

# CPR-M

## ANALOG LOAD CELL



*Innovation, quality and  
reliability guaranteed*



# Analog load cell CPR-M model

The CPR-M load cells are designed and produced entirely by Coop Bilanciali which, thanks to its acknowledged high level of technological expertise on weigh bridges, of which the load cell is an essential part, they are designed according to their specific use with extremely reliable results for the entire weighing system.



Load cell models CPR-M associate **high-level metrological characteristics** with extreme **resilience**. This combination is one of the plus points that has contributed to the huge success of this product on the market.

Approved by legal measurements in compliance with the OIML R 60 recommendations up to 4000 divisions, they are the result of collaboration between prestigious Engineering institutes and universities and the Coop Bilanciali Research and Development department.

They are built using an exclusive, **patented elastic element** (MO 94A000040 - EPO800069) which provided endless, important advantages, such as the compensation for errors due to inclination caused by **thermal expansion and elastic**

**deformation of the weighbridge.**

This elastic element provides **for a significant increase in reliability** over time as no semi-conductor strain gauges are required which are instead used in all the other products present on the market.

The entire cell, from the central body to the casing, is made in highly corrosion-resistant stainless steel.

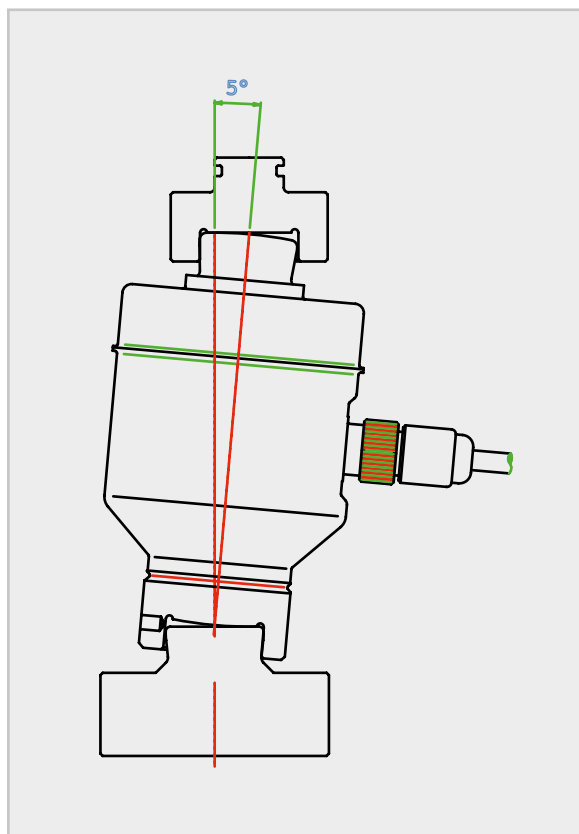
The connection cable inlet is embedded in and protected by high-insulation, **damp-proof bi-component silicone resins.**

Coop Bilanciali has a wide range of ATEX-certified solutions for weighing installation that can be installed in hazardous areas.

# FEATURES FUNCTIONS & BENEFITS

## **INCLINATION UP TO 5° (15 mm FROM VERTICAL POSITION)**

- This excludes problems during thermal expansion or caused by elastic deformation of the weigh bridge and any settling of any foundation
- It also allows for a high level of accuracy, even in installations with rather long weigh bridges.



## **SELF-STABILISING SYSTEM WITH ANTI-ROTATION DEVICE**

- This avoids the cell rotating on itself and stops the cable from twisting

## **8 STRAIN GAUGES**

- High precision, also when the cell must work in a non-vertical position
- Better repeatability and reproducibility

## **HEAVY-DUTY PROTECTION (1,5 mm THICKNESS) AT 45° CONE**

- This allows oscillation for removing debris that may deposit without affecting the correct operating of the system

## **MECHANICAL PROTECTION COVER FOR LOWER MOUNTING CUP**

- Solution that avoids using rubber protections that are subject to wear

## **LIGHTNING PROTECTION**

The protection from lightning is one of the aspects to which attention must be paid. Cooperativa Bilanciai has included 3 different solutions to ensure effective protection:

- A disk made from special insulation material that interrupts the flow of electricity between the bridge's upper structure and the base, via the cell
- High section copper braid bypass
- Electrical board housed in the cell, with components that limit voltage surge caused by lightning

## **RODENT-RESISTANT CABLE**

- A special connection cable with a stainless steel sleeve is available for areas where protection from rodents is required

## **MAXIMUM PROTECTION FROM RADIO- FREQUENCY INTERFERENCE**

- The adoption of special filters prevent interference from high frequency devices

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## **A - 8 STRAIN GAUGES**

High precision - Repeatability - Reproducibility

## **B - HEAVY-DUTY PROTECTION AT 45° CONE**

## **C - MECHANICAL PROTECTION COVER**

## **D - INSULATION DISC FOR LIGHTNING PROTECTION**

## **E - OVERVOLTAGE AND INTERFERENCES PROTECTION**

## **F - COPPER BRAIDED EARTHING CABLE**

## **G - CONNECTING CABLE ENCAPSULATED AND PROTECTED AGAINST THE MOISTURE THANKS TO SPECIAL RESINS**



## HIGH ADDED VALUE PRODUCTION PROCESS

Each part produced by Cooperativa Bilanciai undergoes several tests to guarantee the high quality level and maintenance of reliability over time:

