



APPLIED MEASUREMENTS LTD.

Transducer Specialists...

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<https://appmeas.co.uk>

OSB Shear Beam Load Cells

Key Features:

- Capacities 0-250kg up to 0-5000kg
- Output: 2mV/V
- Sealed to IP67 or IP68
- High Accuracy: $<\pm 0.03\%$ /Rated Capacity
- Robust Construction
- Sense Wire Facility
- Optional Mounting Accessories
- 3 Year Warranty



For Medium Capacity Weighing Applications

The OSB single-ended shear beam load cells are designed for medium capacity weighing applications such as hoppers and vessels, where a low profile, highly accurate and high environmental sealing is required. Their high environmental sealing means they are sealed against ingress of liquids and the polyurethane shielded cable enables it to function in harsh environments whilst still maintaining its integrity.

There are 2 versions available:

- OSBST Shear Beam - Made from stainless steel and sealed to IP68, ideal for conveyor weighing applications such as food, pharmaceutical, and brewing industry, or any application where the load cell needs to be washed down for hygienic purposes.
- OSBKT Shear Beam – Made from alloy steel and sealed to IP67, ideal for general purpose industrial weighing applications where cost is an important factor.

Two mounting assemblies are available to suit the OSB series of shear beam load cells:

- The Vessel Mount - for static applications.
- The Shock / Anti-Vibration Mount - for mixer, feed hopper and conveyor applications where vibration or transient loads may occur.

Sense wires feedback the voltage reaching the load cell, this allows any changes in the lead resistance due to temperature change and/or cable extension to be compensated for when used with instrumentation that features a ratiometric input, such as our [Intuitive2-L digital panel meter](#).

Options:

- Alternative Cable Lengths
- Full Range of Mounting Options Available:
Inc. Vessel/Tank Mounting, Shock/Anti-Vibration Mounting Assembly, Platform Mounting Assembly, Load Button, Base Mounting Spacer, Spherical Rod-End Bearings
- ATEX Certification: II 1 GD Ex ia IIC T6
- Can be Supplied as a Complete System With Mounts, a Junction Box and Instrumentation.
- USB Version (via DSC-USB)
- Wireless Version (via T24 Instrumentation)
- Single or Multi-Channel PC-Based Monitoring & Data Logging System.
- TEDS (Transducer Electronic Data Sheet)
- TEDS Allows Plug & Play with TEDS Enabled Instrumentation.

Applications:

- Low Profile Platforms
- Hoppers and Vessels
- Weighing and Packing Machines
- Conversion of Mechanical Scales
- Food Industry
- Pharmaceutical Applications
- Brewing Applications



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Specification:

	UNITS	OSBKT	OSBST
Rated Capacity (RC)	kgf	0-250, 0-500, 0-1000, 0-2000	0-500, 0-1000, 0-2000, 0-5000
Operating Modes	Compression Only		
Sensitivity (RO)	mV/V	2.0 ±0.1%	
Zero Balance/Offset	±%/Rated Output	<2.0	
Zero Return after 30 mins.	±%/Rated Capacity	<0.025	
Accuracy	±%/Rated Capacity	<0.020	
Temperature Effect on Zero	±%/Rated Output/ °C	<0.0023	
Temperature Effect on Sensitivity	±%/Applied Load/ °C	<0.0010	
Input Resistance	Ohms	380 nominal	
Output Resistance	Ohms	350 nominal	
Insulation Resistance	Megohms	>2000@50Vdc	
Excitation Voltage	Volts AC or DC	10 recommended (2-15 acceptable)	
Operating Temperature Range	°C	-20 to +70	
Compensated Temperature Range	°C	-10 to +40	
Storage Temperature Range	°C	-20 to +70	
Safe Overload	% of Rated Capacity	150	
Ultimate Overload	% of Rated Capacity	300	
Deflection @ Rated Load	mm	<0.4	
IP Rating (Environmental Protection)		IP67	IP68
Weight (excluding cable)	kg	0.9 (250kg, 500kg & 1000kg), 1.1 (2000kg), 2.1 (5000kg)	0.9 (500kg, 1000kg & 2000kg), 1.9 (5000kg)
Fatigue Life		10 ⁸ cycles typical (10 ⁹ cycles on fatigue-rated version)	
Cable Length (as standard)	metres	3	5
Cable Type		6 core screened, PUR sheath, Ø6mm	
Construction		Nickel Plated Alloy Steel	Stainless Steel

Wiring Diagram:

OSBKT		
Wire	Color	Designation
	Blue	+ve excitation
	Black	-ve excitation
	White	+ve signal
	Red	-ve signal
	Green	+ve sense
	Brown	-ve sense
	Screen	To ground – not connected to load cell body

