

Ext. communication to Host System
A Feeder
B Weighing System
C Control Module
D Operator Interface

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

Component A is specified here.

Application

Volumetric feeding of easily-flowing powders and granules. The feeding station is specially suited for quick changes of bulk materials with no clean-up time.

The feeder can be upgraded to a loss-in-weight feeder system at any time.

Design

Single screw feeder with a variety of feeding screws in a range of diameters. Quick-change units (hopper and feeding section) and easily exchangeable feeding tools for adaptation to different bulk materials. All parts in contact with the material being fed are stainless steel. 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:

consult factory



Feed Screws and Sample Feed Rates

Feeder screws are determined based on the material being fed. The theoretical throughput range is influenced by feeder configuration and material characteristics. The sample feed rates below were tested with a free-flowing material (masterbatch, bulk density 0.84 kg/dm³, and semolina, bulk density 0.783 kg/dm³).

Attention: Actual feed rates depend on individual material characteristics. At higher screw speeds a poorly flowing powder will not achieve the full throughput possible with a free-flowing material due to reduced degree screw fill. For feed rates at the upper or lower limits of the theoretical range, check with a Coperion K-Tron Test Lab.

Granule screws (feeding particles ca. 3 mm [0.12 in])					
Screw / tube diameter	mm	9 / 15	12 / 21.7	24 / 36	30 / 40
Pitch	mm	6	8	15	30
Feed rate	dm³/h	0.05 - 4.3	0.12 - 11.6	0.2 - 74.6	0.6 - 218
	ft³/h	0.002 - 0.15	0.004 - 0.41	0.028 - 2.63	0.081 - 7.70
Micro-granule screws (feeding particles <1 mm [0.039 in])					
Screw / tube diameter	mm	9 / 13	12 / 15	24 / 28	30 / 36
Pitch	mm	6	8	15	30
Feed rate	dm³/h	0.06 - 2.3	0.06 - 5.6	0.15 - 48.4	0.5 - 183
	ft³/h	0.002 - 0.08	0.002 - 0.20	0.021 - 1.71	0.071 - 6.46

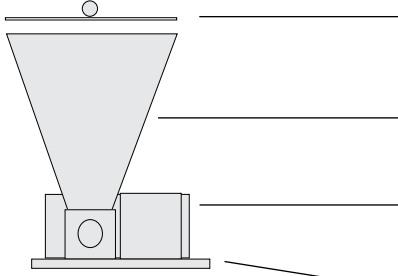
Max. screw speed: 180 RPM.

Feed rates shown are with servo motor and KCM controller (max. motor speed 2000 RPM). For feed rates with DC or AC motors consult factory.

Coperion K-Tron Product Specification
Compact Volumetric Single Screw Feeder

K-CV-KQx4

Configuration

	Description	Alternatives	Remarks	Weight kg [lb]
	Cover	plastic stainless (standard) SS refill lid		9.2 [20.3]
	Hopper	5 dm³ [0.176 ft³] (standard) 11 dm³ [0.39 ft³]		
	Motor drive	Servo motor - 800* W, 240 VAC, IP65 * max. output limited by controller KCM-III requires 230 VAC single phase (US split-phase, 3 wire balanced, L1-N-L2)		
	Feeder	KQx4: screw sizes below		

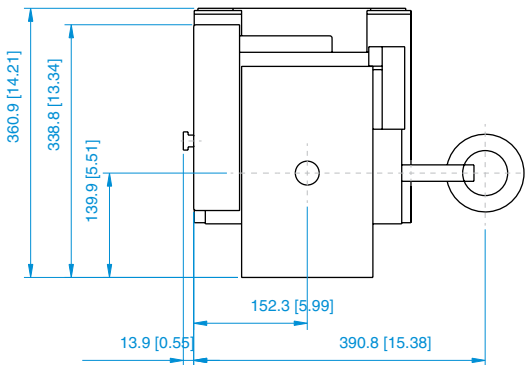
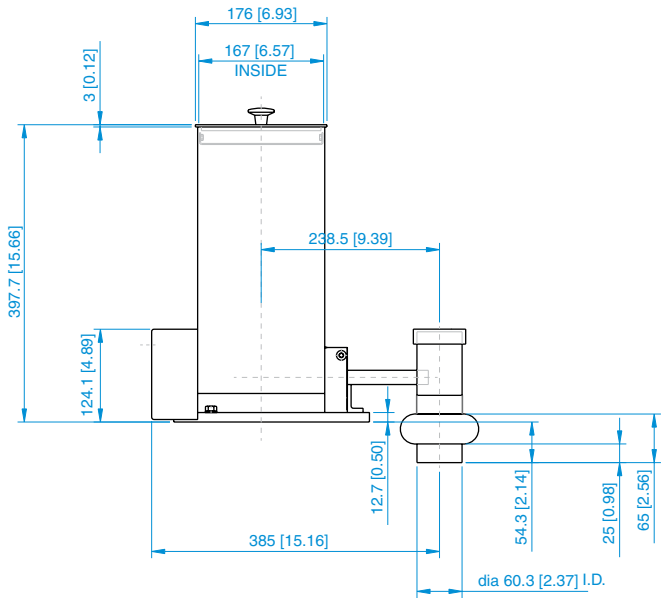
Materials:
Material contact parts and scale: stainless steel EN 1.4404 / 1.4435 (AISI 316L)
Seals & O-Rings: Nitril, PTFE and silicone
Paint: Light gray RAL 7035

Temperature-Limits:
Operating temp.: 0...40°C [32...105°F]
Material temp.: 0...40°C [32...105°F]

Dimensions mm [in]
shown with optional vertical outlet

- Options**
- 1 Exchange hopper, screw, tube
 - 2 Vertical discharge
 - 3 High temp version 200°C [390°F]
 - 4 Special paint (motor)

Screw tube mm(in)	
outer Ø	inner Ø
44 [1.73]	40 [1.62]
40 [1.57]	36 [1.40]
32 [1.26]	28 [1.12]
26.9 [1.06]	21.7 [0.87]
18 [0.71]	15 [0.62]
16 [0.63]	12 [0.50]



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



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