

Silo Load Cell Weighing System



A silo load cell weighing system forms an integral part of any feed management system; it allows you to accurately monitor the quantity of feed delivered, feed usage, batch weighing, data collection to recipe formulation, inventory management and traceability.

The Collinson strain gauge load cell system is integrated into a special load cell mounting frame which is designed to replace the structural elements lost from connection to the concrete base and to provide a stable base for the load cell system ensuring the highest load cell accuracy is achieved.

For optimum accuracy load cells are positioned under each leg of the silo, this minimises the effects of wind, uneven loading/unloading and temperature variations. When a load is applied to the silo each load cell sends its signal to be surmised in a junction box, this in turn is sent to the amplifier which converts the signal to a weight. A silo weighing system fitted with 4 cells and controller will give an overall accuracy of circa 0.25%

The amplifier is a mains powered digital display which is available in two models. The basic digital weight indicator can be utilised as stand alone display or can be integrated into the main control panel* for your house to enable more complex functions.

The process controller is a more intelligent independent system which can perform a variety of complex tasks such as batching or electronic feed consumption.

The displays are housed in an IP66 weatherproof stainless steel enclosure and can be located to a maximum of 30m from the silo in an office.

* To integrate the weigh system your existing control panel will need to accommodate; 10V @ 150mA excitation to drive up to 4x350Ω or 8x700Ω load cell with selectable gains options from 0.5 to 200mV/V.

Plan Ahead!

If you are working to a tight budget but would like provision for feed monitoring or batching in the future, you can order your new silo complete with a load cell mounting frame with dummy load cells. It can then be easily upgraded to accommodate the technology for your feed management system at a later date.

IMPORTANT NOTE

If a Collinson silo leg structure is modified in any way without written authority from Collinson plc the responsibility for ensuring that any such modification is compliant with the relevant design standards lies solely with the company or person undertaking those works. Should serious damage or injury be sustained following unauthorised modification of a silo structure the company or person undertaking those modifications would be wholly liable.

Fitting load cells beneath a Collinson silo or cutting the legs to bolt cells onto constitutes a major modification to the silo structure; doing so without written authority negates all warranty and responsibility for the structural integrity and safety of the silo.



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