

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

Gravimetric feeding of free flowing to very poorly flowing powders (e.g. lumpy, moist or bridge building materials), especially in pharma applications. The weigh bridge features a sanitary design and is therefore suitable where quick and easy cleaning is essential.

All Coperion K-Tron pharmaceutical feeders are engineered to meet the rigid requirements of the industry. The feeder is designed according to cGMP guidelines, easy to clean and disassemble.

Design

Modular twin screw feeder mounted on a compact weigh scale. With the quick change design the feeder bowl can be quickly decoupled from the feeder drive, enabling simple and fast product changes. All twin and single screw feeder models can be interchanged on the same base, depending on scale capacity. All parts in contact with the material being fed are stainless steel. The modular components are held together by V-clamps. The horizontal agitator gently moves bulk material to the large throat and then into the discharge screws. This equipment conforms to CE standards regarding EMC and safety and is also listed by an NRTL as complying with the electrical safety standard UL 61010-1.

Features:

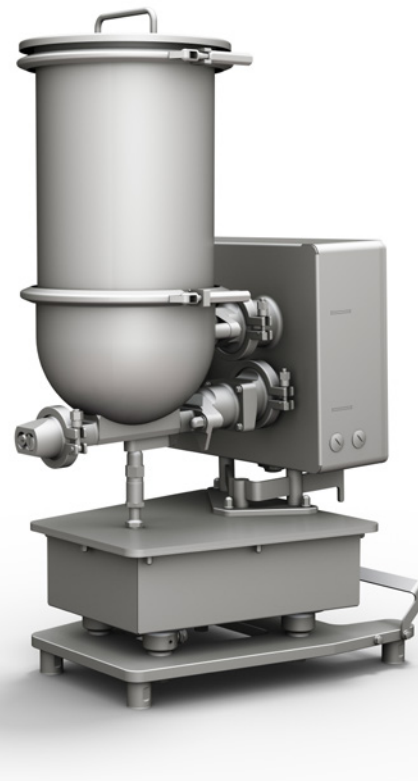
- Reduced footprint
- 2-degree pitch for improved WIP drainage
- Quick Change design for flexible ingredient changeover
- Single drive for complete feeding range

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: (see sheet I-000002)

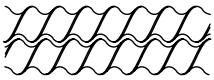
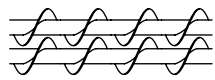
- NEC Class II, Div. 2, Groups F & G
Class I, Div. 2, Groups C & D
ATEX 3G 3D / 3G 2D (outside/inside)



K3-PH-ML-D4-QT20 with 10 liter hopper, baseplate and optional safety grill

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
coarse pitch	dm ³ /h	0.34 - 170	0.47 - 243
	ft ³ /h	0.012 - 6	0.017 - 8.58
fine pitch	dm ³ /h	0.2 - 94.6	0.13 - 60
	ft ³ /h	0.007 - 3.34	0.005 - 2.12

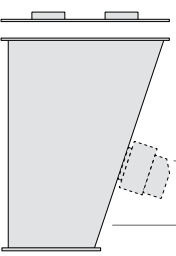
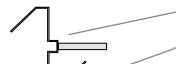
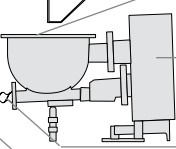
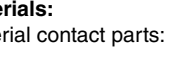
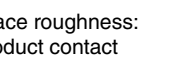
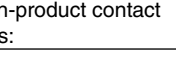
CAUTION: Please contact the factory for feed rates less than 250 g/h. Lower feed rates may be possible for some materials but tests must be done in the Test Lab to confirm feasibility. Material tests are also required for materials with bulk density of more than 0.8 kg/dm³.