OSBST		
Wire	Color	Designation
	Blue	+ve excitation
	Green	+ve sense
	White	+ve signal
	Black	-ve Excitation
	Grey	-ve Sense
	Red	-ve Signal
	Screen	To ground – not connected to load cell body

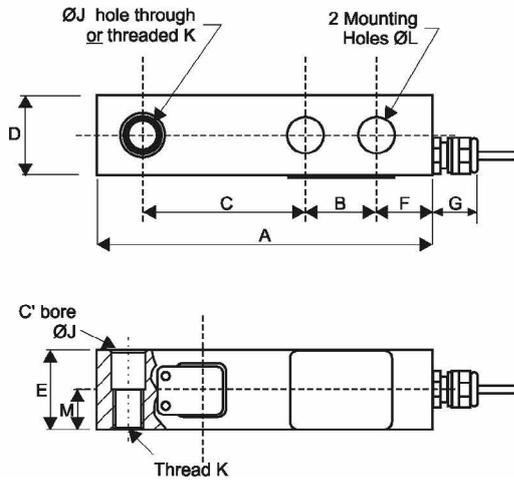
Dimensions (mm):

MODEL	RANGE (kg)	A	B	C	D	E	F	G	H	I	ØJ	K	ØL	M
OSBKT	0-250, 0-500, 0-1000	130	25.4	76.2	30.5	30.5	16	19	-	-	13.5	M12 X 1.75	13.5	16
OSBKT	0-2000	130	25.4	76.2	30.5	36	16	19	-	-	13.5	M12 X 1.75	13.5	16
OSBST	0-500, 0-1000, 0-2000	130	25.4	76.2	32	32	15.8	18	50.5	23.5	13.5	M12 X 1.75	13.5	16
OSBST	0-5000	171.5	38.1	95.25	36.5	48	19	18	70	37	20.5	M20 X 2.5	20.5	-



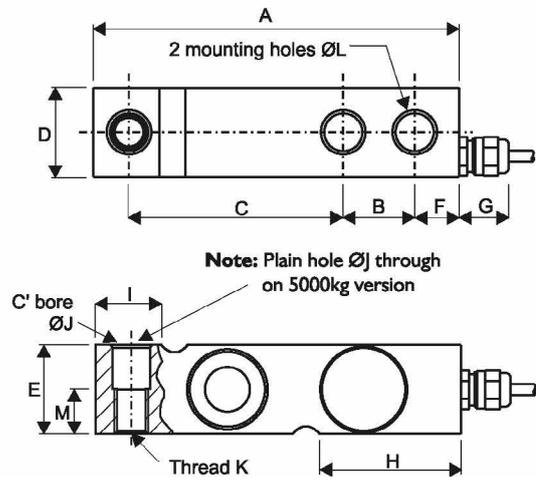
OSBKT Outline Drawing

All dimensions in mm



OSBST Outline Drawing

All dimensions in mm



Ordering Codes:

Core Product	Capacity (inc Engineering Units)	Cable Length (m)	Specials Code	Example Result
OSBKT	250kg	003	000	OSBKT-250kg-003-000
OSBKT	500kg	003	000	OSBKT-500kg-003-000
OSBKT	1000kg	003	000	OSBKT-1000kg-003-000
OSBKT	2000kg	003	000	OSBKT-2000kg-003-000

Core Product	Capacity (inc Engineering Units)	Cable Length (m)	Specials Code	Example Result
OSBST	500kg	005	000	OSBST-500kg-005-000
OSBST	1000kg	005	000	OSBST-1000kg-005-000
OSBST	2000kg	005	000	OSBST-2000kg-005-000
OSBST	5000kg	005	000	OSBST-5000kg-005-000

Associated Products:



[TR150 Handheld Indicator](#)



[T24 Wireless Telemetry Range](#)



[Intuitive4-L Panel-Mount Indicator](#)



[DSC-USB USB Signal Digitiser](#)



[ICA Miniature Strain Gauge Amplifier](#)



[SGA Signal Conditioner/Amplifier](#)

