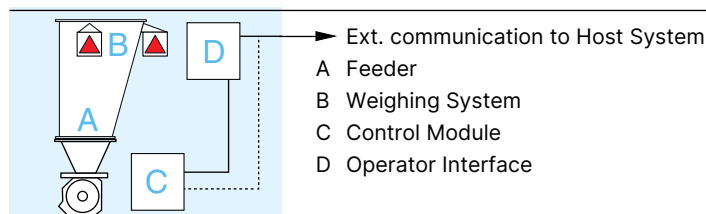


# K-ML-BSP-150-S

## Loss-in-Weight Bulk Solids Pump (BSP) Feeder



Each Coperion K-Tron Weigh feeder consists of the components A, B, C and D.

Component A is specified here.

## Application

Precise gravimetric feeding of free flowing bulk materials, e.g. pellets & granules.

## Design

The BSP feeder has a vertical rotating disc assembly that creates a product lock-up zone conveying the material smoothly from storage hopper to outlet. True, linear mass flow is achieved. Because there are no pockets or screws, the feeder is cleaned in seconds. This device utilizes the principal known as lock-up, as described below.

### ZONE 1: CONSOLIDATION

Interparticle forces produce lock-up at the end of Zone 1

### ZONE 2: ROTATION

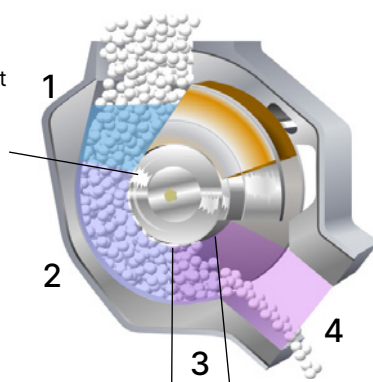
Material is in lock-up condition throughout Zone 2 and rotates as a solid body

### ZONE 3: RELAXATION

Interparticle forces fall below lock-up threshold

### ZONE 4: DISCHARGE

Flexible tip guide aids material discharge



This allows for a simple feeder design, with excellent linearity and accuracy because the material in the feeder is moved together in true positive displacement. With only one moving part and no pockets or screws, the design is simple, providing ease of use and almost zero maintenance.

The BSP-150-S has four feeding ducts. The standard disc is molded silicone on a stainless steel core. For special applications (e.g. super absorbent polymer) a completely steel disc is used.

### Weigh System:

The BSP feeder with the storage hopper is suspended on a 3-point weighing system using K-SFT load cells.

### Controller:

A low power stepper motor drive provides excellent turndown and flexibility ensuring a wide operating range.

The SmartConnex™ control system allows individual or a multi-component control. Interface-modules for computer communication are installed in the control module.

### Hazardous Location Options:

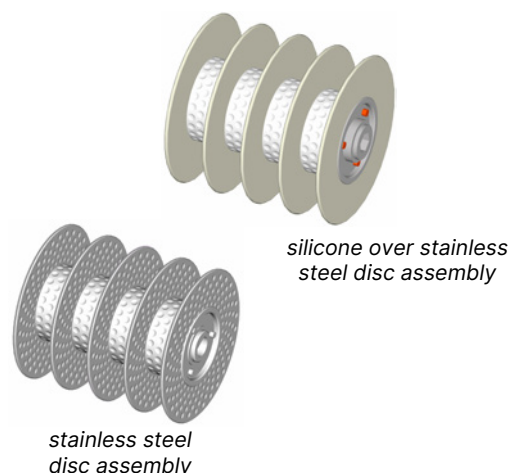
NEC Class II, Div. 2, Group F & G  
ATEX N/A

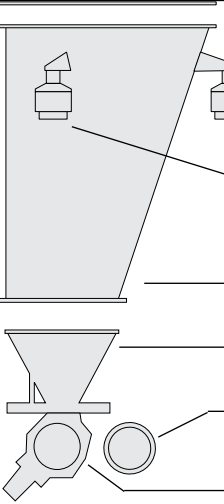
## Feed Rates

Nominal feed rate: 34 to 6700 dm<sup>3</sup>/h [1.2 to 237 ft<sup>3</sup>/h]  
at 0.3 to 60 rpm

Theoretical displacement: 1.84 dm<sup>3</sup>/rev [0.065 ft<sup>3</sup>/rev]

The feed rate indications are approximate values based on material characteristics.

