

EXPERTS IN WEIGHING SINCE 1969

# NEXT GENERATION DIGITAL LOAD CELLS

- Patented Capacitive Technology
- Robust Digital Load Cells
- Tolerate up to 1000% Overload
- Accuracy up to OIML C6 (M10)
- Easy Installation
- Stainless Steel (IP68)
- ATEX Certified Zone 1, 2, 21, 22
- Trusted in over 85 Countries Worldwide

**Eilersen**  
The Weighing Experts



# EXPERTS IN WEIGHING SINCE 1969

## Capacitive Digital Load Cells

Since the foundation in 1969, the Eilersen companies in Denmark and Switzerland have been dedicated to the development, manufacture and supply of high quality, robust industrial sensors based on capacitive technology for the measurement of force and weight.

### Patented Technology with Unique Advantages

This extensive know-how is patented worldwide and applied in the current range of digital load cells. The capacitive technology developed by Eilersen features a number of advantages compared to other technologies used in transducers for measuring force and weight.

Eilersen load cells are produced in stainless steel and hermetically sealed to IP68 by laser welding. Furthermore, the Eilersen load cells feature high accuracy (up to OIML C6), outstanding reliability, simple mechanical and electrical installation, and minimal maintenance for use in tough and demanding industrial applications.

Eilersen load cells are available in capacities up to 500 tons

with a broad range of instrumentation including weighing terminals and weighing modules featuring EtherNet IP, Modbus TCP/IP, PROFINET, Profibus DP, DeviceNet, RS485, 4-20mA and 0-10VDC interfaces. The Eilersen load cells and weighing solutions can be supplied in OIML and ATEX certified versions.

All Eilersen products are developed, manufactured and individually calibrated at the Eilersen manufacturing facilities.

### Eilersen Load Cells are Trusted Worldwide

Eilersen customers include leading companies in more than 85 countries worldwide, and the continuous investment in technology, development, quality, and customer support has led to a very high level of customer loyalty.

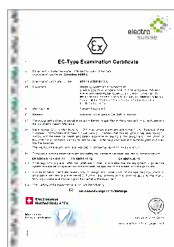
The Eilersen companies have a sound financial basis and exercises environmental and social responsibility. Furthermore, Eilersen offers equal opportunity and non-discrimination policies and benefits from a very stable team of dedicated employees.



Patents



OIML Certificates



ATEX (Ex) Certificates



Quality Assessment Certificate



Material Certificates

# SELECTED REFERENCES



# HYGIENIC LOAD CELLS

High Accuracy and Reliability



# DIGITAL CAPACITIVE TECHNOLOGY

## The Choice for Industrial Applications

The Eilersen digital capacitive technology is based on a non-contacting ceramic sensor mounted inside the load cell body. As the load cell contains no moving parts and the ceramic sensor is not in contact with the load cell body, the load cell tolerates very high overloads, sideloads, torsion and welding voltages.

### **Simple and Hygienic Installation**

This robust technology allows for a very simple and hygienic mechanical installation of the Eilersen load cells without expensive and complicated mounting kits, stay rods or overload protection devices. The simple installation eliminates the need for maintenance and reduces the total cost of ownership.

### **The True Digital Weighing Solution**

The electrical installation of the Eilersen digital load cells is pure plug-and-play as the output from the non-contacting sensor is directly converted, compensated and calibrated to RS485 signal by a proprietary ASIC in the load cell.

This RS485 signal contains the measuring data and status codes for diagnostics, which is transmitted through the single wire coaxial cable to the weighing instrumentation.

The patented digital technology eliminates drift and inaccuracy found in analog circuits as the complete measurement chain is digital.

### **Individually Calibrated for High Accuracy**

Every Eilersen load cell is individually factory calibrated and compensated to ensure the highest accuracy (up to OIML C6 MI10) and quality on the market.

### **Flexible Connectivity**

The Eilersen proprietary design results in unsurpassed flexibility, high data rates and allows for connection to a wide range of equipment, fieldbus interfaces and outputs (PLCs, PCs, SCADA systems, Weighing Terminals, PROFINET, Profibus DP, EtherNet/IP, Modbus TCP/IP, RS485, 4-20mA, 0-10VDC etc.).

