

HOPPER BULK WEIGHER (BCSR)



OPERATING PRINCIPLE

The Hopper Bulk Weigher is a continuous weighing equipment which act as discontinuous totaliser with non constant batche weighing.

The weighing is made by a weighed hopper headed by a buffer hopper that collects the product during the weighing and emptying stages of the weighed hopper.

This equipment is specially well fitted for commercial transactions and highly accurate weighing of free flowing materials (cereals, fertilizers...) for ship loading & unloading applications.

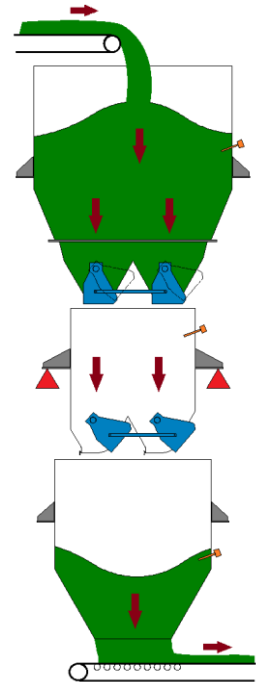
The weighing cycle is managed by ID400 digital weighing controler (indicator):

- In the beginning of the weighing cycle the clamshell gate of the weighing hopper is closed. Then the clamshell gate of filling hopper open and the material is transferred to the weighing hopper by gravity until it reaches the high level set point value. The SAUTELMA weighing PLC ID400 orders the closure of the filling clamshell gate.
- After a short time required cancelling the dynamic effects induced by the material fall into the hopper, the hopper is weighed, and the weight memorised saved and added to the previous sub-total including the unloaded residual mass.
- Then, the ID400 system open the clamshell gate of the weighing hopper and the material is transferred by gravity in the discharging hopper. After a certain amount of time which depends of the set point, a new cycle begins.

COMPOSITION AND CHARACTERISTICS

The BCSR Bulk Hopper Weigher (tower) consist of five main parts:

- Supporting frame (tower) adapted to the scale dimensions and weight.
- Feeding (upper) hopper (silo) with one inlet chute and outlet flange
- Claim Shell Gate pneumatically actuated which can be single, double or triple gate assembly. There is two sets of gates, one for filling the weigh hopper and one for emptying the weighing hopper.
- Weighing Hopper supported by 4 load celles fitted on a rectangular frame. This weighing frame is supported by main tower frame.
- Discharge (lower) hopper which deliver the material generally onto a belt conveyor which transfer it to the destination.
- Weighing & Control command device including:
 - 4 highly accurate load cells
 - Digital signal amplifier
 - ID400 OIML approved digital weighing indicator



ADVENTAGES

- Simple, robust and compact equipment
- Automatic calibration and zeroing
- French LNE and OIML certification (R107, class 0.2)
- Digital connection between load cell and weighing indicator
- **Weighing accuracy is $\pm 0,1$ %**

APPLICATION

- **The BCSR Hopper Bulk Weigher** can be used :
- Port facilities: Ships loading and unloading installation
- Food industry: Production control
- Steel industry and metallurgy: Weigh feeding the raw materials
- Chemistry, Fertilizers: Production control, bulk shipment



Hopper bulk weigher

CONTROL COMMAND EQUIPMEN



Weighing indicator
ID 400

The control command system ensures the following functions:

Automatic recording of gross weight and tare of each individual weight with a registered memory of 28000 records, which can be backed up until 3 years.

Calculate the net and total weight by shipment.

Display of the current weight of the product in the weighing dump, with all information concerning the ongoing operation, average flow (t/h), dynamic outline scale (weighing machine) with states display and inputs and the state operation, error messages and text warning, programmed in base menu, command buttons with icons indicating the function.

Protection against overweight.

Data Backup with a RAM memory, a battery in case of power cut.

Manual mode command in case of emergency or maintenance.

Metrological characteristics:

For legal (commercial) application

Maximum accuracy of weighing for legal application: 6000 d

Maximum internal resolution for legal applications: 60000 d

Minimum certified value of division : 0,75 μ V

Out of legal applications:

Maximum accuracy of weighing for legal application: 10000 d

Maximum internal resolution for legal applications: 100000 d



Graphic terminal

