

# Loss-In-Weight ScrewDisc® Feeders

## DDW-MS3(5)-SD50-30(60) Model Specifications



The Loss-in-Weight ScrewDisc® Feeder DDW-MS3(5)-SD50-30(60) with a unique metering technique particularly developed for pellets and free flowing dry ingredients, consists of the Brabender ScrewDisc® Feeder SD50, a hopper with cover, a free standing mounting base and a feeder-to-scale connection with lowering mechanism and built in weighing module.

All component groups are fully mounted and internally wired to junction boxes.

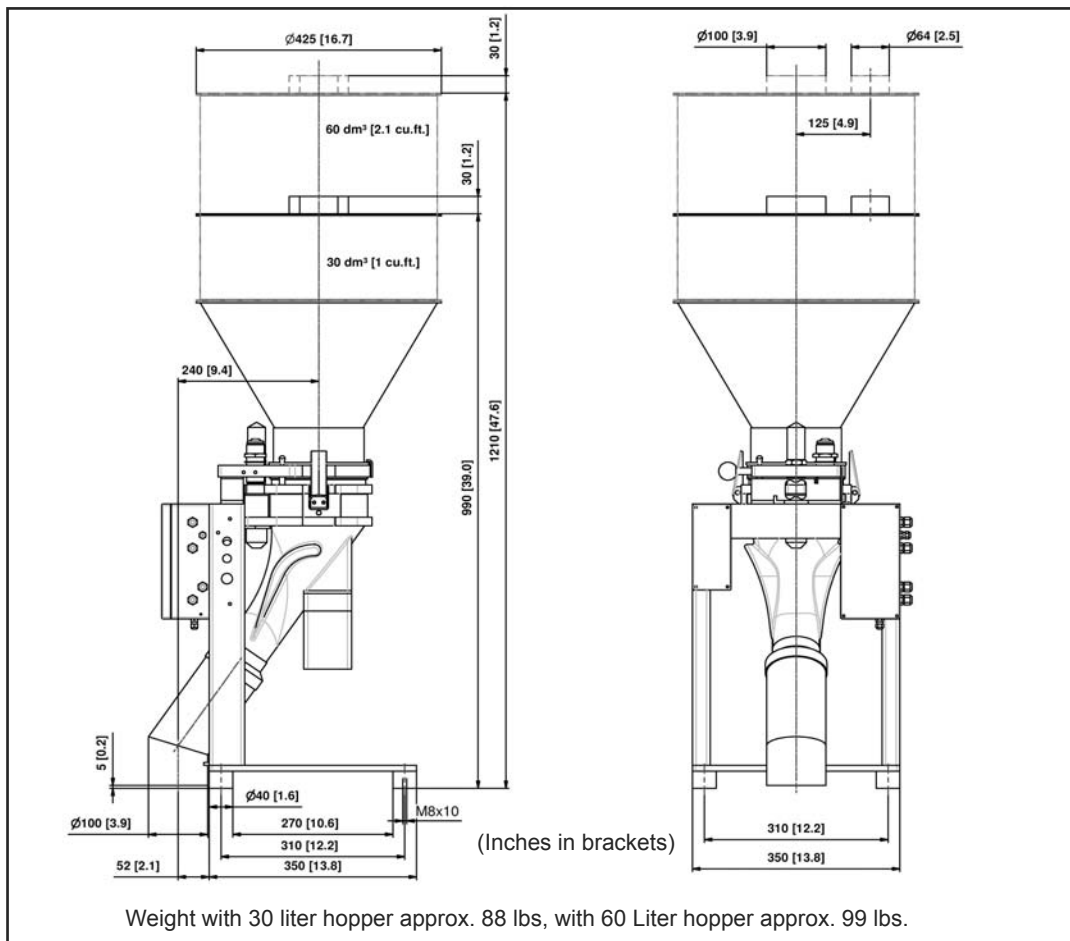
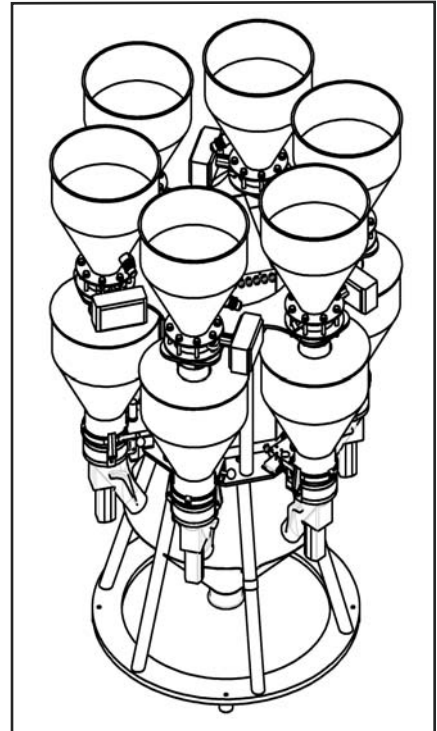
The ScrewDisc® Feeder features a novel feeding principle with a vertical feed screw on a horizontal rotating disc, both mounted in a transparent outlet made of conductive polyurethane. A vertical tubular polyurethane insert slipped over the feed screw replaces the conventional screw tube. The ScrewDisc® is a compact feeder in both headroom and area. Hopper volume can be optimized to further reduce headroom and cleanout. 100:1 feed rate range is achieved with one screw.

