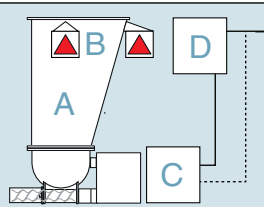


# Coperion K-Tron Product Specification Loss-in-Weight Single Screw Feeder

K-ML-KS60



- 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

Single screw feeder with interchangeable feeding tools suspended in a three-point weighing system with K-SFT load cells. 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. Interface-modules for computer communications are installed in the control module.

### Hazardous Location Options:

- NEC Class I, Div. 1 & 2, Group C & D  
Class II, Div. 1 & 2, Group F & G
- 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<br>Screw<br>(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 | dm³/h                 | 0.14 - 65    | 0.8 - 332    | 2.6 - 979   | 7.3 - 2575 | 11 - 4140  | 0.14 - 69     | 0.8 - 360   | 3 - 1240     | 7.95 - 2194  | 12 - 3449  |
|        | ft³/h                 | 0.005 - 2.29 | 0.03 - 11.72 | 0.09 - 34.6 | 0.26 - 91  | 0.39 - 146 | 0.005 - 2.44  | 0.03 - 12.7 | 0.11 - 43.77 | 0.28 - 77.45 | 0.42 - 122 |
| fine   | dm³/h                 | --           | 0.4 - 172    | 1.4 - 633   | 4.3 - 1847 | 6 - 2587   | --            | 0.5 - 187   | 1.7 - 747    | 4.078 - 1591 | 7 - 2822   |
|        | ft³/h                 | --           | 0.01 - 6.07  | 0.05 - 22.3 | 0.15 - 65  | 0.21 - 91  | --            | 0.02 - 6.6  | 0.06 - 26.4  | 0.14 - 56.2  | 0.25 - 100 |

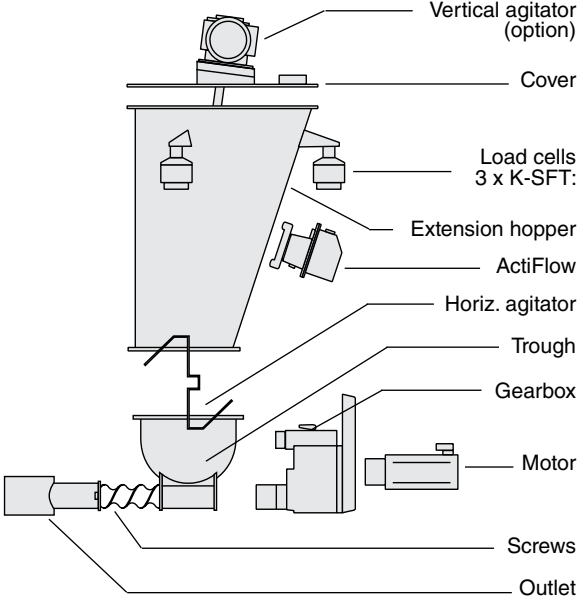
Max. screw speed: 522 RPM

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.

# Coperion K-Tron Product Specification Loss-in-Weight Single Screw Feeder

**K-ML-KS60**

## Configuration

| Description                                                                       | Selection                                                                                                                                                                                    | Remarks                                 | Weight kg [lb] |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------|
|  | <div> <div> <div>Vertical agitator (option)</div> <div> <div>EMA/Asia:<br/>230/400 VAC<br/>180 250 W, IP55</div> <div>Americas:<br/>230/460 VAC<br/>0.25, 0.33 HP</div> </div> </div> </div> | 4D (50 L, 80 L)                         | 25 [55]        |
|                                                                                   |                                                                                                                                                                                              | 6D (110 L, 180 L)                       | 36 [79]        |
|                                                                                   |                                                                                                                                                                                              | 4D                                      | 2 [4.4]        |
|                                                                                   |                                                                                                                                                                                              | 6D                                      | 3 [6.6]        |
|                                                                                   | <div> <div>30 kg<br/>66 lb</div> <div>60 kg<br/>132 lb</div> <div>90 kg<br/>198 lb</div> <div>120 kg<br/>264 lb</div> </div>                                                                 | IP65, NEMA 4<br>gross weighing capacity |                |
|                                                                                   |                                                                                                                                                                                              | 4D or 6D                                | see below      |
|                                                                                   |                                                                                                                                                                                              | option (4D, 6D)                         | 9.6 [21.6]     |
|                                                                                   |                                                                                                                                                                                              |                                         | 0.7 [1.5]      |
|                                                                                   | 5 L                                                                                                                                                                                          |                                         | 2.5 [5.5]      |
|                                                                                   |                                                                                                                                                                                              |                                         | 15 [33]        |
|                                                                                   | Servo motor - 800 W, 240 VAC, IP65<br>KCM-III requires 230 VAC single phase<br>(US split-phase, 3 wire balanced, L1-N-L2)                                                                    |                                         | 5.8 [12.8]     |
|                                                                                   |                                                                                                                                                                                              | see page 1                              | 1 [2.2]        |
|                                                                                   | <div> <div>Horiz. outlet</div> <div>Vertical outlet</div> <div>Pressure compensation</div> </div>                                                                                            | standard: horiz. outlet                 | 1 [2.2]        |
|                                                                                   |                                                                                                                                                                                              |                                         |                |

### Materials:

Material 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

Painting:

Light gray RAL 7035

### Weighing Range:

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

### Temperature-Limits:

Ambient: 0...40°C [32...104°F]

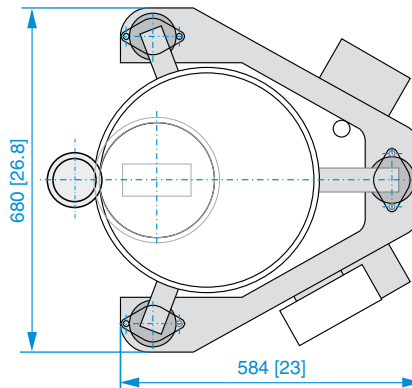
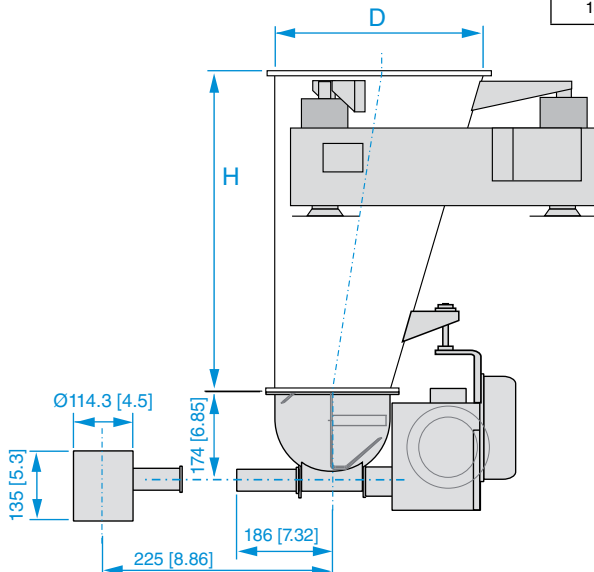
Material: 0...50°C [32...122°F]

for other material temperatures contact factory

## Dimensions mm [in]

| Ø Screw<br>mm [in] | Ø Tube<br>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<br>dm³ [ft³]         | H<br>mm [in] | D<br>mm [in] | Weight<br>kg [lb] |
|-----------------------------|--------------|--------------|-------------------|
| <b>Asymmetrical Hoppers</b> |              |              |                   |
| 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]           |



## 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