

Ext. communication to Host System

A Feeder

B Weighing System

C Control Module

D Operator Interface

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

Component A is specified here.

Application

Gravimetric feeding of free flowing powders, granules and other bulk materials.

Design

Single screw feeder with interchangeable feeding tool mounted on a D5 platform scale. The scale is stainless steel and the scale housing is completely enclosed.

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:

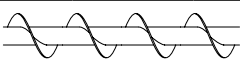
NEC	Class II, Div. 2, Groups F & G / Class II, Div. 1, Groups F & G Class I, Div. 2, Groups C & D / Class I, Div. 1, Groups C & D
ATEX	3D/3D, 3D/2D, 3G/3G, 2D/2D, 2G/2G (outside/inside)



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	dm ³ /h	0.14 - 70.1	0.8 - 354	2.6 - 1041	7.3 - 2740	11 - 4404	0.14 - 74.4	0.8 - 383	3 - 1320	7.95 - 2335	12 - 3669
	ft ³ /h	0.005 - 2.47	0.03 - 12.5	0.09 - 36.7	0.26 - 96.72	0.39 - 155	0.005 - 2.63	0.03 - 13.5	0.11 - 46.6	0.28 - 82.43	0.42 - 130
fine	dm ³ /h	--	0.4 - 183	1.4 - 673	4.3 - 1965	6 - 2752	--	0.5 - 199	1.7 - 794	4.08 - 1690	7 - 3002
	ft ³ /h	--	0.01 - 6.46	0.05 - 23.8	0.15 - 69.4	0.21 - 97.2	--	0.02 - 7.02	0.06 - 28	0.14 - 59.7	0.25 - 106

Max. screw speed: 556 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.

Note: A 'Low' gear reduction is available for low feed rates with high torque (heavy bulk material). Max. screw speed 111 RPM.

Configuration	Description	Alternatives	Remarks	Weight kg [lb]
	Vertical agitator (option)	EME/Asia: 230/400 VAC 180 250 W, IP55 Americas: 230/460 VAC 0.25, 0.33 HP	4D (50 L, 80 L) 6D (110 L)	25 [55] 36 [79]
	Cover		2D 4D 6D	1 [2.2] 2 [4.4] 3 [6.6]
	Extension hopper		2D, 4D or 6D	see below
	ActiFlow		option (4D, 6D)	9.6 [21.6]
	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]
	Platform scale (gross capacity)	60 kg 132 lb 120 kg 264 lb 200 kg 440 lb	D5 IP65, NEMA 4	32 [70]

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

Weighing Range:
Gross scale capacity (60, 120 or 200 kg) less total feeder weight.

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]

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]
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]

Options

- 1 Standard hopper
- 2 Vertical outlet
- 3 Special paint / finish
- 4 Extended screws