Wireless Load Cell Systems
Two different systems to meet the needs of Exhibition and Stage

We have developed our load cells on two different platforms to mirror the needs of the two different sectors: trade show and stage.

After thorough research and testing, we have developed a system in which the series of cells supporting the highest loads adopt Green Line shackles by Van Beest and the series supporting smaller loads use stainless steel shackles.

Additionally, we have dedicated many resources to the development of the module that contains the electronics and battery holders. Everything has been designed to safeguard the electronic circuits as much as possible with a double protective shell.

The batteries are compact and borrow design features from the camera industry to guarantee long-lasting performance. The cylinder shape of the container limits shock, and the anti-rotation ring is integrated into the pin, leaving the upper part of the shackle completely free.

The cylinder is semi-transparent to allow viewing the internal LED: this function is very useful for identifying cells with anomalous loads.

No tools are needed to access the batteries, all you need to do is unscrew the cylinder from its aluminum ring nut without having to loosen any screw. The cylinder has no holes, and the on-off switch is magnetic and without buttons for an high degree of water resistance.

All these features are Patent Pending.
Flexa IoT Wireless Load Cell System needs a permanent wired infrastructure to connect gateways to Internet. One or two gateways are required to cover all the cells of a pavilion. Up to 300 cells per Gateway.

The gateway receives the signals from the cells and send them to the Cloud Server, which can be accessed in real-time by all connected devices.

Load monitoring

System designed to monitor loads in exhibition centers with a high number of cells. Continuous load sampling and transmission every 2 minutes (less frequently if the load is stable).

Magnetic on/off switch without external buttons (shutdown via software available). Long battery life and ultra compact dimensions. Stainless steel shackle and double ABS casing for electronics.

Load data uploaded to the cloud and accessed via PCs or mobile devices via browser.

Flexa IoT Wireless Load Cell System has been designed to fulfil specific the needs of the trade fair centers. It makes finally possible to check each suspended load and maintain its traceability over time with exceptional value at the lowest cost in the industry.

Flexa IoT series is available with 7/8" and 3/4" stainless steel shackles, with load capacities of 500Kg and 250Kg respectively, with a safety factor of 10:1.
The gateway receives the signals from the cells and sends them to a PC for local management of the system. At the next Internet access, all data are sent to the Cloud Data Storage to be accessed by other devices.

Load control

System designed to measure loads in real-time. 4.7t shackles, with 5:1 safety factor. Continuous load sampling, variable data transmission interval, from 1 second to minutes.

Battery-saving smart transmission strategy: transmit every second when the load variation exceeds a configurable threshold, transmit less often (configurable) when the load is stable.

The system can be managed from a local PC connected to the gateway through a USB cable even without an Internet connection. At the next Internet access, the load data are sent to a Cloud Data Storage to be accessed through mobile devices or other remote PCs.

The distances between the cells and the gateway depend on the conditions of the environment. In case of signal difficulties, Long Range Repeaters are available.

The Flexa range includes suitcases and flight cases for storage and transport.

The Flexa Real-Time Wireless Load Cells

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Flexa presents the Wireless Pin Load Cell

Strain gauge pin inserted between the truss connections at the point where the load is maximum load.

Replaces the standard pin and reads the load at the most critical points to monitor the true loads of a structure.

The load capacity of the strain gauge pin is proportional to the diameter of the original pin. Thanks to the special steel and aging treatment, our gauge pin is more than 10% stronger, on average, than the corresponding original pin.

Wireless Pin Load Cell is a powerful tool than can be used for achieving more precise and accurate load calculation reports.

The pin’s terminal seamlessly adapts to the ring of our Flexa Real-time Wireless Load Cell System, so that all load data collected by the pin can be reported at the Flexa system user interfaces.

Samples are taken every second, until the load stabilizes.

The pin is compatible with the main truss brands on the market. Custom sizes are available upon request and can be provided for any diameter not lower than 15mm.

This pin has been tested for high loads and it contains electronic parts, including radio transmission components. The pin can be connected to the truss and removed using a special screw extractor.
The two different platforms have two different graphical user interfaces.

The **Stage version** comes with 3 levels of access: entire event, single zones and individual cells. Load parameters, such as overload thresholds and alarms, can be configured by the operator.

The histograms of the "overview" function provide an immediate view of all the selected zones or cells with multi-screen views to allow a total control of the event.

In the **Exhibition version** the user interface is structured into different hierarchic levels that can be accessed depending on the type of user.

The system includes 3 types of users. The System Administrator can set load parameters for the entire network of cells. A second type of user can set parameters only for a subset of cells, for example corresponding to one exhibition hall.

A normal user, such as the exhibitor, can only see the load data but not set the parameters.