SOCIETA' COOPERATIVA
BILANCIAI
Weighing Instruments and Technology



CPD-M

DIGITAL LOAD CELL

BILANCIAI GROUP

CPD-M

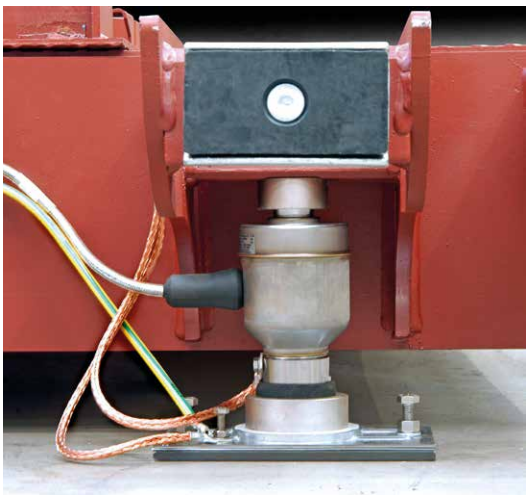
DIGITAL LOAD CELL

Product suitable for ATEX certification

Declaration of Conformity

NTEP certification

Structure in AISI 304 Stainless Steel IP68/69K



STRONG AND RELIABLE, SUITABLE FOR APPROVED WEIGHING SYSTEMS UP TO 6000 DIVISIONS

The **CPD-M load cells** are designed and produced entirely by Coop Bilanciai 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.**

In 1997, after the success achieved with the range of CPR-M model analogical cells, Coop Bilanciai entered the digital era with the **innovative CPD-M range**, load cells using **digital technology**.

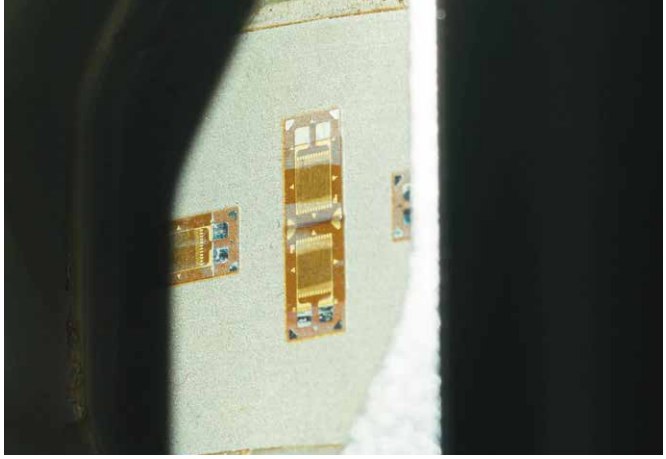
Designed in collaboration with prestigious Engineering institutes and universities, perfected by the company's Research and Development sector and approved by legal measurement in compliance with the OIML R 60 recommendations up to 6000 divisions, in accordance with the NTEP regulations, they **are covered by international patents (MO 2003A00013 – EP 163194 – US7151230 US7361851).**

STRENGTHS

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**





The calibration data for each load cell in the digital version are **memorised in the electronic memory, thus facilitating calibration, the search for faults, maintenance and repair.**
The cell body is made in **17-4 PH** stainless steel, a material with high technical characteristics, used in saline environments, where **high corrosion-proof characteristics are required.**
The protective casing is also made of a highly corrosive-proof stainless steel.
Electrical connections are via a **watertight IP68/69K stainless steel connector** that aids installation and any necessary maintenance by optimising cable length.

A latest-generation electronic board with a high resolution and stability analogical/digital converter is housed inside the load cell, with an extremely sophisticated programming and control logic for:

- **continuous diagnostics** on the status of each system component, allowing the immediate identification of any parts with functioning irregularities
- Carrying out **functional checks on the status of the instrument** and each load cell via modem directly from the maintenance service department, thus reducing costs and intervention times.

