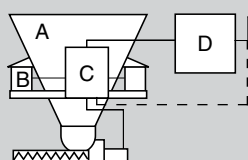


Coperion K-Tron Product Specification

Loss-in-Weight Single Screw Feeder

K-ML-S500-16D
K-ML-S510-16D



- Ext. communication to Host System
- A Feeder
 - B Weighing System
 - C Control Module
 - D Operator Interface

Each Coperion K-Tron weigh 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

Modular single screw feeder with base hopper mounted on a 3-point weighing system.

A variety of feeder screws allows for accommodation of various bulk materials. There are spiral- or auger feeder screws available with different diameters and with short or long pitches. Several feeder screws are equipped with shovels for better filling.

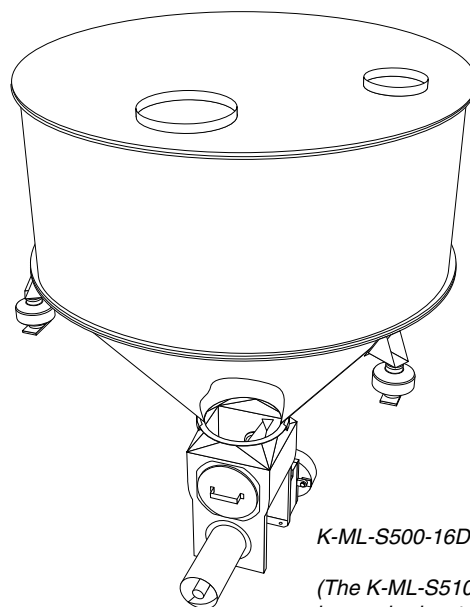
All parts in contact with the material being fed are stainless steel. The components are held together by V-clamps.

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, Group D / Class I, Div. 1, Group D
- ATEX 3D/3D, 3D/2D, 3G/3G, 2GD/2GD (outside/inside)



K-ML-S500-16D

(The K-ML-S510-16D has no horizontal agitator.)

Feed Screws and Feed Rates

Actual feeder screws are determined based on the material being fed. **Attention:** The following rates are theoretical values for free flowing materials being fed volumetrically. Actual feed rates depend on individual material characteristics. The feed range for loss-in-weight feeders is somewhat smaller. For feed rates at the upper or lower limits of the theoretical range, check with a Coperion K-Tron Test Lab.

Pitch	Auger Screws			Spiral Screws			RPM	Reduction
Coarse	Ø 65 (2.6)	Ø 100 (3.9)	Ø 150 (5.9)	Ø 65 (2.6)	Ø 100 (3.9)	Ø 150 (5.9)		
dm³/h	38 - 1140	140 - 5500	430 - 17000	38 - 1140	140 - 5500	430 - 17000	5 - 150	2 : 1
ft³/h	1.4 - 40	5 - 194	15 - 600	1.4 - 40	5 - 194	15 - 600		
dm³/h	51 - 2270	180 - 11000	570 - 34000	51 - 2270	180 - 11000	570 - 34000	5 - 300	1 : 1
ft³/h	1.8 - 80	6.4 - 388	20 - 1200	1.8 - 80	6.4 - 388	20 - 1200		
dm³/h	51 - 3040	180 - 14700	570 - 45300	51 - 3040	180 - 14700	570 - 45300	5 - 400	1 : 1.33
ft³/h	1.8 - 107	6.4 - 520	20 - 1600	1.8 - 107	6.4 - 520	20 - 1600		
Fine	Ø 65 (2.6)	Ø 100 (3.9)	Ø 150 (5.9)					
dm³/h	19 - 780	70 - 2700	200 - 7900				5 - 150	2 : 1
ft³/h	0.7 - 28	2.5 - 95	7 - 280					
dm³/h	25 - 1560	140 - 5500	260 - 15800				5 - 300	1 : 1
ft³/h	0.9 - 55	5 - 194	9 - 560					
dm³/h	25 - 2090	140 - 7400	260 - 21000				5 - 400	1 : 1.33
ft³/h	0.9 - 74	5 - 261	9 - 742					

