

Load Cell and Weighing Assembly Solutions
for Silo, Vessel and Process Weighing

The background of the slide is a collage of industrial images, including a large refinery or chemical plant with tall distillation columns and a complex network of pipes, and a laboratory or cleanroom setting with various pieces of equipment. Overlaid on this are large, semi-transparent geometric shapes in shades of blue and red, creating a modern, high-tech aesthetic.

Industrial Weighing



Company Overview

Quality, reliability, innovation and outstanding customer service have made Thames Side Sensors Ltd a worldwide leader in Industrial and Process Weighing load cell technology.

Now part of the family owned Tecnicas group, among the top five companies in global load cell manufacture, Thames Side Sensors Ltd has its origins in the 1970's. With headquarters in the UK and offices, sales partners and customers in over 70 countries in every kind of process industry we have a truly global presence. Over 35 years of supplying the world's process industries in sectors as varied as offshore, cement, food, pharmaceuticals, minerals, metals, plastics and others has given us an un-rivalled, extensive applications knowledge that allows us to expertly advise customers on the correct selection and application of our products.

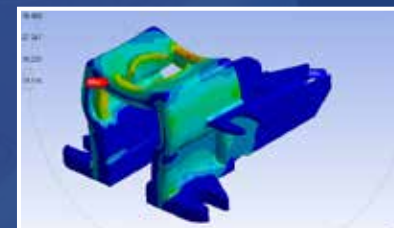
Our state of the art manufacturing facilities are located in Barcelona, Spain with an additional factory in Morocco. All of our load cells are manufactured under strict quality control with full traceability and each and every one is individually tested to ensure its performance. Components and raw materials are sourced from world class manufacturers with an emphasis on quality. Thames Side Sensors Ltd is fully committed to quality and has ISO 9001:2015 certification.

Customer satisfaction with both the products and service we provide has always been the key to the success of our business and our company goals and objectives are geared around this.

We carry a significant stock at our facilities in the UK ensuring rapid delivery times when required. Our confidence in our manufacturing processes allows us to offer a 5 years warranty against manufacturing defects on the majority of our products.

Thames Side Sensors provides the ultimate in load cells and loading assemblies for tank, vessel, silo, process and truck/axle weighing applications as well as for incorporation into many types of process machinery. Our mounting accessories, which are designed in accordance with Eurocode 3 (EN 1993) practices, form a crucial part of the weighing system. A special version of our VC3500 Weighing Assembly is available with CE marking according to EN 1090 (Construction Products Directive). Use of the latest Finite Element Analysis (FEA) software pinpoints the optimum design of mounting accessory for correct operation, then rigorous manufacturing and test procedures ensure total reliability under the harshest of conditions. These innovative mounting accessories provide a simple, but complete, mechanical link between the weighing structure and support base, removing the need in many applications for additional tie bars or other restraints. Our patented designs of mounting accessory, LeverMount® and MasterMount®, allow rapid installation and removal of the load cell without jacks or special tools - even when the vessel is full - providing major savings on installation costs.

Options of special anti-corrosive load cell coatings to provide additional protection in extreme environments where stress corrosion could occur and high temperature load cells for operation up to 150°C are just a few examples that set us apart from the rest.



Thames Side Sensors typically sends around 300 shipments to customers on five continents every month and operates to the latest Incoterms rules. Our Logistics staff have vast experience in export shipping requirements, including the special documentation and certification sometimes required for certain destinations - such as EUR1, ATR etc. They also ensure that we use robust packaging that conforms to both international regulations and individual customer requirements.

We work with high quality, experienced, global shipping companies who have a strong focus on 'on time' delivery and we can arrange shipment by road, sea or air. For those customers who have their own preferred logistics partners, we provide an efficient collection service. Special third party inspections and witness tests such as SGS, ABS and others can be accommodated as required. Same day shipments and next day timed delivery can be made for urgent orders in the UK, with European shipments often available on a next day delivery, depending on location.

In 2011 we established a 100% owned subsidiary in India to ensure that we could fully meet the demands of our existing and potential customers in one of the major world growth markets. Thames Side Sensors India Pvt Ltd has its offices in Mumbai and has locally available stock and commercial/technical customer support functions.

Make Thames Side Sensors Ltd your preferred partner for Industrial and Process weighing load cells and we promise to provide technically superior, quality products at a competitive price, delivered on time.



Technical Excellence



Whilst not strictly necessary for the majority of vessel weighing applications, many of our load cells have OIML certification for use in legal for trade weighing applications.



