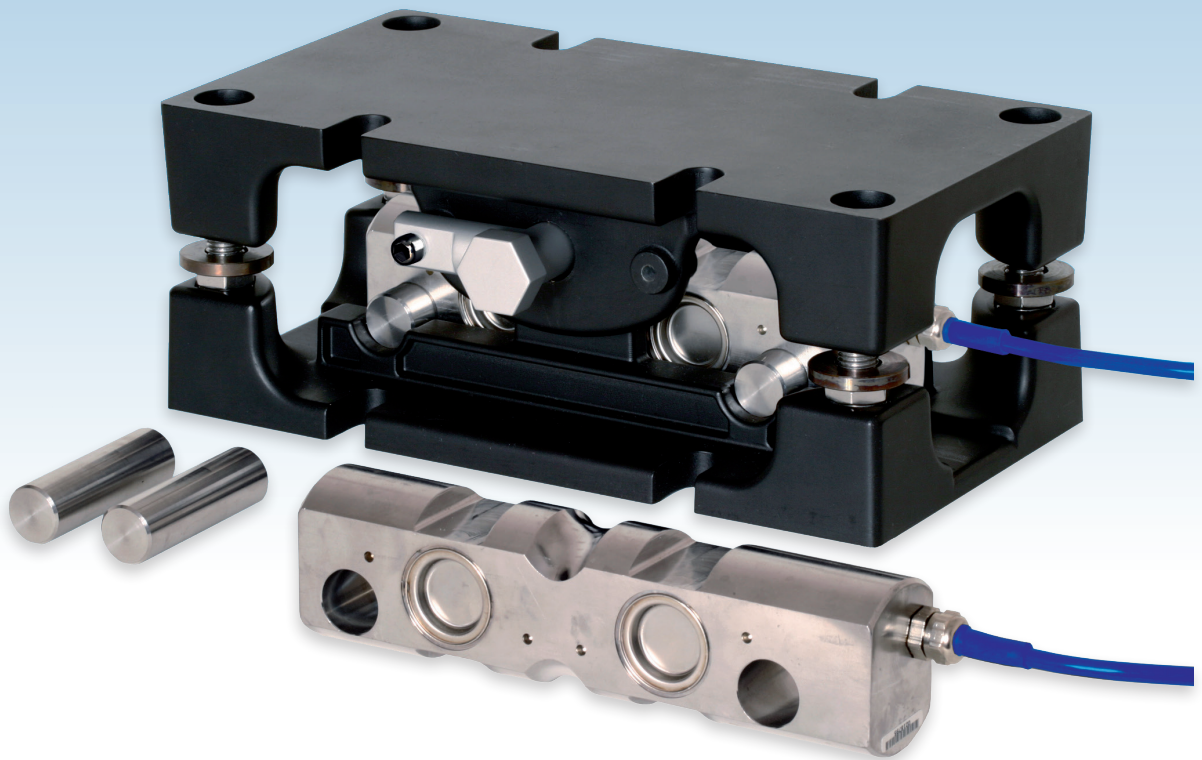


## UNIQUE, PATENTED LOAD CELL ASSEMBLY FOR SILO, TANK AND VESSEL WEIGHING

*capacities 2t - 30t*



Vessel weighing problems solved simply and cost effectively.

The MasterMount® is the latest addition to an innovative range of patented weighing assemblies, which are designed with safety and ease of installation in mind.

- Load cell installation / removal under load without lifting jacks or dummy (false) load cells
- Major savings on installation time & cost
- Substantial lift-off protection
- Allows vessel expansion and contraction
- Low profile, stable design
- Stainless steel load cell, also available in ATEX or IECEx approved, high temperature or amplified output versions
- 5 year warranty
- Fully welded and hermetically sealed load cell construction to IP68 / IP69K
- Resistant to off-axis loading
- Tough and durable paint finish

# MASTERMOUNT®

innovation & inspiration...

## THE CONCEPT

Thames Side's MasterMount® is the latest in a range of unique and patented load cell and mounting accessory combinations, which includes the LeverMount® and LeverMount Lite® and extends the range of capacities up to 30 tonnes.

The MasterMount® has primarily been designed for easy, safe, simple installation and removal of the load cell without the aid of specialist tools, jacks or other equipment.

