



FlexWall® Plus

FW40/5

Volumetric and Gravimetric



General Information

The FlexWall® Plus [FW40/5](#) feeder is ideal for poor or difficult flowing bulk ingredients. The feeder has the following main components: a stainless steel trapezoidal housing, flexible polyurethane trough with large cross-section, external massage paddles with separate drive, a screw, a screw tube, a 3 phase motor and a trapezoidal extension hopper with volumes of 50 dm³ (1.77 cuft) or 70 dm³ (2.47 cuft).

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

Screw removal of the [FW40/5](#) is from the front of the feeder.

The FlexWall® Plus is easily disassembled for wet or dry cleaning as the polyurethane hopper that is attached to the housing is easily removed. Moreover, the [compact trapezoidal shape](#) allows up to 6 feeders to be arranged around a central feed point. All service is from the front or back.

The gravimetric version includes the analog weighing system [MSS](#), or the digital weighing systems [DLS5](#) (Digital Load System) or [MD5](#) (for highest measurement accuracy), both featuring a high resolution robust digital load cell with serial data transmission and advanced filtering technology.

The unit conforms to CE directives.



Model Specification

Screw drive	fixed
Drive power	0.37 kW (0.5 HP)
Screw speed	192 min ⁻¹
Screw speed optional	--
Massage paddles	yes
Separate paddle drive	no



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
50 dm ³ (1.77 cuft) Hopper	FW40/5-50	DDW-DLS(MD)(S)5-FW40/5-50	DDW-DLS(MD)(S)5-FW40/5-50 CM
70 dm ³ (2.47 cuft) Hopper	FW40/5-70	DDW-DLS(MD)(S)5-FW40/5-70	DDW-DLS(MD)(S)5-FW40/5-70 CM



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Available Screw Sizes and Feed Rates

Screw type	Designation \varnothing / p [mm]	Tube designation	Tube dia. [mm]	Max. speed [min ⁻¹]	Max. feed rate * [dm ³ /h]	Max. feed rate * [cuft/h]
Spiral screw (S) (TA= with trough activation)	S 20/15 (TA)	210	25.0x2.0	192 / 100Hz	40	1.4
	S 20/19 (TA)	210	25.0x2.0	192 / 100Hz	54	1.9
	S 20/24 (TA)	210	25.0x2.0	192 / 100Hz	72	2.5
	S 24/27 (TA)	260	30.0x2.0	192 / 100Hz	122	4.3
	S 24/35 (TA)	260	30.0x2.0	192 / 100Hz	162	5.7
	S 28/22 (TA)	320	38.0x3.0	192 / 100Hz	134	4.7
	S 28/35 (TA)	320	38.0x3.0	192 / 100Hz	225	7.9
	S 33/35	350	38.0x1.5	192 / 100Hz	307	10.8
	S 43/27	443	48.3x2.0	192 / 100Hz	368	13
	S 43/42	443	48.3x2.0	192 / 100Hz	616	21.8
Spiral screw (S) for granules	S 20/15	320	38.0x3.0	192 / 100Hz	72	2.5
	S 20/19	320	38.0x3.0	192 / 100Hz	96	3.4
	S 20/24	320	38.0x3.0	192 / 100Hz	127	4.5
	S 24/27	350	38.0x1.5	192 / 100Hz	189	6.7
	S 24/35	350	38.0x1.5	192 / 100Hz	251	8.9
	S 28/22	443	48.3x2.0	192 / 100Hz	232	8.2
	S 28/35	443	48.3x2.0	192 / 100Hz	385	13.6
	S 33/35	443	48.3x2.0	192 / 100Hz	429	25.7
Blade screw (B)	B 28/28	320	38.0x3.0	192 / 100Hz	132	4.7
	B 32/38	350	38.0x1.5	192 / 100Hz	259	9.1
	B 40/32	443	48.3x2.0	192 / 100Hz	302	10.7
	B 40/46	443	48.3x2.0	192 / 100Hz	451	15.9
Fiber screw (F)	F 3322/35-K23	350	38.0x1.5	192 / 100Hz	101	3.6
	F 3322/35-K12	350	38.0x1.5	192 / 100Hz	170	6
	F 4032/46-K15	443	48.3x2.0	192 / 100Hz	372	13.1

* 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.

Technical Specification

Ambient temperature:	0°C to +45°C (32°F to 113°F)	
Humidity of the air:	up to 85% without condensation	* Optionally available: conductive or chemically resistant FDA approval polyurethane
max. vacuum/pressure:	3 hPa (3 mbar) (1.2 inches of water)	
Ingredient temperature:	0°C to +50°C (32°F to 122°F)	
max. bulk density (volumetric):	1.5 kg/dm ³ * (94 lb/cuft)	
max. bulk density (gravimetric):	1.1 kg/dm ³ (62 lb/cuft) with hopper for 50 dm ³ (1.77 cuft) 0.7 kg/dm ³ (44 lb/cuft) with hopper 70 dm ³ (2.47 cuft)	
Flexible screw trough:	polyurethane, food-proof acc. to LMBG*	
Housing, extension hopper, hopper lid:	1.4301 (304 SS)	** 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.
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: 50 dm ³ (1.77 cuft) or 70 dm ³ (2.47 cuft)	Hopper lid for automatic refilling or manual refilling	
Screw drive:	0.37 kW (0.5 HP), IP65; ISO class F; TEFC; frequency-controlled	
Power supply:	AC 230/400 V (110VAC/460VAC) - 50Hz** or 266/460 V (230/460VAC) - 60Hz	
Net weighing range DL55/MD5:	52 kg (114.6 lb) with hopper 50 dm ³ (1.77 cuft)	
	49 kg (108 lb) with hopper 70 dm ³ (2.47 cuft)	
Net weighing range MS5:	57 kg (125.6 lb) with hopper 50 dm ³ (1.77 cuft)	
	54 kg (119 lb) with hopper 70 dm ³ (2.47 cuft)	

Options and Accessories

- Flexible [inlet and vent connections](#)
- Flexible [outlet connections](#)
- Interchangeable screws and screw tubes
- [DESTACO clamp fasteners](#) with and without safety switch
- Versions for higher or lower temperatures than standard
- [Explosion-proof versions](#) as per directive 2014/34/EU (ATEX) or NFPA
- FlexWall® Plus with [Hygienic Design \(HD\)](#) as per directive 1935/2004 or FDA
- Screw extension 150 mm (except for blade and fiber screws)
- Vertical outlet with [quick release](#)
- [Maintenance disconnect box](#)
- [Filter bag](#) or [JetFilter](#) for vent stub
- [Turntable](#) or [cart mounting](#)
- [Pressure compensation](#) for the outlet and/or [feeder hopper](#)
- Cleaning and refill systems upon request