Most of our load cells have ATEX certification for operation in all dust and gas zones. Several products have special ATEX certification for all dust zones, which allows their use without safety barriers – this saves substantial cost. IECEx certification is available on several load cell models. We would be very pleased to advise customers on the correct choice of load cell and certification to suit their hazardous area applications.



Environmental Protection

In addition to the IP68 rating, many of Thames Side Sensors' load cells also carry the IP69K protection rating, which makes them ideal for use in wash-down areas that are now common in the food or pharmaceutical industries. Our load cells also utilise a high toughness Polyurethane cable as standard, which offers an extremely high level of protection against strong chemicals, UV radiation and accidental impacts.



High Temperature Applications

Utilising high temperature electrical components and PTFE cable, the majority of Thames Side Sensors' load cell designs can be specially manufactured for operation in environments up to 150°C.



Lightning Protection

Load cell models used for weighbridges/truck scales have in-built lightning surge arrestors as standard. A version of our load cell junction box is also available with surge arrestors for applications where lightning strikes are a risk, such as truck scales or silo installations in remote or tropical locations.



Parylene Coating

To provide additional protection in extreme environments where stress corrosion could occur, our load cells can be provided with a special transparent 'Parylene' coating to give excellent resistance to aggressive chemicals. Parylene's are almost completely unaffected by solvents, have low bulk permeability and easily pass a 100 hour salt spray test. They also have good thermal endurance and can perform in air without significant loss of physical properties for 10 years at 80°C. Any of our fully welded and hermetically sealed stainless steel load cells can be coated with Parylene as an option.



Advice and Support

Unlike many other weighing component suppliers, we provide applications advice and technical support (both pre-sales and after-sales) from our dedicated, experienced team in the UK, or from our network of carefully selected Partners in strategic worldwide locations. In addition, we offer a range of products that will assist in troubleshooting situations, for example our load cell simulator and LCT-U diagnostic load cell tester (pictured here).

Offshore and Marine

Around 5000 high capacity load cells and special mounting accessories have been delivered for mud weighing systems on oil rigs and drill ships in the last 5 years, making Thames Side Sensors by far and away the leading world-wide manufacturer of load cells for offshore applications in the oil industry. Other applications in the offshore and marine industry include load pins for winches and cranes, as well as weighing systems for gas cylinder platforms used in flare ignition.



SKT CAP SCREW
M8 x 55 LONG
WASHER PLAIN M8
TORQUE TO 35Nm.

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Process Industries

Around 1/3 of the world's cement production is weighed using Thames Side load cells, with thousands of high capacity load cells installed world-wide on cement silos as well as those used in mixing & batching plants and feeding equipment. Food, pharmaceutical and chemical industries are key sectors, due to our expertise in load cells for harsh environments, together with standard all stainless steel construction of both load cell and mounting accessory. Customers in the metals industries find our high temperature load cells invaluable.

Main industries served:

- Cement
- Concrete batching
- Food and drink
- Pharmaceutical
- Chemical
- Minerals
- Biomass and wood pellets
- Paint
- Plastics
- Metals
- Adhesives
- Inks and coatings
- Agriculture and farming



Process Industries - more



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4 OFF ATTACHMENT

Machine Manufacturers / OEM

Thames Side Sensors' load cells find many applications in the manufacture of specialised machinery that incorporates static or dynamic weighing as part of the process.

This includes materials handling equipment such as:

- Weigh feeders
- Belt weighers
- Big bag (FIBC) filling/emptying equipment
- Form-fill-seal machinery
- Check-weighers
- Multihead weighers and rotopackers
- Filling machines
- And others...

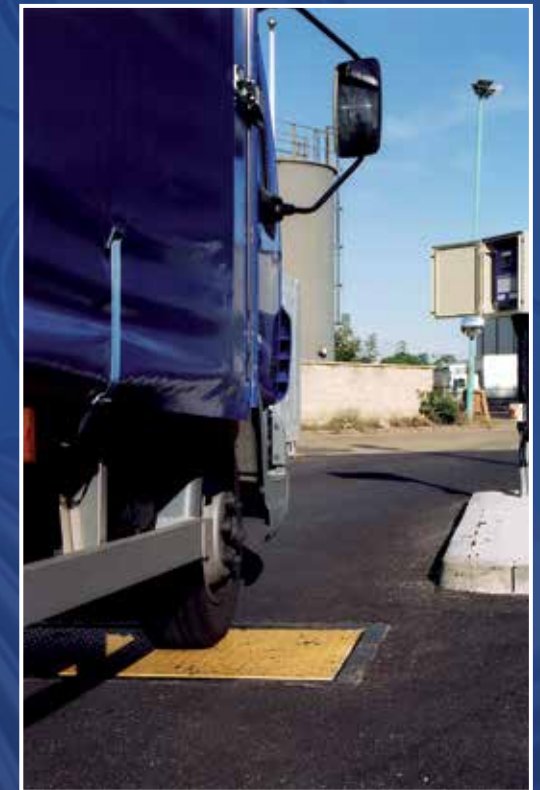


Weighbridges (Truck Scales), Axle Weighers and Weigh in Motion (WIM) Systems

Customers worldwide appreciate the excellent performance, rugged reliability, price and quality of our weighbridge (truck scale) load cells, which incorporate lightning surge arrestors and a durable rodent resistant polyurethane cable as standard.

