

Twin Screw Feeder

DDSR60 2.0 (AC)

Volumetric and gravimetric

General Information

The [DDSR60](#) feeder is ideal for difficult flowing, sticky, bulk ingredients that tend to compact or form bridges while it is at rest in the storage hopper.

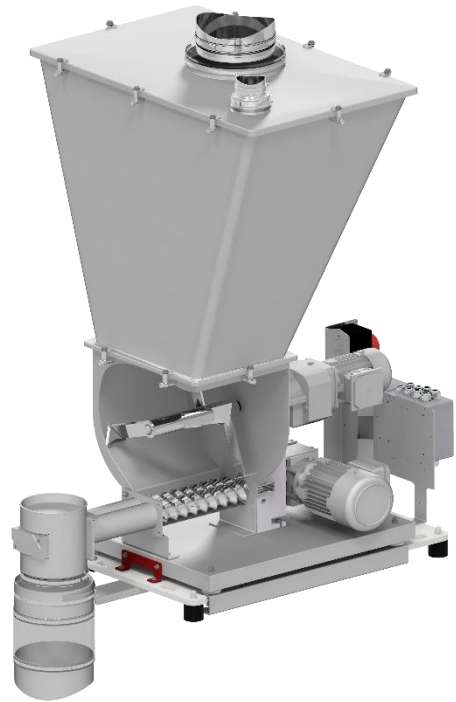
The feeder has the following main components: A stainless steel screw trough with an inspection opening, a modular gear block, a two-piece agitator in the screw trough, a three-phase motor as agitator drive, twin screw, a three-phase motor as screw drive, a screw tube and an extension hopper with volumes of 200 dm³ (7 cuft) or 300 dm³ (10.5 cuft). For caking bulk solids that tend to solidify and bridge when at rest in the feed hopper, a 180 dm³ (6,4 cuft) or 270 dm³ (9,5 cuft) hopper with 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 DDSR60 is easily disassembled for wet or dry cleaning. All service is from the front or back.

The gravimetric version includes the [weighing system MS](#) featuring four high resolution digital load cells with serial data transmission as well as the [weighing system H33](#) with strain gauge load cell with advanced filtering technology.

The unit conforms to CE directives.



Model Specification

Screw drive	Three-phase motor
Drive power	0,75 kW (1.01 HP)
Screw speed	316 min ⁻¹
Screw speed optional	238 min ⁻¹
Trough agitator	yes
Agitator drive	Three-phase motor
Drive power	0.12 kW (0.16 HP)



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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 Interface.

Technical Drawings and Dimensions

	Volumetric feeder	Gravimetric feeder	
		Control module CB	Control module CM
Hopper 200 dm³ (7 cuft)		DDW-MS-DDSR60 2.0 -200 DDW-H33-DDSR60 2.0 -200	DDW-MS-DDSR60 2.0 -200 CM DDW-H33-DDSR60 2.0 -200 CM
Hopper 300 dm³ (10.5 cuft)		DDW-MS-DDSR60 2.0 -300 DDW-H33-DDSR60 2.0 -300	DDW-MS-DDSR60 2.0 -300 CM DDW-H33-DDSR60 2.0 -300 CM
Hopper 180 dm³ (6.4 cuft) AR		DDW-MS-DDSR60 2.0 -180 AR DDW-H33-DDSR60 2.0 -180 AR	DDW-MS-DDSR60 2.0 -180 AR CM DDW-H33-DDSR60 2.0 -180 AR CM
Hopper 270 dm³ (9.5 cuft) AR		DDW-MS-DDSR60 2.0 -270 AR DDW-H33-DDSR60 2.0 -270 AR	DDW-MS-DDSR60 2.0 -270 AR CM DDW-H33-DDSR60 2.0 -270 AR CM

Screw Sizes and Feed Rates

Screw type	Designation Ø / p [mm]	Tube designation	Tube dia. [mm]	Max. speed [min ⁻¹]	Max. feed rate * [dm³/h]	Max. feed rate* [cuft/hr]
Double-spiral Screw (SS)	SS 52/39	640 (689)	70.0x3.0	316 (238) /	3140 [3437] (2365)	110.9 [121.4] (83.5)
	SS 52/62	640 (689)	70.0x3.0	316 (238) /	5303 [5787] (3994)	187.3 [204.4] (141.1)
Twin-spiral Screw (TS)	TS 65/45	689	76.1x3.6	316 (238) /	4947 (3726)	174.7 (131.6)
	TS 65/71	689	76.1x3.6	316 (238) /	7801 (5876)	275.5 (207.5)
Twin-blade Screw (TB)	TB 65/45	689	76.1x3.6	316 (238) /	4631 (3488)	163.5 (123.2)
	TB 65/71	689	76.1x3.6	316 (238) /	7426 (5593)	262.3 (197.5)
Twin-concave Screw (TC)	TC 60/43	640	70.0x3.0	316 (238) /	751 (565)	26.5 (20)
	TC 60/65	640	70.0x3.0	316 (238) /	2005 (1510)	70.8 (53.3)
	TC 60/75	689	76.1x3.6	316 (238) /	4029 (3035)	142.3 (107.2)

* 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](#)



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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 (96 lb/cuft)
max. bulk density MS:	1.5 kg/dm ³ (96 lb/cuft)
	0.8 kg/dm ³ (49.9 lb/cuft) * with hopper 180 dm ³ (6.4 cuft) AR
	0.54 kg/dm ³ (33.7 lb/cuft) * with hopper 300 dm ³ (10.6 cuft)
max. bulk density H33 – 300 kg load cell:	0.63 kg/dm ³ (96 lb/cuft) * with hopper 180 dm ³ (6.4 cuft) AR
	0.38 kg/dm ³ (23.7 96 lb/cuft) with hopper 270 dm ³ (9.5 cuft) AR
max. bulk density H33 - 600 kg load cell:	1.5 kg/dm ³ (96 lb/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)
200 dm³ (7 cuft) or 300 dm³ (10.5)	Hopper lid for automatic refilling
extension hopper	
Screw drive:	0.75 kW (1.01 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)
	662 kg (1460 lb) for 200 dm ³ (7 cuft) hopper; 651 kg (1435 lb) for 300 dm ³ (10.6 cuft) hopper; 615 kg (1356 lb) for 180 dm ³ (6.4 cuft) hopper AR, 599 kg (1321 lb) for 270 dm ³ (9.5 cuft) hopper AR
Net weighing range MS:	
Net weighing range H33 – 300 kg load cell:	162 kg (357 lb) for 200 dm ³ (7 cuft) hopper; 151 kg (333 lb) for 300 dm ³ (10.6 cuft) hopper; 115 (234 lb) for 180 dm ³ (6.4 cuft) hopper AR; 99 kg (218.3 lb) for 270 dm ³ (9.5 cuft) hopper AR
Net weighing range H33 – 600 kg load cell:	462 kg (1019 lb) for 200 dm ³ (7 cuft) hopper; 451 kg (994 lb) for 300 dm ³ (10.6 cuft) hopper; 415 kg (916 lb) for 180 dm ³ (6.4 cuft) hopper AR, 399 kg (880 lb) for 270 dm ³ (9.5 cuft) hopper AR
* 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
- [Maintenance disconnect box](#)
- [Filter bag](#) or [JetFilter](#) for vent pipe
- [Turntable](#), [cart mounting](#), [BagDumper](#)
- Pressure compensation for the [outlet](#) and the [feeder hopper](#)
- Cleaning and refill systems upon request
- [Hopper with agitator \(AR\)](#)

