

## Double Ended Beam Load Cell



### FEATURES

- Capacities: 5K to 250K lb)
- Low profile construction
- 5103 nickel plated alloy steel construction
- 9103 stainless steel construction
- Certified to OIML R60 3000d, NTEP CoC - 10000d
- FM approved for use in hazardous locations
- Sealing: IP67 (DIN 40.050)

### DESCRIPTION

The 5103/9103 are double ended, centre loaded shear beam type load cells. The 5103 is nickel plated alloy steel while the 9103 is stainless steel.

These products are suitable for tank weighing systems, low cost weighbridges and axle weighers.

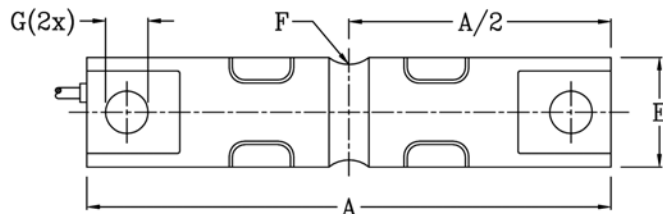
A reliable sealing is ensured by the proprietary TRANSEAL potting compound and additional mechanical protection of the strain gauge area.

A specially designed mounting arrangement is available, providing the ideal solution for vessel / tank weighing.

### APPLICATIONS

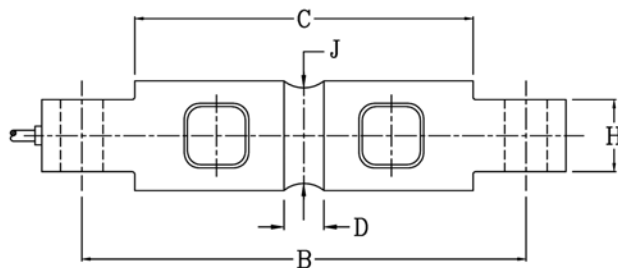
- Platform scales
- On-board weighing
- Weighbridges
- Silo hopper weighing

### OUTLINE DIMENSIONS



Capacity(lbs)	5K, 10K	20K	30-60K	100K	150K	200K,250K
A	206.2	206.2	260.4	285.8	285.8	408.9
B	174.6	174.6	215.9	241.3	241.3	330.2
C	133.1	133.1	165.1	190.5	190.5	254.0
D	15.7	21.3	25.4	31.8	31.8	33.0
E	43.2	49.5	76.2	88.9	99.1	136.5
F	12.7	12.7	25.4	38.1	38.1	50.8
G	16.7	16.7	26.9	26.9	26.9	39.6
H	28.4	28.4	60.2	63.5	71.1	116.8
J	37.6	37.6	69.3	82.3	92.5	131.4

Note: Dimensions in millimeters



#### Cable specifications:

Cable length: 10m (6m for 5-20K)

Excitation + Red  
 Excitation - Black  
 Output + Green  
 Output - White  
 Shield Transparent

### SPECIFICATIONS

Standard Capacities (= E <sub>max</sub> )	Klbs	5 <sup>2</sup> , 10 <sup>2</sup> , 20, 30, 40, 50, 60, 100, 150 <sup>2</sup> , 200 <sup>2,3</sup> , 250 <sup>2,3</sup>			
Metric Equivalents	t	2.3 <sup>2</sup> , 4.5 <sup>2</sup> , 9.1, 13.6, 18.2, 22.7, 27.2, 45.4, 68 <sup>2</sup> , 91 <sup>2</sup> , 113 <sup>2</sup>			
Model		9103/5103	9103	5103	
Accuracy Class According to OIML R-60 / NTEP		NTEP Class IIII	D1	D3 Industrial	C3
Max. Number of Verification Intervals (n <sub>IC</sub> )		10000			3000
Minimum Verification Interval (v <sub>min</sub> )					E <sub>max</sub> /10000
Accuracy Class According to Type Designation		NTEP	D1	D3 Industrial	C3
Combined Error	%FS	0.02	0.1000	0.0300	0.0200
Non-Repeatability	%FS	0.01	0.0200	0.0100	0.0100
Minimum Dead Load Output Return <sup>1</sup>	%FS		0.0500	0.0300	0.0167
Temp. Effect on Min. Dead Load Output	%FS/5°C	0.001 %FS/°F	0.0450	0.0015	0.0070
Temperature Effect on Sensitivity	%FS/5°C	0.008 %load/°F	0.0180	0.0080	0.0050
Maximum Safe Over Load	%E <sub>max</sub>	150			
Ultimate Over Load	%E <sub>max</sub>	300			
Deflection at E <sub>max</sub>	mm	0.5/ 0.6/ 1.1/ 0.5/ 0.5/ 0.5/ 0.6/ 0.5/ 0.5/ 0.9/ 0.9			
Excitation Voltage	V	5 ... 12			
Maximum Excitation Voltage	V	15			
Rated Output (= S <sub>nom</sub> )	mV/V	3			
Tolerance on Rated Output	mV/V	0.003	0.03	0.003	
Zero Balance	%FS	1.0	± 2.0	± 1.0	
Input Resistance	Ω	700 ± 7	880 ± 80	700 ± 7	
Output Resistance	Ω	700 ± 7			
Insulation Resistance	MΩ	≥ 5000			
Compensated Temperature Range	°C	- 10 ... + 40			
Operating Temperature Range	°C	- 40 ... + 80			
Element Material			Stainless steel	NP alloy steel	
Sealing (DIN 40.050 / EN 60.529)		IP67			
Recommended Torque on Fixation Bolts	Nm	12 ... 14			
ATEX options for potentially explosive atmospheres	Nm	II2G EEx ib IIC T4/T6, II2D T70 °C			

<sup>1</sup> Applies for the temperature range - 10 to + 40 °C

<sup>2</sup> Accuracy Class D3 only

<sup>3</sup> 5103 only

Correct mounting of the load cells is essential to ensure optimum performance.

The available 5103/9103 mount incorporates a unique sliding pin design which allows thermal expansion, contraction and controlled scale deck movement, whilst eliminating the need for check rods in most applications. Further information is available on request

FM Approval

Intrinsically Safe: Class I, II, III; Div. 1. Groups C-G

Non-Incendive: Class I; Div 2. Groups A-D

## Disclaimer

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