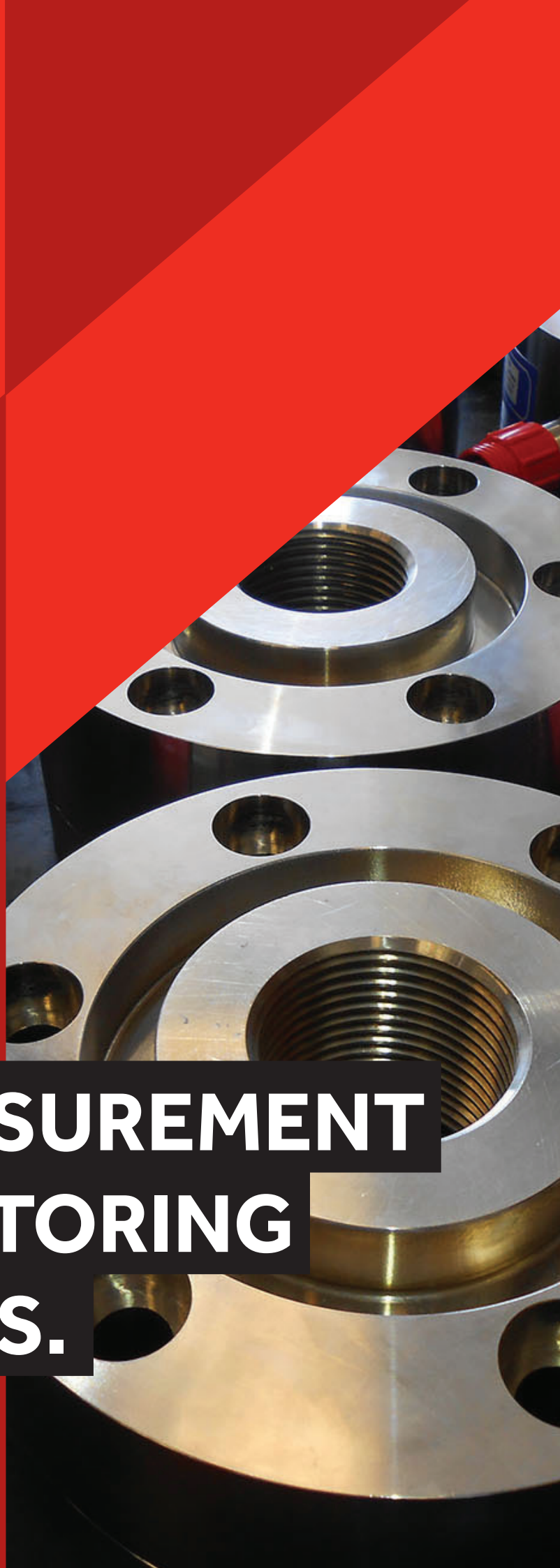


PRODUCT CATALOGUE.

LOAD MEASUREMENT AND MONITORING SOLUTIONS.



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GET IN TOUCH

Contact our head office in Cowes to speak to a member of the team about sales, hires, repairs or bespoke project management and consultancy.

Straininstall
8-10 Mariners Way
Cowes
PO31 8PD
UK

Telephone: +44 (0)1983 203 600
Email: hello@besgroup.com
straininstall.com

Register for our mailing list to stay up-to-date with Straininstall's latest product developments and exciting special offers!

Specialists in load measurement and monitoring technology, Straininstall is the supplier of choice for rigging, lifting and load testing operators worldwide.

Straininstall is an expert in load measurement and monitoring solutions across many different industries including - oil and gas, marine, renewables and construction.

With a large mixed discipline engineering team, we have invested in developing the innovative and award winning SmartLoad® technology to meet the requirements of our customers today. We are proud to be able to offer this technology, stocked in global locations for immediate dispatch anywhere in the world.

As part of BES Group, we have a wealth of global resources available at our fingertips to support our customers. So whatever you need and wherever you need it, we will work with you to identify the best possible solution for your application.

Our reputation is built on quality products and services, engineered to the highest standards and dispatched in minutes.

- We offer **fast delivery** ex-stock for immediate global distribution
- All Straininstall products are **designed and manufactured in the UK** to the highest standards of quality
- **In-house engineering expertise** enables us to develop solutions to meet our customer's exacting requirements
- We are world leaders in supporting a vast range of **complex load monitoring solutions**
- Specialists in **hazardous area** and **subsea** applications
- We provide a **high standard of service** with a single point of contact for all your project enquiries, from concept to delivery



INNOVATION, EXCELLENCE & DELIVERY.

Strainstall's calibration and repair service is available for both Strainstall own and third party products.

We have unrivaled experience in calibrating load equipment and we also offer a popular in-house repair service.

We recognise that repairs often need to be completed urgently in order to get operations back on track. In addition to our usual rapid turnaround, we also offer a fast track service if required.

We welcome third party products in addition to our own, and all equipment receives the same high standard of care.

We have a range of testbeds with load capacities up to 1700 tonnes. All equipment is controlled under our quality management system, and our in-house testbeds are all fully certified and traceable to UKAS standards.

WITH IN-HOUSE EXPERTISE AND A WEALTH OF RESOURCES AVAILABLE WE PROVIDE A QUICK RESOLUTION FOR YOUR TECHNICAL ISSUES.

Strainstall has an enviable reputation for technical innovation and meeting challenging objectives through the delivery of creative and cost effective solutions. We work with you to fully understand your application and monitoring objectives using our significant experience to deliver improved operational performance.

Stock available for immediate dispatch

We maintain a large quantity of stock which is available and can be dispatched within minutes. We package all of our products with the greatest of care ensuring your equipment is delivered safely and provide fast and flexible delivery options anywhere in the world.

Tailored monitoring solutions

Our highly skilled team of professionals have the expertise required to support your needs during all phases of your project. We offer bespoke product design and manufacturing for specific client requirements and we can also provide a complete project management capability to manage delivery to time, quality and cost, while ensuring compliance to the highest of safety regulations.

Installation and commissioning

Strainstall's dedicated engineers provide support with preparatory tasks, installation, site testing and commissioning. Upon receipt of requirements and requested dates, a single point of contact will issue a quotation and comprehensive pre-site check-list.

Due to continuous development, Strainstall reserves the right to change specifications without notice.



HAZARDOUS AREA LOAD MEASUREMENT

Strainstall is a specialist in load measurement solutions for hazardous areas with a range of products and solutions available for zones 0,1 and 2.

All of our hazardous area products are supplied with full ATEX and IECEx certifications to EN/IEC 60079 standards.

Our team are also highly knowledgeable in working with UL, Kosha and other hazardous area classifications worldwide.

We have a wide range of zone 1 and 2 products available ex-stock for immediate dispatch. Our experienced team is on hand to offer guidance and support to customers looking for a safe and compliant, off-the-shelf or bespoke solution for these demanding environments.



