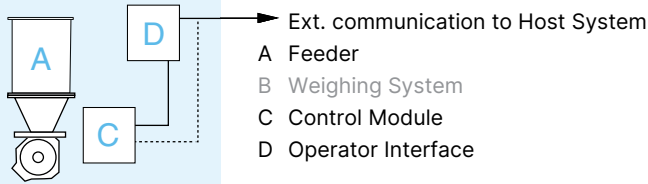


K-MV-BSP-100

Volumetric Bulk Solids Pump (BSP) Feeder



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

Component A is specified here.

Application

Precise volumetric feeding of free flowing bulk materials, e.g. pellets & granules. The feeder can be upgraded to a loss-in-weight feeder system at any time.

Design

The BSP feeder has a vertical rotating disc 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

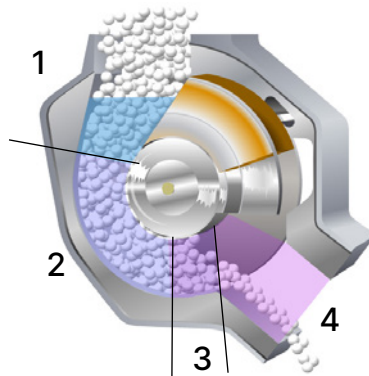
Material is in lock-up condition throughout Zone 2 and rotates as a solid body

ZONE 3: RELAXATION

Interparticle forces fall below lock-up threshold

ZONE 4: ACTIVE DISCHARGE

Flexible tip guide ensures complete 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 inlet slide gate allows for material shut-off and removal of the feeder for cleaning and hopper emptying.

The feeder can also be mounted in opposite discharge position (180°) to discharge material in a non-process direction.

The BSP-100 has a single feeding duct.

Controller:

The SmartConnex™ control system allows individual or a multi-component control. A low power stepper motor drive and controller provide excellent turnaround and flexibility ensuring a wide operating range.

Hazardous Location Options:

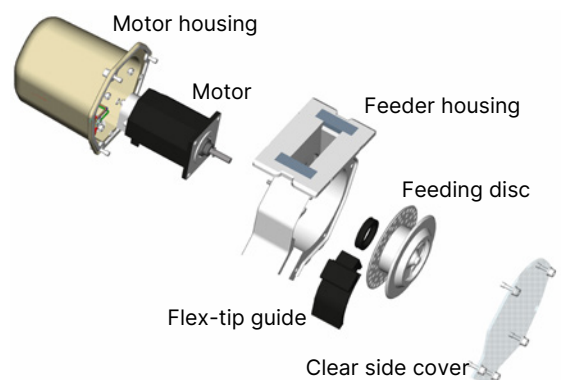
NEC	Class II, Div. 2, Group F & G
ATEX	N/A

Feed Rates

Nominal feed rate: 2 to 400 dm³/h [0.07 to 14 ft³/h] at 0.3 to 60 rpm

Theoretical displacement: 0.11 dm³/rev [0.0039 ft³/rev]

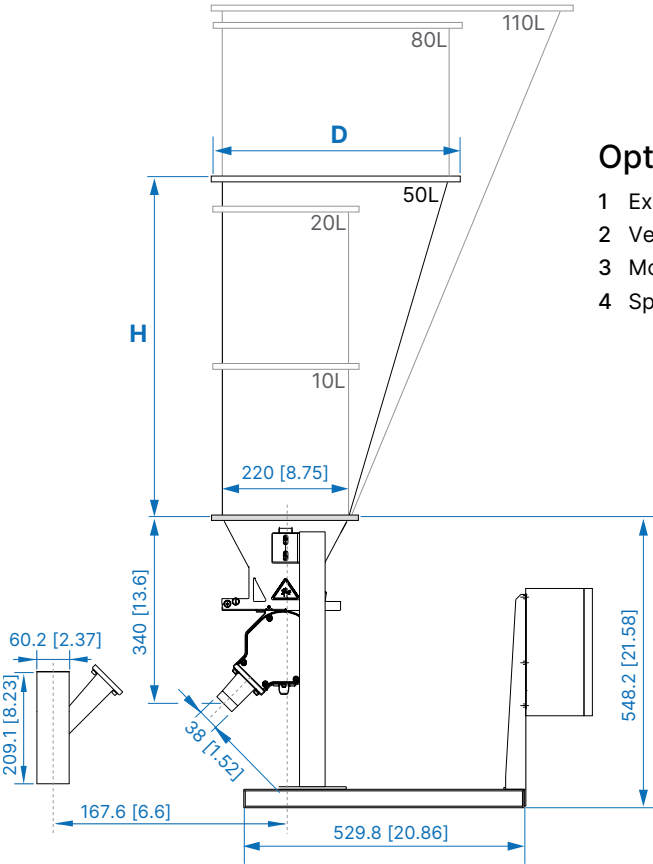
The feed rate indications are approximate values based on material characteristics.



Configuration table with columns: Description, Alternatives, Remarks, Weight kg [lb]. Rows include Cover (2D, 4D, 6D), Extension hopper (2D, 4D or 6D), Transition hopper (2.4 dm³), Motor drive (stepper motor), and Feeding unit (BSP-100).

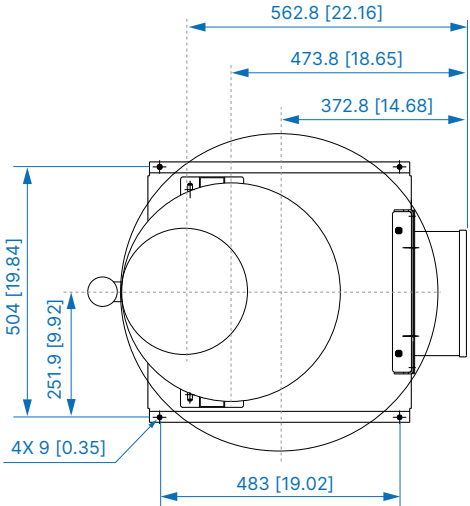
Materials, Temperature-Limits, and Painting specifications table. Includes material contact parts (Cast aluminium, stainless steel), seals (Nitrile rubber, EPDM, silicone), motor cover (black ABS), side cover (clear polycarbonate), operating temp. (-20 to 55°C), material temp. (-20 to 55°C), and painting (Light gray RAL 7035).

Dimensions mm [in]



- Options
1 Extension hopper
2 Vertical discharge 2.37"
3 Mounting stand
4 Special paint

Table with 4 columns: Volume dm³ [ft³], H mm [in], D mm [in], Weight kg [lb]. Rows for Asymmetrical Hoppers (50 to 320) and Cylindrical Hoppers (10 to 20).



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