Convenient handling is ensured by a 3 step pellet change, without tools.

1) Lowering and Emptying: After unlocking two quick release clamps, the feed unit slides down and separates from the feeder extension hopper, which remains in place held by spring clamps. The transparent outlet can now be turned 360° into any desired discharge position.

2) Cleaning: The entire outlet is turned to the side allowing unrestricted access to the feeder interior. The screw and tube and extension hopper can be taken off for cleaning. Wet cleaning of the hopper and feed unit is possible.

3) Ingredient Changeover: If feed rates have to be changed when changing over from one ingredient to another, screws and screw tubes are interchangeable. However, due to the 100:1 turndown, a screw change is often not required. The ScrewDisc Feeder is ready for operation again by carrying out the steps described above in reverse order. Ingredient contact parts are 304 SS. Non-contact parts are aluminum and mild steel painted light grey (RAL 7035)



## Technical Data

### Available Screw Sizes and Feed Rates

| Screw Type           | Part Number | PUR Insert | Max. Feed Rate<br>cu.ft./hr / l/hr |
|----------------------|-------------|------------|------------------------------------|
| Vertical Screw<br>VS | VS 18/13    | PUI 20     | 1.8 / 50*                          |
|                      | VS 28/14    | PUI 30     | 7.1 / 200*                         |
|                      | VS 40/20    | PUI 42     | 27 / 750*                          |
|                      | VS 50/25    | PUI 52     | 54 / 1500*                         |

\* Theoretical values at 100% screw filling level and 100% motor speed. Turndown ratio 100:1

### Accessories / Options

- Flexible connection sleeves
- Exchange screws and exchange PUR inserts
- Scale-mounted controls modules "ISC" (Intelligent Signal Conditioner) for Brabender SCC Field Bus

### ScrewDisc® Feeder SD50

- Vertical feed screw, mounted on a horizontal rotating disc
- PUR insert serving as screw tube
- Pivoted transparent PUR outlet with intergrated handles, also serving as the feeder housing
- Servo motor 230 VAC with built-in speed controller and serial control signal interface RS 485

- Net weighing range with MS3 approx. 66.1lbs (30 liter hopper) or 55 lbs (60 liter hopper); with MS5 approx. 176 lbs (30 liter hopper) or 165 lbs (60 liter hopper)

### Controls

- Single feeder control: single feeder controller Congrav® CB with operating unit Congrav® OP1 for control cabinet installation
- Multiple feeder control: scale-mounted control modules "ISC" (intelligent Signal Conditioner) and/or control cabinet mounted single feeder controllers Congrav® CB with common multiple feeder operating unit Congrav® RC4 in the Brabender SCC (Single Cable Connection) Field Bus System

### Mounting Base / Scale

- Free-standing mounting base with vibration isolation mounting pads
- Base-mounted discharge connection
- Junction boxes
- Feeder-to-Scale connection with lowering mechanism for feeder discharging and slewing (pivoting range 360°), built-in weighing module MS3 or MS5 with high accuracy weighing signal evaluation for digital further processing

### Hopper Modules

- Conical hopper with cylindrical extension, volume 1 cu.ft.(30 liter), safety grid, fixed by spring clamps
- Larger cylindrical extension to extend the volume to 2 cu.ft.(60 liters) for feed rates > 18 cu.ft/hr (500 liters/hr).
- Cover with inlet pipe and vent pipe or laid-on cover with handle

## Brabender 3 Step Pellet Change, without tools, in place, off line.



Lowering,  
swivelling, outlet off line



Cleaning



Ingredient Changeover



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