SmartLoad 1Ex® and 2Ex® wireless technology

We have developed a range of wireless products which incorporate our SmartLoad® technology (including in-sensor data logging) and are fully compliant to the very latest ATEX and IECEx standards.

This technology has been developed with a range of display options including handhelds which can also be used in the relevant hazardous areas. These systems are fully flexible, working with all the safe area SmartLoad® products and software packages.



**Safety is our number one priority.
All Strainstall products are rigorously tested and inspected.**

Safety and reliability are critical factors in the lifting industry and we operate to ISO:9001 2015 accredited quality management system to ensure product excellence. Our products have been designed using the latest finite element analysis software to optimise strength by design, resulting in industry leading factors of safety. The safety factors have been proven through real life destructive testing of all products, giving our customers confidence in case of an unintentional overload event.

All products are proof load tested individually prior to dispatch. Our hazardous area products are fully certified by SGS Baseefa - the leading, internationally recognised certification body for explosion protected equipment, delivering IECEx, ATEX and DSEAR standards to customers around the world.

We are also members of LEEA - Lifting Equipment Engineers Association - the leading representative body for the lifting industry worldwide.

A REVOLUTION IN LOAD MEASUREMENT

SmartLoad®

Improve your workplace safety, reduce downtime and lower costs.

Our innovative and award winning SmartLoad® technology can be retrofitted to your existing equipment, removing the need for expensive full system upgrades.

The handset

- Only one handset required to connect to links, shackles and other load cells
- Automatically detects all cells in range
- Live simultaneous display of multiple cells
- Displays average and total readings
- Intuitive menu driven flexible display
- Optional start / stop logging from handset
- Peak reading and tare display
- Increased range
- Reduced interference
- Variable overload audio alarm
- Individual load cell naming facility

The load cell transmitter

- On-board intelligence
- On-board memory
- Retrofit to existing load cells
- Date and time stamp for all usage events
- Peak readings recorded and logged
- Overload events recorded and logged
- Variable sample rates to suit application
- Low power for long battery life
- Calibration records held on transmitter



Straininstall's ground-breaking SmartLoad® monitoring technology provides users with total system control and flexibility.

SmartLoad® uniquely incorporates intelligence and memory directly on the load cell itself, increasing functionality while enhancing the efficiency and safety of your lifting operations.

SmartLoad® delivers a standard technology platform for use across a range of products. Requiring only one handset to connect links, shackles and other load cells, it reduces operational costs. Fully compatible with existing equipment, SmartLoad® can also be retrofitted, removing the need for expensive full system upgrades.

Utilising the latest wireless technology for increased range and improved signal reliability, SmartLoad® provides assurance, improves data accuracy and enhances workplace safety as well as reducing downtime.

Features and benefits of SmartLoad®

- Logging function controlled from handset - no need for on-site laptop
- Safety assurance - automated overload monitoring
- Uniquely incorporates intelligence on load cells and handsets giving total system control and flexibility
- Significantly increased range and signal reliability over existing industry standard technology
- No training required - simple 'plug-and-play' system
- No pairing required - 'select and connect' technology
- Avoids downtime and unnecessary wastage - built in system redundancy
- Easily integrated with existing monitoring systems



SmartLoad® software is available from entry level viewing to advanced detailed analysis depending on your requirements.

Our intelligent SmartLoad® software automatically detects all load cells in range with no pairing required for instant display of results.

With four options to choose from, Straininstall can provide a data logging or analysis system to suit your load testing needs, including the ability to calibrate your own equipment. Results are automatically exported into Excel and reports are displayed in an easy to understand format for immediate sharing.

Features and benefits of SmartLoad® logging software

- Displays live readings of up to 128 cells simultaneously
- Real-time trace provides overview of the last 100 readings for trend analysis
- Monitors peak readings from each device
- Instant overload notification
- Automatic updates - remotely upgrades cell and handset firmware
- Downloadable event logs and cell reading data (Excel-compatible)
- Controllable cell operating speeds and overload limits
- Remote control cell logging
- Monitors battery life of remote cells, avoiding downtime and unnecessary wastage

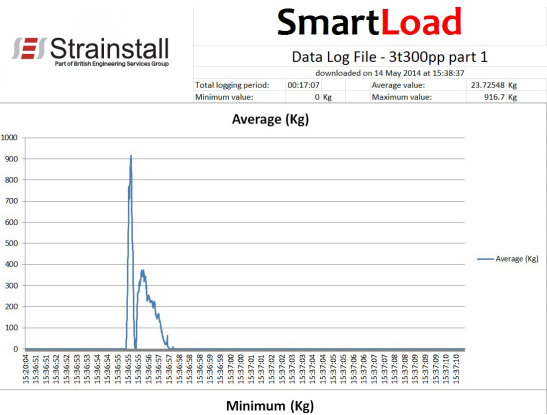
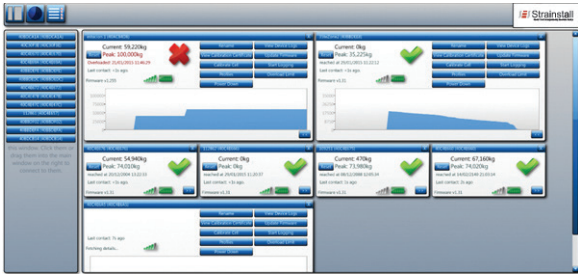
SmartLoad® software versions

Viewer: This entry level option enables PCs to be used like a handset and facilitates firmware upgrades to load cells and displays.

Logging: Adds load monitoring data logging functionality to the viewer software and can view multiple load cells at once.

Asset management: This advanced software package includes all functionality designed for full fleet management of your load monitoring equipment.

*Extra charge applies for log chart customisation.



	Viewer	Logging	Calibration	Asset management
Single cell view	X		X	
View up to 128 cells		X		X
Overload warning reset			X	X
Set safety overload limit			X	X
View calibration certificate	X	X	X	X
Update firmware	X	X	X	X
Calibrate load cells			X	X
Can wake / sleep cells	X	X	X	X
Predefined logging speed profiles		X		X
Adjustable logging speed parameters		Separate option		X
Start / stop logging		X		X
View / download log files		X		X
Customised log chart with customer branding*		X		X
View / download event log		X		X
Delete / reset event log				X
Adjustable alarm limit	X	X	X	X
Change cell names	X	X	X	X
View / reset peak reading	X	X	X	X



LOAD MONITORING DISPLAYS

Available with SmartLoad® technology

Strainstall has a wide range of load monitoring indicators and handsets to match both high performance and budget requirements.

From standard battery powered hand held collectors to wireless units, mains powered indicators and hazardous area approved displays, Strainstall has a solution to meet any load measurement application.

