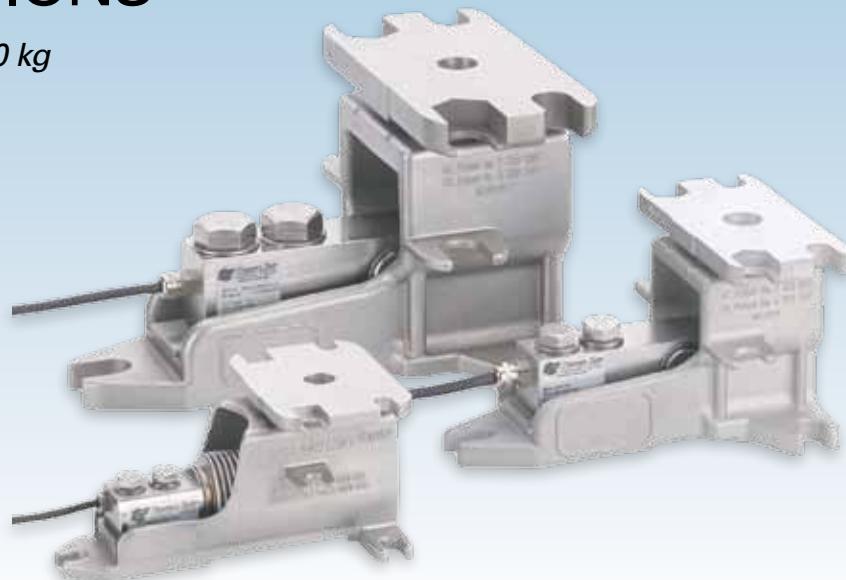


## UNIQUE, PATENTED & COST EFFECTIVE SOLUTION FOR PROCESS WEIGHING APPLICATIONS

*capacities 10 - 5000 kg*



LeverMount® is the latest development in load cell weighing assemblies from Thames Side Sensors. Process weighing installations are made easier, safer and more cost effective using this simple, innovative design.

Load cells approved to 3000 divisions OIML R60 Class C.

Available with ATEX certification for hazardous area applications. For applications in aggressive environments where stress corrosion or acid attack is an issue, a special parylene coating can be specified as an option. High temperature variants are also available.

- Purpose designed stainless load cell and mount arrangement
- Load cell removal without jacking or dummies
- High stability three point mounting
- Easily configurable for radial or tangential mounting
- Stainless steel OIML C3 approved load cell
- Fully welded and sealed to IP68 / IP69K
- Version for static or dynamic applications
- Allows for vessel expansion and contraction
- LeverMount® can be raised and lowered under load without jacking
- Straightforward, low cost installation without specialist tooling
- Substantial lift off prevention
- Tolerant of steel work misalignment

# LEVERMOUNT®

*innovation & inspiration...*

## THE CONCEPT

A purpose designed mounting assembly using single ended shear beam load cells was first introduced in the 1980's. These designs are still in use today and most provide a threaded jacking feature which allows the vessel to be supported by the mount prior to installation of the load cell, however under most load conditions, an external jack is needed to raise and lower the vessel and the threads can become clogged with dirt or powder, rendering the integral jacking mechanism unusable, even under low loads.

LeverMount® is specifically designed to offer a completely fresh approach to process weighing solutions. Utilising the established range of Thames Side shear beam and bending beam load cells, the LeverMount® retains all of the advantages of previous mount designs, whilst providing improved mechanical stability before, during and after installation.

LeverMount®'s unique patented design is such that no separate support arrangements are necessary to raise and lower the vessel. The base casting itself provides a stable load bearing platform prior to installation of the load cell. Once the vessel is in position the two transit bolts are removed and the load cell is used as a lever to raise the top plate of the mount into the working position, regardless of whether the vessel is empty or full. Removal of the load cell at any time is accomplished by reversing the procedure and requires no jacks, dummy load cells or specialist tools. Installation, operation and maintenance of the vessel weighing system is consequently made safer, easier, swifter and less costly.

