

ENGINEERING  
TOMORROW

*Danfoss*

Mobile Hydraulic | Off-highway equipment

**The performance** of your large equipment **relies on the quality** of its small components

**40** years  
of expertise in  
mobile hydraulic



# Success is about teamwork

Choose components your large equipment can rely on

Since 1933, professionals have relied on Danfoss. On our extensive know-how and innovative mind-set. On our detailed engineering with comprehensive effects.

## Get ahead

with components for mobile hydraulics engineered to meet extreme conditions



**Material handling**



**Construction**



**Forestry**

# Stay in control of your challenges

As a professional you face challenges every day. And if those challenges are not being met, they are like a domino effect causing business critical effects. As a professional, you know that quality is your answer to the challenges. Quality of people, machines, and components.

## **Working in Construction, Agriculture, Material handling, or Forestry you aim to stay in control and:**

- Avoid downtime or faulty operations
- Maximize machine efficiency
- Minimize lost revenue
- Ensure operator safety
- Eliminate damage to machines and their components



**Agriculture**

# Stay on top with **reliable components**

Every day, professionals face business critical challenges that threaten their operations. Unfortunately, we cannot be a guardian angel against all obstacles but we can provide state-of-the-art components that reduce unplanned equipment downtime and ensure optimum performance.



## Construction

Modern construction work depends on machinery performance and reliability at all times. Therefore, you cannot afford downtime or faulty operations that affect the whole chain of machines and your ability of meeting the project deadline.

To achieve optimum performance every day, your components need to withstand the shock and vibrations and provide personal safety.

- ✓ Shock and vibration
- ✓ Long-term stability
- ✓ Pressure spikes





## Material handling

How heavy is the load? In today's world, cranes and other large handling machines must operate within very specific load ranges. As operator demands increase, accurate pressure data from the load limiting systems in your high-quality lifting machines are crucial in safeguarding your equipment, the load, and not least the operator.

- ✓ EMC performance
- ✓ Long-term stability
- ✓ High accuracy





## Agriculture

Today, farming is like a science based on great precision. When sowing, fertilizing, and reaping, faulty equipment can have huge implications in terms of money, failed crops, and harm to the environment. Therefore, it is extremely important to achieve and maintain an optimum machine performance and the right pressure sensors are key in doing so.

- ✓ High IP protection
- ✓ Long-term stability
- ✓ Stainless steel wetted parts



# Forestry

The forest is a place of fragility and a harsh environment. Between the two opposites, it is a place of life that continuously grows and renews itself, when managed correctly. To do so, heavy equipment is needed as the machinery in use are exposed to extreme conditions when it comes to mechanical wear, heavy loads, tough ground conditions, and long working days.

- ✓ High accuracy
- ✓ EMC performance
- ✓ Pressure spikes



# Achieve business critical impact with small components



## Longer equipment lifetime

### Smarter hydraulic controls extend the life of your mobile equipment

One example of this is Electronic Load Sensing that fine-tunes your engine output according to your actual demand.

- Extends the life of your hydraulic components
- Reduces downtime and maintenance costs
- Saves fuel and emissions



## Better operator comfort

### Increase operators' safety and performance with improved comfort

One of the ways you can do this is by making Continuously Variable Transmissions (CVT) run smoother with pressure sensors.

- Reduces operator exposure to vibration
- Improves employee satisfaction
- Increases engine performance
- Reduces fuel consumption







**Reduced downtime and maintenance costs**

## How do you know when oil filters are clogged and need to be changed?

With Danfoss pressure transmitters, operators have access to constant, real-time information on filter status, which helps reduce machinery downtime and maintenance costs.

- Access to real-time information
- Decreased downtime
- Improved hydraulic oil quality



**Improved safety**

## Safety, safety, and safety

As a professional, you know that safety compliance is crucial in maintaining a strong brand and reputation among your customers. We provide state-of-the-art components that are compliant to all safety needs and widely acknowledged with 3rd party certifications.

- Complete self-diagnostics
- Identify systematic and random errors
- Activate pre-defined safe conditions when errors are detected



# Choosing the right components is key to your success

Granted, components only make up a small part of your machinery. But despite their size, components are vital in making the best of your equipment. We offer a wide range of innovative and reliable components which makes your equipment run smarter, faster, and more efficiently.