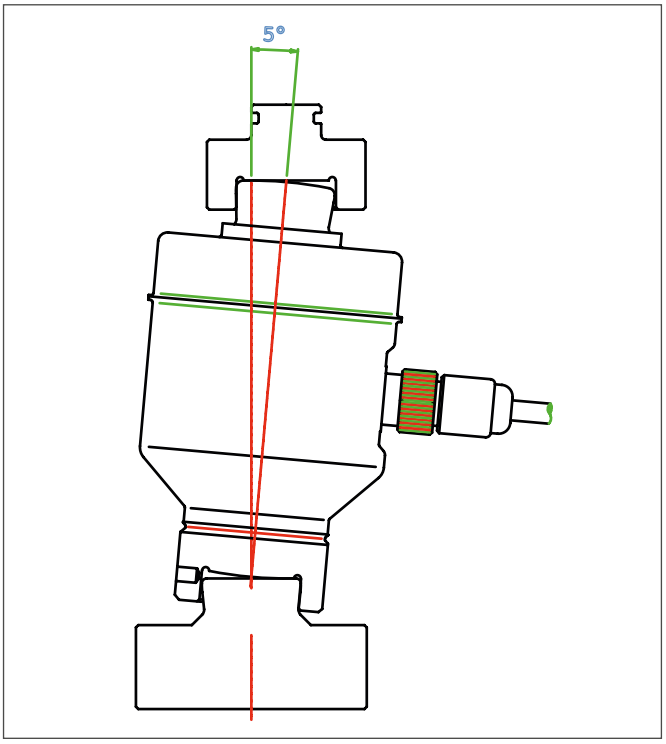
Coop Bilanciai has a wide range of **ATEXcertified solutions** for weighing installation that can be installed in hazardous areas.

- **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**

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 prevents the cell rotating on itself and the cable from twisting.

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.