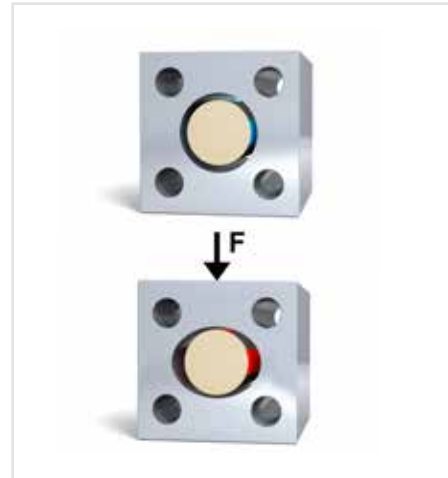
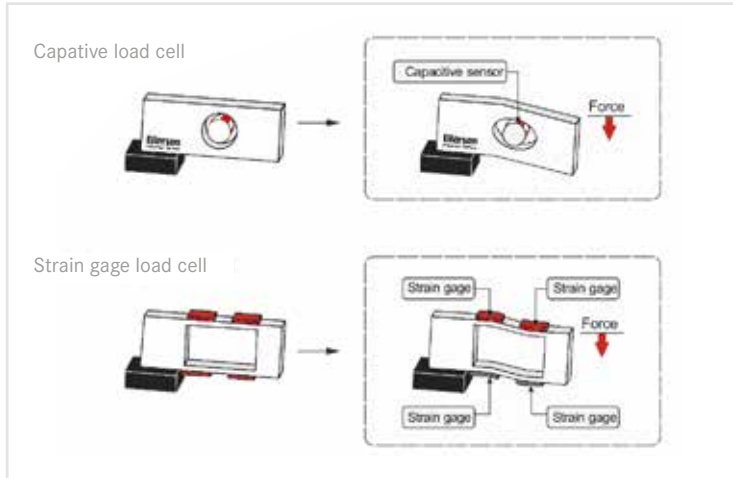
### **Easy Commissioning and Service**

The pre-calibration of the Eilersen load cells and the possibility to monitor the load and status of each individual digital load cell, provides visibility, easy troubleshooting and saves time during commissioning.

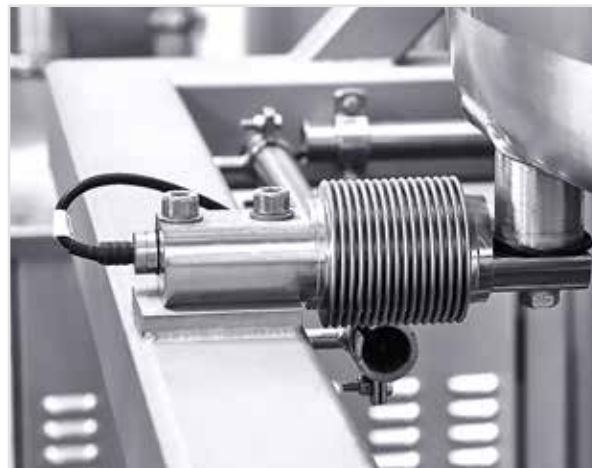
Furthermore, the load cell cables can be mounted on the load cells on-site, if convenient, and the cable length (up to 100 meters) has no influence on the calibration of the Eilersen load cells.

### **Patented and Trusted Worldwide**

The capacitive technology and mechanical design of the Eilersen load cells is patented and trusted by customers in more than 85 countries worldwide.



The Eilersen digital capacitive technology is based on an accurate and stable ceramic sensor, which is non-contacting and therefore unaffected by overloads, sideloads, torsion and welding voltages.



Simple Installation of Eilersen Beam Load Cells



Capacitive Load Cell with Hygienic Base Plate



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The Weighing Experts





# TOP 10 REASONS

For Choosing Eilersen Weighing Solutions

## #1

### Robust and Reliable Load Cells

All Eilersen load cells tolerate very high overloads, sideloads and torsion. The load cells are produced in stainless steel and hermetically sealed to IP68 for tough industrial applications. Furthermore, Eilersen load cells are available in capacities up to 500 tons.

## #2

### Simple Mechanical Installation

Mechanical protection devices are not necessary when installing Eilersen digital load cells. This is not only an important cost and maintenance saver, but also allows for a hygienic installation.

## #3

### Simple Electrical Installation

The Eilersen digital load cells feature true plug-and-play installation as the load cells are pre-calibrated, which eliminates the need for on-site calibration in many applications.

