLUS+1® compliant, ensuring seamless integration into your mobile control systems.

Coils and Electronics at [Danfoss.com](https://danfoss.com)

### Flow rate

Up to 310 l/min  
[82 US gpm]

### Pressure rating

Up to 420 bar  
[6000 psi]

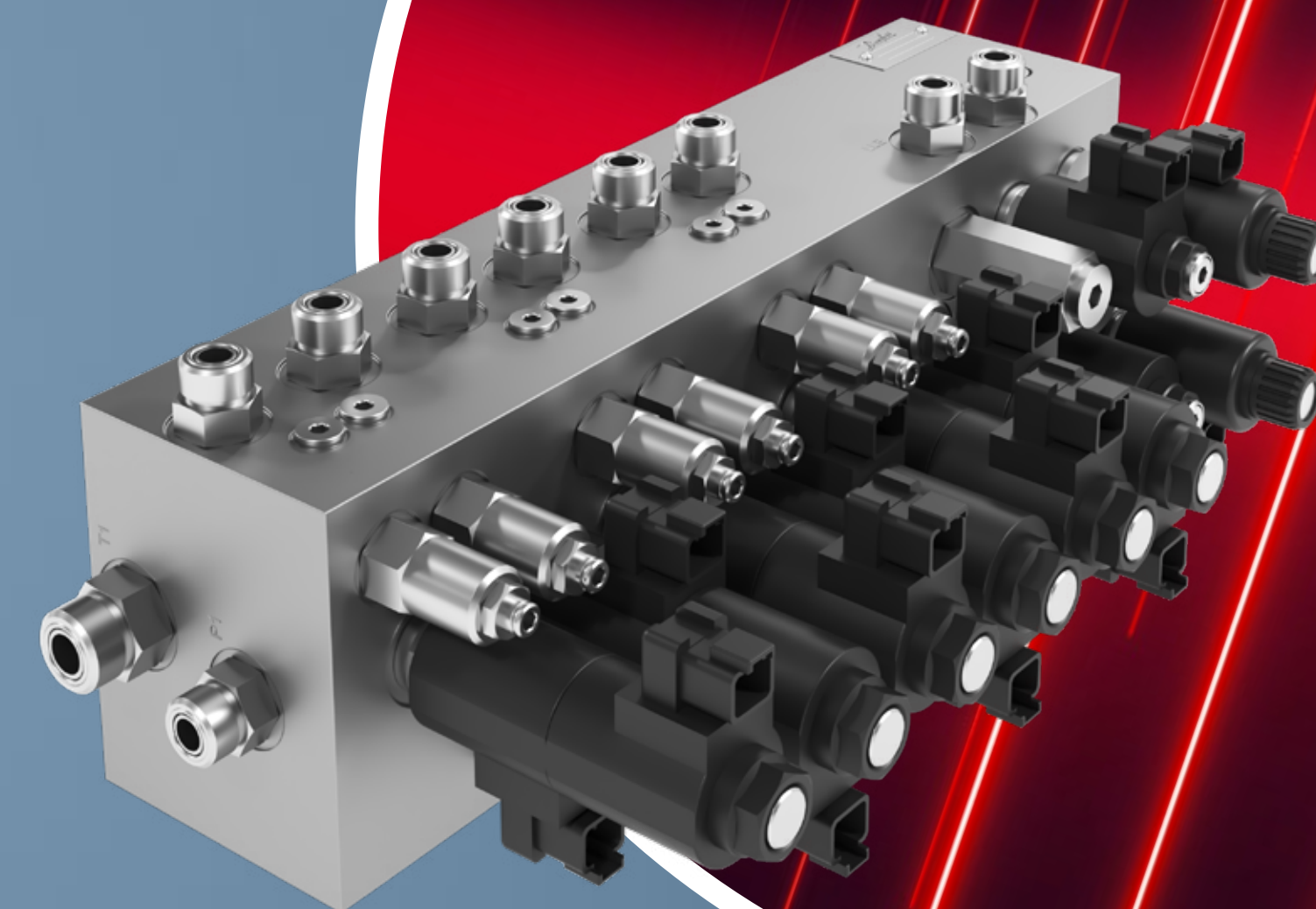
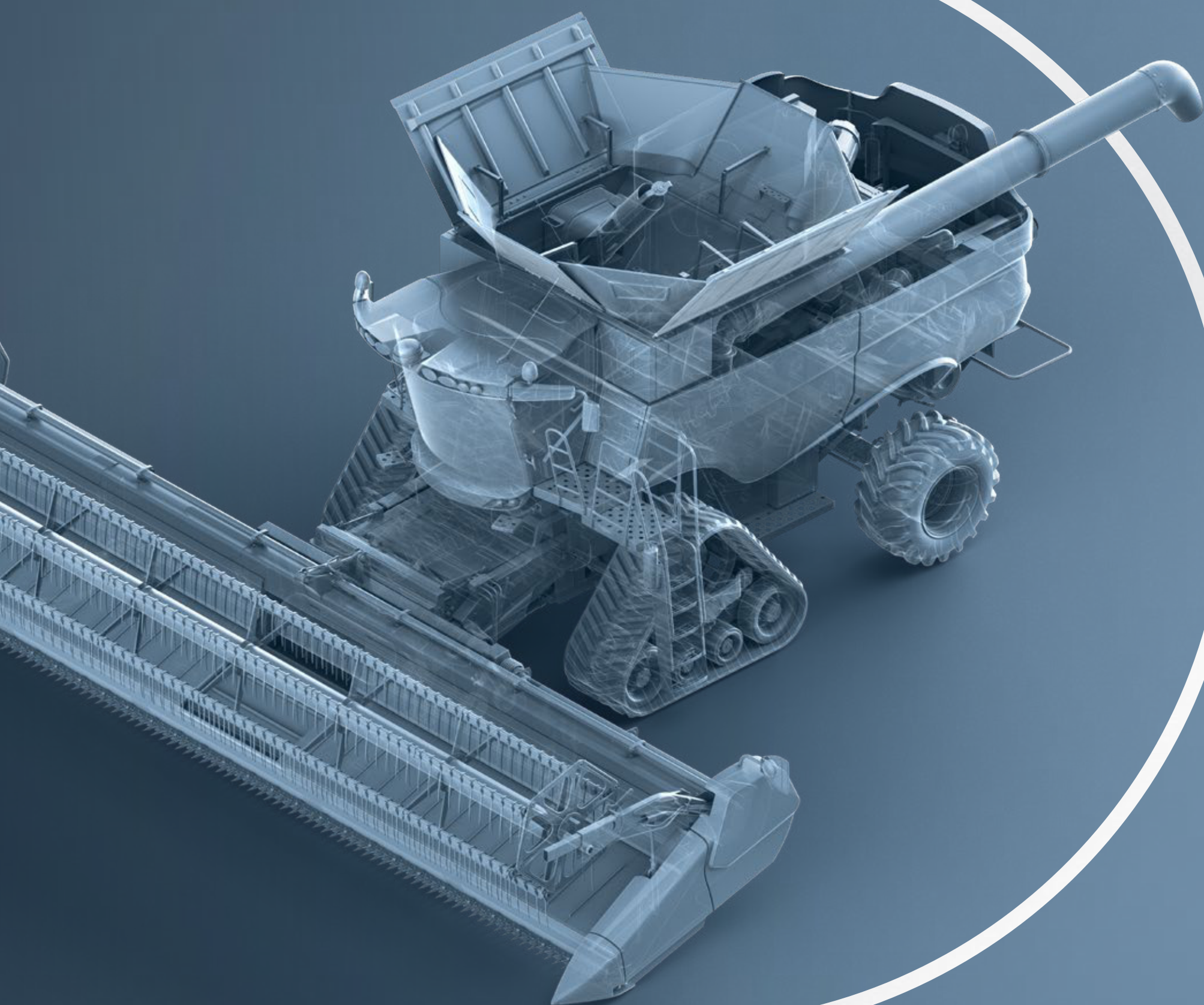




