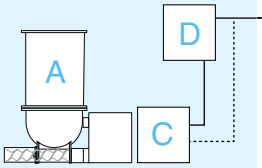
K-MV-KT35

Volumetric Twin Screw Feeder



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) as well as fibers, flakes and other bulk materials. The feeder can be upgraded to a loss-in-weight feeder system at any time.

Design

Twin screw feeder with interchangeable feeding tools. All parts in contact with the material being fed are stainless steel. Feeding equipment is easy to disassemble. The horizontal agitator gently moves the bulk material to the large throat and then into the screws. Feeder screws are easily interchangeable.
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.

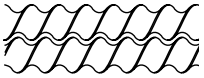
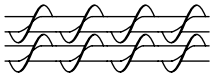
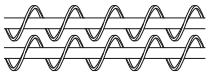
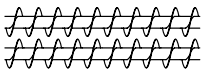
Hazardous Location Options:

NEC	Class II, Div. 2, Groups F & G / Class II, Div. 1, Groups F & G Class I, Div. 2, Groups C & D / Class I, Div. 1, Groups C & D
ATEX	3D/3D, 3D/2D, 3G/3G, 2D/2D, 2G/2G (outside/inside)

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 (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.

Pitch		 Twin concave screws	 Twin auger screws	 Twin spiral screws	 Double auger screws	Max. screw speed
coarse	dm³/h	3.1 - 1466	5.6 - 2346	3.6 - 1446	4.6 - 1772	621 RPM
	ft³/h	0.11 - 51.75	0.2 - 82.81	0.13 - 51.04	0.16 - 62.55	
fine	dm³/h	2.3 - 952	2.6 - 1418	1.9 - 1058	2.5 - 1298	
	ft³/h	0.08 - 33.61	0.09 - 50.06	0.07 - 37.35	0.09 - 45.82	

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.

K-MV-KT35

Volumetric Twin Screw Feeder

Configuration

Description	Alternatives	Remarks	Weight kg [lb]
Vertical agitator	EMEA/Asia: 230/400 VAC 180 250 W, IP55 / Americas: 230/460 VAC 0.25, 0.33 HP	4D (50 L, 80 L)	25 [55]
		6D (110 L, 180 L)	36 [79]
Cover		2D	1 [2]
		4D	2 [4.4]
		6D	3 [6.6]
Extension hopper		2D, 4D or 6D	see below
Horiz. agitator			0.7 [1.5]
Trough	5 L		2.5 [5.5]
Gearbox			15 [33]
Motor	Servo motor - 800 W, 240 VAC, IP65 *KCM-III requires 230 VAC single phase (US split-phase, 3 wire balanced, L1-N-L2)*		5.8 [12.8]
Screws		see page 1	2 [4.4]
Outlet	Horiz. outlet / Vertical outlet / Pressure compensation	standard: horiz. outlet	1 [2.2]

Materials:

Product contact parts*: Stainless steel
EN 1.4404, 1.4435 (AISI 316L)
EN 1.4409 (ASTM A743 CF3M)

*Horiz. agitator: EN 1.4034 (AISI 420) standard
EN 1.4404 (AISI 316L) option

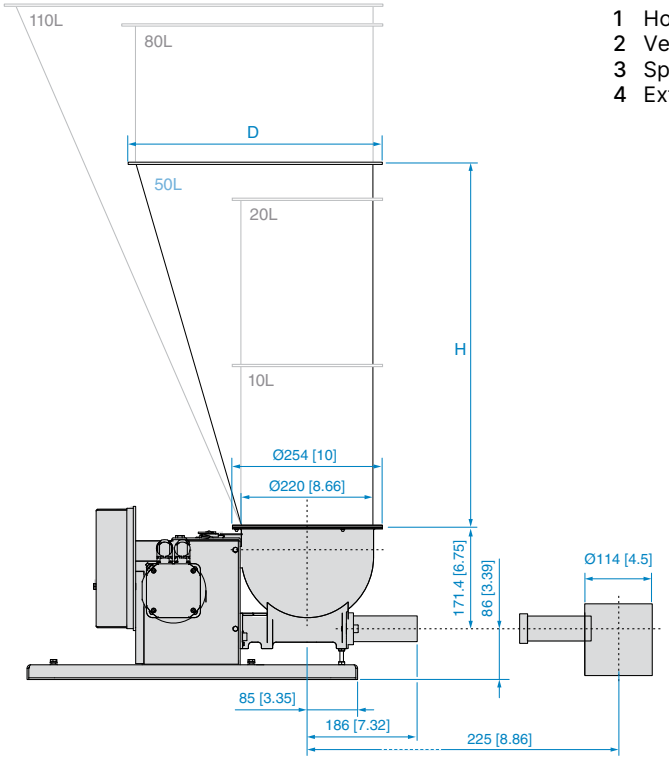
Seals: PTFE, Neoprene, silicone

Temperature-Limits:

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

Painting: Light gray RAL 7035

Dimensions mm [in]

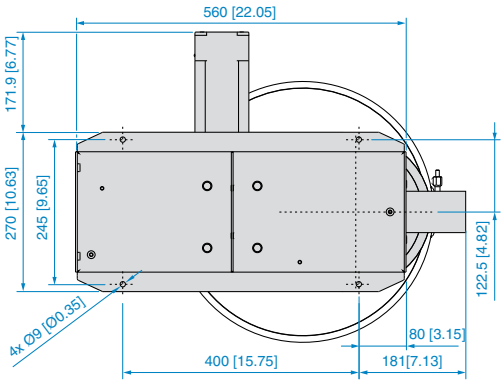


Options

1 Hopper
2 Vertical outlet
3 Special paint
4 Extended screws

Volume dm³ [ft³]	H mm [in]	D mm [in]	Weight kg [lb]
Asymmetrical Hoppers			
50 [1.76]	615 [24.2]	400 [15.75]	7 [15.4]
80 [2.8]	869 [34.2]	400 [15.75]	11 [24.2]
110 [3.88]	922 [36.3]	600 [23.62]	17 [37.4]
180 [6.4]	1176 [46.3]	600 [23.62]	23 [50.6]
250 [8.8]*	1430 [57.2]	600 [23.62]	29.5 [64.9]
320 [11.3]*	1684 [66.3]	600 [23.62]	35 [77]
Cylindrical Hoppers			
10 [0.35]	283 [11]	220 [8.66]	3 [6.6]
20 [0.71]	566 [22.28]	220 [8.66]	6 [13.2]

** only in a hanging configuration*



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