Intuitive SmartLoad® displays

Menu driven with flexible displays, Strainstall's handsets incorporate our innovative and award winning SmartLoad® technology. Fully intuitive, they require no training so are suitable for immediate use.

Options:

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area zone 1 and 2
- Handset and / or permanent display
- Signal boosters available for extended wireless range

Features and benefits:

- ✓ No pairing required - automatically scans for all local cells
- ✓ Increased range and reduced interference
- ✓ Live simultaneous display of multiple cells
- ✓ Average and total readings displayed
- ✓ Intuitive menu driven flexible display
- ✓ Start / stop logging from handset (depending on option)



LOAD PINS

Available with SmartLoad® technology

Strainstall's long-lasting load pins deliver high accuracy under the most challenging of operations.

Harsh environments are our speciality. Manufactured from high tensile stainless steel, our load pins are suitable for hazardous area and subsea applications, and can be easily retrofitted into existing systems.

We provide an in-house calibration service up to 1700 tonnes, traceable to national standards, as well as a customised design service to suit specialised requests.

Options:

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area zone 0, 1 and 2
- X-Y gauging available
- Radial or axial cable exit

Features and benefits:

- ✓ Internally gauged, fully welded and hermetically sealed
- ✓ Short lead time
- ✓ Easily retrofitted
- ✓ Highly accurate
- ✓ In-house custom design and manufacturing

Strainstall load pins are manufactured to suit our customers specific requirements



Typical specifications	mV/V output	mA output	Wireless output
Rated load		As required	
Proof load		150% of rated load	
Non linearity		< ± 1% of full scale	
Non repeatability		< ± 0.01% of full scale	
Zero balance		< ± 0.01% of full scale	
Environmental protection		IP67 / IP68	
Safety factor		As required	
Operating temperature		-25°C to +70°C	
Storage temperature		-30°C to + 80°C	
Output signal	mV/V	4-20mA	Wireless
Electrical connection	4 core	2 or 3 wire	N/A
Cable connection	Gland or connector		N/A
Cable length	5m as standard		N/A
Recommended excitation voltage	10V	N/A	N/A
Maximum excitation voltage	15V	N/A	N/A
Recommended supply voltage	N/A	24V	N/A
Maximum excitation voltage	N/A	30V	N/A
Bridge resistance	700 Ohm	N/A	N/A
Sensitivity	1.0mV/V to 2.0V/V nominal	N/A	N/A
Data logging	N/A	N/A	On load cell
Battery type	N/A	N/A	2 or 4 x AA
Active battery life	N/A	N/A	Up to 350 hours
Standby battery life	N/A	N/A	Up to 1700 hours
Telemetry frequency	N/A	N/A	2.4Ghz ISM
System range	N/A	N/A	Up to 350m
Sampling rate	N/A	N/A	10Hz (500Hz max)

Crane load pins

Specially designed to be incorporated into many locations within a crane structure, depending on its layout. They can be retrofitted, replacing any existing load bearing pins with ease, and we can also supply a complete crane weighing and overload system with the addition of a display / indicator.

Subsea load pins

Specially developed to withstand harsh offshore and subsea applications. Environmentally sealed to IP67 as standard with higher ratings available on request, our subsea load pins can be fitted with wet mateable connectors and are pressure tested to suit different depths.

Industrial load pins

Specially designed to withstand the harsh conditions found in industrial environments including extreme temperatures, dust, moisture and vibration.

SmartLoad® load pins are available for use in hazardous area zones 0, 1 and 2



LOAD LINKS

Available with SmartLoad® technology

Strainstall’s cost effective load links enable accurate and reliable load monitoring.

Our links are designed to minimise stress concentrations and maximise strength. The design incorporates features which increases reliability, reduces the risk of damage and ensures ease of use.

Manufactured from high tensile, aerospace grade anodised aluminium, our load links are suitable for use across all industry sectors including marine and offshore. They are fully Finite Element Analysis (FEA) optimised and destructively tested.

We have a range of links in stock, up to 1000 tonnes ready for immediate dispatch. Larger capacities are available on request and all of our load links are supplied with full calibration and proof load certificates.



 SmartLoad® load pins are available for use in hazardous area zones 0, 1 and 2

Due to continuous development, Strainstall reserves the right to change specifications without notice. *System range dependent on line of sight and external interference.

Typical specifications	mV/V output	mA output	Wireless output
Rated load	As required		
Proof load	150% of rated load		
Non linearity	< ± 0.25% of full scale		
Non repeatability	< ± 0.05% of full scale		
Zero balance	< ± 0.05% of full scale		
Environmental protection	IP66 / IP67		
Safety factor	5x minimum		
Operating temperature	-25°C to +70°C		
Storage temperature	-30°C to + 80°C		
Output signal	mV/V	4-20mA	Wireless
Electrical connection	4 core	2 or 3 wire	N/A
Cable connection	Gland or connector		N/A
Cable length	5m as standard		N/A
Recommended excitation voltage	10V	N/A	N/A
Maximum excitation voltage	15V	N/A	N/A
Recommended supply voltage	N/A	24V	N/A
Maximum excitation voltage	N/A	30V	N/A
Bridge resistance	1000 Ohm	N/A	N/A
Sensitivity	1.5mV/V nominal	N/A	N/A
Data logging	N/A	N/A	On load cell
Battery type	N/A	N/A	3 x AAA
Active battery life	N/A	N/A	Up to 200 hours
Standby battery life	N/A	N/A	Up to 1400 hours
Telemetry frequency	N/A	N/A	2.4Ghz ISM
System range	N/A	N/A	Up to 150m*
Sampling rate	N/A	N/A	10Hz

Options:

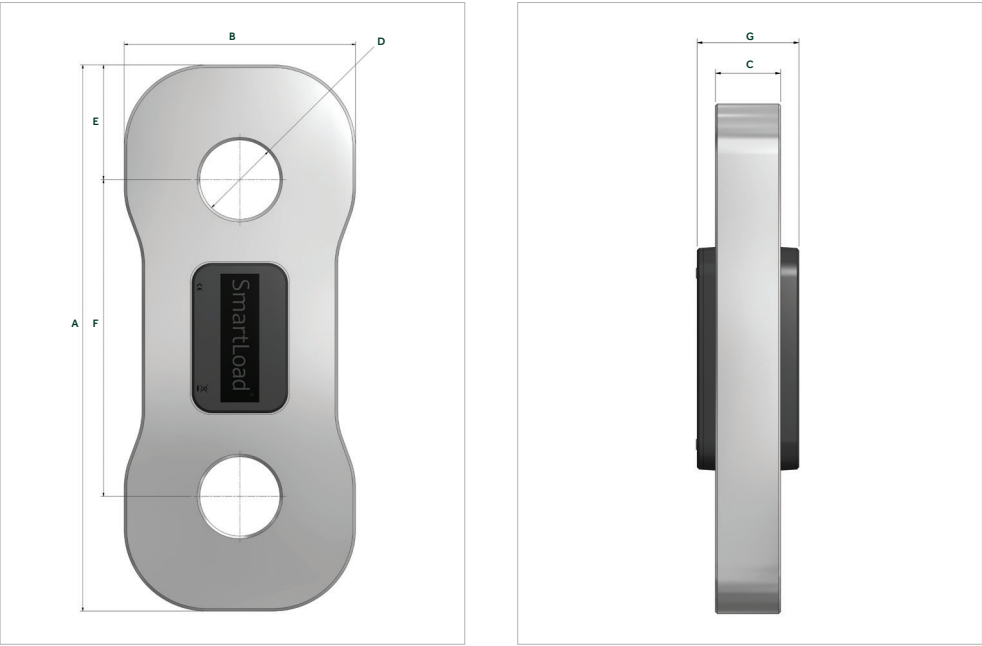
- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area zone 1 and 2
- Built in display - Visilink