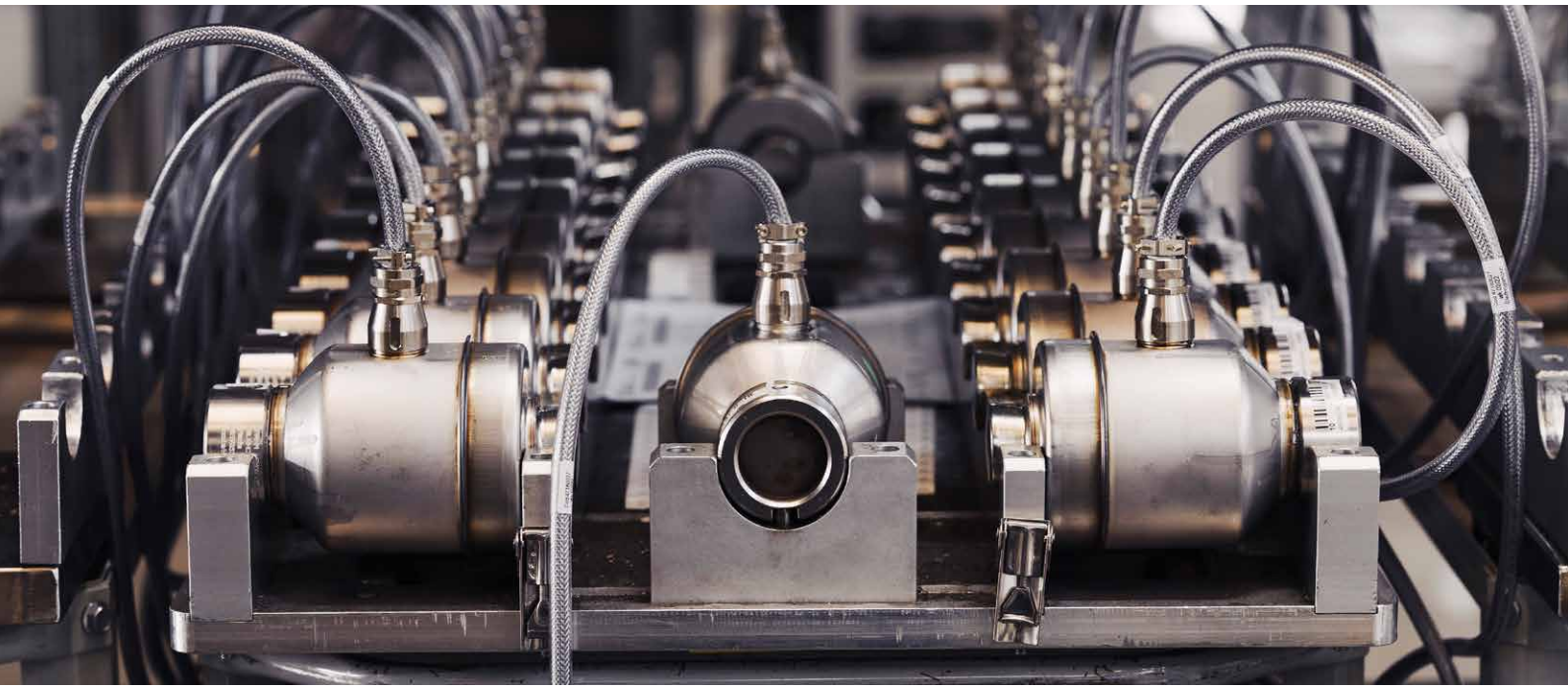
MECHANICAL PROTECTION COVER FOR LOWER MOUNTING CUP

- The use of this mechanical element means that rubber protections can be avoided, which 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.



