

Loss-in-weight feeder MET L CS+

- Gravimetric or volumetric, continuous or batch feeding of bulk solids
- Volumetric feed rate of 5 to 262 l/h possible
- Dust tightness is ensured to the highest degree
- Metal-to-metal contact between components is excluded
- High feeding accuracy and consistency, better+/- 0.5%

Application

The differential loss-in-weight feeder MET CS+ is used for continuous or batch volumetric or gravimetric dosing of poorly flowing bulk materials, usually powders or granules. Typical applications are found across all industries, but especially in the chemical, detergent, and battery sectors.

Particular Features

- PTFE lining inside the discharge pipe prevents metal-to-metal contact and product contamination
- Quick-closing flap (optional) at the discharge for high batch accuracy
- Optional coating of components in contact with the bulk material
- Precisely machined flanges, tri-clamps, and flexible connections ensure optimal alignment, maximum dust tightness, and high design pressures
- Prepared for purge gas sealing of both the screw and the agitator



Design

The loss-in-weight feeder MET CS+ consists of an internal vertical agitator, the feed hopper, the feed container, and a supporting frame. In gravimetric mode, the feeder comprises two scale modules. The vertical agitator moves the bulk material inside the feeder and ensures a reliable flow into the discharge unit.

The weighing modules of the gravimetric version of the feeder consist of precision load cells using strain gauge technology, with integrated overload and lift-off protection.

The evaluation and control electronics as well as the pneumatic control cabinet are integrated into the feeder's supporting frame. If required, they can also be installed separately (control cabinet, control room).

Helix with center rods and screws in single or double-shaft designs are used as discharge units, with a single helix/spiral configuration also being possible. Various alternative screw sizes and designs are available to suit the properties of the bulk material. The extension hopper and feed hopper are available in various sizes and can be adapted and modularly combined depending on the dosing capacity and application.

Function

The MET CS+ feeder is used as a volumetric feeder or as a gravimetric feeder based on the principle of the loss-in-weight feeder. In the loss-in-weight feeders, the actual feedrate is determined from the loss in weight per unit of time. A controller compares the actual feed rate with the feed rate setpoint and regulates the discharge unit.

The extension hopper and feed hopper geometry with steep walls and an internal agitator enables reliable feeding of even poor flowing bulk solids with high feeding accuracy and feed consistency.

Technical Data

Size of the feed hopper [mm]	D 168.3		
Diameter of the twin helix [mm]	TS 17	TS 26	TS 31
Volumetric feed rate V100 *	47 dm ³ /h	137 dm ³ /h	262 dm ³ /h
Distance from centre line to outlet	270 mm		
Volume of the feed hopper	87 dm ³		
Drive power of the discharge unit	0.37 kW		
Drive power of the agitator	0.25 kW		
Ambient Temperature	-10 – 40 °C		
Empty weight	~180 kg		
Operating pressure	20 mbar		
Design Pressure	0...50 mbar		
Method for determining the tightness	Gas tightness test at operating pressure during FAT		
Diameter of the discharge pipe OD (ID) [mm]	DN 100 acc. to DIN 32676 - B		
Diameter of the intake / vent pipe	DN 150 / DN 100 acc. to DIN 32676 - B		
Material of the feed hopper	1.4404		
Material of the extension hopper, helix with center rod, agitator and drive shaft	1.4404		
Material of the shaft protection sleeve on the agitator	1.4112		
Material of the seals and sealing material	Silicon / PTFE		
Material of the flexible connections	Silicon		

*) theoretic feed rate at 100 % filling level and 100 rpm

Order specific variants possible for:

• Simple shaft	• Tank sizes
• Agitator adjustment	• Coating
• Expansion of the flow rate	• SMEPAC test



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