

MechaTron[®] Min loss-in-weight feeder



- **Gravimetric feeder for very small volumes with double shaft and vertical agitator**
- **Easy to dismantle for cleaning and replacement of discharge devices**
- **4 l conical hopper with negative taper and base agitator for manual filling**
- **8 l conical hopper with base / wall agitator and cover with filler neck**
- **Optional protective housing to minimise environmental disturbances**
- **Integrated measurement, control and regulation electronics**

Application

The MechaTron Min loss-in-weight feeder is used for the continuous feeding or batching of very small volumes of powder.

It is ideal for applications where it is either required or desired to discharge the material by a double-shaft discharge device and internal agitator.

Typical applications include laboratory and test facilities for feeding extruders, mixers, mills and granulators.

The system is designed to allow easy dismantling for cleaning and replacement of the discharge devices.

Equipment

The drive and weighing technology is contained in a dust-protected housing.

The one-piece discharge base of high-quality plastic has no apertures and is easy to clean.

The easy-to-remove vertical agitator operates near the base and ensures that the discharge devices are evenly filled.

Different discharge devices are available to suit different products and delivery rates.

The conical 4 l hopper with negative taper is filled manually. It has its own base agitator and is used for small outputs.

With a cover, filler neck and agitator that works close to the walls, the conical 8 l hopper is suitable for larger outputs.

For small outputs we recommend using the protective housing to minimise external disruptive forces.

The housing is supported by a platform which secures the scale electronics.

Function

The loss-in-weight feeder uses the principle of controlled weight reduction. The control system compares the desired and actual output and adjusts the drive motor accordingly.

To achieve high feeding performance, the feeder is designed to offer high load cell resolution and minimal shunt forces and disruptive forces. The optional protective housing minimises environmental disturbances.

The electronically commutated DC motors have an adjustment range of 1:250.

The speed-controlled base agitator ensures even filling across the whole adjustment range.

The double-shaft discharge devices enlarge the feed-in area and ensure uniform discharge behaviour.

MechaTron Min: main components



Technical data

Theoretical delivery rate of double concave screw 14 mm x 6.35 mm	0.2 l/h - 8 l/h (5 - 200 l/min)
Theoretical delivery rate of double concave screw 14 mm x 12.7 mm	0.4 l/h - 15.8 l/h (5 - 200 l/min)
Ambient temperature	-20 °C ... +40 °C
Bulk material temperature	-20 °C ... +40 °C
Bulk density	0.3 - 1.1 kg/dm ³
Particle size	<= 500 µm
EC motor screw: output / adjustment range	150 W / 1 - 250 l/min
EC motor agitator: output / adjustment range	30 W / 1 - 15 l/min
Manually filled feed hopper with negative taper, protective grille and cover (volume)	4 l
Conical feed hopper with agitator (volume)	8 l
Cover with 2 filler necks for 8 l hopper (diameter of inlet / vent)	114.3 mm / 63.5 mm
Load cell nominal load / sensitivity	30 kg / 2 mV / V
Material that comes / does not come into contact with product	1.4404, PUR / 1.4301
Material / protection class of electrical housing	Aluminium / IP65

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