We offer:

- Analogue load cells approved to OIML C4 (4000 divisions) up to 60 tonnes
- Digital load cells with an open protocol, approved to OIML C4 up to 60 tonnes
- A special version of the T95 load cell for high accuracy WIM and axle weighing systems



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Special Applications and Customisation

Our high quality load cells and innovative weighing assemblies are trusted to meet the stringent demands of specialised industries such as:

- Formula One
- Aerospace
- Nuclear

Thames Side is happy to advise on special project requests covering all aspects of weighing. Customers have benefited from our ability to customise standard load cells. Customisation can extend from 'own label' or special cable lengths, to more substantial modifications where the quantities allow for economical manufacture.



Load Cells and Weighing Assemblies



Now
available
at 2 500kg



Now
available
at 2 500kg

LA66

Anti-vibration assembly with bending beam load cell

5kg to 300kg capacity

Stainless steel construction (load cell and mount)

OIML C3 or C6 approved load cell

IP68, IP69K

ATEX certification for dust and gas

Designed for platforms, hopper and tank weighing, bag fillers, conveyors and belt weighers and systems with mixing/vibration



C3 or C6



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LA85

Anti-vibration assembly with shear beam load cell

300kg to 10 000kg capacity

Stainless steel construction (load cell and mount)

OIML C3 approved load cell

IP68, IP69K

ATEX certification for dust and gas

Designed for platforms, hopper and tank weighing, bag fillers, conveyors and belt weighers and systems with mixing/vibration



LeverMount®

Patented cast 316 stainless steel mounting accessory

5kg to 5 000kg capacity in 3 body sizes

Unique and safe load cell installation/removal without jacks, lifting tools or dummy load cells

OIML C3 approved stainless steel load cell

IP68, IP69K

ATEX certification for dust and gas

Designed for process weighing applications, particularly tanks and hoppers in the food and pharmaceutical industries



C3 or C6





Now
available
at 1 000kg



T20

Low profile, compact mounting accessory in zinc plated or stainless steel

1 000kg to 30 000kg capacity

Stainless steel compression load cell

Self-jacking facility and anti-lift security

IP68, IP69K

Designed for level measurement applications as a reliable alternative to radar, ultrasonic and other level sensors



T95

Stainless steel or painted steel mounting accessory, operating in **tension**

2 000kg to 10 000kg capacity

Self centering pendulum design

OIML C3 approved stainless steel folded shear beam

IP68, IP69K; lightning surge arrestors fitted to WIM models as an option

ATEX and IECEx certification for dust and gas

Designed for mixer applications, conveyors, axle weighing and weigh in motion (WIM) systems



MasterMount®

Patented cast steel mounting accessory

2,000kg to 30,000kg capacity

Unique and safe load cell installation/removal without jacks, lifting tools or dummy load cells

Stainless steel double shear beam load cell

IP68, IP69K

ATEX and IECEx certification for dust and gas

Designed for vessel, tank and silo weighing




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Load Cells and Weighing Assemblies



VC3500

- Low profile mounting accessory
- 2 000kg to 200 000kg capacity
- Painted steel, galvanized or stainless steel mounting accessory with high strength
- Stainless steel double shear beam load cell
- IP68, IP69K
- ATEX and IECEx certification for dust and gas
- Designed for large silos, vessels and tanks
- Special versions with  with certification to EN 1090



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T30

- High capacity self aligning weighing assembly
- 100 000kg to 600 000kg capacity
- Stainless steel column load cell
- Integral mount with anti-lift and allowance for vessel expansion
- Compact footprint
- IP67
- Designed for large silos and tanks



T34 Silo mount

- High capacity zinc plated mounting accessory
- 10 000kg to 1 000 000kg capacity
- Stainless steel rocker column load cell in analogue or digital version (with open protocol, up to 60 000kg only)
- OIML C4 approved to 60 000kg
- IP68, IP69K, in-built lightning arrestors
- ATEX certification for dust and gas
- Designed for vessels, tanks and silos