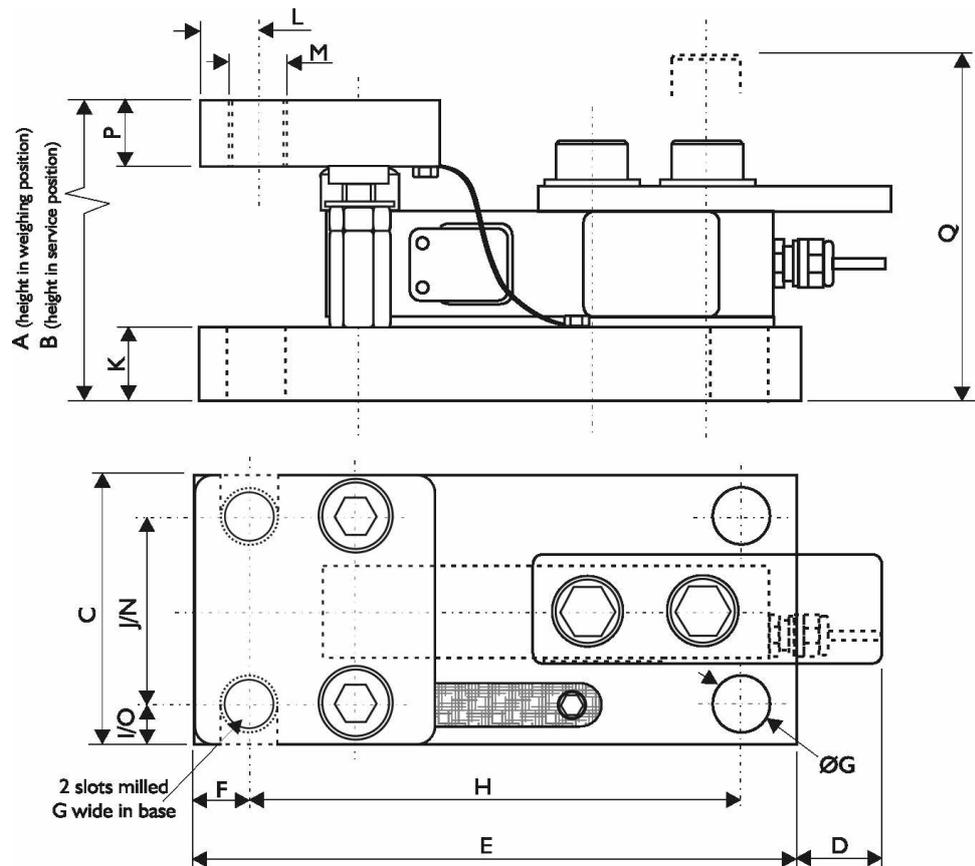


Mounting Accessories:

VESSEL MOUNT ASSEMBLY

- Simple to Install Into New or Existing Installations.
- Can be Installed With or Without the Load Cells in Position
- Stainless Steel Construction
- Easy Lifting and Removal of Load Cell
- Rugged Construction
- Reduces Installation Time
- Permanent Integral Safety Vessel Jacking System for your Vessel
- Anti-Lift Mechanism for Greater Vessel Stability
- Maximum Safety Protection from the Effects of Wind or Accidental Collision are Built-In.
- Heavy Duty Earth Straps Ensure that no Potential Difference Between the Upper and Lower Plates Occurs.
- Low Resistance Path Assists in Removing Strong Welding Currents.
- Substantial Protection Plate is Positioned Above the Cable Outlet to Prevent Damage by Falling Objects or Misuse.

MODEL	OSBKT & OSBST 500-2000kg	OSBKT & OSBST 5000kg
A	100	135
B	108	143
C	110	153
D	51	47
E	165	216
F	15	20
G	14.0	19.8
H	130	162
I	20.0	31.5
J	70	90
K	24	29
L	15	20
M	M16	M16
N	70	90
O	20.0	31.5
P	24	29
Q	111	159



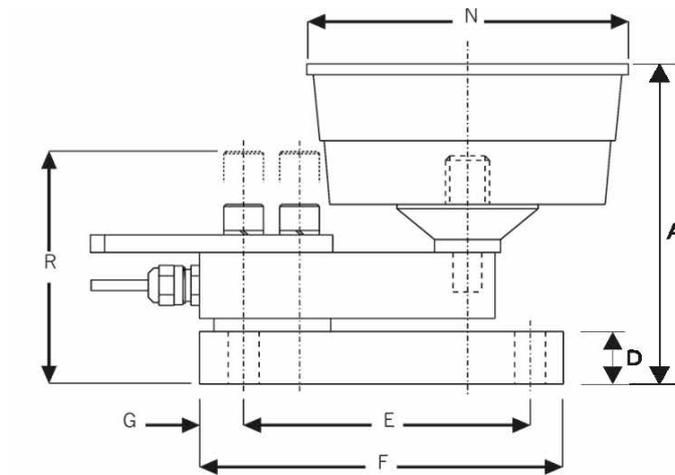


Mounting Accessories:

SHOCK MOUNT ASSEMBLY

- Enables Weighing when a Vessel or Hopper is Subjected to External Forces
- Plated Steel Construction
- Minimises the Effects of Vibration
- Ease of Assembly Reduces Installation Time
- Complete Assembly is Supplied

MODEL	OSBKT & OSBST 500-2000kg
A	146
B	110
C	70
D	24
E	130
F	165
G	20
H	14.0
I	20
L	220
M	180
N	146
O	24
P	26
Q	18
R	106
S	30



Flange thickness 5mm

