

Dynamic weighing...



*Digital precision:
The FIT® load cell*

Efficient checkweighers thanks to a digital load cell

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The world's most advanced range of checkweighers depend on HBM's FIT® (Fast Intelligent Transducer) load cells to handle products at the highest production line rates with very high accuracy and no performance degradation.

The FIT® load cell...

...is a key component of the AS range of checkweighers recently launched by Loma Systems of the UK to weigh both rigid and flexible packs of up to 45 kg.

The AS checkweighers from Loma have been awarded the European R51 accreditation for the high accuracy and rapid response demanded by food producers for improved performance and rapid production.

"We needed a high performance load cell for use in the food and pharmaceutical industries, which meant it had to be made of stainless steel and able to handle intensive wash downs. This means that neither water nor chemicals can ingress the load cell."

Andy Alexander, Product Support Manager, Loma Systems, UK



FIT® for dynamic weighing applications

HBM's FIT® load cell is specifically designed for dynamic weighing applications because it features high torsion and bending stiffness. Extensive signal processing is integrated into the digital load cell enabling access to all the functions needed for fast and accurate measurement of the weight. With its 20-bit resolution, FIT® produces an output rate of up to 600 measurements/sec.

FIT® prevents seal failure

Using a digital load cell overcomes problems on earlier models of checkweighers that were fitted with analog load cells. These load cells were viscous damped and experienced a number of problems including seal failure resulting in oil leaks and measurement inaccuracies due to thermal instability.

No temperature compensation required

Unlike analog cells, HBM's FIT® does not need temperature compensation and its weighing range can easily be set by the user avoiding any pre-calibration.



*The AS 5000
checkweighers from
Loma Systems*



*AS Combo
checkweigher*



Nine digital filters protect from interference effects

The FIT® load cell gives additional advantages since it is easily calibrated at the start of a production run to ensure accuracy. In some cases external factors may still cause variations in weight to be indicated and the FIT® load cell has nine digital filters that can be applied easily to ensure that all unnecessary background static is removed without degrading the central measurement.

"The built-in programmable filters allow us to maximize the response time for different customers' applications."

Andy Alexander



*AS 5000
control panel*

There are five models in Loma's AS range ...

...including the AS Combo that features a combined metal detector and checkweigher. Four of the models weigh both rigid and flexible packs of up to 5kg while the AS Heavy Weight checkweigher is designed to weigh sacks and cases of up to 45kg.

The robust checkweighers are made of stainless steel and are available as stand-alone units or can be supplied with a metal detector head. The range benefits end users since each major component, such as the control unit or the conveyor feeds, are modular and can be located in alternative positions to provide the most suitable and functional layout required and to fully integrate with other equipment on the production line. The system also comes with a wide range of different weighing table and rejection mechanisms to ensure that customers are provided with a tailor-made machine.

FIT® provides programming functions

The Loma AS range incorporates the FIT® load cell programming functions into its central menu-driven membrane keyboard to ensure integrated access to all aspects of the machine. Loma's research shows that 90 per cent of users do not use the full capabilities of their checkweighers. To overcome this issue, Loma has made the use of its AS range as intuitive as possible and it can be programmed with the parameters for up to 100 different items in a core database.

"It is the load cells that weigh the product and this information is critical to the performance of the checkweighers."

"We have had excellent technical support from HBM throughout this project."

Andy Alexander



*FIT® load cell
incorporated into a
Loma checkweigher*