

# LCM SYSTEMS

Solutions in Load Cell Technology

**SCIENCE  
GATE**  
Your Automation Partner



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## Container Weighing



Providing tangible benefits through engineering expertise and integrity



The LCM Systems container weighing system has been designed to be easily retrofitted into the spreader or headerblock of straddle carriers, container cranes and telehandlers. It can be tailored to meet the needs of the individual port, with the standard package being a stand alone system, but with options for a system that is fully integrated into existing terminal operating systems (TOS).

Our container weighing systems calculate container weights in real-time and meet the requirements of SOLAS. Typically they are accurate to 1% of rated load, although higher accuracies can be achieved with on-site calibration and by utilising the in-built linearisation facility.

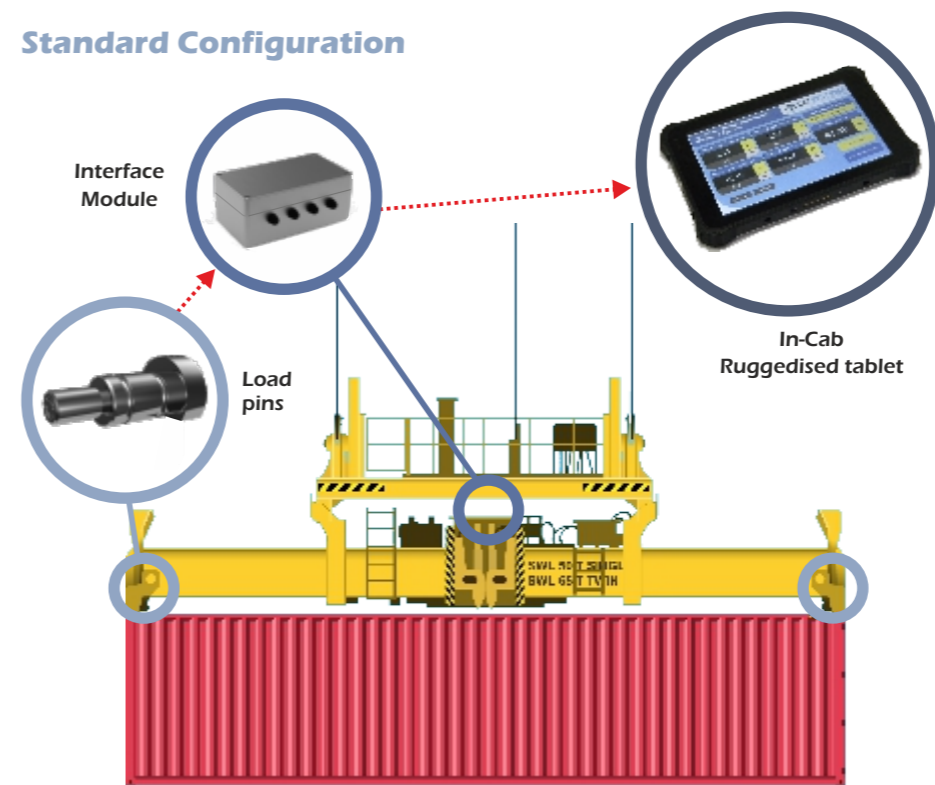
We have over 30 years experience in supplying custom designed engineering solutions, and as a result can be very flexible with regard to the type of load cell system supplied. In addition to our standard load pin based system, we can also provide an annular load cell arrangement where they are placed around the twistlock assembly, or utilise the twistlock to turn it into a load measurement device in its own right.

All our systems are simple and quick to install to ensure minimal disruption, are environmentally sealed to IP67 for suitability of use in marine locations and require very little maintenance. Wireless options are also available.

