



Screw Feeder

DDSR40B

Volumetric and Gravimetric



General Information

The [DDSR40B](#) feeder is ideal for difficult flowing, sticky or floodable bulk ingredients that tend to compact or form bridges.

The feeder has the following main components: A stainless steel screw trough, an agitator in the screw trough, a 3 phase motor as agitator drive, a twin screw and tube, a 3 phase motor as screw drive and an extension hopper with volumes of 100 dm³ (3.5 cuft) or 200 dm³ (7 cuft).

The horizontal agitator works to consistently fill the screw and prevents hopper bridging while providing mass flow. In addition, the screw trough has a large cross-sectional area which when combined with a steep walled hopper naturally promotes ingredient flow.

This results in optimal feeder accuracy and control.

The [DDSR40B](#) is easily disassembled for wet or dry cleaning. All services can be from the front or back.

The gravimetric version includes the [weighing system](#) 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 | 0.37 kW (0.5 HP) |
| Screw speed | 385 min ⁻¹ |
| Screw speed optional | - |
| Trough agitator | yes |
| Agitator drive | Three-phase motor |
| Drive power | 0.12 kW (0.16 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 |
| 100 dm ³ (3.5 cuft) Hopper | DDSR40B-100Q | DDW-DLS(MD)[S]6-DDSR40B-100Q | DDW-DLS(MD)[S]6-DDSR40B-100Q CM |
| 200 dm ³ (7 cuft) Hopper | DDSR40B-200 | DDW-DLS(MD)[S]6-DDSR40B-200 | DDW-DLS(MD)[S]6-DDSR40B-200 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] |
|---|---------------------------|---------------------|-------------------|------------------------------------|--|------------------------------|
| Double Spiral Screw (SS) | SS 33/22 | 419 | 48.3x3.2 | 385 / 100Hz | 800 | 28.3 |
| | SS 33/22 | 470 | 53.0x3.0 | 385 / 100Hz | 1208 | 42.7 |
| | SS 33/35 | 419 | 48.3x3.2 | 385 / 100Hz | 1311 | 46.3 |
| | SS 33/35 | 470 | 53.0x3.0 | 385 / 100Hz | 1960 | 69 |
| Twin-spiral Screw (TS) | TS 40/27 | 419 | 48.3x3.2 | 385 / 100Hz | 1384 | 48.9 |
| | TS 40/27 | 470 | 53.0x3.0 | 385 / 100Hz | 1671 | 59 |
| | TS 40/42 | 419 | 48.3x3.2 | 385 / 100Hz | 2247 | 79 |
| | TS 40/42 | 470 | 53.0x3.0 | 385 / 100Hz | 2693 | 95 |
| Twin-blade Screw (TB) | TB 40/28 | 419 | 48.3x3.2 | 385 / 100Hz | 1141 | 40 |
| | TB 40/43 | 419 | 48.3x3.2 | 385 / 100Hz | 1853 | 65 |
| Twin-concave Screw (TC) | TC 40/12 | 419 | 48.3x3.2 | 385 / 100Hz | 150 | 5.3 |
| | TC 40/23 | 419 | 48.3x3.2 | 385 / 100Hz | 288 | 10.2 |
| | TC 40/27 | 470 | 53.0x3.0 | 385 / 100Hz | 686 | 24.2 |
| | TC 40/50 | 470 | 53.0x3.0 | 385 / 100Hz | 1604 | 59.7 |

* 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 have to be considered for gravimetric feeding, as max. speed should be reduced to allow for bulk density variations.

[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) |
| Product 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 DLS6 and MD6): | 1.5 kg/dm ³ (94 lb/cuft) * with hopper 100 dm ³ (3.5 cuft) |
| | 1.2 kg/dm ³ (75 lb/cuft) * with hopper 200 dm ³ (7 cuft) |
| max. bulk density (with MS6): | 1.5 kg/dm ³ (94 lb/cuft) * with hopper 100 dm ³ (3.5 cuft) |
| | 1.1 kg/dm ³ (69 lb/cuft) * with hopper 200 dm ³ (7 cuft) |
| Screw trough, extension hopper, hopper lid: | 1.4301 (304 SS) |
| Screws, screw tubes, outlets: | 1.4571 (316 SS), 1.4301 (304 SS) or polyurethane, food-proof acc. to LMBG* |
| Non-contact components: | Aluminum, plated or painted steel (RAL 7035) |
| Extension hopper 100 dm³ (3.5 cuft) or 200 dm³ (7.1 cuft) | Hopper lid for automatic refill or manuel refilling |
| Screw drive: | 0.37 kW (1/2 HP), IP65; ISO class F; TEFC; frequency-controlled |
| Agitator drive: | 0.12 kW (0.16 HP), IP65; ISO class F; TEFC; frequency-controlled |
| Power supply: | AC 230/400V **(110VAC/1PH/60hz, 230/460VAC/3PH/60 hz) |
| Net weighing range DLS6 and MD6: | 246 kg (542 lb) with hopper 100 dm ³ (3.5 cuft) |
| | 234 kg (516 lb) with hopper 200 dm ³ (7 cuft) |
| Net weighing range MS6: | 216 kg (476 lb) with hopper 100 dm ³ (3.5 cuft) |
| | 204 kg (450 lb) with hopper 200 dm ³ (7 cuft) |
| * other values upon request | ** 3 phase motors are designed for a power supply of: 230/400 V, 50 (60) Hz, and for the operation in TT networks, TN networks or networks with earthed neutral conductor. For different networks adaptation measures are necessary. |

Options and Accessories

- Flexible [inlet and vent connections](#)
- Flexible [outlet connections](#)
- Interchangeable screws and screw tubes
- [DESTACO clamp fasteners](#) with safety switch
- Versions for higher and lower temperatures
- [Explosion-proof executions](#) as per directive 2014/34/EU (ATEX) or NFPA
- 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 [feeder hopper](#)
- Cleaning and refill systems upon request