

WEIGH YOUR OPTIONS

Maximize uptime with Eilersen. We bring Danish quality to the lifescience and food industries through the world's most reliable load cells.

Eilersen
The Weighing Experts

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Introduction

An ever-increasing number of world-class machine builders and end-users rely on Eilersen load cells and weighing instrumentation.

Why?

Eilersen's unique technology utilizes non-contacting capacitive measurement to provide the world's toughest, most reliable load cell in a highly accurate package.

We are dedicated to bringing the world's most reliable load cells to the market. And the development of new load cells and weighing instrumentation is based on all the know-how of our in-house team

of engineers, who, on average, have more than 20 years of experience in the weighing industry.

This catalog presents two capacitive weighing solutions from our new generation of digital load cells: The hygienic Compression Load Cell CL and the robust Digital Beam Load Cell BL.

Scroll through the catalog and learn more about our innovative and one-of-a-kind technology and how it can increase your production uptime.

Read on!

Patented Technology with Unique Advantages

Several patents cover our capacitive technology worldwide, making Eilersen a world leader in digital load cells, weighing instrumentation, and weighing solutions for industrial applications.

Since 1969, we have developed, manufactured, and calibrated all our weighing modules in our ISO:9001 certified production facilities in Denmark to ensure our products meet the highest quality standards on the market.

This extensive know-how is patented worldwide and applied in the current range of digital load cells.

And today, many of the largest and most recognized companies within the food, pharmaceutical, chemical, and offshore industries in more than 90 countries worldwide benefit from our weighing solutions.

Pioneers in the Field

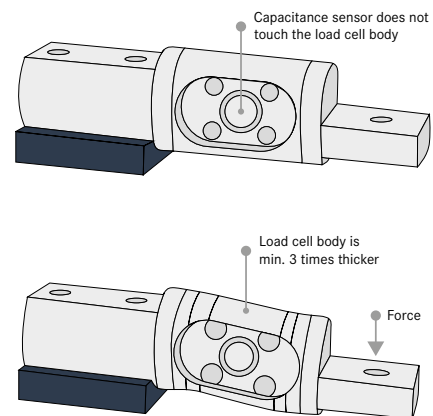
Since the 1970s, we have been pioneers in the invention and continuous development of capacitive load cells.

Our load cells use a ceramic sensor placed at a small distance inside the elastic steel body of the load cell, measuring the force via a contact-less measurement. Consequently, the capacitive sensor measures a distance change within the load cell which is related to the force applied to the load cell.

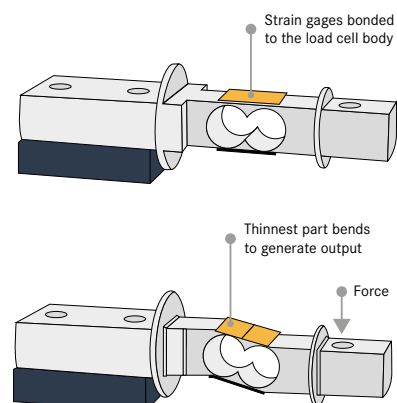
And because the sensor is non-contacting, it is not exposed to the forces to which the load cell is exposed.

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Capacitive load cell



Strain gage load cell





Eilersen supplies reliable weighing systems that fit well with our needs and applications. This makes the entire installation process and maintenance smooth and easy for us as customers. Eilersen provides good service and expert advice when new projects are being launched, so I'm sure Eilersen will remain our preferred supplier of weighing systems also in future.

Jan Juul
Production manager at CARLSBERG

One-of-a-kind Technology with Significant Advantages

Compared to conventional strain gage technology – or other technologies used in transducers for measuring force and weight – Eilersen load cells offer significant benefits, especially in applications where the load cells can experience overload, sideload or torsion.

Overall, our digital load cells offer

- high accuracy (up to 99,99%)
- exceptional reliability
- a high degree of robustness, up to 1000% overload
- simple mechanical and electrical installation
- minimal maintenance, even for use in tough and demanding industrial applications
- load cells are supplied pre-calibrated
- extremely hygienic design

Our load cells are produced in stainless steel and hermetically sealed to IP68 by laser welding.