Our zero-defect policy is your guarantee for a constant and high-performing quality. We use the same production processes and quality assurance standards worldwide in accordance to IATF 16949 letter of approval. It makes it possible for us to offer you best-in-class components. Every time. Everywhere.

**Achieve your business goals with the best components.**

## **Our zero-defect policy**

is your guarantee  
for best-in-class  
components  
– everytime

## MBS 1250 Pressure transmitter **Failsafe measuring signal and long-term stability**

- ✓ High burst and over pressure capabilities due to fully welded design
- ✓ Excellent EMC immunity, ensuring a failsafe measuring signal
- ✓ High tolerance to mechanical shock and vibrations



Scan QR code and see  
full product portfolio



# DST P650 Smart sensor pressure transmitter

## Automatic failure detection enables fast troubleshooting and preventative maintenance

- ✓ Diagnostics – preventative maintenance
- ✓ High burst and over pressure capabilities due to fully welded design
- ✓ Excellent EMC immunity, ensuring a failsafe measuring signal



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# DST P92S SIL2 Pressure transmitter

## Simplified functional safety compliance and optimum safety

- ✓ TÜV approved according to ISO 13849-1, PLd and IEC61508, SIL2
- ✓ Small in size - fits in all applications (Hex 22)
- ✓ Designed to enhance safety, improve performance, and reduce maintenance costs



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# MBT 2310

## Bearing temperature sensor

### Improve performance while optimizing predictive maintenance

- ✓ Separate spring-loaded for accurate bearing measurement
- ✓ Quick response time is achieved by placing the sensor element at the very tip of the sensor tube
- ✓ All sensor tube and pocket material are made of AISI 316Ti



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# MBT 3270 and MBT 3560

## Temperature sensors

### Safe and energy efficient operation of your machine

- ✓ Fast reaction time to temperature changes
- ✓ High tolerance to mechanical shock and vibrations
- ✓ Robust, high protection against moisture ensuring long term reliability and lower failure rate



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## MEP 2250/2650 Electronic pressure switches **Long-term reliability and lower failure rate**

- ✓ Customized hysteresis and time constant
- ✓ Dual functionality supplying both analogue and digital outputs
- ✓ Excellent EMC immunity ensuring a failsafe measuring signal



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## DST X510 and X520 Rotary position sensors **Versions with and without shaft for easy mounting**

- ✓ Higher repetition rate and lower hysteresis due to low shaft wear on the DST X510 – no shaft wear on DST X520
- ✓ Hall effect technology and available in single or redundant versions
- ✓ Able to detect angles from  $\pm 15^\circ$  up to  $360^\circ$



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## DST X710, X720, and X730 Inclination sensors

### From compact design to high precision options

- ✓ The inclination sensors ensure limited dynamics and reduced vibrations due to multiple digital filter settings
- ✓ MEMS technology available with single or redundant configuration
- ✓ Single and redundant versions available



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## DST X800 Wire position sensors

### Detecting the extension of cranes, booms, platforms, and masts

- ✓ Reduced dimension (65mm height) makes it suitable for applications with limited space for installation and easy integration
- ✓ Versions available in different measurement lengths ensure perfect fit of resolution for any application
- ✓ Guided cable winding ensures guaranteed repeatability