MAXIMUM PROTECTION FROM RADIO-FREQUENCY INTERFERENCE

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

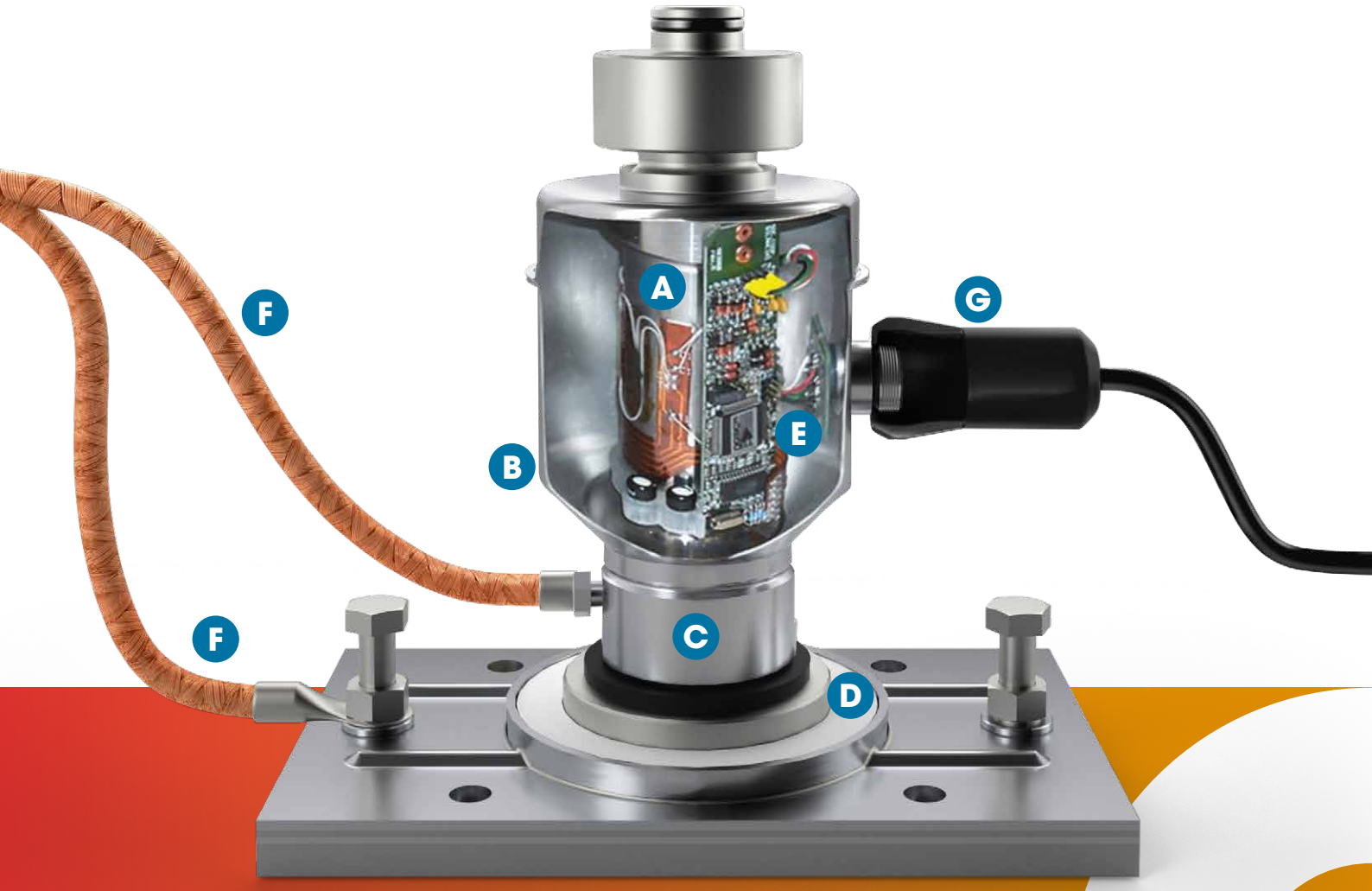
8 STRAIN GAUGES

- High precision, also when the load cell is working in a non-vertical position
- Better repeatability and reproducibility.

