

Single Ended Load Beam



FEATURES

- Capacities: 5 - 500kg
- Fully welded, stainless steel construction
- Hermetically sealed, IP66 and IP68
- Certified to OIML R-60, 4000d and NTEP class III, 10000 divisions
- Current calibration output (SC version) ensures easy and accurate parallel connection of multiple load cells

OPTIONAL FEATURE

- ATEX and FM certified versions are available for use in potentially explosive atmospheres

DESCRIPTION

The SHBxR is a fully weld-sealed stainless steel bending beam type load cell.

This product is suitable for low capacity platform scales, packaging machines, hybrid scales and process weighing.

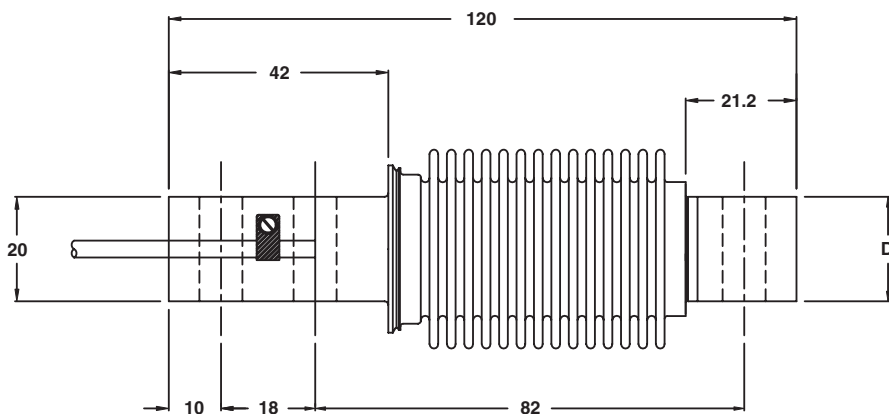
Fully welded construction and water block cable-entry ensure that this product can be used successfully in harsh environments found in the food, chemical and allied industries.

This product meets the stringent Weights and Measures requirements throughout Europe.

APPLICATIONS

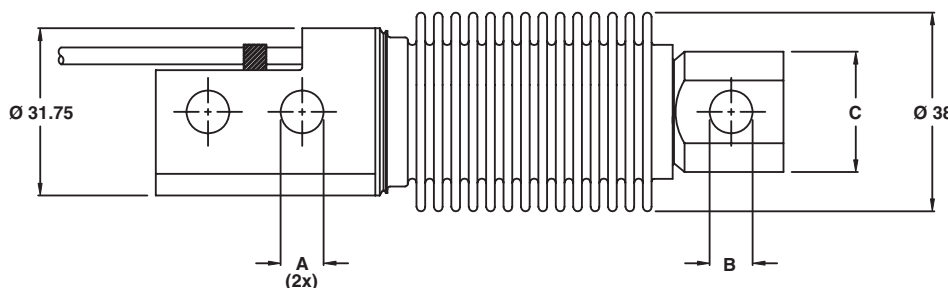
- Platform scales
- Belt scales
- Packaging machines
- Silo/hopper weighing

OUTLINE DIMENSIONS in millimeters



| Capacity (kg) | 5 - 200 | 350 / 500 |
|---------------|----------------------------------|-----------------------------------|
| A | 8.2 | 10.3 |
| B | 8.2 ^{+0.1} ₀ | 10.3 ^{+0.1} ₀ |
| C | 23.0 | 24.0 |
| D | 20.0 | 19.0 |

Note: Dimensions in millimeters



Cable specifications:

| | |
|--------------|-------------|
| Cable length | 3m |
| Excitation + | Green |
| Excitation - | Black |
| Output + | White |
| Output - | Red |
| (Sense +) | Yellow |
| (Sense -) | Blue |
| Shield | Transparent |

4-wire cable standard,
6-wire cable optional



SPECIFICATIONS

| PARAMETER | VALUE | | | | | UNIT |
|--|--|--------------|------------------|------------------|----------------------|--------------------------|
| Standard capacities (E_{max}) | 5, 10, 20, 30, 50, 100, 200, 350, 500* | | | | 100, 200, 350, 500** | kg |
| Accuracy class according to OIML R-60 /NTEP | NTEP III L | Non-Approved | C3 | C4 | C3MI7.5 | |
| Max. no. of verification intervals | 10000 | | 3000 | 4000 | 3000 | |
| Min. verification interval ($V_{min}=E_{max}/Y$) | | | $E_{max}/15,000$ | $E_{max}/15,000$ | $E_{max}/15,000$ | |
| MDLOR ($Z=E_{max}/2*DR$) | | | | | 7500 | |
| Rated output (=S) | 2 | | | | | mV/V |
| Rated output tolerance | 0.02 | | | | | ±mV/V |
| Zero balance | 1.0 | | | | | ±% FSO |
| Combined error | 0.0200 | 0.05000 | 0.0200 | 0.0170 | 0.0200 | ±% FSO |
| Non-repeatability | 0.0100 | 0.0200 | 0.0100 | 0.0090 | 0.0100 | ±% FSO |
| Minimum dead load output return* | 0.0250 | 0.0500 | 0.0167 | 0.0125 | 0.0067 | ±% applied load |
| Creep error (30 minutes) ¹ | | 0.0600 | 0.0245 | 0.0184 | 0.0245 | ±% applied load |
| Creep error (20 - 30 minutes) ¹ | 0.0300 | 0.0500 | | | | ±% applied load |
| Temp. effect on min. dead load output | (0.0008) | 0.0250 | 0.0047 | 0.0047 | 0.0047 | ±% FSO/5°C (°F) |
| Temperature effect on sensitivity | (0.0010) | 0.0250 | 0.0050 | 0.0045 | 0.0050 | ±% applied load/5°C (°F) |
| Minimum dead load | 0 | | | | | % E_{max} |
| Maximum safe over load | 150 | | | | | % E_{max} |
| Ultimate over load | 300 | | | | | % E_{max} |
| Maximum safe side load | 100 | | | | | % E_{max} |
| Deflection at E_{max} | 0.30±0.03 | | | | | mm |
| Excitation voltage | 5 to 12 | | | | | V |
| Maximum excitation voltage | 15 | | | | | V |
| Input resistance | 460±50 | | | | | Ω |
| Output resistance | 350±3.5 | | | | | Ω |
| Insulation resistance | ≥5000 | | | | | MΩ |
| Compensated temperature range | -10 to +40 | | | | | °C |
| Operating temperature range | -40 to +80 | | | | | °C |
| Storage temperature range | -40 to +90 | | | | | °C |
| Element material (DIN) | Stainless steel 1.4542 | | | | | |
| Sealing (DIN 40.050 / EN60.529) | IP66 and IP68 | | | | | |
| SC-Version (current calibration) | Standard | | | | | |
| Recommended torque on fixation bolts | 23 (70 for 350/500kg) | | | | | N*m |

* 5 & 10kg capacities are not approved by NTEP.

5 kg is not approved by OIML.

** $D_{max} = 0.75 * E_{max}$.

FSO-Full Scale Output

SC-version: The rated output and the output resistance are balanced in such a way, that the output current is calibrated to within 0.05% of a reference value. This allows easy parallel connection of the load cells.

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