

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 complex piping, 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 ISO9001:2008 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 assemblies, which are designed in accordance with Eurocode 3 (EN 1993) practices, form a crucial part of the weighing system. Use of the latest Finite Element Analysis (FEA) software pinpoints the optimum design of assembly for correct operation, then rigorous manufacturing and test procedures ensure total reliability under the harshest of conditions. These innovative mounting assemblies 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 assembly, 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 all 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. 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 for urgent requirements, by 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 and gas zone 2 which allows their use without safety barriers, saving substantial cost. IECEx certification is available on several load cell models.



We would be pleased to advise customers on the correct choice of load cell and certification to suit their intrinsically safe 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 found in the food or pharmaceutical industries or silos exposed to heavy rainfall.



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. Parylenes 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.

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 assemblies 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 this field include load pins for winches and cranes and weighing systems for gas cylinders used for flare ignition.



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

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Process Industries

Around one third 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 assembly. 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 Builders / 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
- And others...

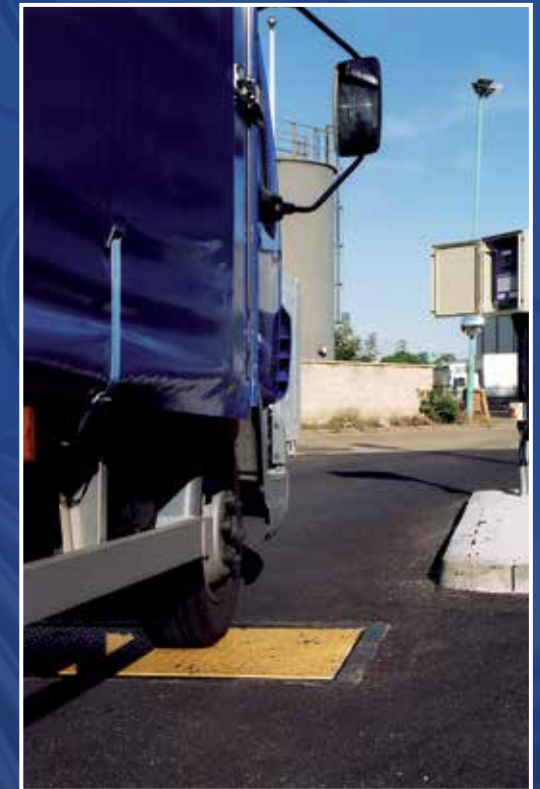


Weighbridges (Truck Scales), Axle Weighers and Weigh in Motion (WIM) Systems

Customers worldwide appreciate the excellent performance, rugged reliability 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 and NTEP Class III up to 60 tonnes
- Digital load cells with open protocol, approved to OIML C4 up to 60 tonnes
- Special version of the T95 load cell for high accuracy WIM and axle weighing systems



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4 OFF ATTACHMENT

Special Applications

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



LA66

Anti-vibration assembly with bending beam load cell
5 to 300kg capacity
Stainless steel construction
OIML C3 approved stainless steel load cell
IP68, IP69K
ATEX certification for dust and gas
Designed for platform, hopper and tank weighing,
bag fillers, conveyors and belt weighers



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LA350

Anti-vibration assembly with shear beam load cell
300 to 5,000kg capacity
Stainless steel construction
OIML C3 approved stainless steel load cell
IP68, IP69K
ATEX certification for dust and gas
Designed for platform, hopper and tank weighing,
bag fillers, conveyors and belt weighers



LeverMount®

Patented cast 316 stainless steel mounting
assembly
10 to 5,000kg capacity in 3 body sizes
Unique and secure load cell installation/removal
without jacks or lifting tools
OIML C3 approved stainless steel load cell
IP68, IP69K
ATEX certification for dust and gas
Designed for process weighing applications,
particularly food and pharmaceutical





T20

Low profile, compact mounting assembly

2,500 to 30,000kg capacity

Stainless steel or zinc plated assembly

Stainless steel compression load cell

Built-in jacking facility and anti-lift

IP68, IP69K

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



T95

Stainless steel or painted steel assembly, operating in tension

2,000kg to 20,000kg 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 assembly

