

# SHBxR SINGLE ENDED BEAM LOAD CELL



## 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.

## FEATURES:

- Fully welded, stainless steel construction
- Hermetically sealed, IP66 and IP68
- Certified to OIML R-60, **4000d**
- ATEX certified versions are available for use in potentially explosive atmospheres
- Current calibration output (SC version) ensures easy and accurate parallel connection of multiple load cells
- **CAPACITIES: 5 → 500kg**

# SHBxR: SPECIFICATIONS

Standard Capacities (=E <sub>max</sub> )	kg	5 <sup>2</sup> , 10, 20, 30, 50, 100, 200, 350, 500				100 <sup>3</sup> , 200 <sup>3</sup> , 350 <sup>3</sup> , 500 <sup>3</sup>	
Accuracy Class According to OIML R-60			C2	C3	C4	C3MI6	C3MI7.5
Max. Number of Verification Intervals (n <sub>ic</sub> )			2000	3000	4000	3000	3000
Minimum Verification Interval (V <sub>min</sub> )			E <sub>max</sub> /10000	E <sub>max</sub> /15000	E <sub>max</sub> /15000	E <sub>max</sub> /15000	E <sub>max</sub> /15000
MDLOR (Z= E <sub>max</sub> / 2*DR)			--	--	--	6000	7500
Accuracy According to Type Designation		CC	C2	C3	C4	C3MI6	C3MI7.5
Combined Error	%S	≤ ± 0.0500	≤ ± 0.0230	≤ ± 0.0200	≤ ± 0.0170	≤ ± 0.0200	≤ ± 0.0200
Non-Repeatability	%S	≤ ± 0.0200	≤ ± 0.0100	≤ ± 0.0100	≤ ± 0.0090	≤ ± 0.0100	≤ ± 0.0100
Minimum Dead Load Output Return <sup>1</sup>	%S	≤ ± 0.0500	≤ ± 0.0250	≤ ± 0.0167	≤ ± 0.0125	≤ ± 0.0083	≤ ± 0.0067
Creep Error (30 Minutes) <sup>1</sup>	%S	≤ ± 0.0600	≤ ± 0.0245	≤ ± 0.0245	≤ ± 0.0184	≤ ± 0.0245	≤ ± 0.0245
Creep Error (20-30 Minutes) <sup>1</sup>	%S	≤ ± 0.0200	≤ ± 0.0053	≤ ± 0.0053	≤ ± 0.0039	≤ ± 0.0053	≤ ± 0.0053
Temp. Effect on Min. Dead Load Output	%S/5°C	≤ ± 0.0250	≤ ± 0.0070	≤ ± 0.0047	≤ ± 0.0047	≤ ± 0.0047	≤ ± 0.0047
Temp. Effect on Sensitivity	%S/5°C	≤ ± 0.0250	≤ ± 0.0060	≤ ± 0.0050	≤ ± 0.0045	≤ ± 0.0050	≤ ± 0.0050
Minimum Dead Load	%E <sub>max</sub>	0					
Maximum Safe Over Load	%E <sub>max</sub>	150					
Ultimate Over Load	%E <sub>max</sub>	300					
Maximum Safe Side Load	%E <sub>max</sub>	100					
Deflection at E <sub>max</sub>	mm	0.30 ± 0.03					
Excitation Voltage	V	5...12					
Maximum Excitation Voltage	V	15					
Rated Output (=S)	mV/V	2					
Tolerance on Rated Output	mV/V	± 0.02					
Zero Balance	%S	≤ ± 1.0					
Input Resistance	Ω	460 ± 50					
Output Resistance	Ω	350 ± 3.5					
Insulation Resistance	MΩ	≥ 5000					
Compensated Temperature Range	°C	-10...+40					
Operating Temperature Range	°C	-40...+80					
Storage Temperature Range	°C	-40...+90					
Element Material (DIN)		Stainless Steel 1.4542					
Sealing (DIN 40.050 / EN 60.529)		IP66 and IP68					
SC-Version (Current Calibration)		Standard					
Recommended Torque on Fixation Bolts	Nm	23 (70 for 350/500kg)					
ATEX opt. for potent. explosive atmospheres <sup>4</sup>		II2G EEx ib IIC T4/T6 or II1D T70°C or II3G EEx nA II T4/T6 or II3D T70°C					

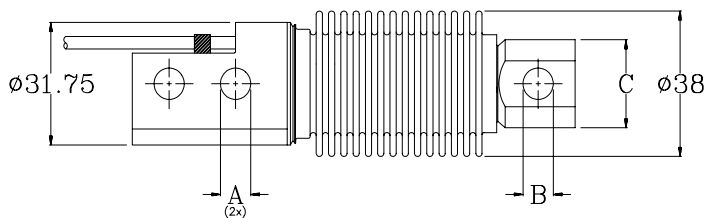
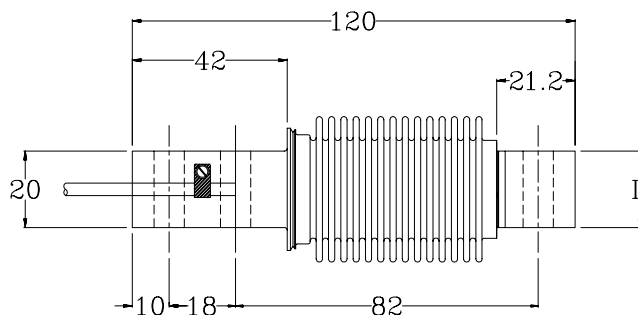
- 1 Applies for the temperature range -10 to +40 °C  
 2 CC quality only  
 3 D<sub>max</sub> = 0.75 \* E<sub>max</sub>  
 4 Applies for the temperature range -20 to +40 °C

**"SC-Version"** The "Rated Output" and the "Output Resistance" are balanced in such a way, that the output current is calibrated within 0.05% to a reference value. This allows an easy parallel connection of load cells.

Accuracy classes C2, C3, C3MI6, C3MI7.5 and C4 are in agreement with the OIML recommendation R-60. Accuracy class C1 is also available. The correct mounting of the load cells is essential to ensure optimum performance. Further information is available on request.

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### Cable specifications:

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

Cable screen is not connected to load cell body. 6-wire cable optional, 4-wire cable standard.

E <sub>max</sub>	5→200	350/500
A	8.2	10.3
B	8.2 <sup>+0.1</sup> <sub>0</sub>	10.3 <sup>+0.1</sup> <sub>0</sub>
C	23.0	24.0
D	20.0	19.0

Dimensions: mm.  
 All dimension tolerances according to ISO 2768m, unless otherwise specified.

All specifications subject to change without notice.