



Screw Feeder

DSR67 2.0 (AC)

Volumetric and gravimetric



General Information

The [DSR67](#) feeder is ideal for poor or difficult flowing bulk ingredients at medium feed rates.

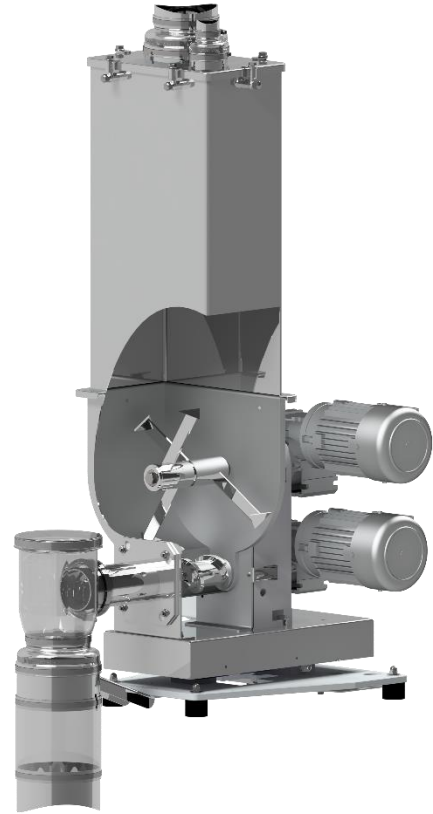
The feeder has the following main components: a stainless steel screw trough with inspection port and agitator, a screw, a screw tube, a modular gearbox, and two 3 phase motors to independently drive the agitator and screw. Extension hoppers are available with a capacity of 35 dm³ (1.2 cuft), 60 dm³ (2.1 cuft), 110 dm³ (3.9 cuft) for storing bulk material. For cohesive bulk solids, which tend to solidify and bridge when at rest in the hopper, a 100 dm³ (3.5 cuft) hopper with an agitator (AR) can be used.

The horizontal agitator works to consistently fill the screw and prevents hopper bridging while providing mass flow. This results in optimal feeder accuracy and control.

The [DSR67](#) is easily disassembled for wet or dry cleaning. All service is from the front or back.

The gravimetric version includes the weighing systems DLS6 and MD6 featuring a high resolution digital load cell with serial data transmission as well as MS6 with strain gauge load cell with advanced filtering technology

The unit conforms to CE directives.



Model Specification

| | |
|----------------------|-----------------------|
| Screw drive | Three-phase motor |
| Drive power | 0.25 kW (0.34 HP) |
| Screw speed | 142 min ⁻¹ |
| Optional Screw speed | 282 min ⁻¹ |
| Trough agitator | yes |
| Agitator drive | Three-phase motor |
| Drive power | 0.25 kW (0.34 HP) |

Control Modules

Control and speed modules are offered either mounted onto the feeder ([Congrav® CM-E](#)) or are available for mounting in a separate control panel ([Congrav® CB-E](#) or [Congrav® CB-S](#)).

Controls can communicate directly to most host/ PLC systems or to Brabender Technologie Congrav® Operator Interfaces.

Technical Drawings and Dimensions

| | volumetric feeders | gravimetric feeders | |
|--|--------------------------------|--|---|
| | | Control module CB | Control module CM |
| 35 dm ³ (1.2 cuft) Hopper | DSR67 2.0 -35Q | DDW-DLS(MD)S(4)5(6)-DSR67 2.0 -35Q | DDW-DLS(MD)S(4)5(6)-DSR67 2.0 -35Q CM |
| 60 dm ³ (2.1 cuft) Hopper | DSR67 2.0 -60 | DDW-DLS(MD)S(4)5(6)-DSR67 2.0 -60 | DDW-DLS(MD)S(4)5(6)-DSR67 2.0 -60 CM |
| 110 dm ³ (3.9 cuft) Hopper | DSR67 2.0 -110 | DDW-DLS(MD)S(5)6-DSR67 2.0 -110 | DDW-DLS(MD)S(5)6-DSR67 2.0 -110 CM |
| 100 dm ³ (3.5 cuft) Hopper AR | -- | DDW-DLS(MD)S(6)-DSR67 2.0 -100 AR | DDW-DLS(MD)S(6)-DSR67 2.0 -100 AR CM |



