

Ext. communication to host system

A Feeder

B Weighing system

C Control Module

D Operator interface

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

Component A is specified here.

Application

Low rate gravimetric feeding of free flowing to difficult powders (e.g. lumpy or bridge building materials) and micropellets. The MT12 twin screw microfeeder are ideal for feeding high cost additives in any process that requires second to second performance with a high degree of accuracy.

Design

Twin screw feeder mounted on a high resolution 18 kg scale. The scale and motor drive are completely enclosed within the feeder base. The twin screw feeding units are interchangeable with larger 16mm feeding units. All product contact components can be dismantled from the feeder in one module to allow for processing for improved hygiene. No tools required for disassembly.

A variety of feeder screws allows for handling a wide range of bulk materials. The feeding equipment is easy to dismantle. The agitator gently moves bulk material to the throat and into the feed screws. The agitator's modular design allows for an optimal configuration depending on the bulk material and application. The screw filler ensures minimal residual material is left in the hopper.

A protective draft shield (acrylic) isolates the feeder from outside influences and ensure maximum accuracy in unstable environments.

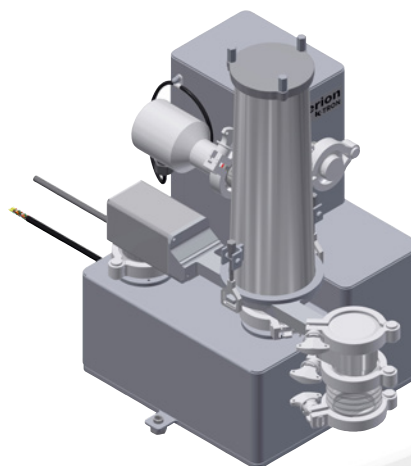
Hazardous Location Options: (see sheet I-000002)

NEC Class II, Div. 2, Groups F & G

ATEX 3D/2D (outside/inside)

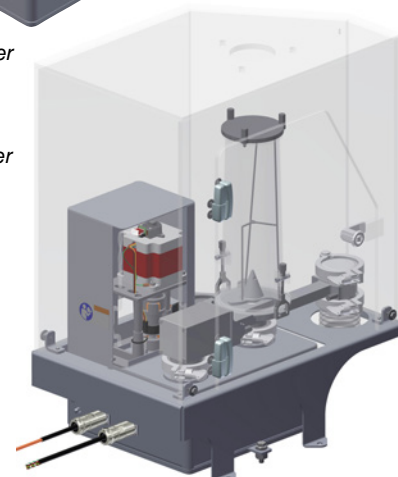
Coperion K-Tron Control Module (KCM) (see sheet S-070207)

The KCM combines the control module, the motor drive module and the operator interface in one compact unit. The KCM is generally mounted near the feeder. An optional stainless steel enclosure is available. The SmartConnex™ control system allows individual or multi-component control. 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.



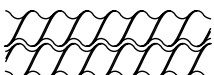
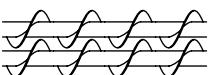
above: 12mm Microfeeder with 1 liter hopper and optional impactor

below: 12mm Microfeeder with 2 liter hopper and 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.

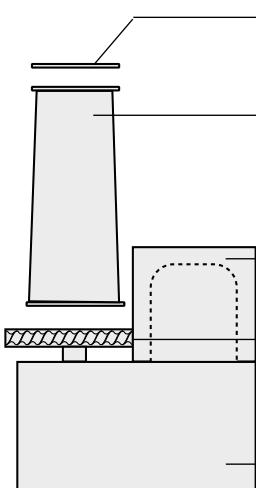
Pitch		Twin concrete screws		Twin auger screws		Screw speed range
						
coarse	dm ³ /h	0.078 - 10.36		0.076 - 10.71		RPM 1 - 150
	ft ³ /h	0.0028 - 0.3656		0.0027 - 0.3781		
fine	dm ³ /h	0.045 - 5.89		0.031 - 4.52		RPM 1 - 150
	ft ³ /h	0.0016 - 0.2079		0.0011 - 0.1595		

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

CAUTION: Minimum feed rate should not be less than 32 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.