Material testing with function simulation tests up to 120% of maximum capacity

Severe controls on the materials before they are used in production, with metallographic tests and hardness measurements

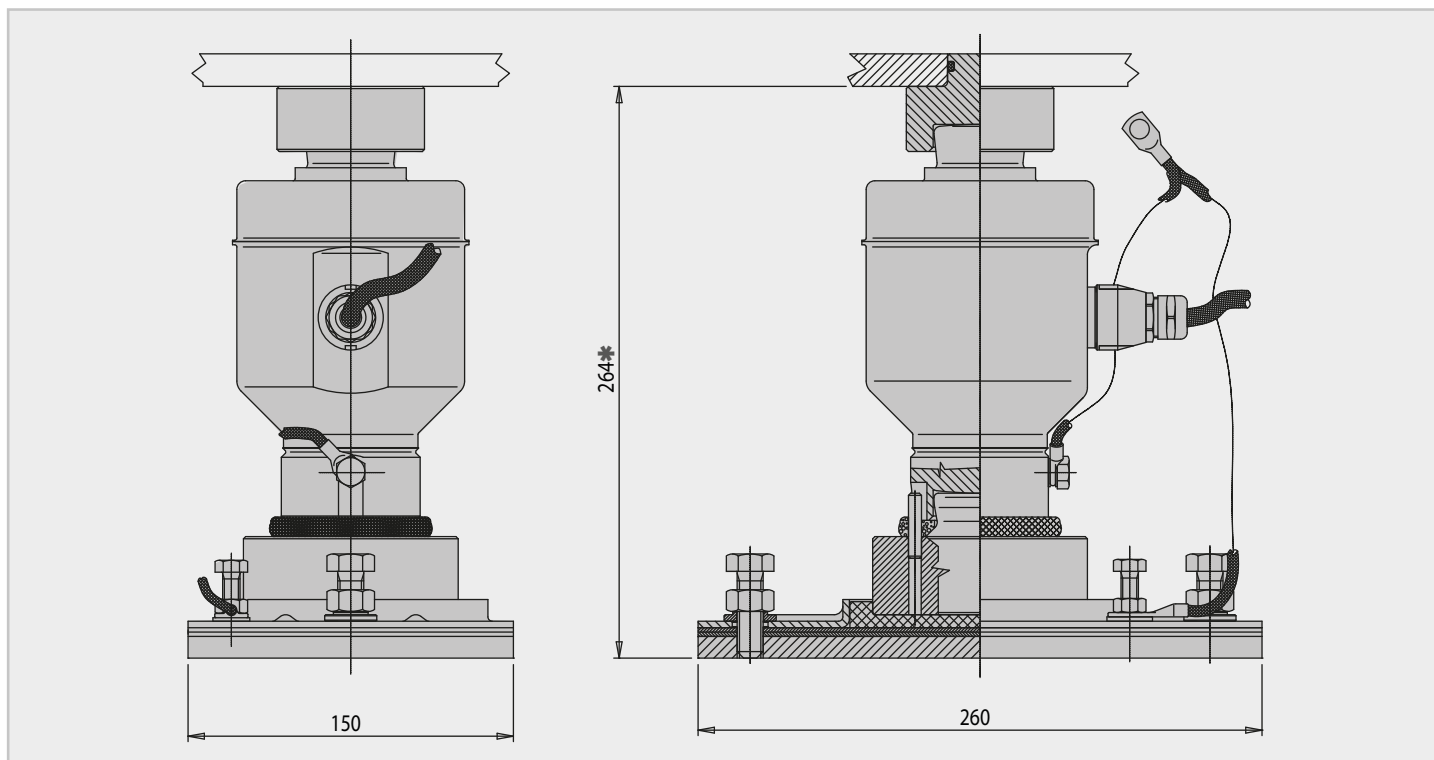
Test on each part, with checks on measurements for comparison with LAT-certified and calibrated reference cell units, using strength testing machines using direct weights



Traceability of each cell by serial number and bar code

Test using strength testing machines using direct weights, sized to each specimen

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**\* Reduced height version available on demand**

KEY TECHNICAL FEATURES	
Maximum capacity	20-35-50 t
Sealing version	IP68/69K
OIML R 60 Max n° intervals	Max 4000
Safe overload	150 %
Safe sideload	50 %
Nominal temp. range	- 10 + 40° C
Operating temp. range	- 30 + 70° C
Storage temp. range	- 40 + 80° C
Exi version	⚠ II 1 G Ex ia IIC T5, T4 Ga; II 1 D Ex ia IIIC T 85°C Da Tamb (-20°C ÷ + 40°C) T5/T 85°C; Tamb(- 20°C ÷ + 55°C) T4/ T 85°C
Z22 version type	⚠ II 3 D Ex tc IIIC T=80° Dc IP6x (-20°C ≤ Tamb ≤ +55°C)