T34 Weighbridge

Self aligning assembly, with stainless steel or nickel plated mounting cups

10 000kg to 60 000kg capacity

Stainless steel rocker column load cell in analogue or digital version (with open protocol)

OIML C4 approved to 60 000kg

IP68, IP69K, in-built lightning arrestors

ATEX certification for dust and gas

Designed for weighbridges/truck scales



T38 High Temperature

High accuracy double shear beam

40 000kg to 200 000kg capacity

Virtually unaffected by shock loads and inevitable side loads or moments

Nickel plated alloy steel construction

Maximum service temperature 150°C

IP67

PTFE cable, 15 metres long

6-wire connection (with sense wires)

Designed for Metals Industry and Foundries



Load Pins

Custom designed to suit the application

100kg to 1 000 000kg capacity

Down-hole (IP68) or externally gauged (IP66) configurations

Stainless steel construction with polyurethane cable

Optional built-in 4-20mA amplified output, optional connector and optional high temperature version

ATEX variants

Designed for cranes, winches, shackles and other load monitoring applications, as well as marine environments



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Single Point Load Cells



T11

Single point (platform) load cell

15, 20, 30, 50, 75, 100, 150kg capacities

Nickel plated alloy steel construction

OIML C3 approved

IP66



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WASHER PLAIN M8
TORQUE TO 35Nm.

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T12

Single point (platform) load cell

15, 20, 30, 50, 75, 120, 200, 250, 350, 400kg
capacities in 2 body sizes

Fully welded stainless steel construction

OIML C3 approved

IP68, IP69K

Nickel plated steel version (T12A) also available
in capacities 50, 75, 120, 200, 250, 350, 400kg;
silicone sealed to IP66; OIML C4 approved; not
available with ATEX option.



T16

Viscous damped load cell assembly for dynamic
weighing, e.g. checkweighers

5, 7.5, 10, 15, 20, 35kg capacities

Stainless steel housing with air breather tube for
wash-down applications

Double bending beam single point load cell inside

OIML C4 approved

IP68 if using the supplied air breather kit



Bending and Shear Beam Load Cells



T66

Bending beam load cell

5, 10, 20, 30, 50, 75, 100, 150, 200, 250, 300, 500kg capacities

Fully welded stainless steel construction

OIML C3 approved, with 6 wire cable
(4 wire version on request)

IP68, IP69K

ATEX certification for dust and gas



T66 (OIML C6)

Higher accuracy bending beam load cell

50, 75, 100, 150, 200, 250kg capacities

Fully welded stainless steel construction

OIML C6 approved, 6 wires

IP68, IP69K

ATEX certification for dust and gas



C6



T85

Shear beam load cell

300, 500, 750, 1 000, 1 500, 2 000, 2 500, 3 000, 5 000, 7 500, 10 000kg capacities

Fully welded stainless steel construction

OIML C3 approved

IP68, IP69K

Optional load feet available

ATEX certification for dust and gas

Calibration in mV/V/Ω by output current matching



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Shear Beam and S-type Load Cells



T85-T

Shear beam load cell with blind loading hole for high accuracy platform scales

300, 500, 750, 1 000, 1 500, 2 000kg capacities

Fully welded stainless steel construction

OIML C3 approved

IP68, IP69K

Optional load foot type 35916 available

ATEX certification for dust and gas

Calibration in mV/V/Ω by output current matching



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T85-N

Shear beam load cell

300, 500, 750, 1 000, 1 500, 2 000kg capacities

Nickel plated alloy steel construction

OIML C3 approved

IP66

PVC cable

Calibration in mV/V/Ω by output current matching

Optional load feet available



T68

S-type tension/compression load cell

250, 500, 1 000, 2 000, 5 000, 7 500kg capacities

Fully welded stainless steel construction

OIML C3 approved (500kg to 5 000kg capacity)

IP68, IP69K

ATEX certification for dust and gas

Optional rod end bearings



S-type Load Cells



T60

S-type tension/compression load cell

50, 100, 150, 200, 300, 500, 750, 1 000, 1 500, 2 000, 3 000, 5 000, 6 000kg capacities

Nickel plated alloy steel, potted

Can be used in tension or compression

IP67

6-wire connection, 2 mV/V

Optional rod end bearings

T61

S-type tension/compression load cell

50, 100, 250, 500, 1 000kg capacities

Nickel plated alloy steel, potted

Can be used in tension or compression

IP67

4-wire connection, 3 mV/V

Optional rod end bearings

T65

S-type tension/compression load cell

50, 100, 200, 300, 500, 1 000, 2 000, 3 000kg capacities

Nickel plated alloy steel, potted

Can be used in tension or compression

IP67

6-wire connection, 2 mV/V

Optional rod end bearings

Instrumentation



Junction Boxes

- Options for 4 or 8 load cells
- Standard version available in ABS plastic or stainless steel
- Optional trimming potentiometers
- Optional ATEX version (all zones) in aluminium for 4 or 8 load cells
- Optional version with built-in lightning surge arrestors (aluminium)
- Digital version available for T34D digital load cells



