

Loss-in-weight feeder MET Min

- Gravimetric feeder for small quantities with dual shaft and vertical agitator
- Easy disassembly for cleaning and discharge unit replacement
- 4-litre tank, negatively conical with bottom-reaching agitator for manual filling
- 8-litre tank, conical with wall- and bottom-reaching agitator and lid with nozzles
- Optional protective housing to minimize environmental interference
- Integrated measurement, control and regulation electronics



Application

The MET Min loss-in-weight feeder is used for continuous dosing or batching of powders in very small quantities. It is ideal for applications where discharging bulk materials using a twin-screw discharge unit with an internal agitator is advantageous or required.

Typical applications include laboratory and pilot plants for feeding extruders, mixers, mills, and granulators. The design allows for quick disassembly for cleaning and replacement of the discharge unit.

Equipment

The drive and weighing equipment are housed in a dust-proofed enclosure.

The one-piece discharge floor is made from high-quality plastic, ledge-free, and easy to clean.

The bottom-reaching vertical agitator is easy to disassemble and ensures a uniform filling level of the discharge units. Various discharge units are available to adapt to different feed rates and product features. The negatively conical 4-litre tank, equipped

with a bottom-reaching agitator, is manually filled and used for small capacities. The conical 8-litre tank, with a wall-reaching agitator, includes a lid and refill nozzle, suitable for larger capacities. For smaller capacities, a protective housing is recommended to minimize external interference. The platform supports the housing and serves as a mounting point for the weighing electronics.

Function

The loss-in-weight feeder operates on the principle of controlled weight reduction. The controller compares the target and actual performance, adjusting the drive motor accordingly. To achieve high control quality, the feeder is designed for high load cell resolution, minimal mechanical side forces, and reduced interference forces. An optional protective housing minimizes external disturbances. The electronically commutated DC motors used in the system have a wide adjustment range of 1:250. A speed-controlled bottom-reaching agitator ensures uniform filling levels across the entire adjustment range.

The twin-screw discharge units expand the intake area and stabilize the discharge behavior.

Main subassemblies



Technical Data

Theoretical feed rate of the double concave screw 14 mm x 6.35 mm	0.2 l/h ... 8 l/h (5 ... 200 1/min)
Theoretical feed rate of the double concave screw 14 mm x 12.7 mm	0.4 l/h ... 15.8 l/h (5 ... 200 1/min)
Ambient Temperature	-20 °C ... +40 °C
Bulk solids temperature	-20 °C ... +40 °C
Material bulk density	0.3 ... 1.1 kg/dm ³
grain size	≤ 500 µm
EC motor screw: Power / adjustment range	150 W / 1 ... 250 1/min
EC motor agitator: Power / adjustment range	30 W / 1 ... 15 1/min
Extension hopper for manual filling, negatively conical with protective grid and hinged lid (volume)	4 litres
Extension hopper, conical with an agitator (volume)	8 litres
Lid with 2 nozzles for 8-litre hopper (Ø inlet / vent)	Ø 114.3 mm / Ø 63.5 mm
Load cell nominal load / sensitivity	30 kg / 2 mV/V
Material in contact with the product / not in contact with the product	1.4404, PUR / 1.4301
Electrical housing material / protection class	Aluminium / IP65

