

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.

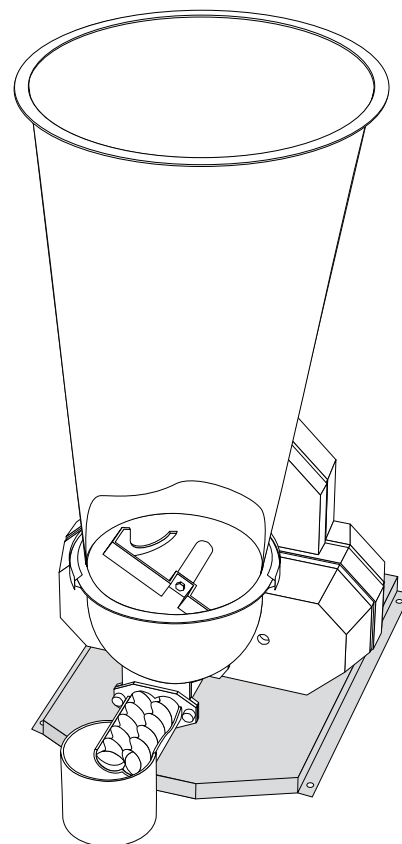
This equipment conforms to CE standards regarding EMC and safety.

Controller: (see separate data sheets)

The SmartConnex™ control system allows individual or multi-component control. Each feeder has its own control module. 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.

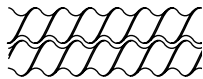
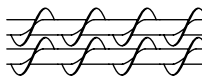
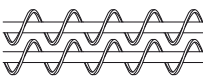
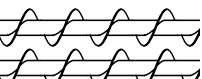
Hazardous Location Options: (see sheet I-000002)

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. 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	Reduction/ Max Screw Speed (RPM)
coarse pitch	dm³/h	15.8 - 1417	27.8 - 2267	19.3 - 1398	25 - 1712	High
	ft³/h	0.56 - 50.02	0.98 - 80.03	0.68 - 49.35	0.88 - 60.43	3.34:1 / 600
	dm³/h	2.9 - 293	5.2 - 485	3.4 - 307	4.3 - 401	Low
	ft³/h	0.1 - 10.34	0.18 - 17.13	0.12 - 10.84	0.15 - 14.16	16.71:1 / 120
fine pitch	dm³/h	10.1 - 920	14.3 - 1370	11.8 - 1023	13.3 - 1254	High
	ft³/h	0.36 - 32.48	0.5 - 48.36	0.42 - 36.11	0.47 - 44.27	3.34:1 / 600
	dm³/h	2.1 - 188	2.4 - 280	1.82 - 216	2.4 - 259	Low
	ft³/h	0.07 - 6.64	0.08 - 9.88	0.06 - 7.62	0.08 - 9.14	16.71:1 / 120

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).

Configuration

	Description	Alternatives	Remarks	Weight kg (lb)
	Vertical agitator	KS: 230/400 VAC 180, 250 W IP55	4D (50 L, 80 L) 6D (110 L, 180L)	25 (55) 36 (79)
	Cover	KA: 115/230 VAC 0.25, 0.33 HP or 100/200 VDC 0.33 HP	2D 4D 6D	1 (2.2) 2 (4.4) 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	100/200 VDC 450 W IP65	standard: 450 W DC	12 (26.4)
	Screws	CKS: 3x230 VAC CKA: 3x220 VAC 370/450 W IP65	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
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, Silicon

Painting: Light gray RAL 7035

Temperature-Limits:

Ambient: 0...40°C [32...104°F]

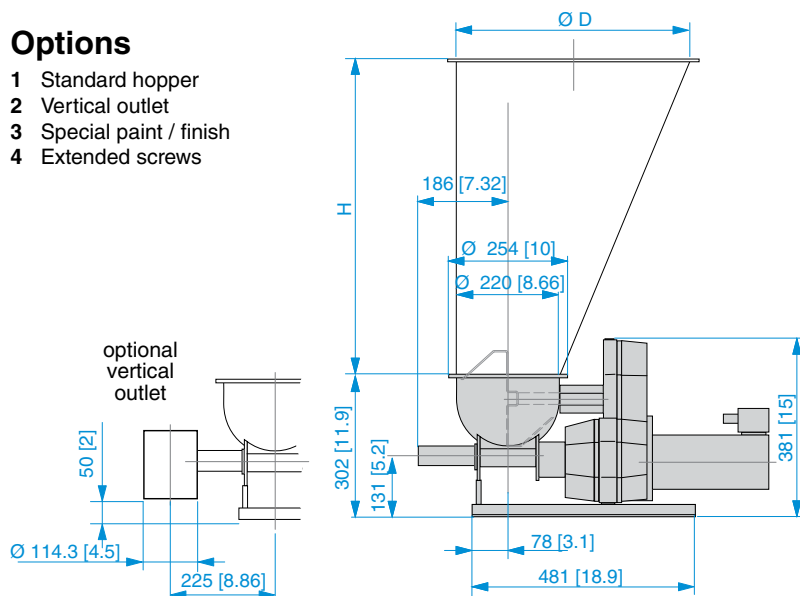
Material: 0...50°C [32...122°F]

for other material temperatures contact factory

Dimensions mm [in]

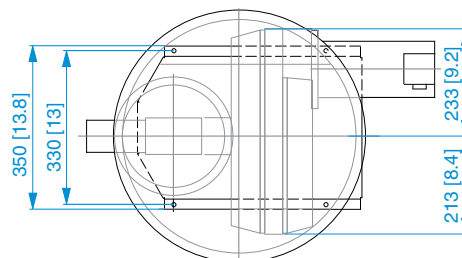
Options

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