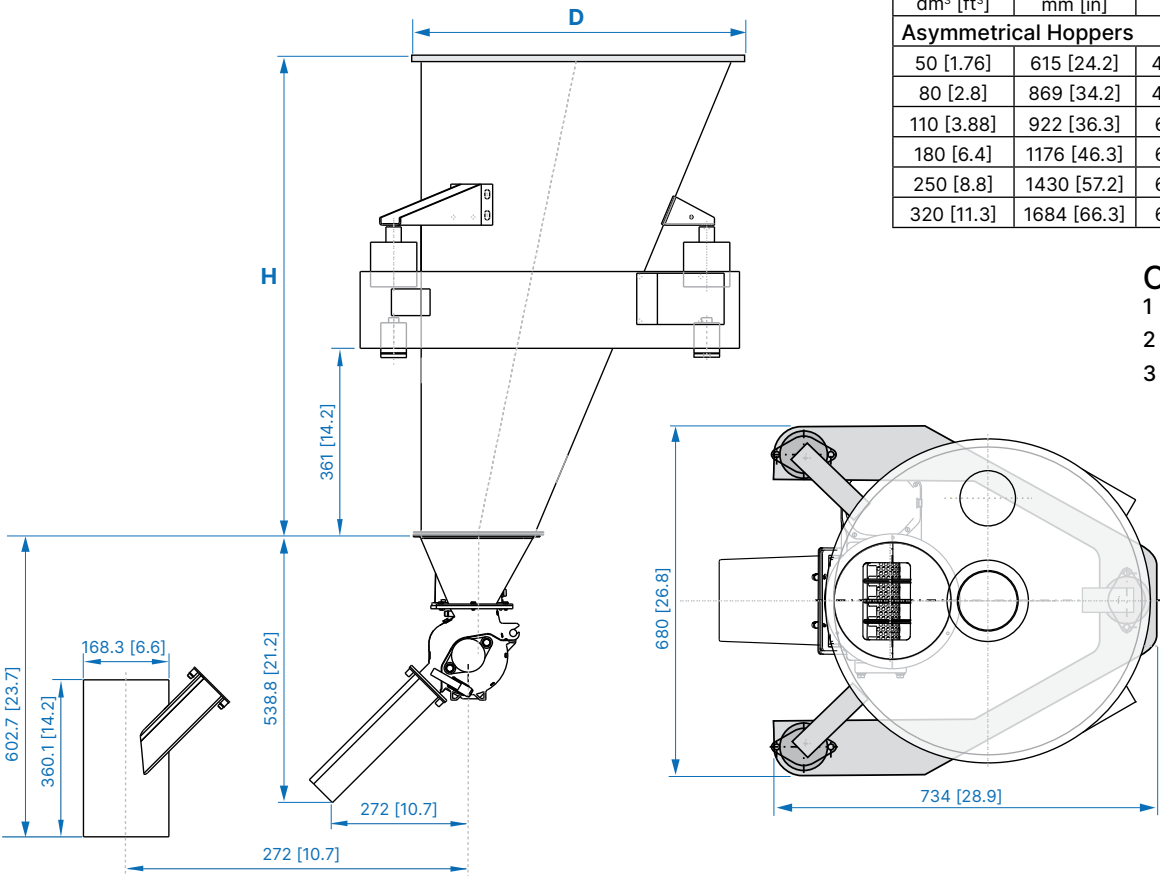


| Configuration                                                                     | Description                | Alternatives                                                                         | Remarks                                                 | Weight kg [lb] |
|-----------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------|----------------|
|  | Cover                      |                                                                                      | 6D                                                      | 3 [6.6]        |
|                                                                                   | Weigh bridge<br>3 x K-SFT: | <div>60 kg<br/>132 lb</div> <div>90 kg<br/>198 lb</div> <div>120 kg<br/>264 lb</div> | IP65, NEMA 4<br>Gross weigh bridge capacity = 3 x K-SFT |                |
|                                                                                   | Extension hopper           |                                                                                      | 6D                                                      | see below      |
|                                                                                   | Transition hopper          | <div>3.4 dm³ [0.12 ft³]</div>                                                        |                                                         |                |
|                                                                                   | Motor drive                | <div>Stepper motor<br/>194W, 48 VDC max<br/>IP55, NEMA 12</div>                      |                                                         | 18 [40]        |
|                                                                                   | Feeding unit               | <div>BSP-150-S</div>                                                                 |                                                         |                |

**Materials:**  
Material contact parts: Stainless steel EN 1.4301 (AISI 304), Santoprene® thermoplastic elastomer (FDA approved)  
Seals: PTFE, nitrile rubber, EPDM, silicone  
Motor Cover: Acrylic/PVC blend

**Weighing Range:**  
Gross weighbridge capacity (e.g. 3 × 60 = 180 kg) less total feeder weight and less 10% reserve  
**Temperature-Limits:**  
Operating temp.: -20 to 55°C [-4 to 130°F]  
Material temp.: -20 to 55°C [-4 to 130°F]

Dimensions mm [in]



| 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 [23.6]   | 17 [37.4]         |
| 180 [6.4]                   | 1176 [46.3]  | 600 [23.6]   | 23 [50.6]         |
| 250 [8.8]                   | 1430 [57.2]  | 600 [23.6]   | 29.5 [64.9]       |
| 320 [11.3]                  | 1684 [66.3]  | 600 [23.6]   | 35 [77]           |

- Options**
- 1 Extension hopper
  - 2 Mounting stand
  - 3 Vertical discharge

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