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Intelligent Junction Box

- Real-time monitoring of signals from up to 4 load cells
- Instant alarm signal via relay if a fault is detected in 1 or more cells
- ABS plastic casing (stainless steel version also available)
- Removable terminals for convenient wiring
- Easy viewing of LED display showing status
- IP65
- Ideal for batching system consistency and helps avoid wastage or product recall

XTSGA Amplifier

- Cost effective load cell amplifier
- ABS casing with quick release screws
- 5V or 10V excitation for up to 4 x 350Ω load cells
- User-selectable analogue outputs set by on-board switch: 0-20 mA, 4-20 mA, 0-10 V, 0-5 V, ±5 V or ±10 V
- AC or DC power options available
- IP65



Optional XTRD remote display



Optional XTRD remote display



Optional XTRD remote display

XT1000

High speed indicator and weight transmitter

OIML R76 and EN 45501 approved

DIN/Omega rail mounting

2400 measurements/second

Configuration by PC software or integral keypad

Basic version with digital I/O, RS232, RS485 (MODBUS RTU, ASCII)

Optional versions with analogue outputs or PROFIBUS / PROFINET / EtherNet/IP connectivity

Optional AC power adapter and IP65 surface mount enclosure with transparent cover



XT2000

High speed indicator and weight transmitter

OIML R76 and EN 45501 approved

Panel mounting

2400 measurements/second

Configuration by PC software or integral keypad

Basic version with digital I/O, RS232, RS485 (MODBUS RTU, ASCII)

Optional versions with analogue outputs or PROFIBUS / PROFINET / EtherNet/IP connectivity

Optional AC power adapter



Smart

Stainless steel construction, IP65

OIML R76 and EN 45501 approved, multi-range

High resolution: 100 000 external divisions

7 digit, high brightness LED display

3 versions, with optional analogue/digital outputs available

Ideal for vessel, tank and silo weighing



Instrumentation



Smart ATEX

ATEX version of Smart, for zones 2, 21 and 22
 Stainless steel construction, IP65
 OIML R76 and EN 45501 approved, multi-range
 High resolution: 100 000 external divisions
 7 digit, high brightness LED display
 3 variants with optional analogue/digital outputs
 Ideal for vessel, tank and silo weighing in hazardous areas



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Matrix 2

Stainless steel enclosure
 OIML R76 and EN 45501 approved, ideal for truck weighing
 Multi-range capability
 RS232 and RS485 communications, digital I/O and analogue output options
 Supports up to 8 analogue or 16 digital load cells
 Simple calibration and configuration
 Weighbridge (truck scale) management, industrial and dosing applications included (multiple languages)



Additional Cable

Specially designed load cell cable for wiring from the junction box to instrumentation
 Option of 4-core or 6-core (with sense wires) with screen
 Halogen-free polyurethane outer sheath with XLPE sheathed conductors
 High toughness and resistance to cuts, chemicals, UV radiation, drilling mud
 Rodent resistant
 Available in custom lengths up to 200m

Weighing Assembly Selection Guide

Assembly Type	LA66	LA85	LeverMount	T20	T95	MasterMount	VC3500	T30	T34 Silo
Capacity kg									
5	•		•						
10	•		•						
20	•		•						
50	•		•						
75	•								
100	•		•						
150	•								
200	•		•						
300	•	•	•						
500		•	•						
1 000		•	•	•					
1 500		•	•						
2 000		•	•		•	•			
2 500		•	•	•					
3 000		•	•						
5 000		•	•	•	•	•			
7 500		•				•			
10 000		•		•	•	•			•
15 000						•			•
20 000				•		•			•
30 000				•		•	•		•
40 000									•
50 000							•		
60 000									•
75 000							•		
100 000							•	•	•
150 000							•		
200 000							•	•	•
300 000								•	
400 000								•	•
600 000								•	•
800 000									•
1 000 000									•
IECEX					•	•	•		
ATEX	•	•	•	•	•	•	•		•
OIML	•	•	•		•				•
Painted Mount					•	•	•	•	
Zinc Plated Mount				•			•		•
Stainless Steel Mount	•	•	•	•	•		•		

Made to Measure



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