Furthermore, Eilersen load cells are available in capacities up to 500 tons with a broad range of instrumentation, including weighing indicators and weighing modules featuring Ethernet IP, Modbus TCP/IP, PROFINET, Profibus DP, EtherCAT, RS485, 4-20mA, and 0-10VDC interfaces. The Eilersen weighing solutions can be supplied in OIML, ATEX and IECEx certified versions.

All our products are developed, manufactured, and individually calibrated at the Eilersen ISO 9001:2015 certified manufacturing facilities in Denmark and Switzerland.

A New Generation of Digital Load Cells

Our high-quality digital load cells provide advantages for all industries. The patented capacitive technology provides you with superb accuracy and load cells that tolerate up to ten times overload.

The factory calibration makes installation and commissioning fast and simple. With no need for mounting devices, the load cells are easy to clean and perfect for food, pharma, and biotech weighing solutions. Eilersen digital load cells are available in

capacities up to 500 tons, accuracy up to OIML C6, and ATEX and IECEx certified versions.

The development of the Eilersen products is based on more than 50 years of experience, high-quality standards, and innovative ideas, making Eilersen the market leader for digital weighing technology in the food and lifescience industries.

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Hygienic Compression Load Cell CL



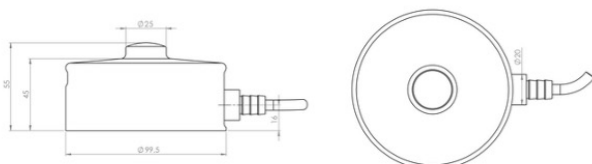
Our new hygienic (aseptic) compression load cell type CL comes in a EHEDG compliant design.

These robust digital compression load cells are produced in electropolished stainless steel and hermetically sealed to IP68 for hygienic weighing installations, installations in tough environments, and general process weighing.

The load cells can be supplied with a hygienic base plate in AISI316. The compression load cell type CL-Ex can be used in ATEX (Ex) and IECEx applications (Zone 1, 2, 21, and 22).

Special Features

- EHEDG compliant hygienic (aseptic) design without gaps or edges for easy cleaning to minimize the risk of bacteria growth
- Low profile and hygienic design
- High tolerance of up to 1000% overload
- Robust capacitive technology
- Hermetically sealed to IP68
- Electropolished stainless steel 1.4542 (17-4 PH)
- Laser welded with Duplex 1.4462 stainless steel
- ATEX and IECEx certified (Zone 1, 2, 21, 22)
- Easy mechanical and electrical installation
- High accuracy, High resolution
- Capacity (E_{max}): up to 5000kg
- Accuracy: up to High Precision 0.025%
- Load cell cable length up to 100meters
- Load cell calibration independent of cable length
- Load cell cable replaceable on-site
- Withstands welding voltages and ESD



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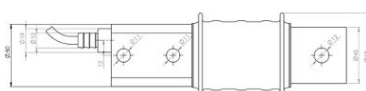
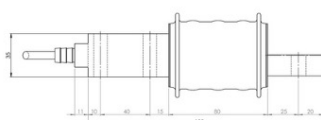
Parameter	Unit	0.05%	0.025%
Rated capacity (E_{max})	kg	50, 100, 150, 250, 500, 1000, 1500, 2000, 3000, 4000, 5000	
Safe overload limit	% of E_{max}	200 to 500	
Safe sideload limit	% of E_{max}	300 to 1000	
Minimum dead load	% of E_{max}	0	
Accuracy	% of E_{max}	0.050	0.025
Repeatability	% of E_{max}	0.025	0.020
Hysteresis	% of E_{max}	0.040	0.020
Creep 30 min.	% of E_{max}	0.040	0.040
Temperature effect on zero	% / 10°C	0.055	0.055
Temperature effect on sensitivity	% / 10°C	0.055	0.055
Compensated temperature range	°C	-10 to 50	
Operating temperature range	°C	-50 to 70 (100*)	
Deflection at E_{max}	mm	0.10	
Measuring rate	Hz	500	
Supply	Vdc	24Vdc ±5%	
Internal resolution	Bit	24	
Material		Stainless steel 17-4 PH and AISI 316	
Protection		IP68	
Cable		6meter standard coaxial RG-58 (Ø6mm) with BNC connector	
Maximum cable length	m	100	
Weight	kg	2.0	
Output options		EtherNet/IP, PROFINET, EtherCAT, Profibus DP, Modbus TCP/IP, DeviceNet, RS485, 4-20mA, 0-10Vdc	

