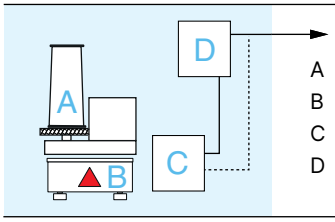
K-CL-SFS-MT16

Loss-in-Weight Twin Screw Microfeeder



Ext. communication to host system
A Feeder
B Weighing system
C Control Module
D Operator interface

Each K-Tron weigh feeder consists of the components A, B, C and D.

Component A is specified here.

Application

The MT16 twin screw microfeeder provides accurate, low-rate gravimetric feeding of free-flowing powders, challenging materials prone to lumping or bridging, and micropellets. It is ideally suited for feeding high-value additives in applications requiring exceptional accuracy and second by second consistency.

Design

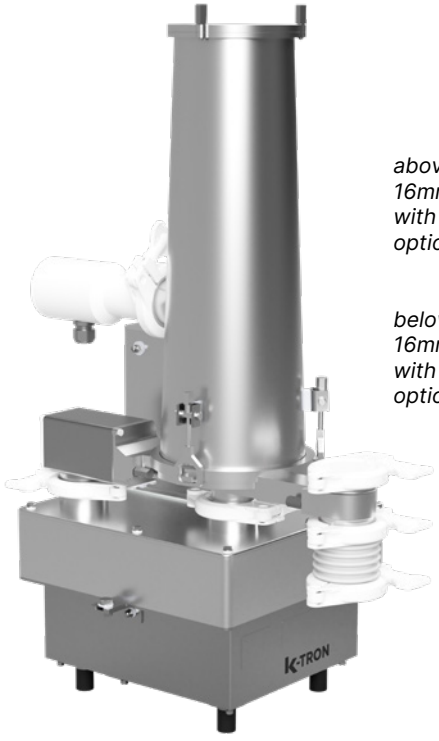
The MT16 twin-screw microfeeder with SFS platform scale combines exceptional feeding accuracy with a compact, hygienic design. The scale housing is stainless steel and completely enclosed. In difficult environments, an optional protective acrylic draft shield can help maintain precise gravimetric performance. Motor and drive are integrated into the fully enclosed feeder base, while an optional interchangeable 12 mm feeding unit provides exceptional application flexibility.
Designed for rapid cleaning and maintenance, all product-contact parts can be removed as a single module, with easy disassembly, minimizing downtime during cleaning and product changeovers.
Multiple screw and agitator configuration options allow the feeder to handle a broad range of bulk materials. The modular agitator gently conditions and conveys material into the feed screws, ensuring consistent flow, while the screw filler minimizes residual product left in the hopper. This equipment conforms to all applicable European Directives (e.g. Machinery, EMC).

Controller: (see separate data sheets)

The SmartConnex™ control system allows individual or multi-component control. Each feeder has its own control module. Connection between feeders, operator interface and smart I/O is via an industrial network. A variety of protocols is available for connection to the plant's host system.

Hazardous Location Options:

NEC	*consult factory*
ATEX	3D/2D (outside/inside)



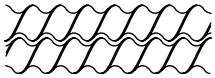
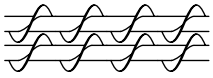
above:
16mm Microfeeder with 6 liter hopper and optional impactor

below:
16mm Microfeeder with 3 liter hopper and optional draft shield



Feeder Screws and Feed Rates

The feed rates below were tested with a free-flowing material (semolina, bulk density 0.783 kg/dm³). Actual feed screws will be determined by the material being fed. Feeder screws are easily interchangeable.

Pitch		Twin concave screws 	Twin auger screws 	Screw speed range
coarse	dm³/h	0.223 - 30.36	0.253 - 33.11	RPM 1 - 150
	ft³/h	0.0079 - 1.0718	0.0089 - 1.1687	
fine	dm³/h	0.166 - 21.69	0.083 - 11.49	RPM 1 - 150
	ft³/h	0.0059 - 0.7656	0.0029 - 0.4054	

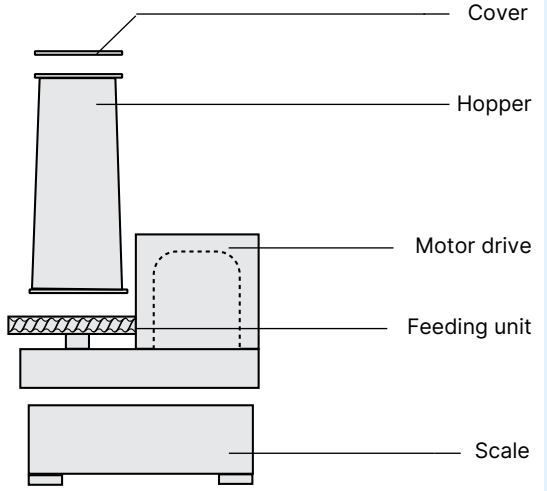
The feed rate indications are approximate values and vary according to material characteristics.