Two types of load cell interface can be specified; a load button and saddle arrangement with expansion/contraction adjustment for static applications such as hoppers and tanks and a ball and cup, self-centring, option for dynamic applications such as floor scales.

## ATEX CERTIFICATION

The load cells used in LeverMount® have ATEX certification which allow their use in all dust zones without safety barriers, resulting in significant cost savings.

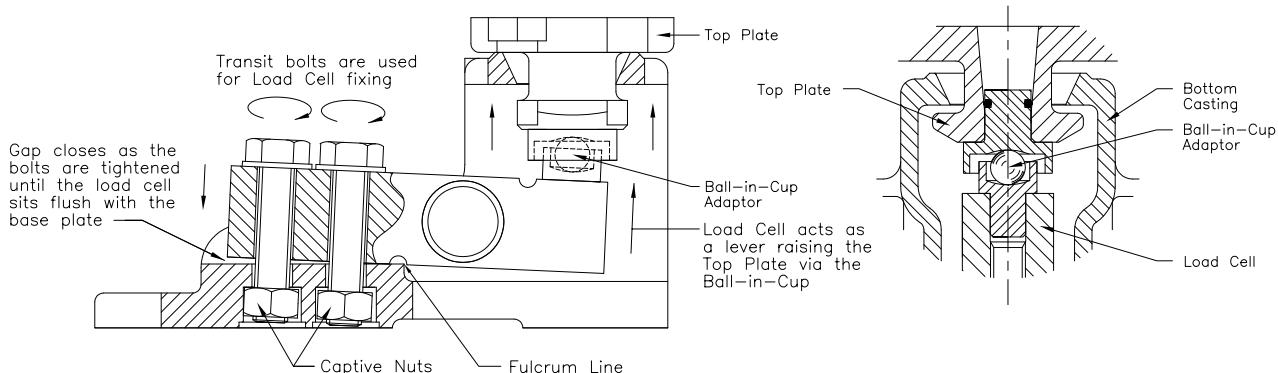
Code	Safety Parameters			Application
	Temp. Class	T66 Load Cell	350i Load Cell	
II 1 GD Ex ia II CT4..T6 Ga IP68 T85°C Ex ia IIIC T135°C T85°C Da Ex ta IIIC T85°C Da	T4 T5 T6	Pi = 2.5W Pi = 2.5W Pi = 1.69W	Pi = 1.3W Pi = 0.8W Pi = 0.53W	Gas Zones 0, 1, 2 with safety barriers Dust Zones 20, 21, 22 without safety barriers

## HIGH TEMPERATURE

The T66 and 350i load cells used in the LeverMount® are available in high temperature variants which utilise special load cell components and a PTFE 'Teflon' cable for operation in environments up to 150°C

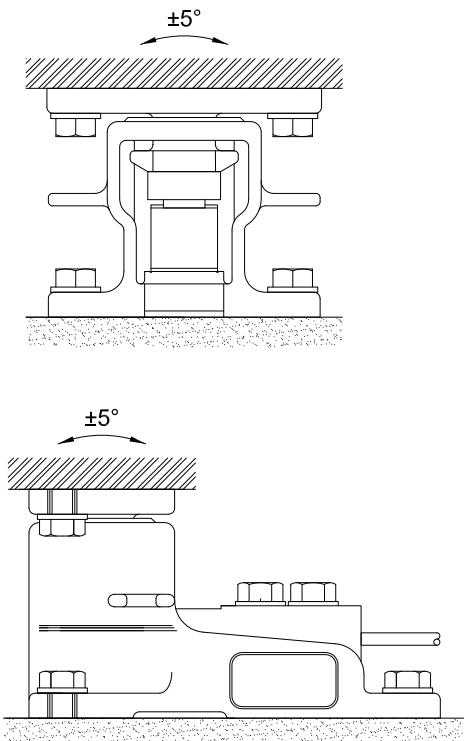
## ENVIRONMENTAL PROTECTION

Load cells used in the LeverMount® are rated for both IP68 and IP69K ingress protection as standard. A special parylene coating can be specified as an option to provide additional protection in extreme environments where stress corrosion could occur, for example where chlorine or acids are present.