The Eilersen digital load cells are equipped with up to 100 meters coaxial cable and the cable length has no influence on the load cell calibration.

## #4

### Certified Quality

The Eilersen digital load cells can be supplied in OIML (up to C6 M110) and ATEX certified (zone 1, 2, 21, 22) versions while still offering a very high overload tolerance.

## **#5** **Flexible Solutions**

A range of Eilersen weighing modules are available with a host of fieldbus interfaces (Profibus DP, PROFINET, DeviceNet, Ethernet IP, Modbus TCP/IP, 4-20mA, 0-10VDC etc.).

## **#6** **Load Cells for Dynamic Applications**

The Eilersen digital load cells feature sampling rates of up to 1000 measurements per second and a deflection of less than 0.1 mm at Full Scale (FS).

These characteristics result in a high frequency of resonance, which together with a wide variety of digital filters makes it possible to achieve a very fast response for dynamic applications.

## **#7** **Minimizes on-site Installation Costs for OEM Customers**

The very high overload tolerance of Eilersen load cells allows for in-factory installation of the load cells in OEM equipment, which eliminates the need for expensive and inconvenient transportation protection for the load cells.

## **#8** **Fast Commissioning and Service**

It is possible to monitor the load and status of each individual Eilersen load cell with the integrated load cell diagnostics feature.

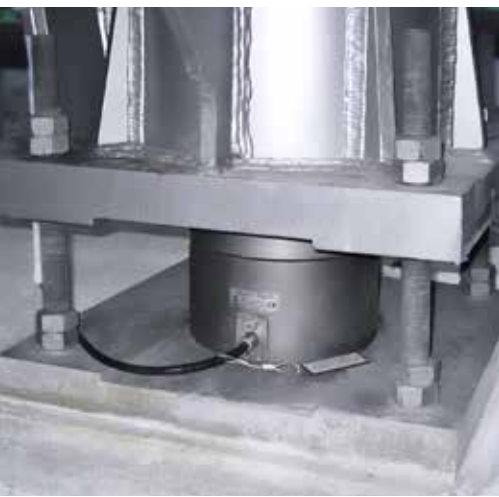
Eilersen digital load cells do not require regular maintenance but if maintenance is required, the integrated system will alert users, providing fast and easy troubleshooting.

## **#9** **High Quality Standards**

All Eilersen load cells are developed, manufactured and individually calibrated at the Eilersen sites in Denmark and Switzerland to ensure that the load cells meet the highest quality standards on the market.

## **#10** **Patented and Trusted Worldwide**

The capacitive technology and mechanical design of the Eilersen load cells has been patented and is trusted by customers in more than 85 countries worldwide.



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# ROBUST HYGIENIC SCALES

For Industrial Applications

Robust Mobile  
Scales



Hygienic, Safe and Easy  
to Clean



## Special Features

- Very robust and hygienic design
- Can handle up to 300% overload
- Equipped with Eilersen capacitive digital load cells
- Material: AISI304 or AISI316
- Dimensions: can be made according to customer requirements
- Supplied with local indicator and/or interface to PLC, PC or SCADA systems
- Weighing capacity up to 10000kg
- Available in legal for trade versions
- Can be supplied in versions for installation in ATEX Zone 1, 2, 21 or 22

Accurate Bench  
Scales

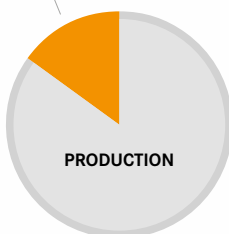


# ROBUST CAPACITIVE LOAD CELLS

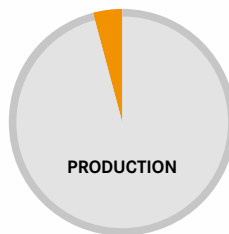
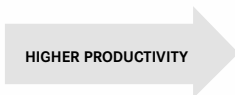
Tolerates up to 1000% Overload