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Screw Sizes and Feed Rates

| Screw type | Designation Ø / p [mm] | Tube designation | Tube dia. [mm] | Max. speed [min ⁻¹] | Max. feed rate * [dm ³ /h] | Max. feed rate * [cuft/hr] |
|--|---------------------------|---------------------|-------------------|------------------------------------|--|-------------------------------|
| Spiral screw (S) (TA= with trough activation) | S 28/22 (TA) | 320 | 38.0x3.0 | 142 (282) / 100Hz | 100 (198) | 3.5 (7.0) |
| | S 28/35 (TA) | 320 | 38.0x3.0 | 142 (282) / 100Hz | 167 (331) | 5.9 (11.7) |
| | S 33/35 (TA) | 350 | 38.0x1.5 | 142 (282) / 100Hz | 227 (450) | 8 (15.9) |
| | S 43/27 (TA) | 443 | 48.3x2.0 | 142 (282) / 100Hz | 272 (541) | 9.6 (19.1) |
| | S 43/42 (TA) | 443 | 48.3x2.0 | 142 (282) / 100Hz | 456 (905) | 16.1 (32.0) |
| | S 52/39 (TA) | 563 | 60.3x2.0 | 142 (282) / 100Hz | 588 (1168) | 20.8 (41.2) |
| | S 52/62 (TA) | 563 | 60.3x2.0 | 142 (282) / 100Hz | 997 (1981) | 35.2 (70) |
| | S 67/45 | 715 | 76.1x2.3 | 142 (282) / 100Hz | 1194 (2372) | 42.2 (83.8) |
| S 67/71 | 715 | 76.1x2.3 | 142 (282) / 100Hz | 1969 (3909) | 69.5 (138.0) | |
| Spiral screw (S) for granules | S 28/22 | 443 | 48.3x2.0 | 142 (282) / 100Hz | 177 (351) | 6.3 (12.4) |
| | S 28/35 | 443 | 48.3x2.0 | 142 (282) / 100Hz | 289 (574) | 10.2 (20.3) |
| | S 33/35 | 443 | 48.3x2.0 | 142 (282) / 100Hz | 322 (640) | 11.4 (22.6) |
| | S 43/27 | 563 | 60.3x2.0 | 142 (282) / 100Hz | 384 (762) | 13.6 (26.9) |
| | S 43/42 | 563 | 60.3x2.0 | 142 (282) / 100Hz | 629 (1249) | 22.2 (44.1) |
| | S 52/39 | 715 | 76.1x2.3 | 142 (282) / 100Hz | 878 (1744) | 31.0 (61.6) |
| | S 52/62 | 715 | 76.1x2.3 | 142 (282) / 100Hz | 1458 (2896) | 51.5 (102.3) |
| Blade screw (B) | B 50/45 | 563 | 60.3x2.0 | 142 (282) / 100Hz | 571 (1135) | 20.2 (40.1) |
| | B 50/70 | 563 | 60.3x2.0 | 142 (282) / 100Hz | 917 (1821) | 32.4 (64.3) |

* Theoretical values at 100% screw filling level and motor speed. Depending on the flow characteristics the screw filling level may decrease to 50%. Further limitations must be considered for gravimetric feeding as max. speed should be reduced to allow for bulk density variations. The values in brackets refer to optional motors.
[How to read the table of screws](#)

