General Information

The FlexWall® FW155/0 is a feeder 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, 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.

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

The gravimetric version includes the H34 weighing system featuring a high resolution digital load cell with serial data transmission, strain gauge load cell with advanced filtering technology.

The unit conforms to CE directives.

Model Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screw drive</td>
<td>fixed</td>
</tr>
<tr>
<td>Drive power</td>
<td>1.5 kW (2.04 HP)</td>
</tr>
<tr>
<td>Screw speed</td>
<td>142 min⁻¹</td>
</tr>
<tr>
<td>Massage paddles</td>
<td>yes</td>
</tr>
<tr>
<td>Separate paddle drive</td>
<td>no</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Hopper Size</th>
<th>Volumetric Feeders</th>
<th>Control Module CB</th>
<th>Control Module CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 dm³ (21.19 cuft)</td>
<td>FW155/0-600</td>
<td>DDW-H34-FW155/0-600</td>
<td>DDW-H34-FW155/0-600 CM</td>
</tr>
<tr>
<td>1000 dm³ (35.31 cuft)</td>
<td>FW155/0-1000</td>
<td>DDW-H34-FW155/0-1000</td>
<td>DDW-H34-FW155/0-1000 CM</td>
</tr>
</tbody>
</table>
## Screw Sizes and Feed Rates

<table>
<thead>
<tr>
<th>Screw type</th>
<th>Designation Ø / p [mm]</th>
<th>Tube designation</th>
<th>Tube dia. [mm]</th>
<th>Max. speed [min⁻¹]</th>
<th>Max. feed rate * [dm³/h]</th>
<th>Max. feed rate * [cuft/h]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiral screw (S)</td>
<td>S 103/105 (TA)</td>
<td>1091</td>
<td>114.3x2.6</td>
<td>142 / 100Hz</td>
<td>7185</td>
<td>253.7</td>
</tr>
<tr>
<td>Spiral screw (S)</td>
<td>S 120/120</td>
<td>1270</td>
<td>133.0x3.0</td>
<td>142 / 100Hz</td>
<td>11245</td>
<td>397.1</td>
</tr>
<tr>
<td>Spiral screw (S)</td>
<td>S 155/100</td>
<td>1631</td>
<td>168.3x2.6</td>
<td>142 / 100Hz</td>
<td>15503</td>
<td>547.5</td>
</tr>
<tr>
<td>Spiral screw (S)</td>
<td>S 155/165</td>
<td>1631</td>
<td>168.3x2.6</td>
<td>142 / 100Hz</td>
<td>25925</td>
<td>915.6</td>
</tr>
<tr>
<td>Spiral screw (S) for granules</td>
<td>S 103/105</td>
<td>1270</td>
<td>133.0x3.0</td>
<td>142 / 100Hz</td>
<td>8870</td>
<td>313.2</td>
</tr>
<tr>
<td>Spiral screw (S) for granules</td>
<td>S 120/120</td>
<td>1631</td>
<td>168.3x2.6</td>
<td>142 / 100Hz</td>
<td>15530</td>
<td>548.5</td>
</tr>
<tr>
<td>Blade screw (B)</td>
<td>B 103/105</td>
<td>1091</td>
<td>114.3x2.6</td>
<td>142 / 100Hz</td>
<td>6600</td>
<td>233.1</td>
</tr>
<tr>
<td>Blade screw (B)</td>
<td>B 120/120</td>
<td>1631</td>
<td>168.3x2.6</td>
<td>142 / 100Hz</td>
<td>10530</td>
<td>371.9</td>
</tr>
<tr>
<td>Blade screw (B)</td>
<td>B 155/100</td>
<td>1631</td>
<td>168.3x2.6</td>
<td>142 / 100Hz</td>
<td>14975</td>
<td>528.9</td>
</tr>
<tr>
<td>Blade screw (B)</td>
<td>B 155/165</td>
<td>1631</td>
<td>168.3x2.6</td>
<td>142 / 100Hz</td>
<td>24985</td>
<td>882.4</td>
</tr>
</tbody>
</table>

* 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

- **S**: Spiral screw
- **B**: Blade screw
- **TA= with trough activation**

### 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)
- **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)**: 1.3 kg/dm³ (91 lb/cuft) with hopper 1000 dm³ (35.31 cuft)

### Flexible screw trough

- Flexible screw trough: polyurethane, food-proof acc. to LMBG*

### Housing, extension hopper, hopper lid

- **Hopper lid**: 1.4301 (304 SS)
- **Extension hopper**: 600 dm³ (21.19 cuft) or 1000 dm³ (35.31 cuft)

### 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)**
- **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.**

### Extension hopper

- **Net weighing range H34**: 600 dm³ (21.19 cuft) or 1000 dm³ (35.31 cuft)
- **Net weighing range H34**: 1200 kg (2646 lb) with hopper 600 dm³ (21.19 cuft)
- **Net weighing range H34**: 1150 kg (2535 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
- Screw extension 400 mm (15.8 inches) (not for blade and fibre screws)
- 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