

FlexWall® FW20/0

Volumetric and gravimetric

General Information



The FlexWall® [FW20/0](#) feeder is ideal for poor or difficult flowing bulk ingredients. The feeder has the following main components: a stainless steel rectangular housing, flexible polyurethane trough with a large trough cross-section, massage paddles, a screw, a screw tube, a DC smart motor and an extension hopper with volumes of 5 dm³(0.18 cuft) or 10 dm³ (0.35 cuft).

The shape of the trough and the external massage paddles work together to provide consistent screw filling and mass flow without ingredient deterioration.

Screw removal of the [FW20/0](#) is from the front.

The FlexWall® is easily disassembled for wet or dry cleaning as the polyurethane hopper that is attached to the housing is easily removed. All service is from the front or back of the feeder.

The gravimetric version includes the weighing system [MD1 and MD2](#) featuring high resolution digital lead cell with serial data transmission with advanced filtering technology.

The unit conforms to CE directives.



Model Specification

Screw drive	fixed
Drive Power	0.18 kW (0.25 HP)
Screw speed	200 min ⁻¹
Screw speed optional	--
Massage paddles	yes
Separate paddle drive	no



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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 Interfaces.

Technical Drawings and Dimensions

	Volumetric feeders	Gravimetric feeders	
		Control module CB	Control module CM
5 dm³ (0.18 cuft) hopper	FW20/0-5	DDW-MD1(2)-FW20/0-5	DDW-MD1(2)-FW20/0-5 CM
10 dm³ (0.35 cuft) hopper	FW20/0-10	DDW-MD2-FW20/0-10	DDW-MD2-FW20/0-10 CM

Available 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]
Spiral screw (S)	S 9/7	120	15.0x1.5	200	5	0.18
	S 13/10	160	20.0x2.0	200	12	0.42
	S 13/15	160	20.0x2.0	200	20	0.71
	S 20/15	220	25.0x1.5	200	42	1.48
	S 20/19	220	25.0x1.5	200	56	1.98
	S 20/24	220	25.0x1.5	200	75	2.65
Spiral screw (S) for granules	S 9/7	160	20.0x2.0	200	10	0.35
	S 13/10	220	25.0x1.5	200	24	0.85
	S 13/15	220	25.0x1.5	200	38	1.34

* 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.

[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 +50°C (32°F to 122°F)
max. bulk density (volumetric):	0.96 kg/dm ³ (60 lb/cuft) with hopper for 5 dm ³ (0.18 cuft)
Max. bulk density (gravimetric MD1):	1.5 kg/dm ³ (94 lb/cuft) with hopper for 5 dm ³ (0.18 cuft)
Max. bulk density (gravimetric MD2):	1.5 kg/dm ³ (94 lb/cuft) with hopper for 5 dm ³ (0.18 cuft)
	1.5 kg/dm ³ (94 lb/cuft) with hopper for 10 dm ³ (0.35 cuft)
Flexible screw trough:	polyurethane, food-proof acc. to LMBG*
Housing, extension hopper, hopper lid:	1.4301 (304 SS)
Ambient temperature:	0°C to +45°C (32°F to 113°F)
Screws, screw tubes, outlets:	1.4571 (316 SS), 1.4301 (304 SS) or polyurethane, food-proof acc. to LMBG*
Non-contact components:	Aluminium,planted or painted steel (RAL 7035)
Extension hopper 5 dm ³ (0.18 cuft) or 10 dm ³ (0.35 cuft)	Hopper lid for automatic refilling with vent pipe or manual refilling
Screw drive:	0.18 kW (0.24 HP), IP65; 24-48 V DC-Smart Motor with integrated controller
Power supply:	AC 230 – 50hz**
Net weighing range MD1:	6.5 kg (14.3 lb) with hopper 5 dm ³ (0.18 cuft)
Net weighing range MD2:	18.5 kg (40.8 lb) with hopper for 5 dm ³ (0.18 cuft)
	17 kg (39.7 lb) with hopper for 10 dm ³ (0.35 cuft)

* Available options: Conductive or chemically resistant FDA approval polyurethane

Options and Accessories

- [Flexible inlet and vent connections](#)
- [Flexible outlet connections](#)
- Interchangeable screws, screw tubes and screw troughs
- [Filter bag](#) for vent stub
- [Maintenance disconnect box](#)
- Versions for higher and lower temperatures than standard
- Explosion-proof executions as per directive 2014/34/EU (ATEX) or NFPA
- Cleaning and refill systems upon request