Features and benefits:

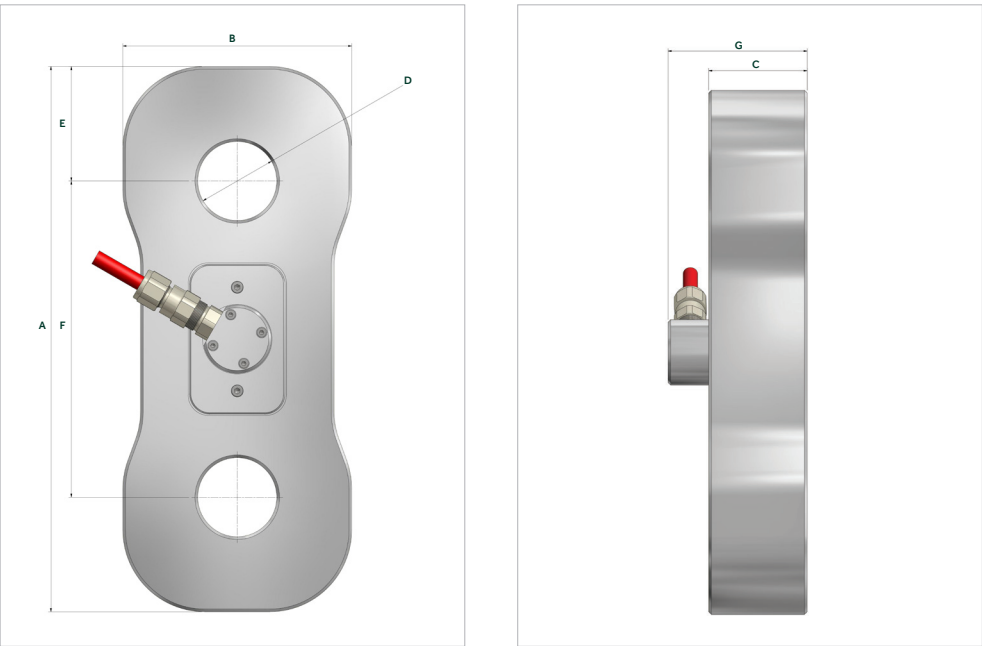
- ✓ Industry leading safety factor
- ✓ In link data logging
- ✓ In stock available for immediate dispatch
- ✓ Latest wireless technology
- ✓ Internal antenna
- ✓ Compatible with SmartLoad® COG system
- ✓ Corrosion resistant design
- ✓ Use with any SmartLoad® hand held or wall mounted display



Wireless load link



Cabled load link



Load links typical dimensions														
Load rating (tonnes)	3.25	5	12.5	25	35	50	75	120	150	200	250	300	400	500
Weight (kg)	0.8	1.2	2.5	4.8	7.3	10.9	16.9	41.5	53.1	70	90	112	175	228
A mm	204	248	310	350	392	436	530	570	640	770	808	850	1000	1080
B mm	74	86	104	114	124	148	180	270	290	308	332	352	420	456
C mm	24	26	38	60	75	90	90	120	130	140	162	185	205	230
D mm	20	26	40	52	58	71	84	97	111	134	144	154	179	189
E mm	24	36	59	72	80	94	116	140	160	220	209	220	260	290
F mm	156	176	192	206	232	248	298	290	320	370	390	410	480	500
G mm	48.5	48	48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



LOAD SHACKLES

Available with SmartLoad® technology

Strainstall’s robust load shackles are ideal for lifting and weighing applications where there is limited headroom.

Our load shackles are manufactured from GN or Van Beest shackles as standard, but other manufacturers are available on request.

We provide a fully stainless steel construction (excluding bow) up to 85 tonnes as standard, and fully stainless steel construction for 120 tonnes and above upon request.

We have a large range of shackles available in stock up to 1000 tonnes for purchas, and ready for immediate dispatch. Larger capacities are available on request and all of our load shackles are supplied with full calibration and proof load certificates.



SmartLoad® load pins are available for use in hazardous area zones 0, 1 and 2

Due to continuous development, Strainstall reserves the right to change specifications without notice. *System range dependent on line of sight and external interference.

Typical specifications	mV/V output	mA output	Wireless output
Rated load	As required		
Proof load	150% of rated load		
Non linearity	< ± 1% of full scale		
Non repeatability	< ± 0.01% of full scale		
Zero balance	< ± 0.01% of full scale		
Environmental protection	IP66 / IP67		
Safety factor	3x		
Operating temperature	-25°C to +70°C		
Storage temperature	-30°C to + 80°C		
Output signal	mV/V	4-20mA	Wireless
Electrical connection	4 core	2 or 3 wire	N/A
Cable connection	Gland or connector		N/A
Cable length	5m as standard		N/A
Recommended excitation voltage	10V	N/A	N/A
Maximum excitation voltage	15V	N/A	N/A
Recommended supply voltage	N/A	24V	N/A
Maximum excitation voltage	N/A	30V	N/A
Bridge resistance	700 Ohm	N/A	N/A
Sensitivity	2.0mV/V nominal	N/A	N/A
Data logging	N/A	N/A	On load cell
Battery type	N/A	N/A	3 x AAA or 3 x D
Active battery life	N/A	N/A	Up to 350 hours
Standby battery life	N/A	N/A	Up to 1700 hours
Telemetry frequency	N/A	N/A	2.4Ghz ISM
System range	N/A	N/A	Up to 150m*
Sampling rate	N/A	N/A	10Hz

Options:

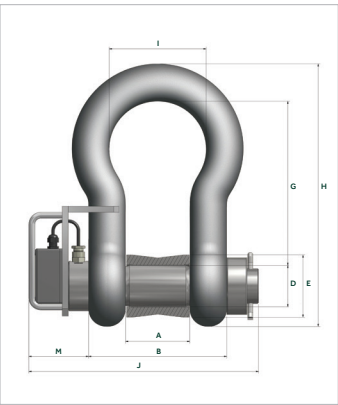
- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area zone 1 and 2
- Subsea - with ROV / diver mateable connectors
- Bow or D type

