

## Application

Volumetric feeding of free flowing to difficult 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 modular components are held together by V-clamps. The horizontal agitator gently moves bulk material to the large throat and then into the discharge screws. It is removable without tools. The horizontal agitator speed totals 5% of the screw speed.

High and low reducer ranges are available. The user will need to select either high or low range. Unit can mechanically be changed over as necessary.

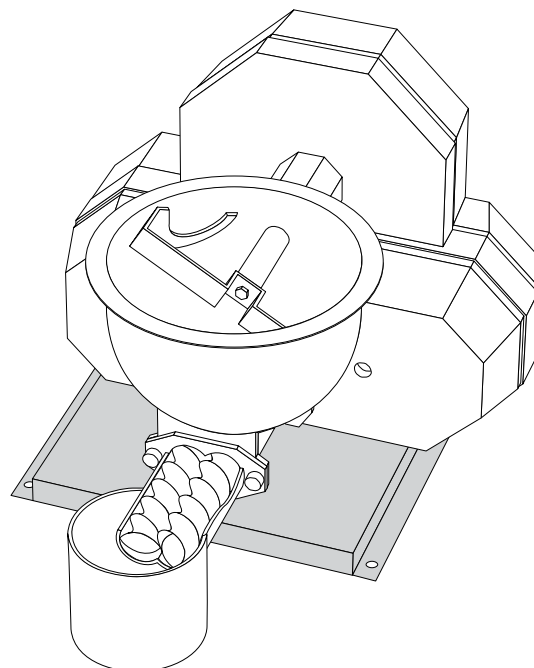
This equipment conforms to CE standards regarding EMC and safety.

**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)

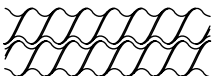
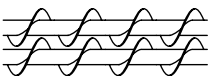
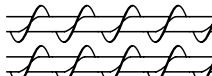
NEC Class II, Div. 2, Groups F & G / Class II, Div. 1, Groups F & G  
 Class I, Div. 2, Group D / Class I, Div. 1, Group D  
 ATEX 3D/3D, 3D/2D, 3G/3G, 2GD/2GD (outside/inside)



## 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.

|       |        | Twin concave screws                                                                 | Twin auger screws                                                                   | Double auger screws                                                                   | Reduction/<br>Max Screw Speed (RPM) |
|-------|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------|
| Pitch |        |  |  |  |                                     |
|       | Coarse | dm³/h 60 - 5270<br>ft³/h 2.1 - 186                                                  | 85 - 7040<br>3 - 249                                                                | 70 - 4050<br>2.4 - 143                                                                | High<br>4.7:1 / 425                 |
|       |        | dm³/h 32 - 3160<br>ft³/h 1.1 - 112                                                  | 48 - 4250<br>1.7 - 150                                                              | 27 - 2280<br>0.9 - 80                                                                 | Low<br>8:1 / 250                    |
|       | Fine   | dm³/h 32 - 2600<br>ft³/h 1.1 - 92                                                   | 48 - 4430<br>1.7 - 156                                                              | 44 - 3230<br>1.5 - 114                                                                | High<br>4.7:1 / 425                 |
|       |        | dm³/h 20 - 1530<br>ft³/h 0.7 - 54                                                   | 28 - 2630<br>1 - 93                                                                 | 21 - 1780<br>0.7 - 63                                                                 | Low<br>8:1 / 250                    |

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 Twin Screw Feeder

**K2-MV-T60**

## Configuration

|  | Description       | Alternatives                                              | Remarks                                                | Weight kg [lb]                    |
|--|-------------------|-----------------------------------------------------------|--------------------------------------------------------|-----------------------------------|
|  | Vertical agitator | KS: 230/400 VAC<br>1.5 kW IP55                            | KA: 115/230 VAC<br>1 HP<br>or 180/200 VDC<br>1, 1.5 HP | 10D<br>130 [286]                  |
|  | Cover             |                                                           |                                                        | 10D<br>27 [59]                    |
|  | Extension hopper  |                                                           |                                                        | 10D<br>see below                  |
|  | Horiz. agitator   |                                                           |                                                        | 1.8 [4]                           |
|  | Trough            | 15 L                                                      |                                                        | 7 [15.4]                          |
|  | Gearbox           |                                                           |                                                        | 28 [62]                           |
|  | Motor             | 200 VDC<br>1.6 kW<br>IP55                                 | CKS: 3x230 VAC<br>CKA: 3x220 VAC<br>1.6 kW<br>IP65     | standard: 1.6 kW DC<br>30 [66]    |
|  | Screws            |                                                           |                                                        | see page 1<br>12 [26.4]           |
|  | Outlet            | Horiz. outlet<br>Vertical outlet<br>Pressure compensation |                                                        | standard: horiz. outlet<br>5 [11] |

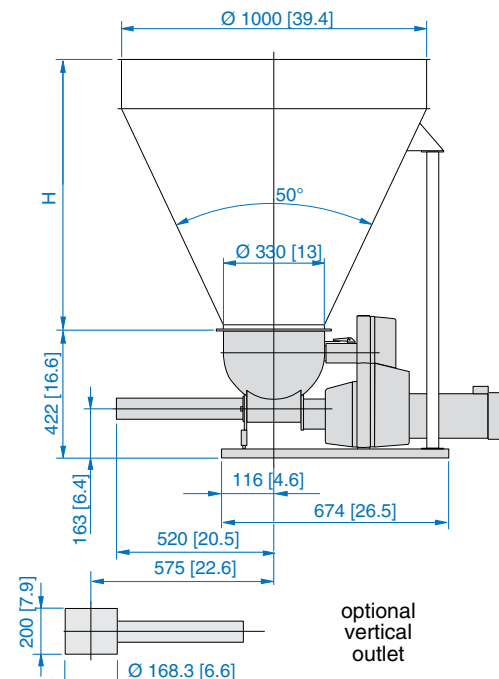
### Materials:

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)

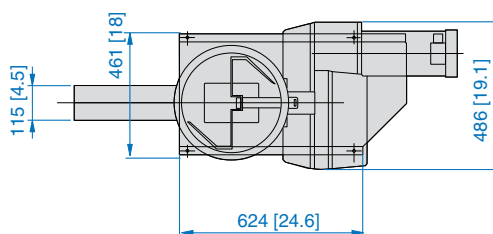


## Options

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

| Volume<br>dm³ [ft³]        | H<br>mm [in] | D<br>mm [in] | Weight<br>kg [lb] |
|----------------------------|--------------|--------------|-------------------|
| <b>Symmetrical Hoppers</b> |              |              |                   |
| 250 [9]                    | 732 [29]     | 1000 [39.4]  | 37 [81]           |
| 450 [15]                   | 1086 [43]    | 1000 [39.4]  | 59 [130]          |
| 750 [26]                   | 1450 [57]    | 1000 [39.4]  | 82 [180]          |
| 1100 [39]                  | 1820 [72]    | 1000 [39.4]  | 106 [234]         |
| 1400 [49]                  | 2350 [93]    | 1000 [39.4]  | 140 [308]         |

6D and 16D hoppers also available



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