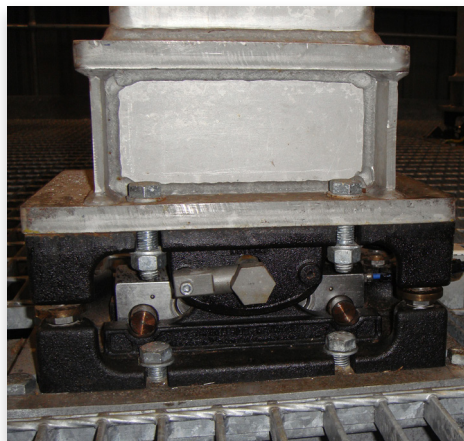
The special design also avoids the need to use dummy cells whilst any welding or other work is being undertaken on the vessel. The high specification double ended stainless steel shear beam load cell incorporated in the MasterMount® is the same model used in Thames Side's popular VC3500 'traditional' mount arrangement.

A patented lever and cam mechanism enables the top plate of the mounting accessory to be raised and lowered with a 180 degree turn, which can be accomplished easily using only an M30 socket spanner and T-bar. The stainless steel load cell is retained within the accessory by simple captivated pins, which avoids the use of fiddly retaining clips.

Lift-off protection is provided by the mounting accessory itself, instead of the traditional method of using the load cell for lift-off protection. This protects the load cell from reverse shock loading on lift-off. The Mastermount® mounting accessory is manufactured from high strength cast steel and is protected by a durable, hard wearing, corrosion resistant paint finish.

Once the MasterMount® weighing assembly has been fitted under the vessel, installation and removal of the load cell can be accomplished in only a few minutes, resulting in large savings in installation costs.

The MasterMount® is just one product in an extensive range of innovative Thames Side load cell and mounting accessory combinations, with capacities from 10kg up to 1000 tonnes, designed specifically for Process Weighing and Materials Storage applications.



## ATEX AND IECEX CERTIFICATION

The VC3500 load cell used in the MasterMount® has a number of ATEX and IECEX certifications, several of which allow use without safety barriers – resulting in significant cost savings;

Cert.	Code	Safety Parameters	Key Points
ATEX	II 1 GD Ex ia IIC T6 Ga Ex ia IIIC T70°C Da	Ui=30 V, Pi=1.3 W Ci=2.4 nF, Li=8 µH	Suitable for all dust and gas zones but requires safety barriers.
IECEX	Ex ia IIC T6 Ga Ex ia IIIC T70°C Da		
ATEX	II 3 G Ex nA IIC T6 Gc (Ta = -20°C to +60°C)	Ui=30 V, Pi=1.3 W Ci=2.4 nF, Li=8 µH	Suitable for Gas zone 2 only. No safety barriers are required. Refer to certificate for further details.
ATEX	II 1 D Ex ta IIIC T80°C Da IP6X Ta = (-20°C < Ta < +60°C)	Um=18 V	Suitable for all dust Zones: 20, 21 and 22. No safety barriers are required. Excitation voltage must be below 18V. Safe ambient temperature range is from -20°C to +60°C.

For details of the certification relating to a specific product code, please refer to the documentation included in the "ATEX and IECEX Approved Products" section of our website.

## HIGH TEMPERATURE

The VC3500 load cell is available in a high temperature variant, which utilises special load cell components and a PTFE 'Teflon' cable for operation in environments up to +150°C.

## ENVIRONMENTAL PROTECTION

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.

## AMPLIFIED OUTPUT

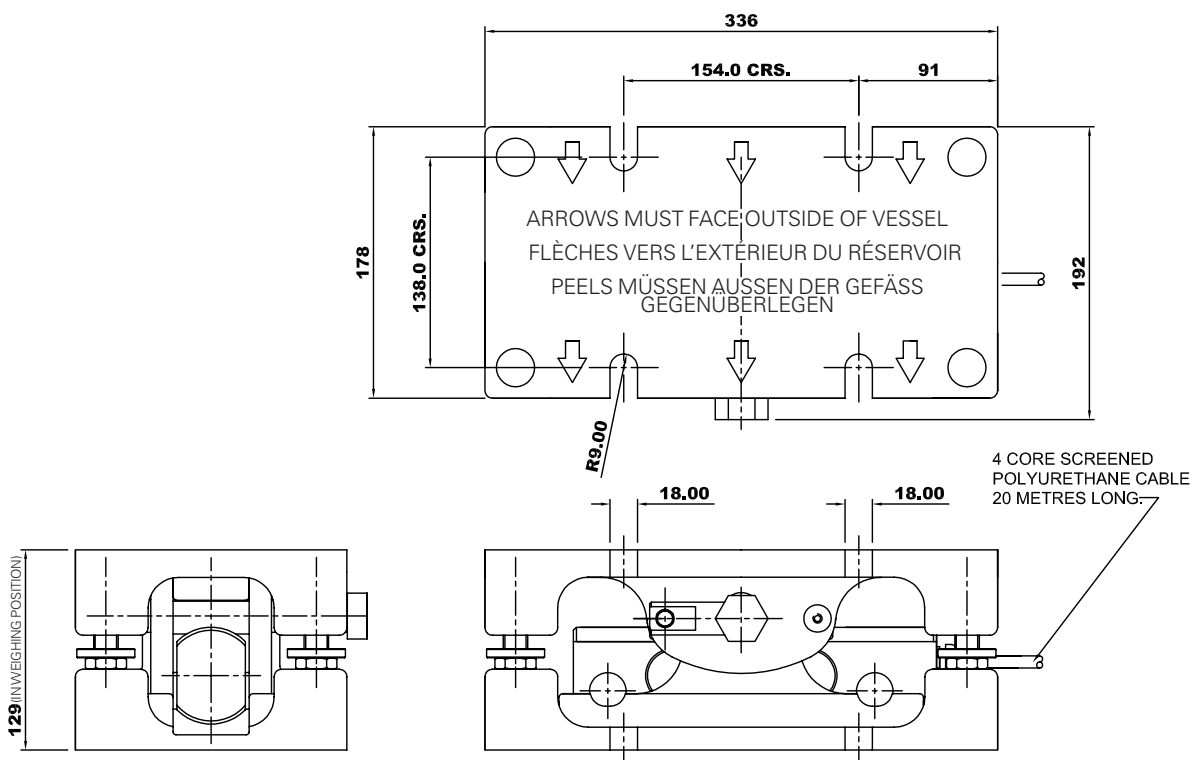
An integral 4-20mA amplified output can be specified where required.