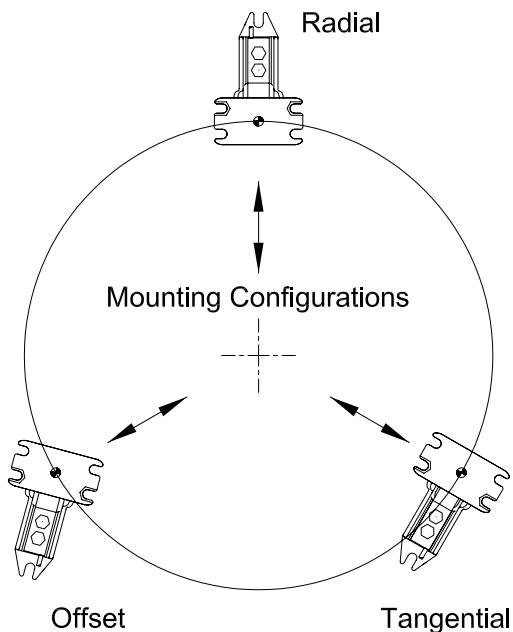
## FEATURES

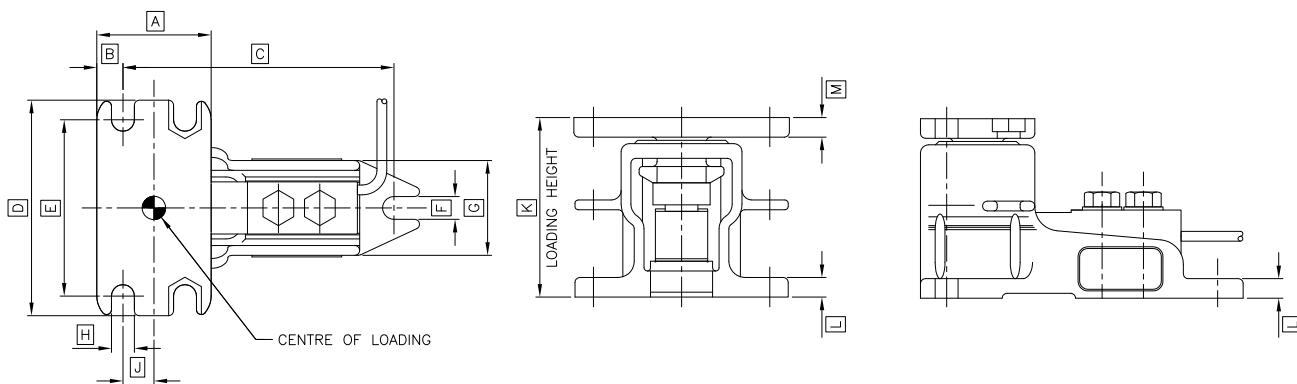
- Purpose designed cast 316 grade stainless steel mount
- Simple two part casting using the transit bolts with captivated nuts for load cell fixing
- Stainless steel, IP68/IP69K, fully welded, single ended shear beam load cell
- Load cell acts as a lever to raise and lower the top plate and vessel
- Vessel can be raised and lowered under load
- No jacking screws or support pillars
- Three point support and fixing
- Top plate movement in the lateral and rotational axis
- Configurable for radial, tangential or offset mounting
- Substantial anti-lift facility, over 50% of maximum rated load
- Minimal difference between the working height and the installed height
- Load cell can be easily removed under load in situ
- Three physical sizes cover the range from 10kg to 5000kg



