BILANCIAI
OUR STORY BUILDS YOUR INNOVATION



CPR-M

ANALOGUE LOAD CELL

BILANCIAI GROUP

CPR-M

ANALOGUE LOAD CELL

Product suitable for ATEX certification

Declaration of Conformity

NTEP certification

Structure in AISI 304 Stainless Steel IP68/69K

HIGH MECHANICAL ROBUSTNESS HIGH PRECISION METROLOGICAL CHARACTERISTICS

The **CPR-M load cells** are entirely designed and produced by Coop Bilanciai, whose high technical know-how on weighbridges, ensures **accurate and reliable results for the complete weighing system**.



Approved up to 4000 divisions by Legal Metrology in accordance with the OIML R 60 recommendations, they are the result of collaboration between prestigious engineering institutes and universities and Coop Bilanciai Research and Development.

They are built with an **exclusive, patented elastic element** which provides endless and important advantages, such as the **compensation of errors** due to the inclination caused by thermal expansion and elastic deformation of the weighbridge.

STRENGTHS

Each load cell produced by Cooperativa Bilanciai undergoes several tests to guarantee a high quality standard and long lasting reliability:

- **MATERIAL TESTING WITH OPERATIONAL TESTS UP TO 120% OF MAXIMUM CAPACITY**
- **SEVERE CONTROLS ON THE MATERIALS BEFORE THEY GO INTO PRODUCTION, WITH METALLOGRAPHIC ANALYSIS AND HARDNESS TESTING**





This elastic element significantly helps to **increase reliability over time as no semi-conductor strain gauges are required, unlike all the other products present on the market**.

The entire load cell, from the central body to the housing, **is made of highly corrosion-resistant stainless steel**.

The connection cable entry is encapsulated and protected by means of bicomponent silicone resins with **high-insulation capacity** and optimal **moisture protection**.

Coop Bilanciai offers a wide range of **ATEX certified solutions** for weighing systems to be installed in hazardous areas.

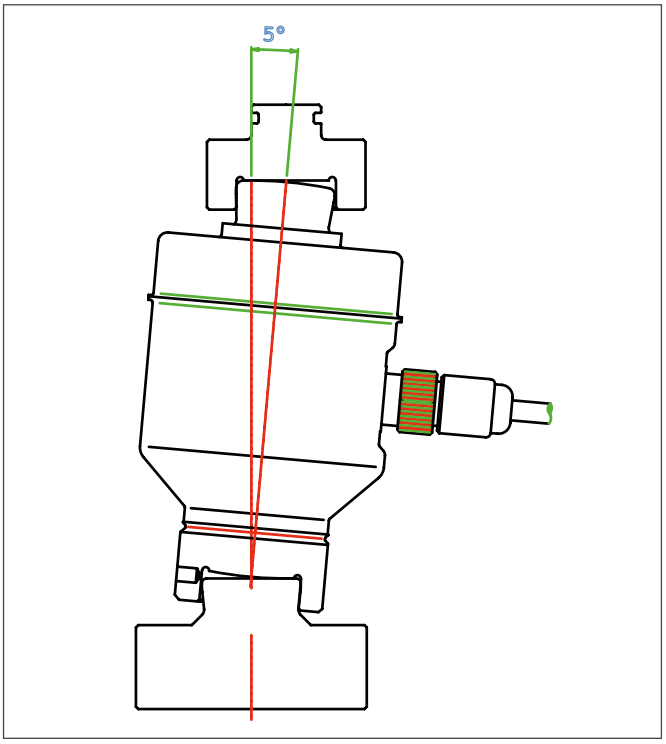


- **TEST ON EACH LOAD CELL AND VERIFICATION OF THE METROLOGICAL CHARACTERISTICS BY COMPARISON WITH LAT-CERTIFIED AND CALIBRATED REFERENCE LOAD CELLS, USING DEADWEIGHT FORCE STANDARD MACHINES**
- **TRACEABILITY OF EACH LOAD CELL BY ITS SERIAL NUMBER AND BAR CODE**
- **TEST AT DIFFERENT TEMPERATURES AND TEMPERATURE COMPENSATION ON EACH LOAD CELL**

CONSTRUCTION FEATURES

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

- It allows to avoid problems during the thermal expansion or in case of elastic deformations of the weighbridge and any possible settlement of the foundation.
- It also allows for high levels of accuracy, even with considerably long weighbridges.



SELF-STABILISING SYSTEM WITH ANTI-ROTATION DEVICE

- It prevents any load cell rotation and cable twisting.

45° CONE PROTECTION (1 mm THICK)

- Thanks to its oscillation, it allows to remove any accumulated debris which could affect the correct operation of the system.