## FEATURES

- Purpose designed cast alloy steel mounting accessory and stainless steel load cell
- Simple, robust two part casting supplied locked in position (via transit bolts) ready for installation
- Stainless steel, IP68 / IP69K, fully welded double ended shear beam load cell
- Special cam design loading shaft raises and lowers the top plate and vessel
- Load cell can be safely installed or removed under a loaded vessel
- No jacking screws or support pillars
- Substantial anti-lift-off protection through mounting accessory, not load cell
- Minimal difference between the raised and lowered height of 3mm
- One design covers the range from 2t to 30t

## BENEFITS

- Ideal for process weighing applications that require an accurate, safe and cost effective solution
- Aesthetically pleasing design
- 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
- Increased safety, eliminating potential damage to the load cell
- Reduces the need to compensate for pipe work without flexible connections
- Covers the majority of process weighing applications
- Much less down time and reduced cost when compared with conventional weighing assemblies
- No dummy load cells required during installation

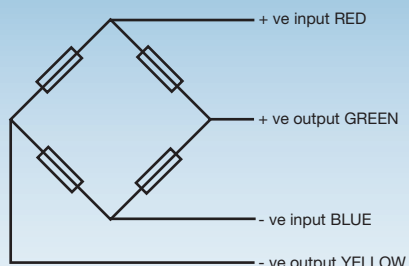


All dimensions in mm

## VC3500 Load Cell

	Load cell specification	Units
Full Load Output	2.0 (± 0.25%)	mV/V
Excitation - Recommended	10	V
Excitation - Maximum	18	V
Safe Service Load	150	%
Ultimate Overload	300	%
Combined Error	< ± 0.03	%*
Repeatability	< ± 0.015	%*
Output at Zero Load	< ± 2.0	%*
Input Resistance	785	Ω ± 20
Output Resistance	705	Ω ± 5
Operational Temperature Range	-50 to +80	°C
Compensated Temperature Range	-10 to +40	°C
Temperature Coefficient on Zero	< ± 0.002	%* / °C
Temperature Coefficient on Span	< ± 0.0012	%* / °C
Environmental Protection	IP68 / IP69K	
Cable Length	20	m
Cable Material	Polyurethane	
Insulation	>500	MΩ @ 100VDC

\* All percentages are related to Full Rated Load



### Electrical Connections

Via 4 core, 16 / 0.2mm, screened polyurethane mud resistant cable  
Cable length 20m

### Construction

Sensor element  
High strength stainless steel type 17-4PH  
Mounting assembly  
Alloy steel, durable painted finish  
Shafts  
Corrosion resisting hardened stainless steel

## MasterMount® Weighing Assembly

Load Cell Capacity (t)	Deflection at capacity (mm)	Expansion across assembly (mm)	Maximum Vertical Load (kg)		Maximum End Load (kg)	Maximum Transverse Load (kg)	Maximum Lift-off Load (kg)
			Load Cell installed	Load Cell removed			
2	0.20	+/- 3	40060	34250	9370	1460	13560
5	0.20						
7.5	0.25						
10	0.25						
15	0.30						
20	0.40						
30	0.50						

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MasterMount® 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.