# FlexWall®
# FW155/0-(MS)

Volumetric and gravimetric

## General Information

The FlexWall® FW155/0 feeder is ideal for poor or difficult flowing bulk ingredients.

The feeder has the following main components: a stainless steel rectangular housing, a flexible polyurethane trough with a large cross-section, external massage paddles, a screw, a screw tube, a 3 phase motor and an extension hopper with volumes of 600 dm³ (21.19 cuft) or 1000 dm³ (35.31 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 FW155/0 is from the front of the feeder.

The FlexWall® FW1550/ is easily disassembled for wet or dry cleaning as the polyurethane trough that is attached to the housing is easily removed.

The weighing system MS is available as gravimetric version with four high-resolution load cells with advanced filtering technology.

The unit conforms to CE directives.

## Model Specification

| | |
|---|---|
| Screw drive | fixed |
| Drive power | 1.5 kW (2.01 HP) |
| Screw speed | 142 $min^{-1}$ |
| 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.

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## Technical Drawings and Dimensions

| | volumetric feeders | gravimetric feeders | |
|---|---|---|---|
| | | Control module CB | Control module CM |
| 600 dm³ (21.19 cuft) Hopper | FW155/0-600 | DDW-MS-FW155/0-600 | DDW-MS-FW155/0-600 CM |
| 1000 dm³ (35.31 cuft) Hopper | FW155/0-1000 | DDW-MS-FW155/0-1000 | DDW-MS-FW155/0-1000 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 * [$dm^3/h$] | Max. feed rate * [cuft/h] |
|---|---|---|---|---|---|---|
| Spiral Screw (S) (TA= with trough activation) | S 103/105 (TA) | 1091 | 114.3x2.6 | 142 / 100Hz | 7185 | 253.7 |
| | S 120/120 | 1270 | 133.0x3.0 | 142 / 100Hz | 11245 | 397.1 |
| | S 155/100 | 1631 | 168.3x2.6 | 142 / 100Hz | 15503 | 547.5 |
| | S 155/165 | 1631 | 168.3x2.6 | 142 / 100Hz | 25925 | 915.6 |
| Spiral Screw (S) for granules | S 103/105 | 1270 | 133.0x3.0 | 142 / 100Hz | 8870 | 313.2 |
| | S 120/120 | 1631 | 168.3x2.6 | 142 / 100Hz | 15530 | 548.5 |
| Blade Screw (B) | B 103/105 | 1091 | 114.3x2.6 | 142 / 100Hz | 6600 | 233.1 |
| | B 120/120 | 1270 | 133.0x3.0 | 142 / 100Hz | 10530 | 371.9 |
| | B 155/100 | 1631 | 168.3x2.6 | 142 / 100Hz | 14975 | 528.9 |
| | B 155/165 | 1631 | 168.3x2.6 | 142 / 100Hz | 24985 | 882.4 |

* 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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| | | |
|---|---|---|
| Ambient temperature: | 0°C to +45°C (32°F to 113°F) | * Optionally available: 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) | |
| Ingredient temperature: | 0°C to +50°C (32°F to 122°F) | |
| max. bulk density (volumetric): | 1.5 kg/dm³ * (94 lb/cuft) | |
| max. bulk density (gravimetric): | 1.5 kg/dm³ (94 lb/cuft) with hopper 600dm³ (21.19 cuft)<br>1.5 kg/dm³ (94 lb/cuft) with hopper 1000 dm³ (35.31 cuft) | |
| Flexible screw trough: | polyurethane, food-proof acc. to LMBG* | ** 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. |
| 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: | Aluminum, plated or painted steel (RAL 7035) | |
| Extension hopper 600 dm³ (21.19 cuft) or 1000 dm³ (35.31 cuft): | Hopper lid for inlet and vent connections | |
| Screw drive: | 1.5 kW (2.01 HP), IP66; ISO class F; TEFC; frequency-controlled | |
| Power supply: | AC 230/400 V (110VAC/460VAC)- 50Hz** | |
| Net weighing range MS: | 1770 kg (3902 lb) with hopper 600 dm³ (21.19 cuft) | |
| Net weighing range MS: | 1710 kg (3770 lb) with hopper 1000 dm³ (35.31 cuft) | |

## Options and Accessories

- Flexible inlet and vent connections
- Flexible outlet connections
- Interchangeable screws and screw tubes
- BagDumper (for manual refilling)
- 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
- Vertical outlet with quick release
- Maintenance disconnect box
- Filter bag or JetFilter for vent pipe
- Turntable or cart mounting
- Pressure compensation for the outlet and/or feeder hopper
- Cleaning and refill systems upon request