Features and benefits:

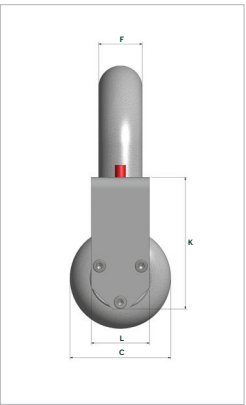
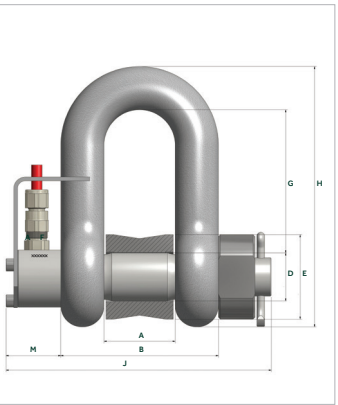
- Internally gauged, fully welded and hermetically sealed
- Robust construction
- Internal antenna
- Stainless steel centralising load bobbin supplied as standard
- Robust stainless steel protection cage for electronics



Wireless load shackle



Cabled load shackle

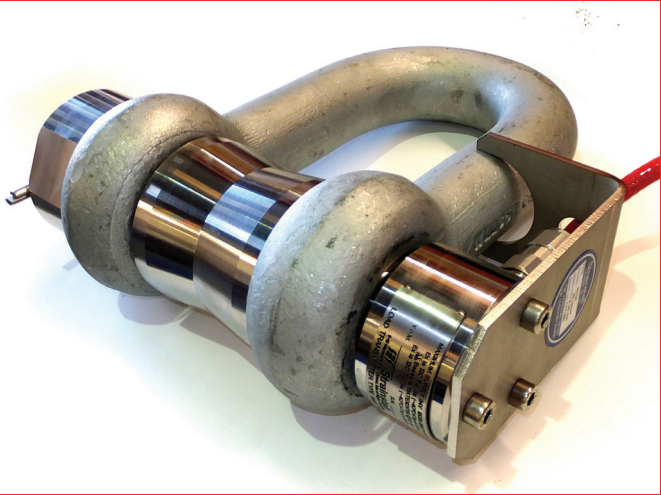


Load shackles typical dimensions - telemetry																		
Load rating (tonnes)	8.5	12	17	25	35	55	85	120	150	200	300	400	500	600	700	800	900	1000
Weight (kg) - whole assy	6.1	8.7	12.8	19.4	24.7	48	69	133	164	273	447	665	800	945	1100	1135	1322	1419
A mm	43	51	60	74	83	105	127	147	169	179	205	231	256	285	310	310	330	338/346
B mm	93	115	136	164	183	235	273	337	379	419	485	559	584	675	720	730	770	800
C mm	60	73	89	104	111	145	162	208	238	279	325	376	398	405	435	435	465	480
D mm	28	35	42	50	57	70	83	95	108	130	150	175	185	205	217	217	230	240
F mm	25	32	38	45	50	65	75	95	105	120	140	170	180	195	205	210	220	220
G mm (bow)	95	115	146	176	197	260	329	401	411	514	619	668	718	700	700	700	700	750
H mm (bow)	164	201	249	300	331	433	527	647	689	838	996	1113	1189	1200	1231	1236	1268	1340
J mm (cabled)	175	215	240	250	290	340	380	460	510	560	630	720	740	850	900	920	940	980
J mm (wireless)	261	306	336	370	391	443	487	571	611	646	711	801	821	936	971	981	1021	1040
K mm (cabled)	200	200	200	200	200	210	220	230	230	230	230	230	230	N/A	N/A	N/A	N/A	N/A
K mm (wireless)	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
L mm (cabled)	50	50	50	60	75	88	100	120	130	150	180	210	220	240	260	260	260	270
L mm (wireless)	160	100	100	100	100	110	120	160	160	160	160	160	160	160	160	160	160	160
M mm (cabled)	54	55	57	57	57	55	55	50	50	50	50	50	55	60	60	60	60	60
M mm (wireless)	136	151	151	151	151	151	151	151	151	121	126	126	126	141	141	141	141	141

Subsea load shackles: Includes SmartLoad® technology

Strainstall’s subsea load shackles are available as a ‘D’ or ‘Bow’ shackle body with load centralising bobbins, ROV / diver mateable connectors, displays and signal conditioning units with a robust carry case.

Specially designed for use in underwater applications, our load shackles are supplied with wet mateable connectors and deep sea protection, so they are unaffected by the outside water pressure whilst remaining sensitive in the intended load measuring direction.





PILLAR COMPRESSION LOAD CELLS

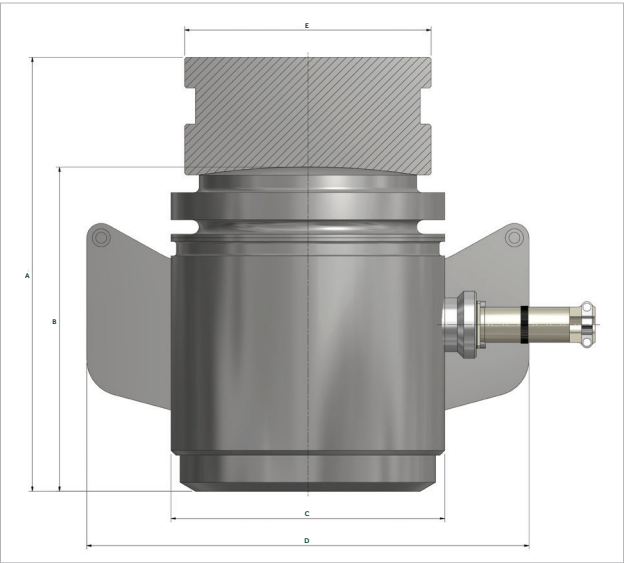
Available with SmartLoad® technology

Strainstall’s pillar compression load cells are highly adaptable with a robust construction for use in harsh environments.

Manufactured from high tensile stainless steel, each load cell is designed with a domed loading top to greatly reduce the effect of offset loads. The load cell cable is fitted through an integral connector to allow for on-site mating and removes the need for handling large lengths of cable whilst positioning the load cells.

We provide an in-house calibration service up to 1700 tonnes, traceable to national standards, as well as a customised design service to suit specialised requests. We maintain a range of stock available to buy and ready for immediate dispatch.

