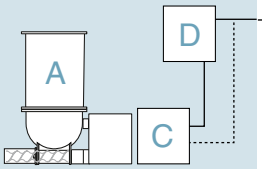
Coperion K-Tron Product Specification
Pharmaceutical Quick Change Twin Screw Feeder

K3-PH-MV-QT35



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 free flowing to very poorly flowing powders (e.g. lumpy, moist or bridge building materials), especially in pharma applications. The feeder can be upgraded to a loss-in-weight feeder system at any time.

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. 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.

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 all applicable European Directives (e.g. Machinery, EMC) 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)

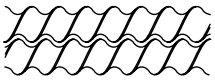
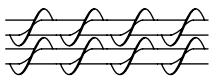
The SmartConnex™ control system allows individual or multi-component control. Each feeder has its own control module. Connection between feeders, operator interface and smart I/O is via an industrial network. A variety of protocols is available for connection to the plant's host system.

Hazardous Location Options:

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

K3-PH-MV-QT35 with 50 liter hopper, baseplate and optional safety grill

Feeder Screws and Feed Rates

Pitch		 Twin concave screws	 Twin auger screws
coarse pitch	dm^3/h	2.5 - 1386	4.4 - 2012
	ft^3/h	0.09 - 48.9	0.16 - 71.1
fine pitch	dm^3/h	1.63 - 791	2.2 - 1007
	ft^3/h	0.06 - 27.9	0.08 - 35.6

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

The feed rates below were tested with a free-flowing material (semolina, bulk density 0.783 kg/dm^3). Actual feed screws will be determined by the material being fed. Feeder screws are easily interchangeable.

CAUTION: Please contact the factory for feed rates less than 1 kg/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/dm^3.

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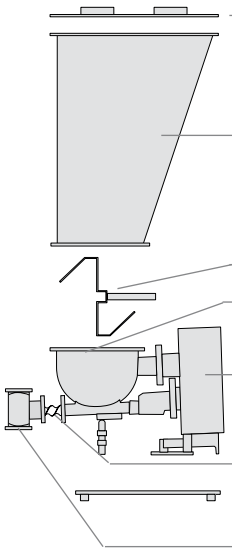
Configuration



Description	Data	Remarks	Weight kg [lb]
Cover		4D	2 [4]
Hopper		see table below	
Horizontal agitator			0.3 [0.7]
Trough	5 dm³ [0.18 ft³]		10 [22]
Drive & Stand	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)*		23 [50.6]
Screws			2.5 [5.5]
Baseplate			14.8 [32]
Outlet	Horiz. outlet / Vertical outlet / Pressure compensation	Horizontal (std) Vertical (optional)	2 [4.4] 4.6 [10.1]

Technical Data

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

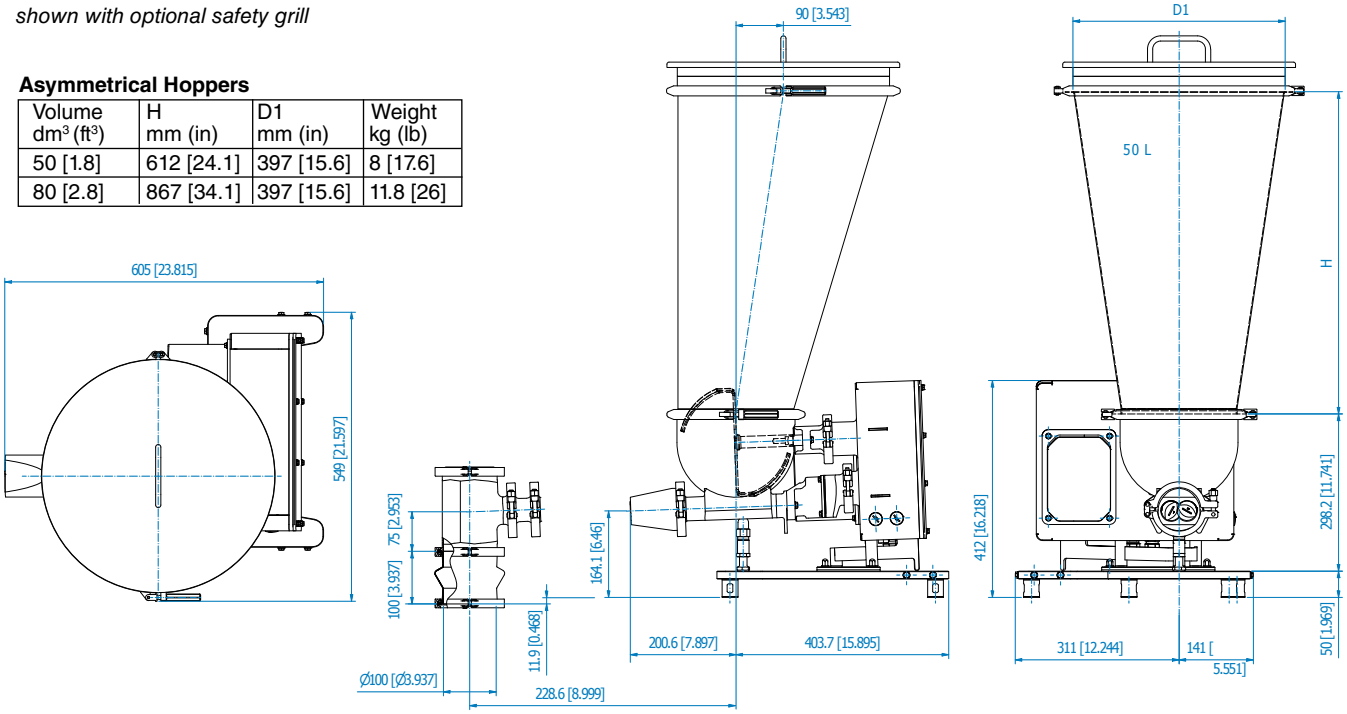
Temperature-Limits:
Ambient: 0...40 °C [32...104°F]
Material (standard): 0...50 °C [32...122°F]
for other material temperatures contact factory

Dimensions [mm(in)]

shown with optional safety grill

Asymmetrical Hoppers

Volume dm³ (ft³)	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]



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