Cleaning  
Calibration  
Maintenance



Productivity using  
Standard Load Cells



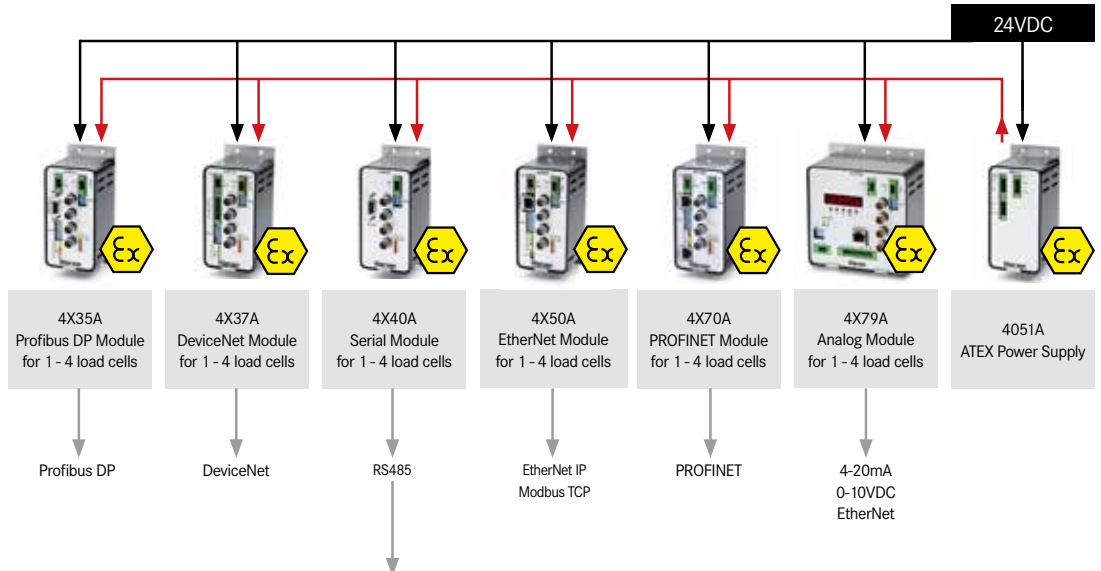
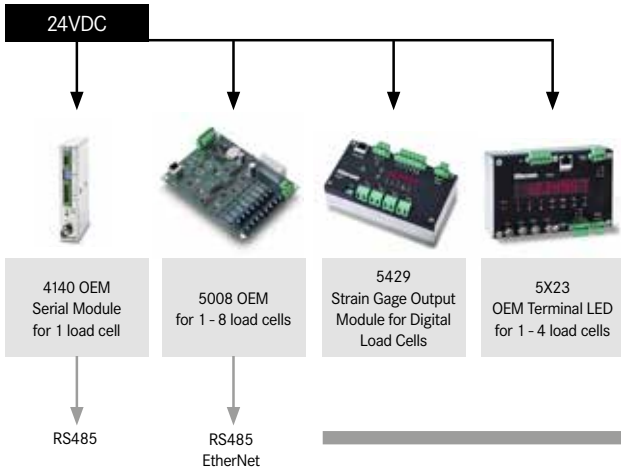
Productivity using  
Eilersen Load Cells