Coperion K-Tron Product Specification Loss-in-Weight Twin Screw Microfeeder

K-CL-SFS-MT12

Configuration	Description	Alternatives	Remarks	Weight kg (lb)
	Cover		Standard (SST)	0.3 (0.7)
	Hopper		1 dm ³ (0.04 ft ³)	1 (2.2)
			2 dm ³ (0.07 ft ³)	1.6 (3.5)
	Motor drive	Stepper-Motor 110 W 65 V IP65		10.1 (22.5lb)
	Feeding unit	Horizontal outlet Vertical outlet (std)		
	Scale		K-SFS-III IP65, NEMA 4	

Materials:

Product contact parts: Stainless steel
DIN 1.4435/1.4404 (AISI 316L),
X2CrNiMo 17-12-2

Seals: Alloy 60, Silicone (food grade),
mineral filled PTFE (food grade)

Weighing Range:

18 kg (39.6 lb)

Temperature-Limits:

Operating temp.: 5 to 45°C (41 to 113°F)

Material temp.: 5 to 45°C (41 to 113°F)

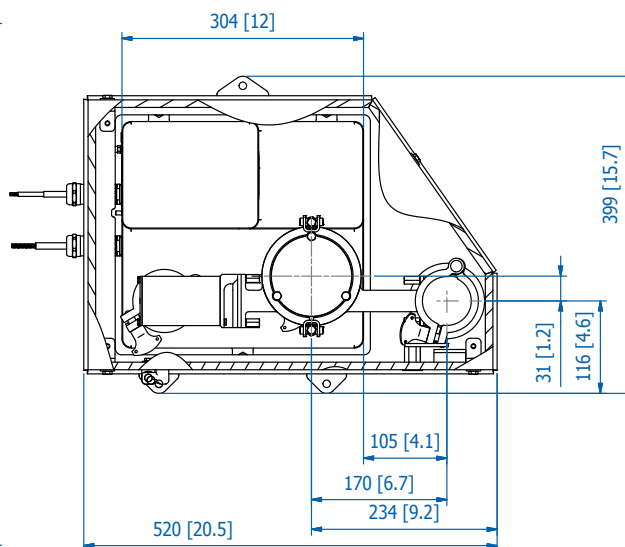
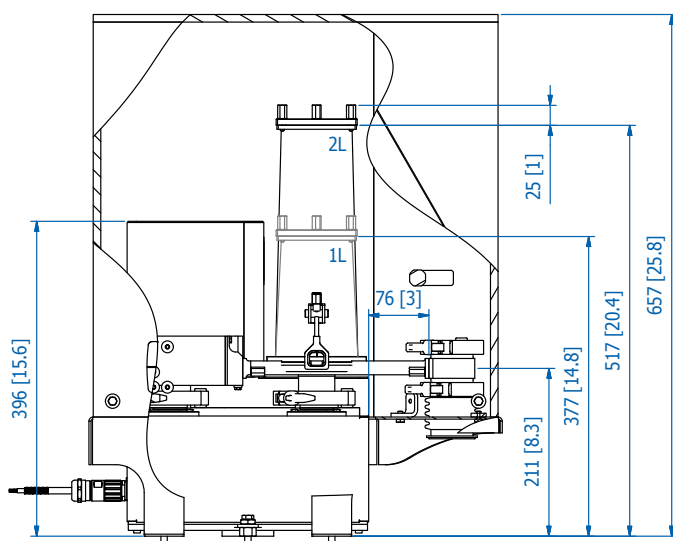
Protection:

IP65 (NEMA 4X)

Dimensions mm [in]

Options

- impactor
- pressure compensation
- quick change feeder module
- baseplate



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