[Check Valves](#)[Shuttle Valves](#)[Sequence and  
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Valves](#)[Flow Control Valves](#)[Directional  
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# HIC

Combine cartridge valves seamlessly into a Hydraulic Integrated Circuit (HIC) manifold to match your application needs. With our EasyManifold configurator, designing tailored hydraulic solutions is effortless, regardless of size.

[HIC at Danfoss.com](#)

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A custom HIC can be specified, quoted and designed to meet your circuit requirements using our EasyManifold web-based design tool.

Thousands of users around the world already rely on EasyManifold to:

- **Effortlessly create** hydraulic circuit schematics from Danfoss's digital library of cartridge valves using a **drag and drop** interface.
- **Automatically design** small to medium sized HICs. At the click of a button, your project can be submitted and EasyManifold will generate a 2D drawing and 3D model. In **less than an hour**, you can take your project from a concept to a design ready for manufacturing.
- Configure any standard cartridge valve with the **Shopping Cart** function.

[Video of Easy Manifold](#)

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## ICS Business unit

Danfoss Power Solutions (DPS) is a leading supplier of hydraulics and electric powertrain systems. We leverage our full solutions capabilities and application know-how to optimize the performance of mobile and industrial machinery.

The BU Integrated Circuit Solutions, part of the Controls Division, engineers control solutions for the global cartridge and Hydraulic Integrated Circuit (HIC) market. We are passionate professionals, committed to developing cutting-edge control solutions that enable sustainable growth and improved energy efficiency. We pursue global change for better.

Danfoss ICS  
production plants



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