Features	Benefits
Weighs in real-time as part of normal lifting operations	Port operations can continue without any delays/holdups
Fast and simple installation	Minimal downtime and reduced installation costs
Accurate and reliable	Meets the requirements of SOLAS & suitable for use in dockside environments
Can be easily retrofitted to all existing container lifting equipment	Highly adaptable solution suitable for both large and small ports
Utilises proven strain gauge technology	Tried and tested method of load measurement offers 'peace of mind'
Identifies eccentrically loaded and overloaded containers	Provides twistlock damage warning and improves safety
Data output in various analogue/digital formats	Can be integrated directly with TOS, or supplied as a stand alone system
Pre-wired cable assemblies	No system wiring required during installation (de-skilling commissioning)
Linearisation facility	Can calibrate the system once installed to give best possible accuracy
Non intrusive method of load measurement	No modifications required, reducing costs

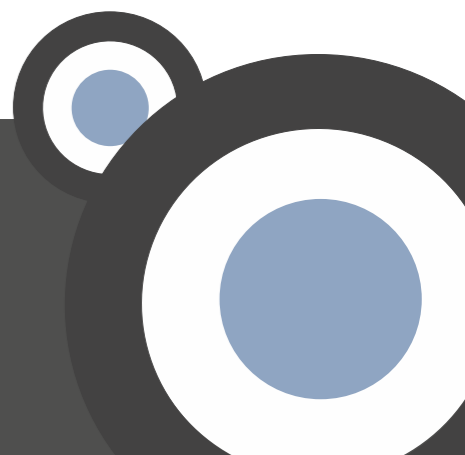
The standard system comprises of 4 load measuring pins that replace existing load bearing pins on the spreader block. These are supplied with pre-wired cable assemblies for connection to an interface module that allows installation to be carried out by untrained personnel and facilitates fast and easy replacement of cables in the event of any cables becoming damaged. The interface module has a linearisation facility to allow for the calibration of the system when installed to achieve optimal accuracy. Data is then output to a ruggedised 8" tablet that displays the load on each twistlock and the percentage of the total weight, as well as the total weight on all four twistlocks. There is also a tare function and the facility to enter container numbers and generate reports.

### Standard Configuration



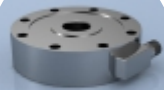
### Standard System Specification

- 4 x load pins**
  - ⊙ Rated to IP67
  - ⊙ Supplied with pre-wired cable assemblies
  - ⊙ mV/V output
  - ⊙ 17-4PH stainless steel
- 1 x Interface Module**
  - ⊙ USB connection to tablet
  - ⊙ Output to RS485
  - ⊙ Built in linearity correction
- 1 x Ruggedised Tablet**
  - ⊙ Rated to IP67
  - ⊙ Cab mount included
  - ⊙ 2GB RAM
  - ⊙ Solid state hard drive
  - ⊙ 2 x USB ports



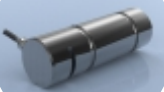
LCM Systems Ltd specialises in load measurement solutions that are utilised in many different industries worldwide. Established in 1984, we provide engineering and design expertise to market sectors including oil & gas, civil engineering, marine & offshore, aerospace, heavy lifting and process engineering.

We manufacture a comprehensive range of standard load cells and instrumentation, but a significant proportion of our business comes from the supply of bespoke products that are tailored to meet specific customer requirements. We can also manufacture load cells suitable for Zone 1 and 2 hazardous area applications, and pride ourselves on being able to provide innovative solutions to complex and challenging load measurement problems.



#### Load Cells

With a load cell range that starts with capacities from 25g to over 1000 tonnes, we have the expertise to provide you with the right load cell solution for your specific requirements, including the most hostile of environments.



#### Load Pins

We offer a standard range of load pins, covering ratings between 500kgs and 1500 tonnes, however, the nature of this type of product means that most load pins are manufactured to meet each customer's specific dimensional requirements.



#### Load Shackles

The LCM range of load shackles have been designed for lifting and weighing in rugged or harsh environments. The load shackle pins are manufactured from high tensile carbon steel, and come in capacities from 1 to 1000 tonnes.



#### Load Links

Manufactured from high tensile aluminium or stainless steel, our load links are simple to install, and matched to standard shackle sizes. They come in ratings from 1 to 500 tonnes and are environmentally sealed to IP65, IP66 or IP67 as required.



#### Instrumentation

We supply a wide range of load cell instrumentation products, including digital indicators, hand held indicators, amplifiers and conditioners. This means that for every application, we can provide you with a complete load measurement package.