CAUTION: Minimum feed rate should not be less than 100 g/hr. Lower feed rates may be possible for some materials but tests must be done in the Test Lab to confirm feasibility. Material tests are also required for materials with bulk density of more than 0.8 kg/dm³.

K-CL-SFS-MT16

Loss-in-Weight Twin Screw Microfeeder

Configuration

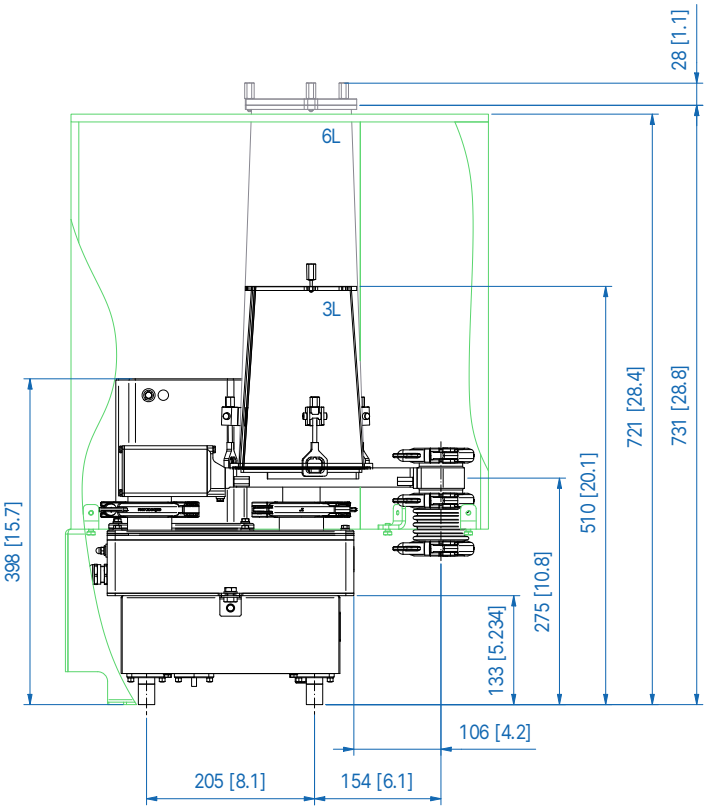
	Description	Alternatives	Remarks	Weight kg [lb]
	Cover		Standard (SST)	0.5 [1.1]
	Hopper		3 dm³ [0.1 ft³]	1.6 [3.5]
			6 dm³ [0.2 ft³]	2.7 [5.9]
	Motor drive	Servo motor - 800 W, 240 VAC, IP65 *KCM-III requires 230 VAC single phase* *(US split-phase, 3 wire balanced, L1-N-L2)*		24.1 [53]
	Feeding unit	Horizontal outlet / Vertical outlet (std)		
	Scale		K-SFS-I IP65, NEMA 4	

Materials:
Product contact parts: Stainless steel EN 1.4435/1.4404 (AISI 316L), X2CrNiMo 17-12-2
Seals: Silicone (food grade), PTFE (food grade)

Weighing Range: 24 kg [52.8 lb]

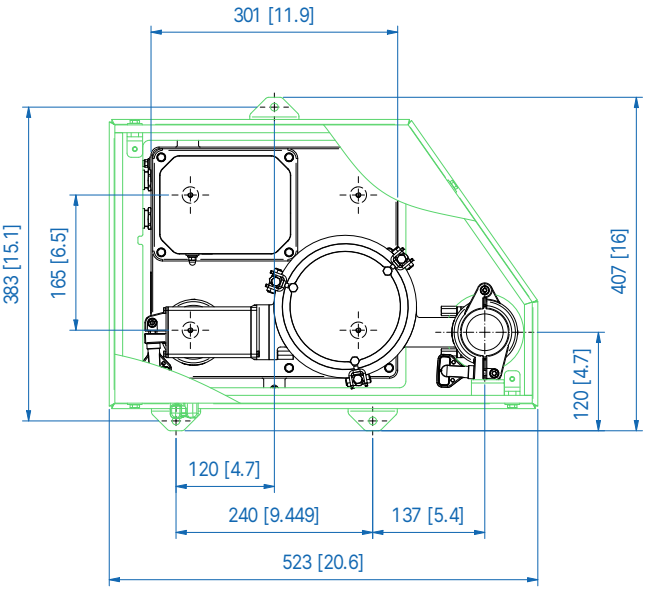
Temperature-Limits:
Ambient: 0...40°C [32...104°F]
Material: 0...50°C [32...122°F]
for other material temperatures contact factory

Dimensions mm [in]



Options

- impactor (non-ATEX)
- pressure compensation
- acrylic draft shield (only with 3L hopper)
- quick change feeder module
- baseplate
- purged seal



Caution: these measurements are for general reference only. Please consult dimensional drawing for exact measurements

Copyright by K-Tron Technologies, Inc. Covered by patents in USA and other countries. Specifications subject to change without notice.