* with Teflon cable

A high-resolution photograph of a stainless steel industrial probe. The probe has a cylindrical body with a flared, multi-ribbed section in the middle. It is mounted on a rectangular base with three mounting holes. A black cable is connected to the end of the probe. The background is a plain, light gray.

The BL-Ex load cell is certified for installation in ATEX (Ex) and IECEx environments (Zone 1, 2, 21, and 22) but can also be used in non-ATEX (Ex) rated areas.

- High tolerance of up to 1.000% overload
- Robust capacitive technology
- Hermetically sealed to IP68
- Electropolished stainless steel 1.4542 (17-4 PH)
- Laser welded with Stainless Steel 1.4541
- ATEX and IECEx certified (Zone 1, 2, 21, 22)
- Withstands welding voltages and ESD
- Load cell cable length up to 100meters
- High accuracy, High resolution
- Capacity (E_{max}): 10, 20, 30, 50, 100, 150, 250, 500, 1000kg
- Accuracy: up to High Precision 0,015% C4
- Load cell cable length up to 100meters
- Load cell calibration independent of cable length
- Load cell cable replaceable
- Easy mechanical and electrical installation



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Parameter	Unit	0.05%	0.025%
Rated capacity (E_{max})	kg	10, 20, 30, 50, 100, 150, 250, 500, 800, 1000	
Safe overload limit	% of E_{max}	200 to 1000	
Safe sideload limit	% of E_{max}	300 to 1000	
Combined accuracy	% of E_{max}	0.050	0.025
Repeatability	% of E_{max}	0.015	0.010
Hysteresis	% of E_{max}	0.020	0.017
Creep 30 min.	% of E_{max}	0.025	0.017
Temperature effect on zero	% / 10°C	0.035	0.035
Temperature effect on sensitivity	% / 10°C	0.035	0.035
Compensated temperature range	°C	-10 to 50	
Operating temperature range	°C	-50 to 70 (100**)	
Deflection at E_{max}	mm	max 0.10	
Measuring rate	Hz	500	
Supply	Vdc	24Vdc ±5%	
Internal resolution	Bit	24	
Material		Stainless steel 17-4PH and AISI316	
Protection		IP68	
Cable		6meter standard coaxial RG-58 (Ø6mm) with BNC connector	
Maximum cable length	m	100	
Weight	kg	2.5	
Output options		PROFINET, Profibus DP, EtherNet/IP, Modbus TCP/IP, EtherCAT, DeviceNet, RS485, 4-20mA, 0-10Vdc	

*higher accuracies available on request up to C4

**with Teflon cable

40 Years of Digital Weighing Solutions. Made in Denmark – Trusted Worldwide

More than 40 years ago, Mr Nils Eilersen invented the capacitive weighing technology – and today, Eilersen is still the only company in the world to master the capacitive weighing principle.

Our patented technology makes Eilersen a world leader in digital load cells, weighing instrumentation, and weighing solutions for industrial applications. A position we are constantly working to maintain and, hopefully, expand.

That is why 15% of the yearly turnover is invested directly into product development every year, with a department of experienced engineers assigned to this field.

Today, many of the largest and most recognized companies within the food, pharmaceutical, chemical, logistics and offshore industries in more than 90 countries worldwide benefit from Eilersen weighing solutions.

For more information, please contact

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