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

Loss-in-Weight Single Screw Feeder

K-ML-S500-16D
K-ML-S510-16D

Configuration

Description	Alternatives	Remarks	Weight kg (lb)
Agitator drive	3 x 400/230 VAC 2.2 kW; IP55		170 (375)
Vertical agitator		depending on size of hopper	
Cover			64 (141)
Base hopper		see below	
3 Load cells	300 kg (660 lb) 500 kg (1100 lb) 1000 kg (2200 lb)	IP65, NEMA 4 Gross weigh bridge capacity = 3 x K-SFT	
Trough S500/S510	50 dm³ (1.8 ft³) / 15 dm³ (0.5 ft³)	Cleaning opening front side: Ø 240 (9.5)	
Agitator drive (only S500)	3 x 400/230 VAC; 0.55 kW; IP55		
Gear box			
Motor	200 VDC 1.6 kW IP55 CKS: 3x230VAC CKA: 3x220VAC 1.6 kW IP65 CKS: 230/400VAC CKA: 230/460VAC 2.2 kW, IP55 with Freq. Inverter	standard: 1.6 kW DC	S500: 105 (232) S510: 58 (128)
Screw			
Outlet	Horiz. outlet Vertical outlet Pressure compensation	standard: vertical	

Materials:

Parts in contact
with bulk material: Stainless steel, DIN material no.
1.4404 / 1.4435, AISI 316L

Seals: PTFE, Neoprene
Painting: Light gray RAL 7035

Weighing Range:

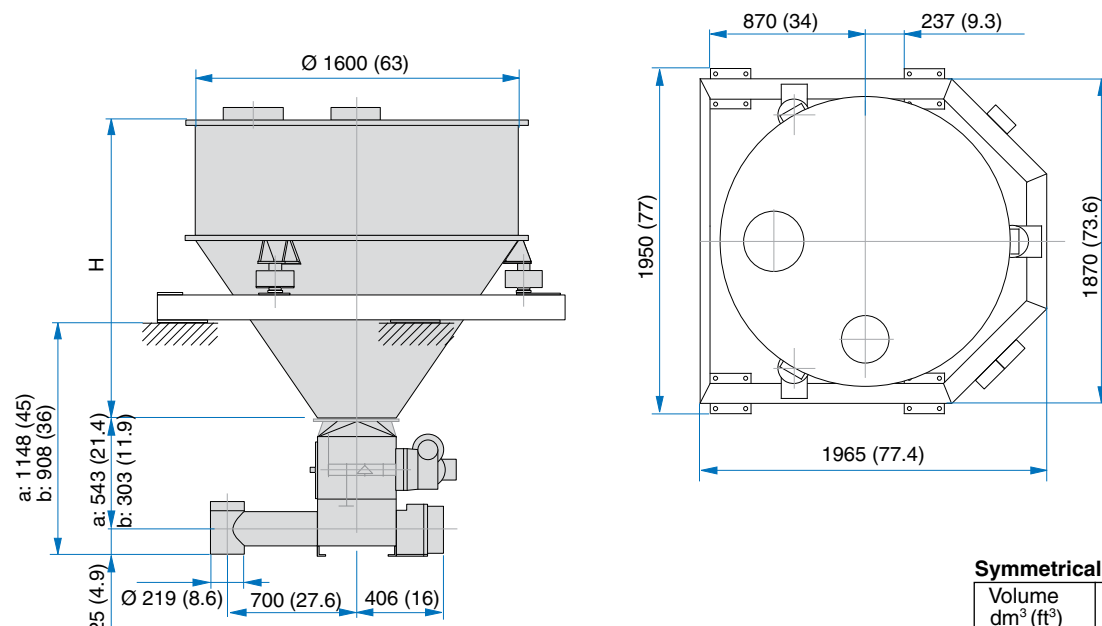
Gross weighbridge capacity (e.g. 3 x 60 = 180 kg) less total feeder
weight and less 10% reserve

Temperature-Limits:

Ambient: 0 to 40°C (32 to 104°F)
Material: 0 to 50°C (32 to 122°F)
for other material temperatures contact factory

Dimensions [mm(in)] a: K-ML-S500 / b: K-ML-S510

Shown with optional vertical outlet.



Symmetrical Hoppers

Volume dm³ (ft³)	H mm (in)	Weight kg (lb)
1400 (49)	1253 (49)	72 (158)
2800 (100)	1978 (78)	128 (282)

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