MECHANICAL PROTECTION CAP FOR LOWER SPHERICAL SURFACE

- It avoids the use of rubber protections which are subject to wear.

LIGHTNING PROTECTION

The closest attention must be paid to lightning protection.
Cooperativa Bilanciai has included 3 different solutions to ensure adequate protection:

- Insulating disc which interrupts the electrical continuity between the weighbridge upper structure and the base plates.
- Large cross-section copper braid bypass
- Electrical board housed within the load cell, equipped with surge protector components to limit any atmospheric over-voltage.



EXCELLENT RESISTANCE TO RADIO FREQUENCY INTERFERENCE

- The use of special filters prevents high frequency interferences.

8 STRAIN GAUGES

- High precision, even when operating in a non-vertical position
- Better repeatability and reproducibility.



A 8 STRAIN GAUGES: high precision - repeatability - reproducibility

B 45° CONE PROTECTION

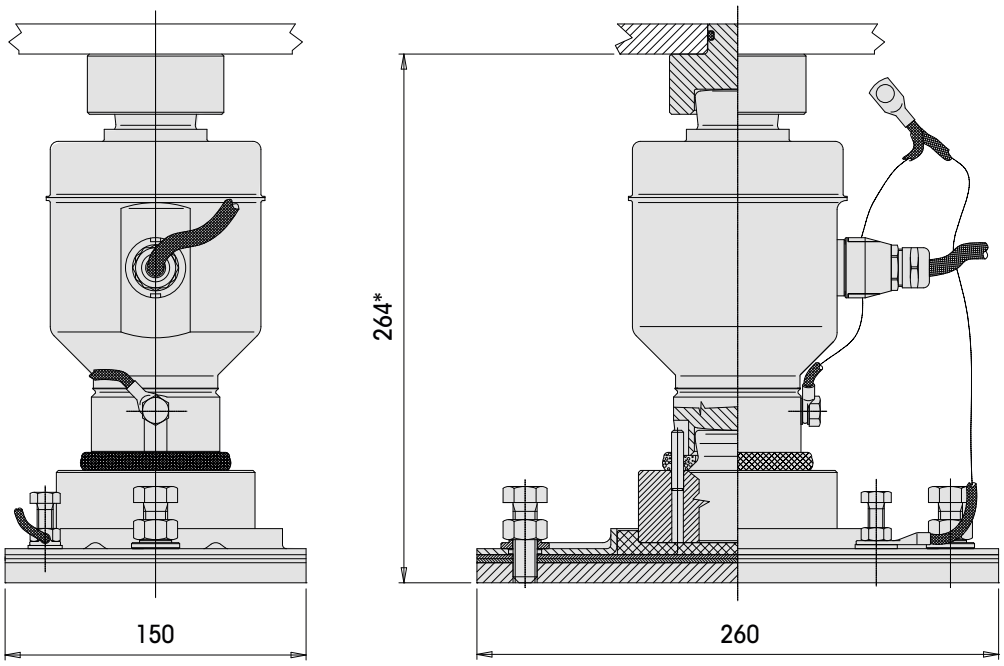
C MECHANICAL PROTECTION CAP

D INSULATING DISC FOR LIGHTNING PROTECTION

E OVERVOLTAGE AND INTERFERENCES PROTECTION

F COPPER BRAID BYPASS

G ENCAPSULATED CONNECTING CABLE WHICH PERFECTLY PROTECTS AGAINST MOISTURE BY MEANS OF SPECIAL RESINS



* Reduced heights are available on request

KEY TECHNICAL FEATURES

MAXIMUM CAPACITY		20-35-50 t
PROTECTION DEGREE		IP/68/69K
Number of scale divisions according to OIML R 60		Max 4000
SAFE OVERLOAD		150%
ULTIMATE OVERLOAD		300%
NOMINAL TEMP. RANGE		- 10 + 40°C
OPERATING TEMP. RANGE		- 30 + 70°C
STORAGE TEMP. RANGE		- 40 + 80°C
EXI VERSION	Ex	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	Ex	II 3 D Ex tc IIIC T=80° Dc IP6x (-20°C≤Tamb≤+55°C)


CPR-M
Totally reliable, the guarantee of innovation

In order to technologically improve its production, the company reserves the right to make changes and modifications to the products shown in the above pictures at any time and without prior notice.
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BILANCIAI GROUP

BILANCIAI

Società Cooperativa Bilanciai Campogalliano
41011 Campogalliano (MO) Italy
Via S. Ferrari, 16 - Ph. +39 059 893611
Customer Service - Ph. +39 059 893612
www.coopbilanciai.it - info@coopbilanciai.it