

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

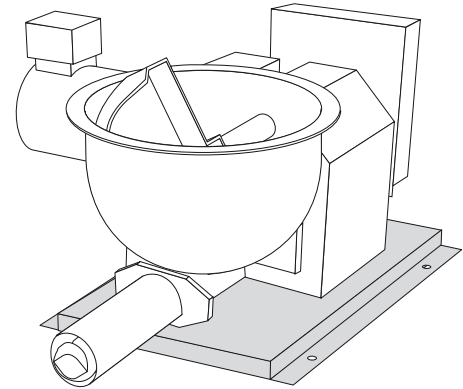
Single screw feeder with interchangeable feeding tools. All parts in contact with the material being fed are stainless steel. Feeding equipment is easy to disassemble. The horizontal agitator gently moves the bulk material to the large throat and then into the screws. Feeder screws are easily interchangeable.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

Controller: (see separate data sheets)

The SmartConnex™ control system allows individual or multi-component control. Each feeder has its own control module. A variety of protocols is available for connection to the plant's host system.

Hazardous Location Options: (see sheet I-000002)

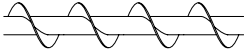
NEC Class II, Div. 2, Groups F & G / Class II, Div. 1, Groups F & G
 Class I, Div. 2, Groups C & D / Class I, Div. 1, Groups C & D
 ATEX 3D/3D, 3D/2D, 3G/3G, 2GD/2GD (outside/inside)



Feed Screws and Sample Feed Rates

Feeder screws are determined based on the material being fed. The theoretical throughput range of 1:100 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					Gearbox
		ø15 (15)	ø25 (30)	ø40 (40)	ø50 (50)	ø60 (60)	ø15 (15)	ø25 (30)	ø40 (40)	ø45 (50)	ø60 (60)	
coarse	dm³/h	0.73 - 65	3.6 - 332	11.3 - 979	36 - 2575	51 - 4140	0.72 - 69	3.9 - 360	14.3 - 1240	30.8 - 2194	54 - 3449	A
	ft³/h	0.03 - 2.29	0.13 - 11.72	0.4 - 34.6	1.27 - 91	1.8 - 146	0.03 - 2.44	0.14 - 12.7	0.5 - 43.77	1.09 - 77.45	1.91 - 122	
	dm³/h	0.3 - 30	1.81 - 161	5.4 - 461	17.4 - 1309	23 - 2120	0.34 - 35	1.8 - 169	6.9 - 600	18.4 - 1347	26 - 1747	B
	ft³/h	0.01 - 1.06	0.06 - 5.68	0.19 - 16.3	0.61 - 46.2	0.81 - 74.8	0.01 - 1.24	0.06 - 5.97	0.24 - 21.18	0.65 - 47.5	0.92 - 61.67	
	dm³/h	0.14 - 14	0.8 - 75	2.6 - 227	7.3 - 639	11 - 973	0.14 - 15.4	0.8 - 78	3 - 279	7.95 - 583	12 - 949	C
	ft³/h	0 - 0.49	0.03 - 2.65	0.09 - 8.01	0.26 - 22.6	0.39 - 34.4	0 - 0.54	0.03 - 2.75	0.11 - 9.85	0.28 - 20.6	0.42 - 33.5	
fine	dm³/h	--	1.7 - 172	6.5 - 633	20.4 - 1847	29 - 2587	--	2 - 187	7.7 - 747	18.2 - 1591	32 - 2822	A
	ft³/h	--	0.06 - 6.07	0.23 - 22.3	0.72 - 65	1.02 - 91	--	0.07 - 6.6	0.27 - 26.4	0.64 - 56.2	1.13 - 100	
	dm³/h	--	0.9 - 82	3 - 290	10.3 - 896	14 - 1266	--	0.9 - 87	3.9 - 355	9.43 - 454	14 - 1352	B
	ft³/h	--	0.03 - 2.89	0.11 - 10.24	0.36 - 31.6	0.49 - 44.7	--	0.03 - 3.07	0.14 - 12.5	0.33 - 16	0.49 - 47.73	
	dm³/h	--	0.4 - 36	1.4 - 136	4.3 - 407	6 - 561	--	0.5 - 40	1.7 - 160	4.078 - 383	7 - 622	C
	ft³/h	--	0.01 - 1.27	0.05 - 4.8	0.15 - 14.4	0.21 - 19.8	--	0.02 - 1.41	0.06 - 5.65	0.14 - 13.5	0.25 - 21.96	