2,000 to 30,000kg capacity

Unique and secure load cell installation/removal without jacks or lifting tools

Stainless steel double-ended shear beam load cell

IP68, IP69K

ATEX and IECEx certification for dust and gas

Designed for vessel, tank and silo weighing



Load Cells and Weighing Assemblies



VC3500

Low profile mounting assembly

30,000 to 200,000kg capacity

Painted steel, galvanized or stainless steel mounting assembly

Stainless steel double-ended shear beam load cell

IP68, IP69K

ATEX and IECEx certification for dust and gas

Designed for large silos, vessels and tanks



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T30

High capacity self aligning mounting assembly

100,000 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 mounting assembly

10,000 to 1,000,000kg capacity

Stainless steel rocker column load cell in analogue or digital version (with open protocol, up to 60,000kg only)

Zinc plated mount

OIML C4 approved and NTEP Class III approved to 60,000kg

IP68, IP69K, inbuilt lightning protection

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

10,000 to 60,000kg capacity

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

OIML C4 approved and NTEP Class III approved to 60,000kg

IP68, IP69K, inbuilt lightning protection

ATEX certification for dust and gas

Designed for weighbridges/truck scales



T38 High Temperature

High accuracy double shear beam

40,000 to 200,000kg capacity

Virtually unaffected by shock loads and inevitable side loads or moments

Nickel plated alloy steel

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 designs to suit the application

100 to 1,000,000kg capacity

Down-hole or externally gauged, IP66 or IP68 protection

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



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



T16

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

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

Stainless steel housing with venting for
washdown applications

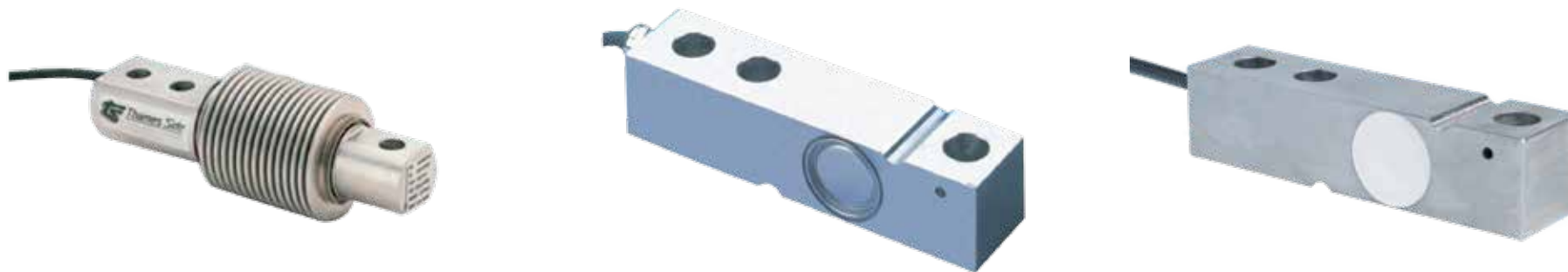
Double bending beam single point load cell inside

OIML C4 approved

IP68 using supplied venting 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, 4 or 6 wire versions

IP68, IP69K

ATEX certification for dust and gas



350i

Shear beam load cell

300, 500, 750, 1000, 1500, 2000, 3000, 5000kg capacities

Fully welded stainless steel construction

OIML C3 approved

IP68, IP69K

Optional load feet

ATEX certification for dust and gas

Optional 350Ti version with blind loading hole for platform scales



350n

Shear beam load cell

300, 500, 750, 1000, 1500, 2000kg capacities

Nickel plated alloy steel construction

OIML C3 approved

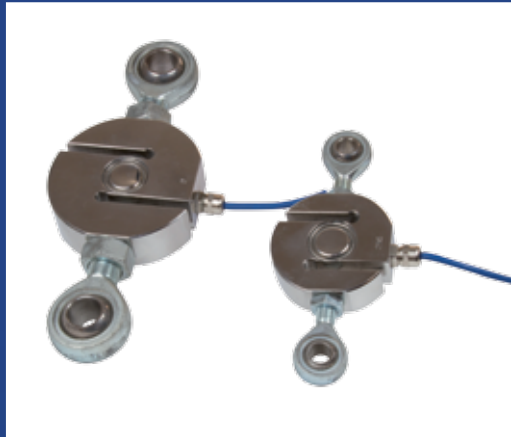
IP66

PVC cable

Optional load feet



S-type Load Cells



650

S-type tension/compression load cell
 250, 500, 1000, 2000, 5000, 7500kg
 Fully welded stainless steel construction
 OIML C3 approved (500-5000kg capacities)
 IP68, IP69K
 Optional rod end bearings



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 WASHER PLAIN M8
 TORQUE TO 35Nm.