Technical Specification

| | |
|---|---|
| Ambient temperature: | 0°C to +45°C (32°F to 113°F) |
| Humidity of the air: | up to 85% without condensation |
| max. vacuum/pressure: | 3 hPa (3 mbar) (1.2 inches of water) |
| Ingredient temperature: | 0°C to + 60°C (32°F to 140°F) |
| max. bulk density (volumetric): | 1.5 kg/dm ³ * (94 lb/cuft) |
| max. bulk density (with MD4) | 0.75 kg/dm ³ *(46.8 lb/cuft) with hopper 35 dm ³ (1.2 cuft); 0.35 kg/dm ³ *(21.8 lb/cuft) with hopper 60 dm ³ (2.1 cuft) |
| max. bulk density (with DLS5 MD5): | 0.9 kg/dm ³ *(56.1 lb/cuft) with hopper 35 dm ³ (1.2 cuft); 0.45 kg/dm ³ *(28.1 lb/cuft) with hopper 60 dm ³ (2.1 cuft) |
| max. bulk density (with DLS6 MD6): | 1.5 kg/dm ³ *(93.6 lb/cuft) with hopper 60 dm ³ (2.1 cuft); 1.5 kg/dm ³ *(93.6 lb/cuft) with hopper 110 dm ³ (3.9 cuft); 1.5 kg/dm ³ *(93.6 lb/cuft) with hopper 100 dm ³ (3.5 cuft) AR |
| max. bulk density (with MS5): | 1.0 kg/dm ³ *(62.4 lb/cuft) with hopper 35 dm ³ (1.2 cuft); 0.5 kg/dm ³ *(31.2 lb/cuft) with hopper 60 dm ³ (2.1 cuft) |
| max. bulk density (with MS6): | 1.5 kg/dm ³ *(93.6 lb/cuft) with hopper 60 dm ³ (2.1 cuft); 1.5 kg/dm ³ *(93.6 lb/cuft) with hopper 110 dm ³ (3.9 cuft); 1.5 kg/dm ³ *(93.6 lb/cuft) with hopper 100 dm ³ (3.5 cuft) AR |
| Screw trough, extension hopper, hopper lid: | 1.4301 (304SS) |
| Screws, screw tubes, outlets: | 1.4571 (316 SS), 1.4301 (304SS) or polyurethane, food-grade to LMBG* |
| Non-contact components: | Aluminium, plated or painted steel (RAL 7035) |
| Hopper lid 35 dm ³ (1.2 cuft), or 60 (2.1 cuft) or 110 dm ³ (3.9 cuft): | Hopper lid for automatic refilling or manual refilling |
| Hopper lid 100 dm ³ AR: | Hopper lid with agitator drive for vertical agitator |
| Screw drive: | 0.25 kW (0.34 HP), IP65; ISO class F; TEFC; frequency-controlled |
| Agitator drive: | 0.25 kW (0.34 HP), IP65; ISO class F; TEFC; optional frequency-controlled |
| Power supply: | AC 230/400 V (110VAC/460VAC) - 50Hz** or 266/460 V (230/460VAC) - 60Hz |
| Net weighing range MD4: | 32 kg (70.5 lb) with hopper 35 dm ³ (1.2 cuft); 24 kg (52.9) with hopper 60 dm ³ (2.1 cuft) |
| Net weighing range DLS5 and MD5: | 37 kg (81.6 lb) with hopper 35 dm ³ (1.2 cuft); 28 kg (61.7) with hopper 60 dm ³ (2.1 cuft) |
| Net weighing range DLS6 and MD6: | 264 kg (582 lb) with hopper 60 dm ³ (2.1 cuft); 255 kg (562.2 lb) with hopper 110 dm ³ (3.9 cuft) ; 227 kg with hopper 100 dm ³ (3.5 cuft) AR |
| Net weighing range MS5: | 42 kg (92.6 lb) with hopper 35 dm ³ (1.2 cuft); 33 kg (72.8 lb) with hopper 60 dm ³ (2.1 cuft) |
| Net weighing range MS6: | 234 kg (515.9 lb) with hopper 60 dm ³ (2.1 cuft); 225 kg (496 lb) with hopper 110 dm ³ (3.9 cuft); 197 kg (434.3 lb) with hopper 100 dm ³ (3.5 cuft)AR |
| * other values upon request | ** Three-phase motors are designed for a power supply of: 230/400 V - 50 Hz, and for the operation in TT networks, TN networks or networks with earthed neutral. For different networks adaptation measures are necessary. |

Options and Accessories

- Flexible [inlet and vent connections](#)
- Flexible [outlet connections](#)
- Interchangeable screws and screw tubes
- [Hopper with horizontal agitator](#)
- [DESTACO clamp fasteners](#) with safety switch
- Versions for higher or lower temperatures than standard
- [Explosion-proof versions](#) as per directive 2014/34/EU (ATEX) or NFPA
- Screw extension 200 mm (7.9 inches)
- Vertical outlet with [quick release](#)
- [Maintenance disconnect box](#)
- [Filter bag](#) or [JetFilter](#) for vent pipe
- [Turntable](#), [cart mounting](#), [BagDumper](#)
- Pressure compensation for the [outlet](#) and/or [feeder](#) hopper
- Cleaning and refill systems upon request