## BENEFITS

- Ideal for process weighing applications that require an accurate, safe and cost effective solution
- Aesthetically pleasing design, eliminating the need for additional machining and special bolts
- Suitable for use in the harshest of industrial environments
- No need for alternative lifting devices such as pad jacks
- Easier, quicker and safer than alternative mount arrangements
- No stripped threads or top plate interference
- Eliminates rocking and twisting in the mount, always finds a plane
- Tolerant of steel work misalignment avoiding any mechanically induced errors
- Easy alignment to the radial axis of the vessel to compensate for expansion and contraction.
- Increased safety
- Reduces the need to adjust for pipe work without flexible connections
- Less down time
- Covers the majority of process weighing applications



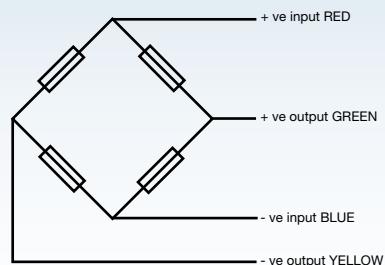


Capacity (kg)	A	B	C	D	E	F	G	H	J	K	L	M
20, 50, 100, 200	70	16	147	100	80	9	55	9	19	80	7	8
300, 500, 1000, 2000	70	16	168	132	108	14	60	14	19	110	12	12
3000, 5000	100	25	225	190	150	22	80	22	25	164	15	20

All dimensions in mm.

	Load cell specification		Units
	LeverMount Lite	LeverMount	
<b>Load Cell Approval</b>	3000 divisions (C3) OIML R60 Class C	3000 divisions (C3) OIML R60 Class C	
<b>Load Ranges</b>	10, 20, 50, 100, 150, 200	300, 500, 1000, 2000, 3000 & 5000	kg
<b>Rated Output</b>	2+/- 0.1%	2±0.15%	mV/V
<b>Combined Error</b>	<±0.017	<±0.017	%*
<b>Non-repeatability</b>	<±0.015	<±0.015	%*
<b>Creep (30 minutes)</b>	<±0.016	<±0.016	%*
<b>Temp Effect on Zero Balance</b>	<±0.002	<±0.002	%*/°C
<b>Temp Effect on Span</b>	<±0.0012	<±0.0012	%*/°C
<b>Compensated Temp Range</b>	-10 to +40	-10 to +40	°C
<b>Operating Temp Range</b>	-20 to +70	-20 to +70	°C
<b>Safe Overload</b>	150	150	%*
<b>Ultimate Overload</b>	300	300	%*
<b>Zero Balance</b>	<±1	<±2	%*
<b>Input Resistance</b>	400	400	Ω ± 20
<b>Output Resistance</b>	350	350	Ω ± 3
<b>Insulation Resistance</b>	>5000	>5000	MΩ @ 100v.d.c
<b>Recommended Supply Voltage</b>	10	10	V
<b>Maximum Supply Voltage</b>	15	15	V
<b>Cable Length</b>	3	5	m
<b>Cable Material</b>	Polyurethane	Polyurethane	
<b>Protection Class</b>	IP68 / IP69K	IP68 / IP69K	

\*With respect to rated output



#### Electrical Connections

Via 4 core, 5.7mm diameter,  
screened polyurethane cable.  
*Screen not connected electrically to load cell.*

#### Shipping Weights: (kg)

10, 20, 50, 100, 150, 200 = 1.2kg  
300, 500, 1000, 2000 = 4kg  
3000, 5000 = 9kg

#### Construction

Mount manufactured from cast 316 stainless steel. Load cell manufactured from high strength 17-4PH stainless steel.

UK Patent No. 2 339 026

US Patent No. 6 320 142



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LeverMount® is a registered trademark of Thames Side Sensors Limited.  
Our policy is one of continuous product enhancement. We therefore reserve the right to incorporate technical modifications without prior notification.



[www.thames-side.com](http://www.thames-side.com)