Pillar compression load cell



Options:

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area zone 0, 1 and 2
- Subsea - with ROV / diver mateable connectors
- Bespoke design
- Optional loading cap

SmartLoad® load pins are available for use in hazardous area zones 0, 1 and 2

Typical specifications	mV/V output	mA output	External wireless interface
Rated load	As required		
Proof load	150% of rated load		
Non linearity	< ± 0.15% of full scale		
Non repeatability	< ± 0.05% of full scale		
Zero balance	< ± 0.05% of full scale		
Environmental protection	As required	IP66	
Safety factor	As required		
Operating temperature	-20°C to +60°C		
Storage temperature	-30°C to + 80°C		
Cable connection	Gland or connector	N/A	
Cable length	5m as standard	N/A	
Output signal	mV/V	4-20mA	Wireless (Input signal mV/V)
Electrical connection	4 core	2 or 3 wire	N/A
Recommended excitation voltage	10V	N/A	N/A
Maximum excitation voltage	15V	N/A	N/A
Recommended supply voltage	N/A	24V	N/A
Maximum excitation voltage	N/A	30V	N/A
Bridge resistance	700 Ohm	N/A	N/A
Sensitivity	1.5mV/V - 2.0V/V nominal	N/A	N/A
Data logging	N/A	N/A	In interface
Battery type	N/A	N/A	3 x D
Active battery life	N/A	N/A	Up to 500 hours
Standby battery life	N/A	N/A	Up to 1700 hours
Telemetry frequency	N/A	N/A	2.4Ghz ISM
System range	N/A	N/A	Up to 350m
Sampling rate	N/A	N/A	10Hz (500Hz max)

Pillar compression load cell typical dimensions						
Product code	7510-100	7510-200	7510-300	7510-500	7510-700	7510-1000
Load rating (tonnes)	100	200	300	500	700	1000
Weight (kg)	8.5	18	28	75	86	160
A mm	170	215	240	320	350	400
B mm	127	163	179	248	281	315
C mm	100	126	151	216	216	272
D mm	184	210	244	320	320	246
E mm	86	112	136	196	196	246

Features and benefits:

- ✓ Robust construction
- ✓ Long design life
- ✓ Highly accurate
- ✓ Fully welded and hermetically sealed
- ✓ Compatible with SmartLoad® COG system
- ✓ Larger sizes include built in handles for ease of positioning



DIAPHRAGM COMPRESSION LOAD CELLS

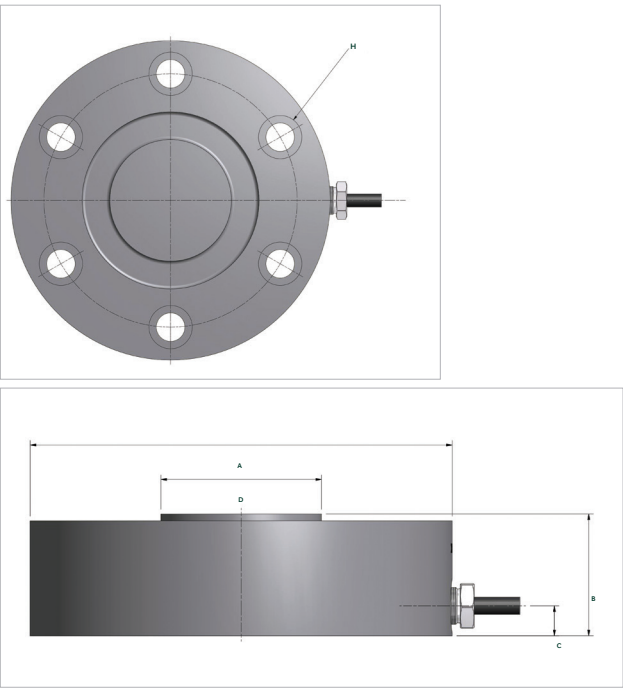
Available with SmartLoad® technology

Strainstall’s diaphragm load cells are ideal for a range of structural and industrial applications where height may be limited.

Manufactured from high tensile stainless steel, our highly accurate diaphragm load cells have a low profile and a high resistance to offset loads.

The standard fixing arrangement includes six counter bored holes with an optional base plate, which allows the load to become an integral part of the structure they are monitoring. They can also be supplied with tapped holes for more specialised installations.

Diaphragm compression load cell



Options:

- SmartLoad® technology
- Cabled or wireless
- Hazardous area zone 0, 1 and 2
- Subsea
- Bored or tapped holes
- Optional base plate

SmartLoad® load pins are available for use in hazardous area zones 0, 1 and 2

Typical specifications	mV/V output	mA output	External wireless interface
Rated load	As required		
Proof load	150% of rated load		
Non linearity	< ± 0.25% of full scale		
Non repeatability	< ± 0.05% of full scale		
Zero balance	< ± 0.05% of full scale		
Environmental protection	IP68	IP66	
Safety factor	As required		
Operating temperature	-20°C to +60°C		
Storage temperature	-30°C to + 80°C		
Cable connection	Gland or connector	N/A	
Cable length	5m as standard	N/A	
Output signal	mV/V	4-20mA	Wireless (Input signal mV/V)
Electrical connection	4 core	2 or 3 wire	N/A
Recommended excitation voltage	10V	N/A	N/A
Maximum excitation voltage	15V	N/A	N/A
Recommended supply voltage	N/A	24V	N/A
Maximum excitation voltage	N/A	30V	N/A
Bridge resistance	1000 Ohm	N/A	N/A
Sensitivity	1.5mV/V nominal	N/A	N/A
Data logging	N/A	N/A	In interface
Battery type	N/A	N/A	3 x D
Active battery life	N/A	N/A	Up to 500 hours
Standby battery life	N/A	N/A	Up to 1700 hours
Telemetry frequency	N/A	N/A	2.4Ghz ISM
System range	N/A	N/A	Up to 350m
Sampling rate	N/A	N/A	10Hz (500Hz max)

Diaphragm compression load cell typical dimensions			
Product code	DIA 2800	DIA 3356	DIA 3357
Load rating (tonnes)	0.1 to 20	10 to 50	40 to 100
A mm	112	150	184
B mm	25	45	53
C mm	11	12	12
D mm	50	60	70
Hole H	To suit 6 x M6 SKT CAP screws on 98 P.C.D	To suit 6 x M12 SKT CAP screws on 122 P.C.D	To suit 6 x M16 SKT CAP screws on 146 P.C.D

Features and benefits:

- ✓ Can be retrofitted
- ✓ High resistance to offset loads
- ✓ Versatile - ideal for applications where height may be limited
- ✓ High safety factor
- ✓ Fully welded and hermetically sealed
- ✓ Compatible with SmartLoad® COG system