Screw speed (RPM): Gearbox **A** = 5.2 - 522 **B** = 2.5 - 250 **C** = 1.1 - 108

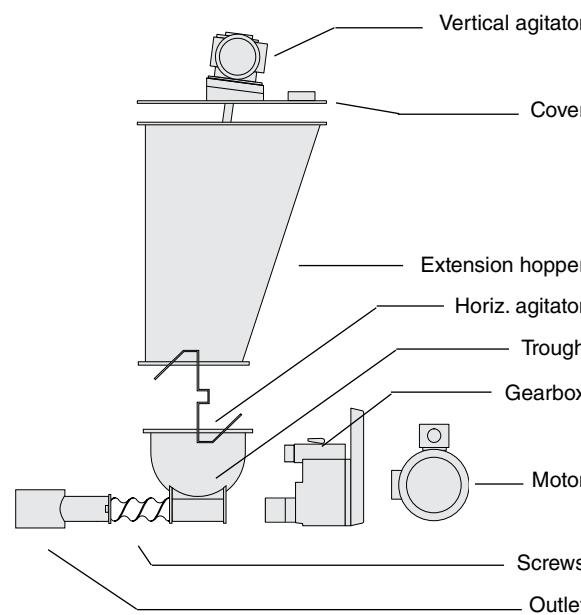
Feed rates shown are with DC motor and KCM controller (Range 1:100 / Max. motor speed 2000 RPM).

For feed rates with vector-duty AC motor with speed pick-up and KCM controller multiply values by 0.875 (Range 1:100 / Max. motor speed 1750 RPM).

Coperion K-Tron Product Specification Volumetric Single Screw Feeder

K-MV-KS60

Configuration

Description	Selection	Remarks	Weight kg (lb)
	KS: 230/400 VAC 180, 250 W IP55	4D (50 L, 80 L) 6D (110 L, 180 L)	25 (55) 36 (79)
	KA: 115/230 VAC 0.25, 0.33 HP or 100/200 VDC 0.33 HP		
		2D 4D 6D	1 (2) 2 (4.4) 3 (6.6)
		2D, 4D or 6D	see below
		5 L	0.7 (1.5) 2.5 (5.5) 15 (33)
	A B C		
	100/200 VDC 450 W IP65	CKS: 3x230 VAC CKA: 3x220 VAC 370/450 W IP65	standard: 450 W DC 12 (26.4)
		see page 1	1 (2.2)
	Horiz. outlet Vertical outlet Pressure compensation	standard: horiz. outlet	1 (2.2)

Materials:

Material contact parts*: Stainless steel

DIN 1.4404, 1.4435 (AISI 316L)

DIN 1.4409 (ASTM A743 CF3M)

*Horiz. agitator:

DIN 1.4034 (AISI 420) standard

DIN 1.4404 (AISI 316L) option

Seals:

PTFE, Neoprene, Silicone

Painting:

Light gray RAL 7035

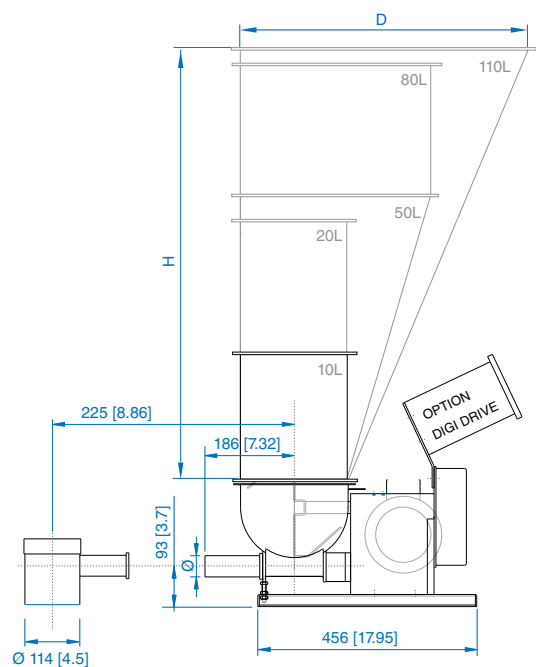
Temperature-Limits:

Ambient: 0...40°C [32...104°F]

Material: 0...50°C [32...122°F]

for other material temperatures contact factory

Dimensions mm [in]



Ø Screw mm [in]	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]
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

Options

- 1 Hopper
- 2 Vertical outlet
- 3 Special paint
- 4 Extended screws

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