Single-Ended Load Beam

FEATURES

- Capacities: 5–500 kg
- Fully-welded, stainless-steel construction
- Hermetically sealed, IP66 and IP68
- Certified to OIML R-60, 4000d and NTEP class IIIL, 10000 divisions
- Current calibration output (SC version) ensures an easy and accurate parallel connection of multiple load cells
- **Optional**
  - ATEX, UKCA and FM-certified versions for use in potentially explosive atmospheres

APPLICATIONS

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

DESCRIPTION

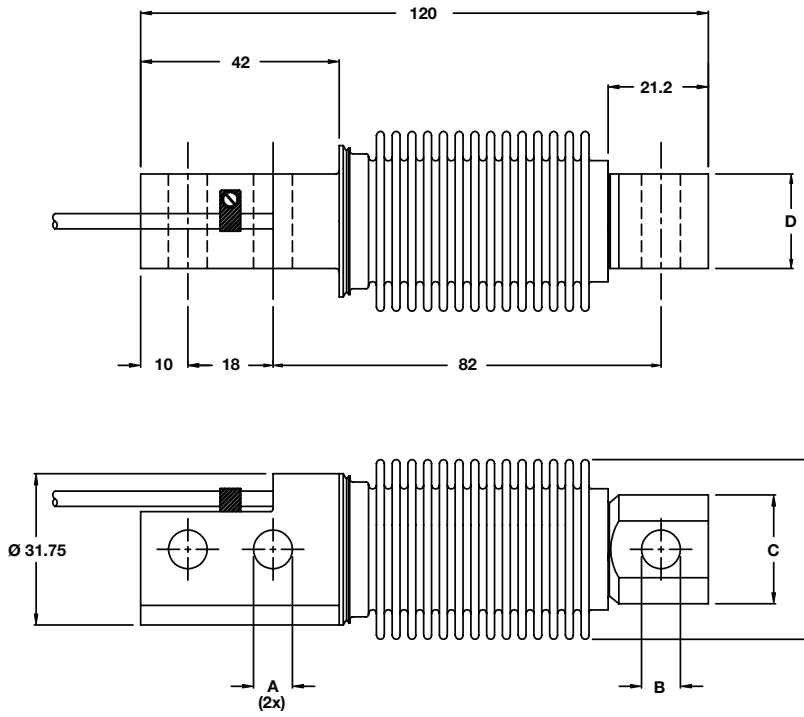
Model SHBxR is a fully-welded sealed stainless-steel bending beam type load cell.

The 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 demanding environments found in the food, chemical and allied industries.

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

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

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SPECIFICATIONS						
PARAMETER	**VALUE**					**UNIT**
Standard capacities (E_{max})	5, 10, 20, 30, 50, 100, 200, 350, 500 (1)				100, 200, 350, 500 (2)	kg
Accuracy class according to OIML R-60 /NTEP	NTEP IIIL	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)		0.0600	0.0245	0.0184	0.0245	±% applied load
Creep error (20 - 30 minutes)	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 350/500 kg)					N*m

(1) 5 and 10 kg capacities are not approved by NTEP.
5 kg is not approved by OIML.

(2) $D_{max} = 0.75 * E_{max}$

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.

All specifications subject to change without notice.

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CERTIFICATION MARKINGS

ATEX & UKEX Markings: (For Zone 1, 2 and Zone 21, 22)

II 2 G Ex ib IIC T6…T4 Gb
II 2 D Ex ib IIIC T70°C Db
II 2 D Ex tb IIIC T70°C Db

II 3 G Ex ic IIC T6…T4 Gc or Ex nA IIC T6…T4 Gc
II 3 D Ex ic IIIC T70°C Dc or Ex tc IIIC T70°C Dc

IS Class I, II, III, Division 1, Groups A, B, C, D, E, F and G;
NI Class I, Division 2, Groups A, B, C, and D;
DIP Class II, III, Division 2, Groups F and G;
T4;
Ta = -25°C to +40°C;