Servo motor with KCM controller / Range 1:1267/ Max. motor speed 1900 RPM

Coperion K-Tron Product Specification Pharmaceutical Loss-in-Weight Quick Change Twin Screw Feeder

**K3-PH-ML-D4-
QT20**

Configuration

	Description	Data	Remarks	Weight kg [lb]
	Cover		2D	1 [2]
			4D	2 [4]
	ActiFlow		optional (4D)	10 [22]
	Hopper		see table below	
	Horizontal agitator			0.3 [0.7]
	Trough	5 dm ³ (0.18 ft ³)		10 [22]
	Drive & Stand	Servo motor 800 W 240 VAC		23 [50.6]
	Screws			0.7 [1.5]
	Outlet	Horiz. outlet Vertical outlet Pressure compensation	Horizontal (std) Vertical (optional)	0.8 [1.7] 1.3 [2.9]
	Weigh bridge		D4	12 [26]
	Baseplate		IP65, NEMA 4	14 [31]

Technical Data

Materials:

Material contact parts: Stainless steel
DIN 1.4404, 1.4435 (AISI 316L)

Surface roughness:

product contact Ra 0.4 µm
non-product contact Ra 1.2 µm or better

Seals: Food-Quality

Temperature-Limits:

Ambient: 0...40°C [32...104°F]

Material (standard): 0...50°C [32...122°F]

for other material temperatures contact factory

NOTE: Due to its small footprint the QT20 must be mounted on a baseplate or bolted to a platform. When not mounted on a baseplate care must be taken to ensure there is no tension on the cable to the scale.

Dimensions mm [in]

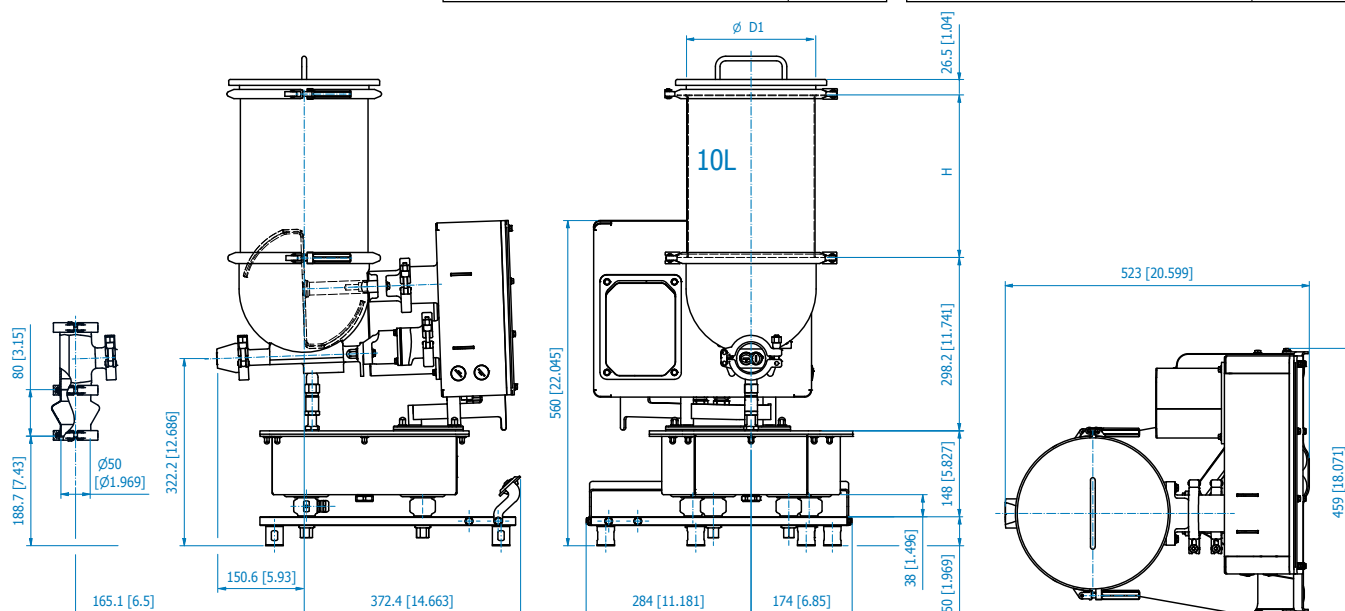
shown with optional safety grill

Asymmetrical Hoppers

Volume dm ³ [ft ³]	H mm [in]	D1 mm [in]	Weight kg [lb]
50 [1.8]	612 [24.1]	397 [15.6]	8 [17.6]
80 [2.8]	867 [34.1]	397 [15.6]	11.8 [26]

Symmetrical Hoppers

Volume dm ³ [ft ³]	H mm [in]	D1 mm [in]	Weight kg [lb]
10 [0.35]	280 [11]	217 [8.5]	3 [6.6]
20 [0.71]	560 [22.1]	217 [8.5]	5.3 [11.7]



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