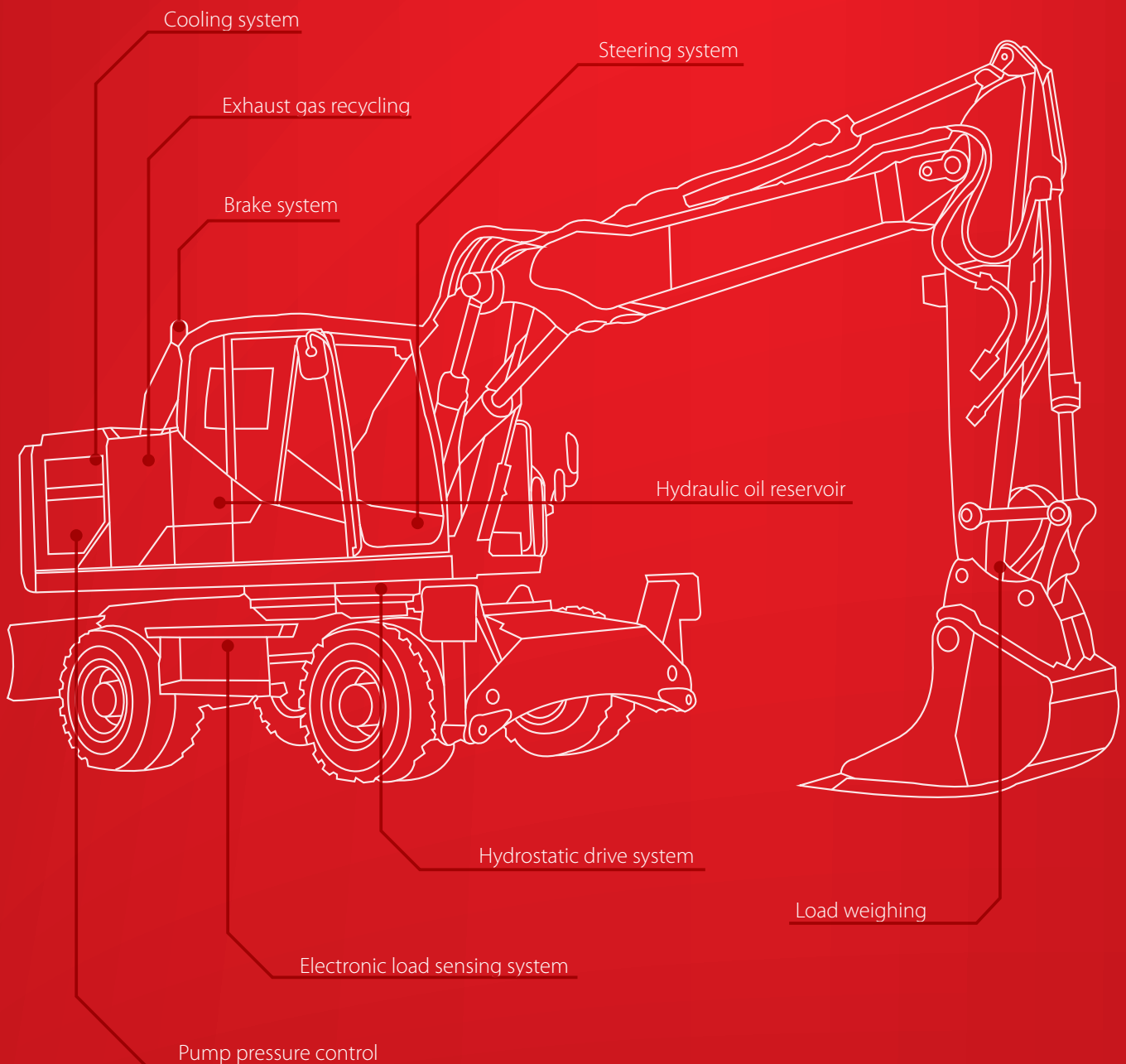
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# Intelligent automation

wherever  
performance matters

Built-in intelligence opens new opportunities for safe, clean, and efficient operation of mobile hydraulic equipment. Pressure and temperature sensors in hydraulic and transmission systems enable surveillance and control of all vital processes to ensure maximum performance, reduce down-time, cut down on fuel, and provide the necessary safety in the daily work environment.



# Be part of our **sensor technology world**

We are right next to you. In fact, take a look inside practically any off-highway equipment and you'll find components from Danfoss Sensing Solutions playing a key role in saving fuel costs, improving man-machine safety, reducing emissions and product life cycle costs.

## **Cooperation with Danfoss Power Solutions**

To improve and ease your business, we work in close collaboration with Danfoss Power Solutions. This helps you to power, propel, control, and steer off-highway machines efficiently, safely, and reliably with a wide range of hydraulic and electronic components.

But we are also cooperating with you. Decades of close cooperation with OEM's have given us unique expertise in how pressure, temperature and position sensors and switches enable improved performance and safety in all kinds of mobile equipment.

We apply our expertise to innovate the solutions you are looking for. Today. And tomorrow.

Learn more at [hydraulicsensors.danfoss.com](https://hydraulicsensors.danfoss.com)

## **Danfoss A/S, Sensing Solutions**

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