Twin screw feeder
MiniTwin 2.0
Volumetric and gravimetric

**General Information**

The MiniTwin feeder is ideal for the reliable feeding of powder in the gram range.

The feeder has the following main components: a free-standing chassis/weighing system combination, a stainless steel screw trough, an agitator in the screw trough, a twin screw, a screw tube, a DC smart motor, and an extension hopper for bulk material storage.

These components work to consistently fill the screw, because the agitator prevents hopper bridging while providing mass flow into the screw. This results in optimal feeder accuracy and control.

The MiniTwin is easily disassembled for wet or dry cleaning by releasing quick release clamps from the stationary gear unit. All service and maintenance is from the front or rear.

The gravimetric version includes the weighing system MD0 featuring a high-resolution digital load cell with serial data transmission, with advanced filtering technology for compensating disturbances.

The unit conforms to CE directives.

**Model Specification**

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screw drive</td>
<td>DC-Smart motor</td>
</tr>
<tr>
<td>Drive power</td>
<td>0.18 kW (0.24 HP)</td>
</tr>
<tr>
<td>Screw speed</td>
<td>140 min⁻¹</td>
</tr>
<tr>
<td>Trough agitator</td>
<td>Yes</td>
</tr>
<tr>
<td>Separate agitator 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.

**Technical Drawings and Dimensions**

<table>
<thead>
<tr>
<th>Component</th>
<th>Volumetric Feeders</th>
<th>Gravimetric Feeders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hopper 0.5 dm³ (0.02 cuft)</td>
<td>MT 2.0-0.5</td>
<td>Control module CB</td>
</tr>
<tr>
<td>Hopper 1.0 dm³ (0.04 cuft)</td>
<td>MT 2.0-1.0</td>
<td>DDW-MD0-MT 2.0-0.5</td>
</tr>
<tr>
<td>Hopper 1.5 dm³ (0.1 cuft)</td>
<td>MT 2.0-1.5</td>
<td>DDW-MD0-MT 2.0-1.0</td>
</tr>
</tbody>
</table>

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**Twin screw feeder**

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### Screw Sizes and Feed Rates

<table>
<thead>
<tr>
<th>Screw type</th>
<th>Designation</th>
<th>Tube designation</th>
<th>Tube dia. [mm]</th>
<th>Max. speed [min⁻¹]</th>
<th>Max. feed rate * [dm³/h]</th>
<th>Control range Screw drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twin-concave screw (TC)</td>
<td>TC 12/04</td>
<td>130</td>
<td>60.3</td>
<td>140</td>
<td>1.26 (0.04 cuft)</td>
<td>1:100</td>
</tr>
<tr>
<td></td>
<td>TC 12/12</td>
<td>130</td>
<td>60.3</td>
<td>140</td>
<td>5.60 (0.2 cuft)</td>
<td>1:100</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 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**

### 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/overpressure:** 2 hPa (2 mbar) (inches of water)
- **Ingredient temperature:** 0°C to +60°C (32°F to 140°F)
- **max. bulk density (volumetric):** 1.5 kg/dm³ (94 lb/cuft)
- **max. bulk density (MD0):** 1.5 kg/dm³ (94 lb/cuft) with hopper 0.5 dm³ (0.02 cuft), 0.7 kg/dm³ (43.7 lb/cuft) with hopper 1.5 dm³ (0.05 cuft)
- **Screw trough, extension hopper, hopper lid:** 1.4404
- **Screws, screw tubes, outlets:** 1.4404
- **Non-contact components:** Aluminum, plated or painted steel (RAL 7035)
- **Extension hopper:** Hopper lid for manual refilling
- **Drive:** 0.18 kW (0.24 HP), IP65
- **Power supply:** 100-240 V, 50-60 Hz (1/N/PE AC) **
- **Net weighing range MD0:** 1.8 kg (4 lb) with hopper 0.5 dm³ (0.02 cuft), 1.1 kg (2.4 lb) with hopper 1.5 dm³ (0.05 cuft)

* *other values upon request*
** *Operation on TT networks, TN networks or networks with earthed neutral. For different networks adaptation measures are necessary.*

### Options and Accessories

- Flexible **outlet connections**
- Interchangeable screws, screw tubes, screw troughs
- Explosion-proof versions as per directive 2014/34/EU (ATEX) or NFPA
- **Wind protection** (polycarbonate, transparent) for stabilization of wind and draught
- **Maintenance disconnect box, pluggable execution**
- Pressure compensation for the outlet
- **Ground plate**
- Cleaning and refil systems upon request