

# CDL Compression digital load cell

**PRECIA  
MOLEN™**  
WORLDWIDE WEIGHING



## Fields of use

- ▼ Weighbridges (trucks, wagons).
- ▼ Tank and silo weighing.

## Description

With 15 years of experience in digital load cells, PRECIA MOLEN now offers the CDL, a compression digital load cell with single-column technology for weighing applications on weighbridges.

The CDL uses the principle of measuring the distortion of beams under compressive stress. It uses strain gauges mounted in Wheatstone bridges to convert the force into an electrical signal.

The CDL has been designed to be little sensitive to load off-centring, while keeping small dimensions.

Made of Stainless Steel (304L), the CDL is waterproof in prolonged immersion (IP68) and high pressure cleaning (IP69K)

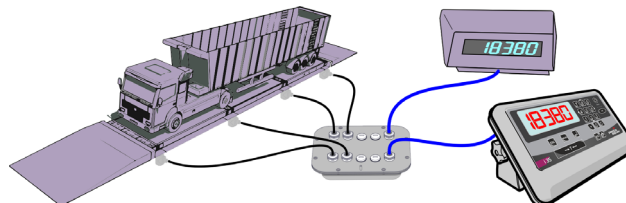
## Advantages

### Digital technology

Digital technology offers the accuracy of a measurement made as close as possible to the load to be weighed: the measurement is converted within the load cell itself, which sends a digital value. Therefore, the distance between the weighbridge and the indicator no longer has any influence on the quality of the information. Consequently, the 15-m long connection cable can be shortened according to installation requirements, thus preventing cable strands under the weighbridge.

Another advantage of digital technology lies in the set-up of a load cell network. The balancing of the weighbridge is performed more easily, by configuring the load cell, as opposed to a lengthy and delicate adjustment process using potentiometers as is done with analog technology. All the data is stored in the load cell but also in the indicator. Therefore, besides a fast detection of faulty weighbridge, replacing a load cell is easier as it only takes a transfer of all stored data into the new load cell for the weighbridge to be instantly functional.\*.

Moreover, the star-shaped connection of the PM.NET digital network around the PRECIA MOLEN connection box (itself with IP68 and IP69K protection ratings) offers a direct connection of measurement equipment like the remote weight display, thus avoiding extra cabling to the indicator.



\* Recommissioning in compliance with the present regulations, in France, an Initial Repair Verification has to be performed within two weeks.

### Immunity to electric surges

PRECIA MOLEN has developed a PM.NET field bus resistant to electrical disturbances thanks to a differential information transmission.

The CDL is efficiently protected from electrical disturbances itself thanks to its high voltage clipping protections.

Moreover, the connection of all grounded shielding of the PM.NET network grants compliance with Electro Magnetic Compatibility rules.

### Fully waterproof

Due to the absence of detachable connection, this load cell is fully waterproof, as proved by tests by a certified body. This load cell works perfectly in water for a prolonged time (IP68). Furthermore, the CDL can be cleaned by high pressure jet (IP69K) which makes your weighbridge easy to maintain sustainable.



### Design

Made of stainless steel, the load cell has as standard anti-rodent protection with metal tubing offering efficient protection against rodent attacks.

With its 125-mm height, this load cell is one of the most compact on the market, making it ideal for the renovation of older weighbridges and simplifying civil engineering works.



French manufacture.

## Compliance

- ▼ Test certificate delivered by a certified body according to the R60 recommendation of the OIML.
- ▼ IP68 / IP96K certificate number: LCIE N°118526\_636680.
- ▼ Test in fog according to NF EN ISO-9227 norm.

## Available models

- ▼ 30 t CDL: 3 500 d (C3.5).
- ▼ 50 t CDL: 3 500 d (C3.5).

## Technical data

### Electrical features

- ▼ DC power voltage..... 7 V
- ▼ Black PVC shielded cable with tubing:
  - Outer Ø ..... 6,6 mm
  - Length..... 15 m
  - Minimum curve radius..... 40 mm
  - Flexible metal tubing..... 80 cm
  - Isolation resistance ..... 5000 MΩ

### Metrological features

Accuracy class*		C3,5	C3,5
Maximum capacity	$E_{max}$	t	30 50
Minimum dead load	$E_{min}/E_{max}$	%	0 0
Checking division ratio	$Y=E_{max}/v_{min}$		7500 6977

\* The C3.5 accuracy class is compliant with the OIML R60 international recommendation.

### Environmental features

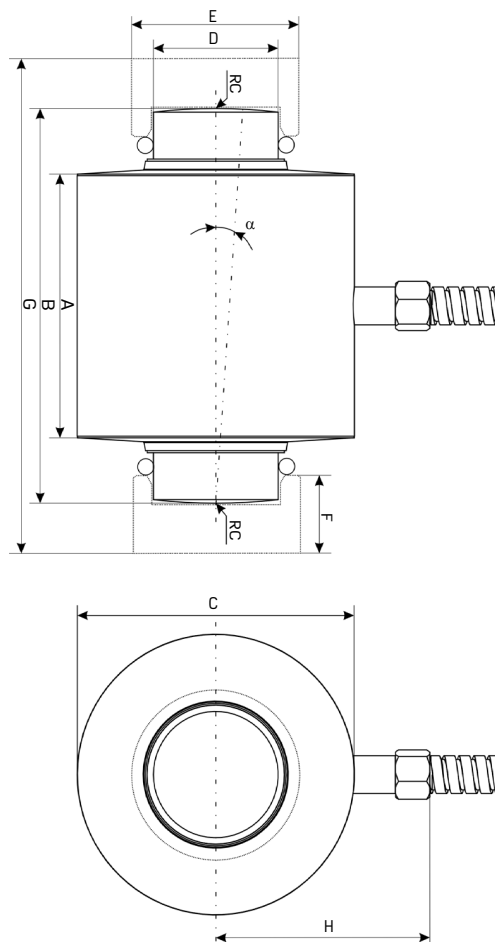
- ▼ Temperatures ranges:
  - Compensated ..... - 10 °C / + 40 °C
  - In service ..... - 30 °C / + 65 °C
  - In storage ..... - 30 °C / + 70 °C
- ▼ Waterproof according to DIN 40-050 IP 68

### Mechanical features

- ▼ Limit load..... 150 %  $E_{max}$
- ▼ Breaking load..... 300 %  $E_{max}$

Load cell	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	RC (mm)	$\alpha$ (°)	Wgt (kg)
CDL 30 t	82.5	125	89	40	58	25 / 30	157/167	68.5	175	5	2.5
CDL 50 t	82.5	153	89	48	68	46	215	68.5	225	5	3.5

### Dimensions



## Accessories

Digital connection box	Cups	Shim	Anti-rotation
<p>DJB 4                      DJB 6/8</p>			

Your specialist

Illustrations not contractual. Precia-Molen reserves the right to alter the characteristics of the equipment described in this brochure at any time.

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