FEEDING - WEIGHING

LOSS IN WEIGHT FEEDER
DPP 300

DEFINITION AND PRINCIPLE

The Loss-in-Weigh Feeder extracts the product from a hopper and according to the fixed flow rate « set point » adjusts the discharged weight by varying the feeder speed to keep the loss in weight flow constant.

The weight of the material in the hopper is measured by three highly accurate strain gauge load cells associated to a digital signal processing unit (UTN).

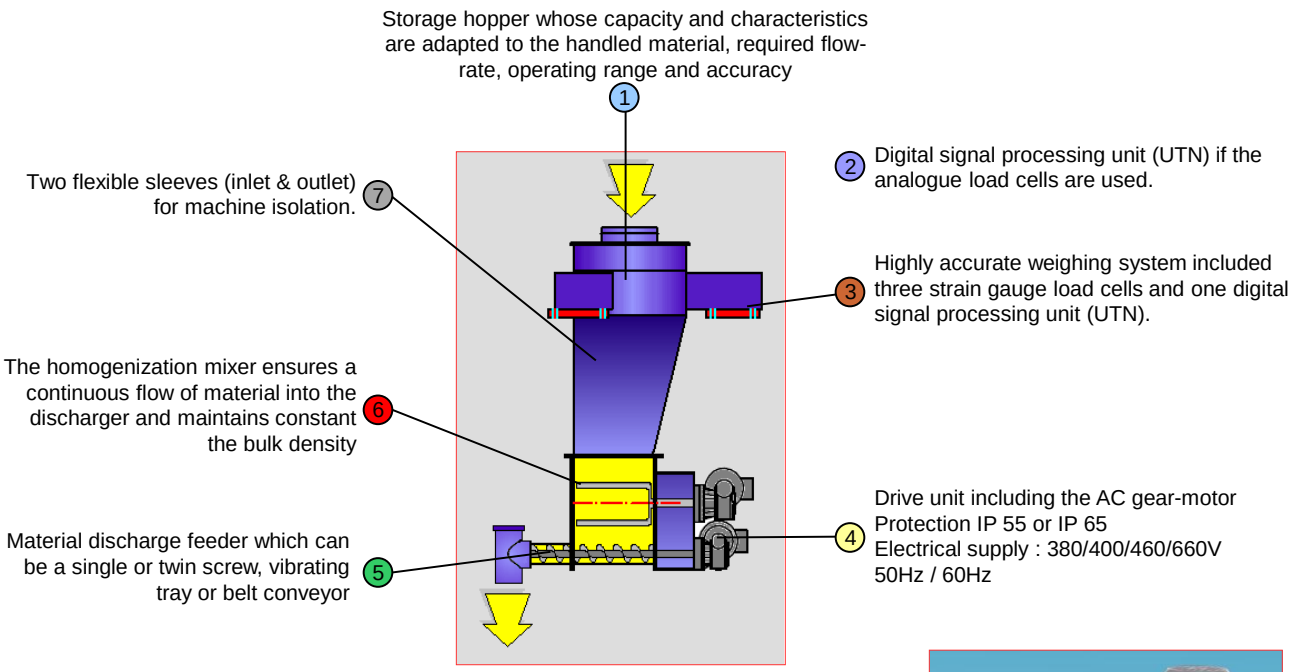
The decrease in the total weight of the « weight loss » per unit of time is compared to the « set point value » (continuous feeder).

The Loss in Weight feeder can also be used as a batch-type feeder.
The feeder can be made of carbon steel or stainless steel.

CONSTRUCTION AND CHARACTERISTICS

The loss-in-weight feeder consists of four main parts :

- A storage hopper adapted to the material characteristics and required flow-rate.
- An extraction and feeding device (screw or vibrating tray)
- Three highly accurate strain gauge load cells and a digital signal processing unit
- An electrical and control command cubicle



ADVANTAGES

- Simple structure and easily adaptable to all types of material.
- Modular conception for quick and easy disassembling and cleaning
- Completely enclosed dust free machine
- Interchangeable feed components (screw, vibrating tray belt…) for low cost feeding of several very different materials
- High weighing and feeding accuracy: (+/- 0,2 à 0,5 %)

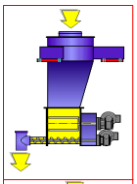
SAUTELMA ROTOLOK
At the center of your system

APPLICATIONS

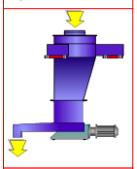
The Loss-in Weight feeder is used for continuous and batch weighfeeding of granules, powders, flakes, fibres and also liquids

- **Food industry :** Cereals, biscuits, confectionery, chocolate, pasta, canned food, pet food
- **Chemical industry :** Detergents, pesticides, fertilizers, minerals, Zeolite, oligo-elements…
- **Building materials :** Gypsum, plaster, starch additive (MnO2, CaCO3…)
- **Plastics :** Plastics, compound, fibres
- **Pharma / Cosmetics :** All applications for dosing of powders and granules
- **Nuclear technology :** Dosing of chips of glass for nuclear waste coating

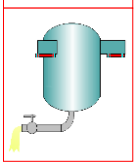
DIFFERENT MODELS



Loss-in-Weigh feeder with single or twin screw discharger.
Recommended for powders and granules of medium flowability



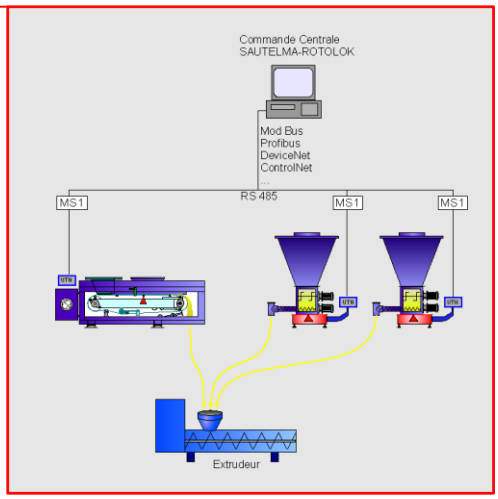
Loss-in-Weigh feeder with vibrating tray.
Recommended for powders, granules, flakes, and friable materials.



Loss-in-Weigh feeder with pump extractor
Recommended for liquids.

- **Special applications : ATEX, Calorifugeage…**

NETWORK COMMUNICATION



THE CONTROL COMMAND EQUIPMENT

The Loss-in-weigh feeder is controlled by Sautelma's universal microprocessor controlled measuring system called MINISMART. The Minismart receives the « set point » value compares the lost weight per unit of time to the set point and adjusts the speed of the screw <discharges to maintain constant the gravimetric flow. It also manages the faults.
The Minismart can operate by itself or be integrated in hierarchically structured assemblies.

The Network Communication can be insured through :
- Traditional wiring connections with 4.20mA, analog and PFC digital signals
- RS 485 or RS 232 serial connections and protocol such as J-BUS/MODBUS
- In network field bus communications such as PROFIBUS, DEVICENET, CONTROLNET as well as ETHERNET.

The weighing signal is locally processed by Sautelmas Digital signal processing unit
(UTN). The UTN is a specialised signal processing electronics device which contains among others inputs/outputs the DSP and an analog/digital converter.
The electrical part contains : frequency inverter, transformer, motor protection, relays and terminal connection block. It is usually settled in an standard electrical cubicle located near the feeder or in the electrical room.

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