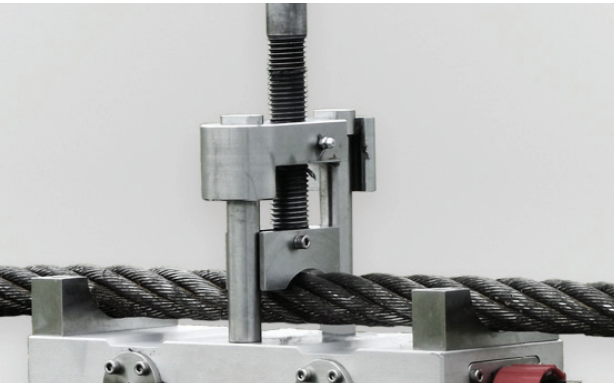
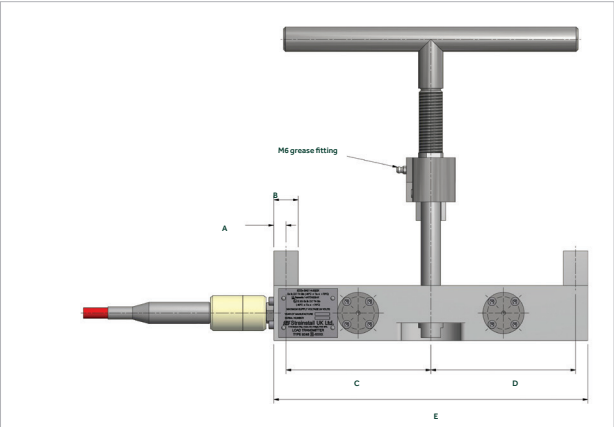
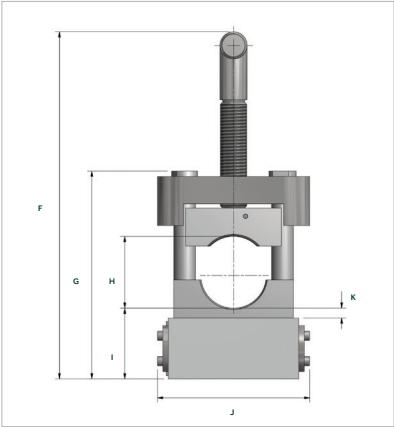
STATIC LINE MONITOR

Available with SmartLoad® technology

Strainstall’s static line monitors are ideal for use in harsh environments where a fixed means of measurement is impractical.

Manufactured from high tensile aluminium or stainless steel, our static line monitors can be customised to suit various rope sizes. They provide accurate readings to ensure that loads remain within safe working limits.

We have a range of stock ready for immediate dispatch, as well as a popular in-house calibration service up to 100 tonnes, traceable to national standards.



Typical specifications	mA output	External wireless interface
Rated load	As required	
Proof load	200% of rated load (dependent on rope capacity)	
Rope diameter	22mm to 50mm	
Operating temperature	-20°C to +60°C	
Storage temperature	-30°C to +80°C	
Environmental protection	IP67	IP66
Output signal	4-20mA	Wireless
Electrical connection	2 or 3 wire	N/A
Cable connection	Gland and connector	N/A
Cable length	5m as standard	N/A
Recommended supply voltage	24V	N/A
Maximum supply voltage	30V	N/A
Data logging	N/A	In interface
Battery type	N/A	3 x D
Active battery life	N/A	Up to 500 hours
Standby battery life	N/A	Up to 1700 hours
Telemetry frequency	N/A	2.4Ghz ISM
System range	N/A	Up to 350m
Sampling rate	N/A	10Hz (500Hz max)

Static line monitor typical dimensions	
A mm	12.5
B mm	2.5
C mm	147.5
D mm	147.5
E mm	320
F mm	319
G mm	191
H mm	66 (Max)
I mm	66
J mm	140
K mm	9

Options:

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area zone 1 and 2
- Aluminium or stainless steel construction

Features and benefits:

- ✓ Easy to transport
- ✓ Robust construction
- ✓ Simple to use

 SmartLoad® load pins are available for use in hazardous area zones 0, 1 and 2



RUNNING LINE MONITOR

Available with SmartLoad® technology

Strainstall’s running line monitors’ rugged design makes them ideal for operation in extreme environments.

Specially designed to be corrosion resistant in harsh marine environments, our running line monitors suit various rope sizes and capacities depending on your needs. We maintain a range of stock available for immediate dispatch. We provide a popular in-house calibration service up to 100 tonnes, traceable to national standards, as well as bespoke design and manufacturing to suit more specific requests.

Options:

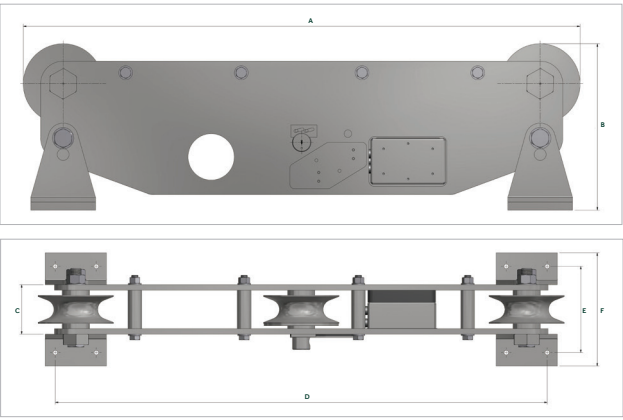
- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area zone 1 and 2
- Various display options
- Mains or battery powered indicators
- Three or five roller system
- Customised system design service

Features and benefits:

- ✓ Robust stainless steel protection cage for electronics
- ✓ Corrosion resistant design
- ✓ In stock available for immediate dispatch

 SmartLoad® load pins are available for use in hazardous area zones 0, 1 and 2

Cabled running line monitor

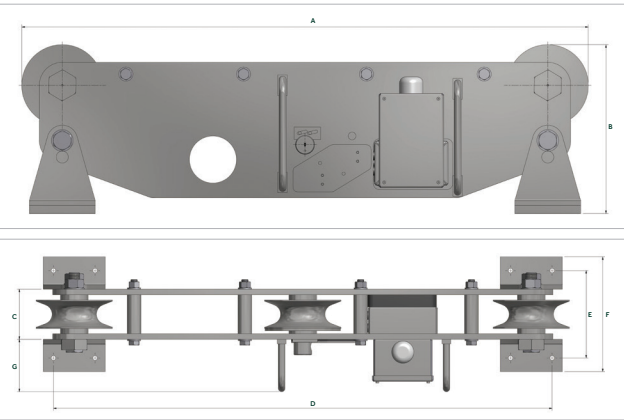


Typical specifications	mA output	Wireless output
Rated load	As required	
Proof load	200% of rated load (dependent on rope capacity)	
Rope diameter	10mm to 125mm	
Non linearity	± 2% of full scale	
Non repeatability	< ± 0.01% of full scale	
Zero balance	< ± 0.01% of full scale	
Environmental protection	IP66/IP67	
Operating temperature	-20°C to +60°C	
Storage temperature	-30°C to +80°C	
Output signal	4-20mA (load) Pulsed output, quadrature mode (distance/speed)	Wireless
Electrical connection	8 core (load and distance/speed)	N/A
Cable connection	Gland and connector	N/A
Cable length	5m as standard	N/A
Recommended supply voltage	24V	N/A
Maximum supply voltage	30V	N/A
Data logging	N/A	On RLM
Battery type	N/A	3 x D
Battery life (active)	N/A	Up to 350 hours
Battery life (standby)	N/A	Up to 1700 hours
Telemetry frequency	N/A	2.4GHz ISM
Sampling rate	N/A	10Hz
System range	N/A	150m*