# Product Overview

## Next Generation Digital Load Cells



### Digital Weighing Modules



### Digital Weighing Terminals



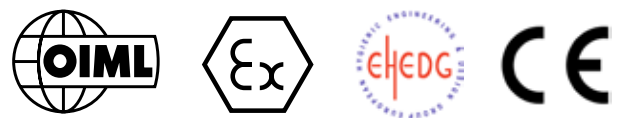
## Load Cell Overview

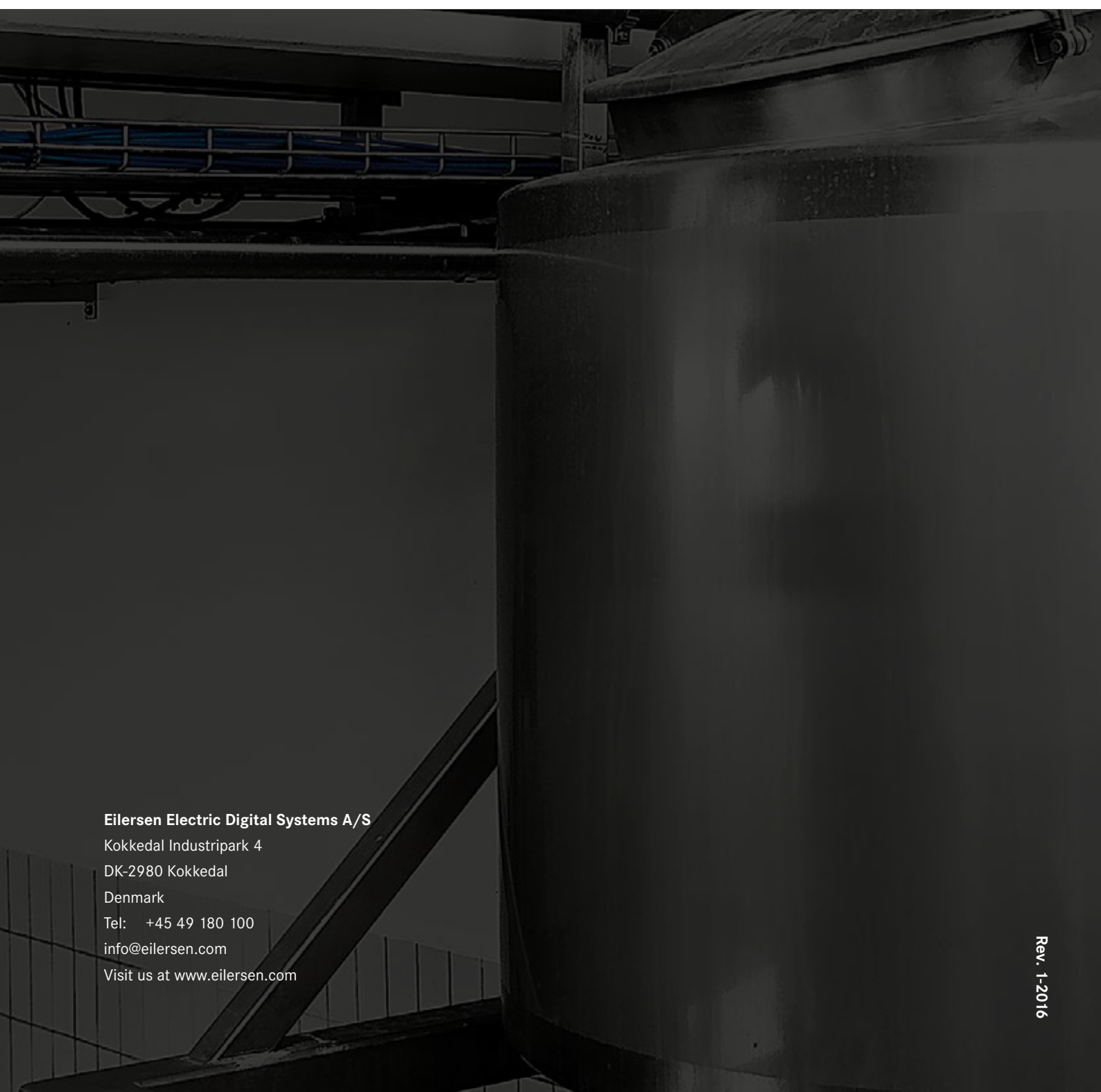
Standard Capacitive Load Cell



NON-ATEX	BL	BM	SPSX	SPSXL	CL	CM	CH
ATEX	BL-Ex	BM-Ex	SPSX-Ex	SPSXL-Ex	CL-Ex	CM-Ex	CH-Ex
<b>Load Cell Type</b>							
Compression					■	■	■
Bending Beam	■	■					
Single Point			■	■			
<b>Load Cell Features</b>							
Digital Capacitive Tech.	■	■	■	■	■	■	■
Stainless Steel	■	■	■	■	■	■	■
EHEDG Compliant Design					■	■	
IP68	■	■	■	■	■	■	■
Robust	■	■	■	■	■	■	■
<b>Specifications</b>							
Maximum Capacity	1000kg	7000kg	150kg	250kg	5000kg	25000kg	500000kg
Overload Tolerance	> 300% of Rated Capacity						
Interface Options	EtherNet IP, Modbus TCP/IP, PROFINET, Profibus DP, DeviceNet, RS485, 4-20mA, 0-10VDC						
<b>Applications</b>							
Process Weighing	■	■	■	■	■	■	
Tank, Vessel & Silo	■	■			■	■	■
Filling & Dosing	■		■	■	■		
Level Measurement					■	■	■
Dynamic Weighing	■	■	■	■			
Scales	■	■	■	■			
Conveyer Belts	■	■	■	■			
Heavy Duty	■	■	■	■	■	■	■
On-Board Mobile Weighing		■					
Offshore Applications	■	■			■	■	■

Customized Capacitive Load Cells – Examples





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