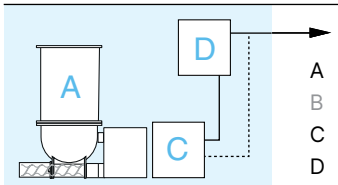
K-MV-KS60

Volumetric Single 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 easy flowing powders, granules and other bulk materials. The feeder can be upgraded to a loss-in-weight feeder system at any time.

Design

Single 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. For feed rates at the upper or lower limits of the theoretical range, check with a Coperion K-Tron Test Lab.

Pitch	DN Screw (Tube)	Auger screws					Spiral screws				
		ø15 (15)	ø25 (30)	ø40 (40)	ø50 (50)	ø60 (60)	ø15 (15)	ø25 (30)	ø40 (40)	ø45 (50)	ø60 (60)
coarse	dm³/h	0.14 - 65	0.8 - 332	2.6 - 979	7.3 - 2575	11 - 4140	0.14 - 69	0.8 - 360	3 - 1240	7.95 - 2194	12 - 3449
	ft³/h	0.005 - 2.29	0.03 - 11.72	0.09 - 34.6	0.26 - 91	0.39 - 146	0.005 - 2.44	0.03 - 12.7	0.11 - 43.77	0.28 - 77.45	0.42 - 122
fine	dm³/h	--	0.4 - 172	1.4 - 633	4.3 - 1847	6 - 2587	--	0.5 - 187	1.7 - 747	4.078 - 1591	7 - 2822
	ft³/h	--	0.01 - 6.07	0.05 - 22.3	0.15 - 65	0.21 - 91	--	0.02 - 6.6	0.06 - 26.4	0.14 - 56.2	0.25 - 100

Max. screw speed: 522 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.

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Configuration

Description	Alternatives	Remarks	Weight kg [lb]
Vertical agitator	EMEA/Asia: 230/400 VAC 180 250 W, IP55	4D (50 L, 80 L)	25 [55]
	Americas: 230/460 VAC 0.25, 0.33 HP	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	1 [2.2]
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

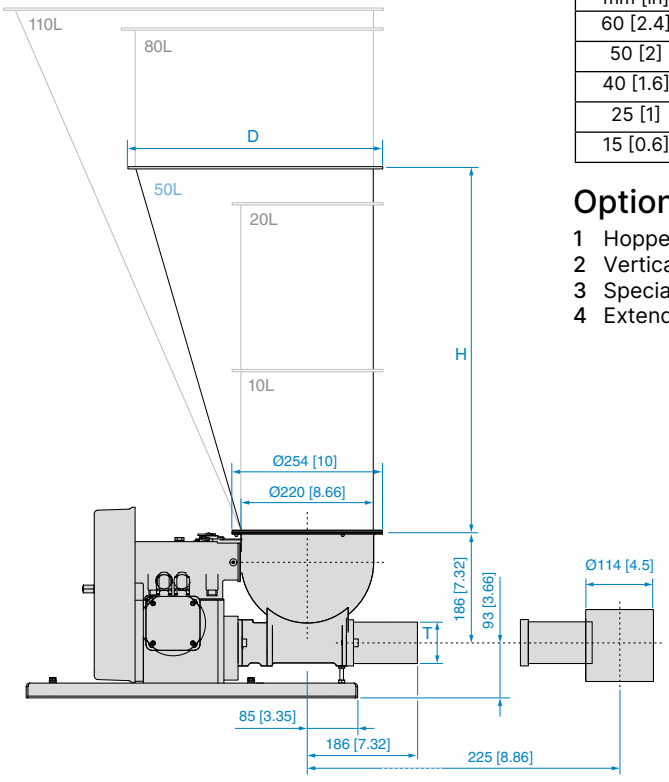
Seals: PTFE, Neoprene, silicone

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]



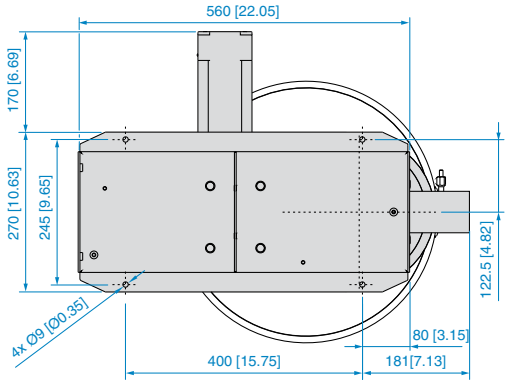
Ø Screw mm [in]	T Ø Tube mm [in]
60 [2.4]	70 [2.76]
50 [2]	60.3 [2.4]
40 [1.6]	48.3 [1.9]
25 [1]	33.7 [1.32]
15 [0.6]	21.3 [0.84]

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