Running line monitor typical dimensions - bespoke design available on request					
Model type	Model 1	Model 2	Model 3	Model 4	Model 8
Rope sizes available (Ø mm)	10-25	22-28	32-40	42-48	52-100
A mm	722	810	963	1028	1240
B mm	250	270	297	331	415
C mm	62	90	90	95	144
D mm	601	785	899	936	1148
E mm	112	146	148	153	200
F mm	162	186	188	193	250
G mm (wireless)	95	95	95	95	95
G mm	95	95	95	95	95
Max line tension (tonnes)	9	22	45	60	150+

Due to continuous development, Strainstall reserves the right to change specifications without notice. *System range dependent on line of sight and external interference.

Wireless running line monitor





SILO WEIGHING

Available with SmartLoad® technology

Straininstall manufactures a full range of silo weighing and batching systems that can be tailored to suit any silo or vessel, whatever the contents.

Easy to install, our highly adaptable silo weighing systems can be mounted during manufacture of new equipment or retrofitted to existing systems. Using the latest technology we ensure our customers receive the most up-to-date and dependable systems for use on both fixed and portable applications.

SmartLoad® load pins are available for use in hazardous area zones 0, 1 and 2

Options:

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area zone 0, 1 and 2

Features and benefits:

- ✓ Accurate display and batching of contents
- ✓ Tailored to suit any application
- ✓ Newly mounted or retrofitted
- ✓ On-site calibration service available

T24

Available with SmartLoad® technology

Our standard range of tension links, load shackles, RLMs, and compression load cells can be supplied with our award-winning SmartLoad® technology.

For customers who need compatibility with existing equipment, we also offer these products with T24 technology.



CENTRE OF GRAVITY SYSTEM

Available with SmartLoad® technology

Straininstall's centre of gravity (COG) system facilitates the safe lifting and transportation of structures and loads, where it is difficult to determine the centre of gravity by calculation.

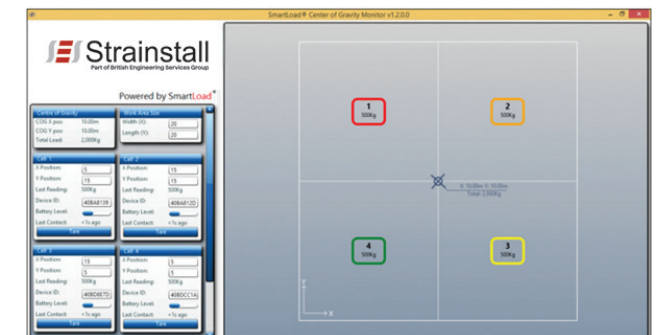
Our accurate, reliable and robust COG system minimises the risk of incidents during lifting operations. A lift's centre of gravity is often the single most undervalued property of a load. Given the opportunity, if the COG is not centralised, or the load is close to its limit, rotation can occur and the integrity of your lift and the safety of your personnel are put at risk.

Options:

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area zone 0, 1 and 2

Features and benefits:

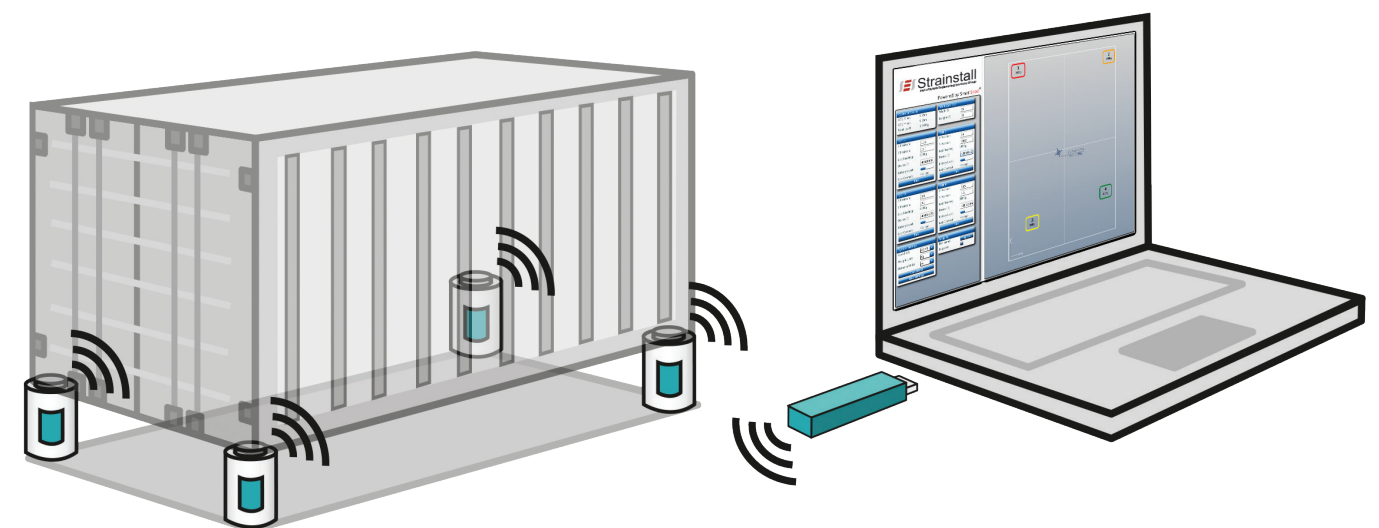
- ✓ Live COG indication
- ✓ Accurate, reliable and robust
- ✓ Determines both weight and centre of gravity
- ✓ Facilitates safe lifting
- ✓ Simple and intuitive set up and design
- ✓ Can be used with multiple load cells and configurations



Integration with SmartLoad® technology

Integrating our award winning SmartLoad® technology, the system comprises load cells which weigh and automatically calculate your lift's centre of gravity. Our custom designed software can display the COG as the lift is in progress. The lift load data is then stored and available to download for analysis and reporting.

The flexibility of our SmartLoad® technology means that the COG software can be used with your existing SmartLoad® load cells, removing the need for expensive full system upgrades.



LOAD MONITORING PRODUCT BROCHURE.

CONNECT WITH STRAINSTALL
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OR VISIT
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 **Straininstall**
Part of British Engineering Services Group