

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:

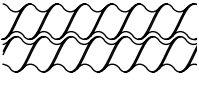
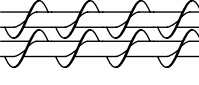
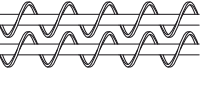
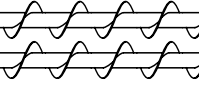
NEC Class II, Div. 2, Groups F & G / Class II, Div. 1, Groups F & G
Class I, Div. 2, Groups C & D / Class I, Div. 1, Groups C & D
ATEX 3D/3D, 3D/2D, 3G/3G, 2D/2D, 2G/2G (outside/inside)



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
coarse pitch	dm ³ /h	2.9 - 1417	5.2 - 2267	3.4 - 1398	4.3 - 1712
	ft ³ /h	0.1 - 50.02	0.18 - 80.03	0.12 - 49.35	0.15 - 60.43
fine pitch	dm ³ /h	2.1 - 920	2.4 - 1370	1.82 - 1023	2.4 - 1254
	ft ³ /h	0.07 - 32.48	0.08 - 48.36	0.06 - 36.11	0.08 - 44.27

Max. screw speed: 599 RPM

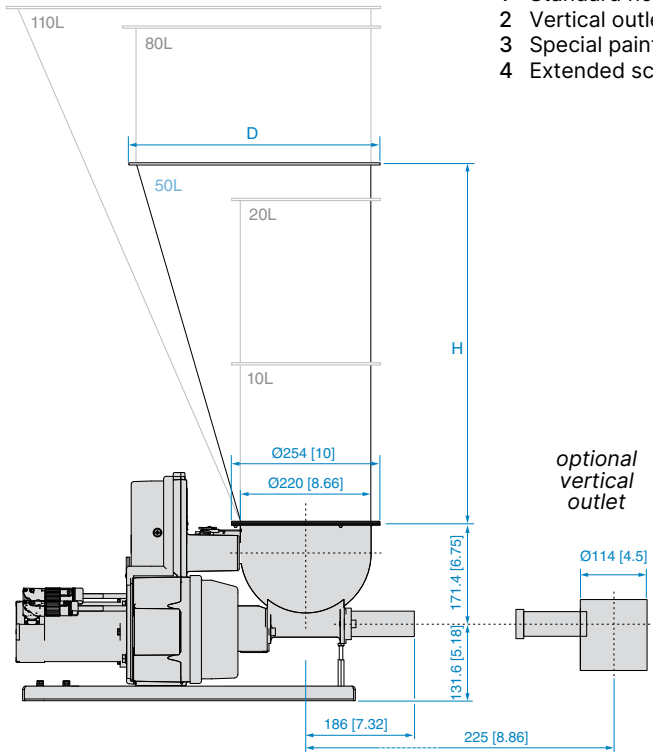
Feed rates shown are with servo motor and KCM controller (Max. motor speed 2000 RPM). For feed rates with DC or AC motors consult factory.

Note: A 'Low' gear reduction is available for low feed rates with high torque (heavy bulk material). Max. screw speed 120 RPM.

Configuration table with columns: Description, Alternatives, Remarks, Weight kg [lb]. Includes a diagram of the feeder components like Vertical agitator, Cover, Extension hopper, etc.

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]

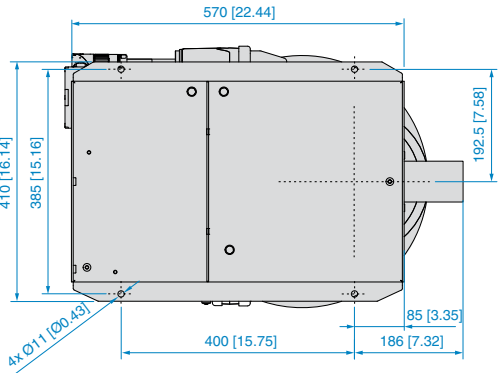


Options

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

Table with 4 columns: Volume dm³ [ft³], H mm [in], D mm [in], Weight kg [lb]. It lists dimensions for Asymmetrical Hoppers (50, 80, 110, 180, 250, 320) and Cylindrical Hoppers (10, 20).

* only in a hanging configuration



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