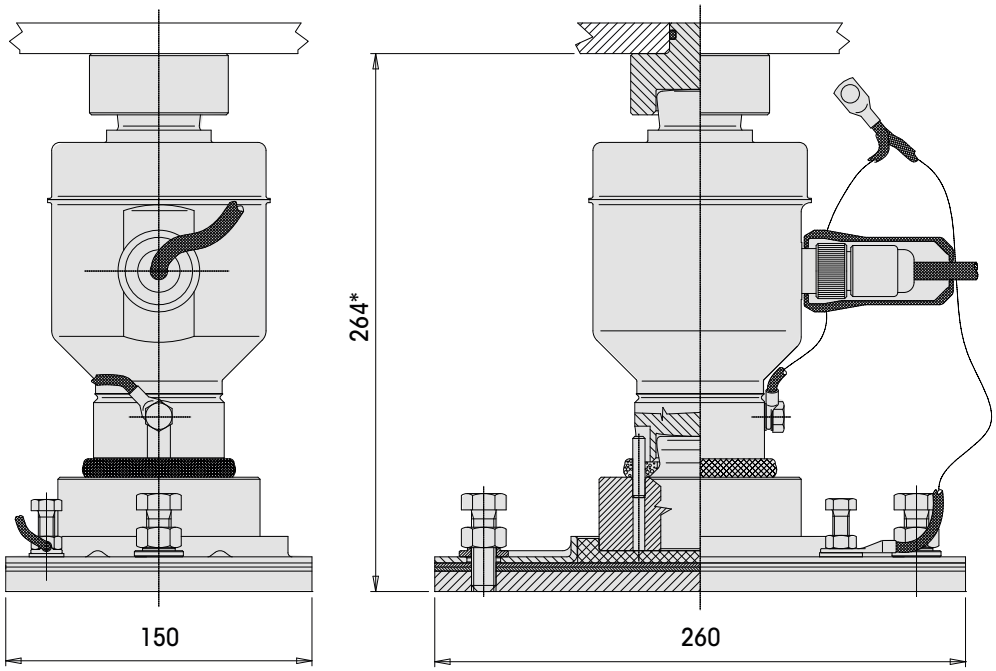


RODENT-RESISTANT CABLE

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



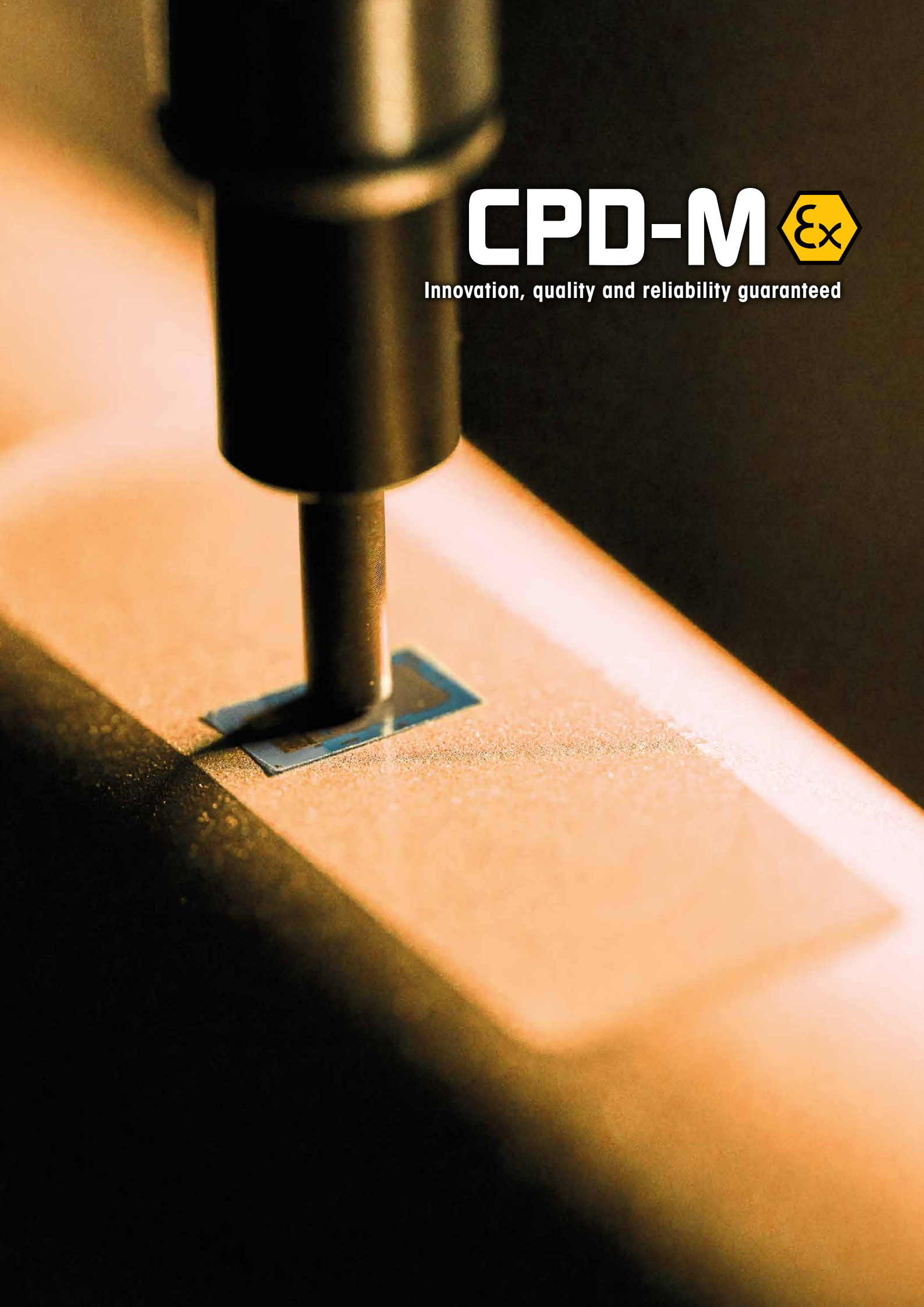
A 8 STRAIN GAUGES: high precision - repeatibility - reproducibility
B HEAVY-DUTY PROTECTION AT 45° CONE
C MECHNICAL PROTECTION COVER
D INSULATION DISC FOR LIGHTNING PROTECTION
E OVERVOLTAGE AND INTERFERENCES PROTECTION
F COPPER BRAIDED EARTHING CABLE
G WATERTIGHT IP68/IP69K STAINLES STEEL CONNECTOR



* Reduced height version available on demand

KEY TECHNICAL FEATURES

MAXIMUM CAPACITY	20-35-50 t	
SEALING VERSION	IP/68/69K	
OIML R 60 MAX N° INTERVALS	Max 6000	
SAFE OVERLOAD	150%	
SAFE SIDELOAD	10%	
NOMINAL TEMP. RANGE	- 10 + 40°	
OPERATING TEMP. RANGE	- 30 + 70°	
STORAGE TEMP. RANGE	- 40 + 80°	
TRANSMISSION PROTOCOL	RS 485	
EXI VERSION	Ex	II 1 G Ex ia IIC T5 Ga; II 1 D Ex ia IIIC T100°C Da Tamb (- 20°C ÷ + 50°C) T5/T100°C
Z22 VERSION TYPE	Ex	II 3 D Ex tc IIIC T=80° Dc IP6x (-20°C≤Tamb≤+55°C)


CPD-M
Innovation, quality and reliability guaranteed

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

SOCIETA' COOPERATIVA BILANCIAI
Weighing Instruments and Technology

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