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T60

S-type tension/compression load cell
 50, 100, 150, 200, 300, 500, 750, 1000, 1500,
 2000, 3000, 5000, 6000kg capacities
 Nickel plated alloy steel, potted
 Can be used in tension or compression
 IP67
 6-wire connection
 Optional rod end bearings



T61

S-type tension/compression load cell
 50, 100, 250, 500, 1000kg capacities
 Nickel plated alloy steel, potted
 Can be used in tension or compression
 IP67
 4-wire connection, 3 mV/V
 Optional rod end bearings



T64

S-type tension/compression load cell
 50, 100, 250, 500, 1000, 2500kg capacities
 Nickel plated alloy steel, potted
 Can be used in tension or compression
 IP67
 4-wire connection
 Optional rod end bearings



T65

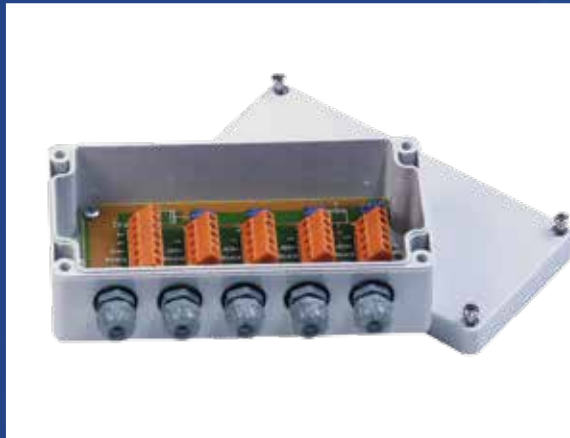
S-type tension/compression load cell
 50, 100, 200, 300, 500, 1000, 2000, 3000kg capacities
 Nickel plated alloy steel, potted
 Can be used in tension or compression
 IP67
 6-wire connection
 Optional rod end bearings



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

Instrumentation



Junction Boxes

Options for 4 or 8 load cells, 4 or 6 wire connections

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)

Version available for T34D digital load cells

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M8 x 55 LONG
WASHER PLAIN M8
TENSILE 700 35Nm.



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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 or die cast versions 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

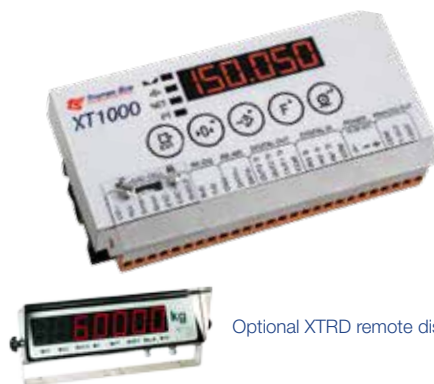
ABS casing with quick release screws

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



XT1000

High speed indicator and weight transmitter

DIN rail mounted

2400 measurements/second

Bright LED display

Configuration by software or integral keypad

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

Optional versions with analogue, PROFIBUS or PROFINET outputs

Optional AC power adapter and IP65 surface mount enclosure

XT2000

High speed indicator and weight transmitter

Panel mounted

2400 measurements/second

Bright LED display

Configuration by software or integral keypad

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

Optional versions with analogue, PROFIBUS or PROFINET outputs

Optional AC power adapter

DP 100

Cost effective general purpose indicator for indoor use

RS232 communications for printer or PC connection

Multi-range operation

User-friendly setup

Plastic construction

6 digit LCD display with LED backlight

Operation by 9VDC (adapter supplied) or battery (5 x AA)

5V excitation for up to 4 x 350Ω load cells or 8 x 700Ω load cell

High resolution (20-bit A/D)

Instrumentation



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 variants with optional analogue/digital outputs
- Ideal for vessel, tank and silo weighing



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

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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












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)



Weighing Assembly Selection Guide

Assembly Type	LA66	LA350	LeverMount	T20	T95	MasterMount	VC3500	T30	T34 Silo
Capacity kg									
10	•		•						
20	•		•						
50	•		•						
100	•		•						
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	•	•	•		•				•
NTEP									•
Painted					•	•	•	•	
Zinc Plated				•			•		•
Stainless	•	•	•	•	•		•		

Made to Measure



 Thames Side Offices ● International Partners



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