

CDL Compression digital load cell

**PRECIA
MOLEN™**
WORLDWIDE WEIGHING



Fields of use

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

Description

With its 15 years' experience in digital load cells, PRECIA MOLEN now offers the CDL, a compression digital load cell with mono-column technology adapted to weighing applications for weighbridges.

The CDL uses the measurement principle by distortion of beams submitted to a compression strain. It uses strain gauges mounted in Wheatstone bridges for the conversion of strength 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)

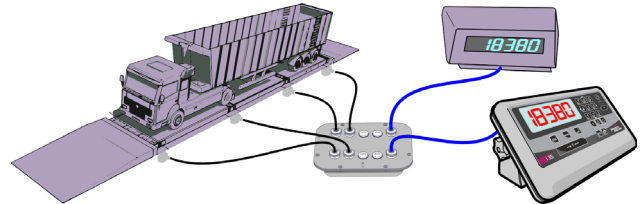
Advantages

Digital technology

Digital technology offers measurement accuracy closest to the load to weigh, measurement conversion is performed within the load cell itself, the load cell sends a digital value. Therefore, the distance between the weighbridge and the indicator has no more influence on the quality of the information. So 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 a configuration of the load cell as opposed to a lengthy and delicate adjustment using potentiometers as in analog technology. All data are stored into 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 indexes) offers a direct connection of measurement equipments such as the weight remote display thus avoiding extra cabling to the indicator.



* Putting back into service in compliance with the present regulations, in France, an Initial Repair Verification has to be performed every fortnight.

Immunity to high voltages

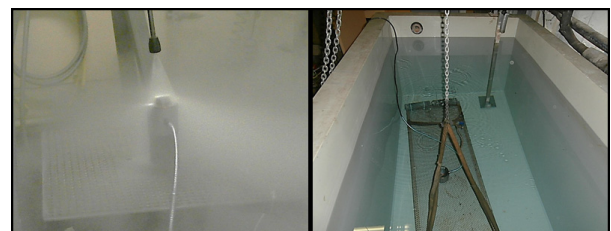
PRECIA MOLEN has developed a PM.NET field bus resistant to electrical disturbances thanks to a differential information transmission.

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

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

Totally waterproof

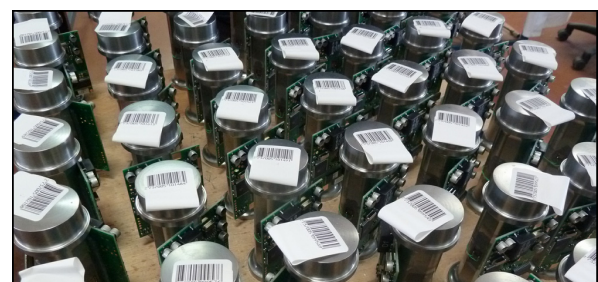
Due to its absence of detachable connection, this load cell is totally waterproof as proved by tests by a certified body. This load cell perfectly works in water for a prolonged time (IP68). Furthermore, the CDL can be cleaned by high pressure jet (IP69K) which eases the maintenance and sustainability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



Design

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

With its 125-mm height, this load cell is one of the most compact ones in the market offering the renovation of older weighbridges simplifying civil engineering works.



French manufacture.

Conformities

- ▼ Test certificate delivered by a certified body according to the R60 recommendation of the IOLM.
- ▼ 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 tension..... 7 V
- ▼ Black PVC shielded sheathed cable:
 - Ø exterior..... 6,6 mm
 - Length..... 15 m
 - Minimum curve radius..... 40 mm
 - Metallic sheath..... 80 cm
 - Insulation 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 IOLM R60 international recommendation.

Environmental features

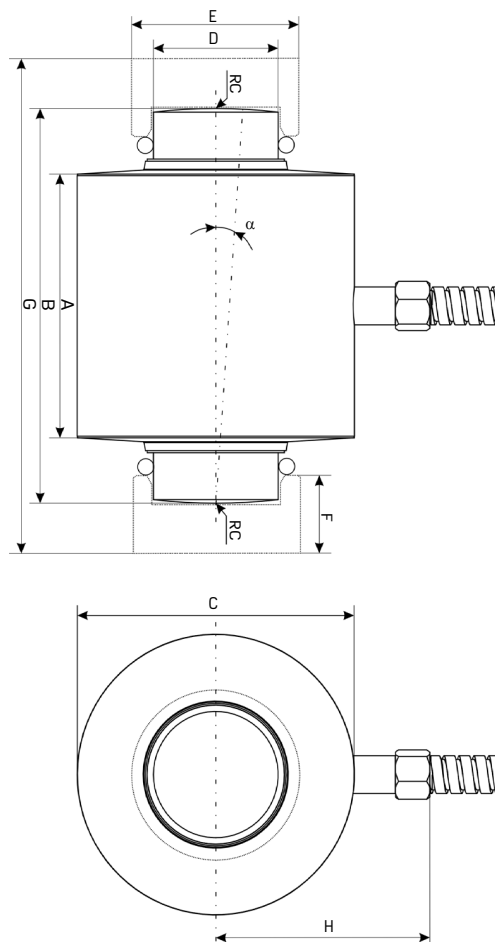
- ▼ Temperatures ranges:
 - Compensated..... - 10 °C / + 40 °C
 - In service..... - 30 °C / + 65 °C
 - In storage..... - 30 °C / + 70 °C
- ▼ Waterproof according to DIN 40-050 IP 68

Mechanic features



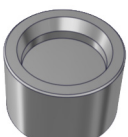
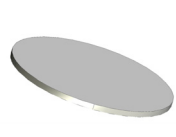

- ▼ Limit load..... 150 % E_{max}
- ▼ Breakage load..... 300 % E_{max}

Load cell	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	RC (mm)	α (°)	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		68,5	225	5	2,5

Dimensions



Accessories

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

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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