



# Screw Feeder

## DSR67B 2.0 (DC-Smart)



Volumetric and gravimetric

### General Information

The [DSR67B](#) feeder is ideal for difficult flowing bulk ingredients that tend to compact or form bridges while it is at rest in the storage hopper.

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 100 dm<sup>3</sup> (3.53 cuft) or 200 dm<sup>3</sup> (7.06 cuft) for storing bulk material.

The Smartmotor is characterized by an extremely high turndown of 1:100. For cohesive bulk solids, which tend to solidify and bridge when at rest in the hopper, a 180 dm<sup>3</sup> (6.4 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. 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 [DSR67B](#) is easily disassembled for wet or dry cleaning. All service is from the front or back.

The gravimetric version includes the [weighing systems](#) 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	DC-smart motor
Drive power	0.4 kW (0.54 HP)
Screw speed	282 min <sup>-1</sup> *
Trough agitator	yes
Agitator drive	Three-phase motor
Drive power	0.12 kW (0.16 HP)
* very high turndown of 1:100.	

### 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 <sup>3</sup> (3.53 cuft) Hopper	<a href="#">DSR67B 2.0 -100Q</a>	<a href="#">DDW-M6-DSR67B 2.0 -100Q</a>	<a href="#">DDW-M6-DSR67B 2.0 -100Q CM</a>
200 dm <sup>3</sup> (7.06 cuft) Hopper	<a href="#">DSR67B 2.0 -200</a>	<a href="#">DDW-M6-DSR67B 2.0 -200</a>	<a href="#">DDW-M6-DSR67B 2.0 -200 CM</a>
Hopper 180 dm <sup>3</sup> (6.4 cuft) AR	--	<a href="#">DDW-M6-DSR67B 2.0 -180 AR</a>	<a href="#">DDW-M6-DSR67B 2.0 -180 AR CM</a>



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### Screw Sizes and Feed Rates

Screw type	Designation $\varnothing$ / p [mm]	Tube designation	Tube dia. [mm]	Max. speed [min <sup>-1</sup> ]	Max. feed rate * [dm <sup>3</sup> /h]	Max. feed rate * [cuft/hr]
<a href="#">Spiral screw (S)</a> <a href="#">(TA= with trough activation)</a>	S 28/22 (TA)	320	38.0x3.0	282	198	7.0
	S 28/35 (TA)	320	38.0x3.0	282	331	11.7
	S 33/35 (TA)	350	38.0x1.5	282	450	15.9
	S 43/27 (TA)	443	48.3x2.0	282	541	19.1
	S 43/42 (TA)	443	48.3x2.0	282	905	32.0
	S 52/39 (TA)	563	60.3x2.0	282	1168	41.2
	S 52/62 (TA)	563	60.3x2.0	282	1981	70
	S 67/45	715	76.1x2.3	282	2372	83.8
<a href="#">Spiral screw (S) for granules</a>	S 28/22	443	48.3x2.0	282	351	12.4
	S 28/35	443	48.3x2.0	282	574	20.3
	S 33/35	443	48.3x2.0	282	640	22.6
	S 43/27	563	60.3x2.0	282	762	26.9
	S 43/42	563	60.3x2.0	282	1249	44.1
	S 52/39	715	76.1x2.3	282	1744	61.6
	S 52/62	715	76.1x2.3	282	2896	102.3
	<a href="#">Blade screw (B) Polyurethan</a>	B 50/45 **	563	60.3x2.0	282	1135
B 50/70 **		563	60.3x2.0	282	1821	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](#)

\*\* alternatively also available as stainless steel version

### 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 <sup>3</sup> * (94 lb/cuft)	
max. bulk density (with MD6):	1.5 kg/dm <sup>3</sup> (94 lb/cuft) * with hopper 100 dm <sup>3</sup> (3.53 cuft);	
	1.1 kg/dm <sup>3</sup> (69 lb/cuft) * with hopper 200 dm <sup>3</sup> (7.06 cuft)	
	0.9 kg/dm <sup>3</sup> (56.3 lb/cuft) * with hopper 180 dm <sup>3</sup> (6.4 cuft) AR	
max. bulk density (with MS6):	1.5 kg/dm <sup>3</sup> (94 lb/cuft) * with hopper 100 dm <sup>3</sup> (3.53 cuft);	
	1.0 kg/dm <sup>3</sup> (62.4 lb/cuft) * with hopper 200 dm <sup>3</sup> (7.06 cuft)	
	0.7 kg/dm <sup>3</sup> (43.7 lb/cuft) * with hopper 180 dm <sup>3</sup> (6.4 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)	
Extension hopper <a href="#">100 dm<sup>3</sup> (3.53 cuft) or 200 dm<sup>3</sup> (7.06 cuft)</a> :	Hopper lid for <a href="#">automatic refilling</a> or <a href="#">manual refilling</a>	
Top container <a href="#">180 dm<sup>3</sup> AR</a> :	Container lid with agitator drive for vertical agitator	
Screw drive:	0.4 kW (0.54 HP), IP65; ISO class F	
Agitator drive:	0.12 kW (0.16 HP), IP55; ISO class F; TEFC; (option: frequency-controlled)	
Power supply:	AC 230/400 V (110VAC/460VAC)- 50Hz** or 266/460 V (230/460VAC) - 60Hz	
Net weighing range MD6:	245 kg (540.1 lb) with hopper 100 dm <sup>3</sup> (3.53 cuft);	
	232 kg (511.5) with hopper 200 dm <sup>3</sup> (7.06 cuft); 164 kg (361.6 lb) with hopper 180 dm <sup>3</sup> (6.4 cuft) AR	
Net weighing range MS6:	215 kg (474 lb) with hopper 100 dm <sup>3</sup> (3.53 cuft);	
	202 kg (445.3 lb) with hopper 200 dm <sup>3</sup> (7.06 cuft) 134 kg (295.4) with hopper 180 dm <sup>3</sup> (6.4 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
- Screw extension 200 mm (7.9 inches)
- [Hopper with agitator](#)
- [DESTACO clamp fasteners](#) with safety switch
- Versions for higher or lower temperatures than standard
- 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