

Volumetric and Gravimetric

General Information

The FlexWall® Plus [FW40/7](#) 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 a 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. The [FW40/7](#) features a separate paddle drive to allow paddle speed adjustment for difficult flowing ingredients.

Screw removal of the FW40/7 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. Moreover, the [compact trapezoidal shape](#) allows up to 6 feeders to be arranged around a central feed point. Service can be from the front or back.

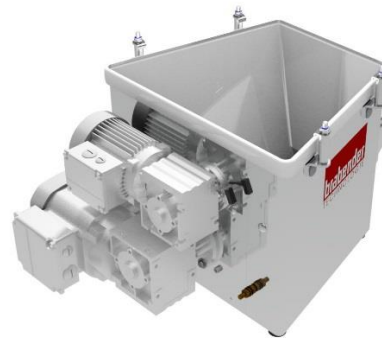
The gravimetric version includes the analog weighing system [M55](#), or the digital weighing system [MD5](#) (for highest measurement accuracy), featuring a high resolution robust digital load cell with serial data transmission and advanced filtering technology.

The unit conforms to CE directives.



Model Specification

Screw drive	fixed
Drive Power	0.37 kW (0.5 HP)
Screw speed	198 min ⁻¹
Screw speed optional	346 min ⁻¹
Massage paddles	Yes
Separate paddle drive	Yes
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
50 dm ³ (1.77 cuft) hopper	FW40/7-50	DDW-M5-FW40/7-50	DDW-M5-FW40/7-50 CM
70 dm ³ (2.47 cuft) hopper	FW40/7-70	DDW-M5-FW40/7-70	DDW-M5-FW40/7-70 CM



FlexWall® Plus

FW40/7



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Available 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]
Spiral screw (S) (TA=with trough activation)	S 20/15 (TA)	210	25.0x2.0	198 (346) / 100Hz	41 (72)	1.4 (2.5)
	S 20/19 (TA)	210	25.0x2.0	198 (346) / 100Hz	56 (97)	2 (3.4)
	S 20/24 (TA)	210	25.0x2.0	198 (346) / 100Hz	74 (129)	2.6 (4.6)
	S 24/27 (TA)	260	30.0x2.0	198 (346) / 100Hz	126 (220)	4.4 (7.8)
	S 24/35 (TA)	260	30.0x2.0	198 (346) / 100Hz	167 (292)	5.9 (10.3)
	S 28/22 (TA)	320	38.0x3.0	198 (346) / 100Hz	138 (242)	4.9 (8.5)
	S 28/35 (TA)	320	38.0x3.0	198 (346) / 100Hz	232 (406)	8.2 (14.3)
	S 33/35	350	38.0x1.5	198 (346) / 100Hz	317 (553)	11.2 (19.5)
	S 43/27	443	48.3x2.0	198 (346) / 100Hz	380 (663)	13.4 (23.4)
	S 43/42	443	48.3x2.0	198 (346) / 100Hz	635 (1110)	22.4 (39.2)
Spiral screw (S) for granules	S 20/15	320	38.0x3.0	198 (346) / 100Hz	74 (130)	2.6 (4.6)
	S 20/19	320	38.0x3.0	198 (346) / 100Hz	99 (174)	3.5 (6.1)
	S 20/24	320	38.0x3.0	198 (346) / 100Hz	131 (228)	4.6 (8.1)
	S 24/27	350	38.0x1.5	198 (346) / 100Hz	195 (341)	6.9 (12)
	S 24/35	350	38.0x1.5	198 (346) / 100Hz	259 (452)	9.1 (16)
	S 28/22	443	48.3x2.0	198 (346) / 100Hz	239 (418)	8.4 (14.8)
	S 28/35	443	48.3x2.0	198 (346) / 100Hz	397 (694)	14 (24.5)
	S 33/35	443	48.3x2.0	198 (346) / 100Hz	442 (774)	15.6 (27.3)
Blade screw (B)	B 28/28	320	38.0x3.0	198 (346) / 100Hz	136 (238)	4.8 (8.4)
	B 32/38	350	38.0x1.5	198 (346) / 100Hz	267 (467)	9.4 (16.5)
	B 40/32	443	48.3x2.0	198 (346) / 100Hz	311 (543)	11 (19.2)
	B 40/46	443	48.3x2.0	198 (346) / 100Hz	465 (813)	16.4 (28.7)
Fiber screw (F)	F 3322/35-K23	350	38.0x1.5	198 (346) / 100Hz	104 (**)	3.7 (**)
	F 3322/35-K12	350	38.0x1.5	198 (346) / 100Hz	175 (**)	6.2 (**)
	F 4032/46-K15	443	48.3x2.0	198 (346) / 100Hz	384 (**)	13.6 (**)

* 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.

** Available upon request

[How to read the table of screws](#)

Technical Specification

Ambient temperature:	0°C to +45°C (32°F to 113°F)	* Available options: Conductive or chemically resistant FDA approval polyurethane
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):	1.5 kg/dm ³ (94 lb/cuft)	
Max. bulk density (gravimetric):	0.9 kg/dm ³ (56 lb/cuft) with hopper 50dm ³ (1.77 cuft) 0.6 kg/dm ³ (38 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)	
Screws, screw tubes, outlets:	1.4571 (316 SS), 1.4301 (304 SS) or polyurethane, food-proof acc. to LMBG*	
Non-contact components:	Galvanized or painted steel (RAL 7035)	
50 or 70 dm ³ extension hopper	Hopper lid for automatic refilling with vent pipe or manual refilling	** 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.
Screw drive:	0.37 kW (0.5 HP), IP65; ISO class F; TEFC; frequency-controlled	
Paddle drive (FW40/2; FW40/7 only):	0.12 kW (0.16 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 MD5:	45 kg (99.2 lb) with hopper 50 dm ³ (1.77 cuft) 42 kg (92.6 lb) with hopper 70 dm ³ (2.47 cuft)	
Net weighing range MS5:	50 kg (110.2 lb) with hopper 50 dm ³ (1.77 cuft) 47 kg (103.6 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 and lower temperatures than standard
- [Explosion-proof executions](#) 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 (5.9 inches) (not for blade and fiber screws)
- Vertical outlet with [quick release](#)
- [Maintenance disconnect box](#)
- [Filter bag](#) or [JetFilter](#) for ventstubs
- [Turntable](#) or [cart mounting](#)
- [Pressure compensation for the outlet](#) and/or [feeder hopper](#)
- Cleaning and refill systems upon request