I Application

The horizontal blender is used to dissolve solid/powder products into a liquid, recirculated in a tank. The blender is limited to the suction of small amount of solids as it has no table for bags and the hopper is smaller than that of the table blender.

I Operating principle

Horizontal blender is a compact unit, it consists of a centrifugal pump with a venturi system on the suction side and a hopper with a butterfly valve above the venturi to add solid / powder products to the pumped liquid. In this blender, the suction and venturi system are set horizontally.

The venturi system and the suction of the pump create a negative pressure at the base of the hopper. When the valve of the hopper opens, the solids are drawn from the hopper and are dissolved in the liquid when they pass through the pump casing.

To achieve the best possible dissolution, it is recommended to recirculate the product (batch production) untill all the solid/powder product is suctioned in and then, when the solid product is completely incorporated into the liquid product, continue recirculating the product for a while.

In some cases, it can be used in-line depending on the solid product to add and the required level of dissolution.

I Design and features

Very simple and versatile system for a fast and homogeneous mixing of a wide range of solid products without any contact with the atmosphere.
Hygienic design.
Single mechanical seal.
ISO 2852 Clamp connections for easy assembly/disassembly.
Cleaning and disinfection without disassembly.
## I Technical specifications

### Materials:
- **Parts in contact with the product**: AISI 316L
- **Other metal parts**: AISI 304
- **Gaskets**: EPDM

### Mechanical seal:
- **Rotary part**: Silicon carbide (SiC)
- **Stationary part**: Silicon carbide (SiC)
- **Gaskets**: EPDM

### Surface finish:
- **Internal**: Bright polish Ra ≤ 0.8 μm
- **External**: Matt

### Blender

<table>
<thead>
<tr>
<th></th>
<th>MH-20</th>
<th>MH-26</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approximate flow</td>
<td>20 m³/h</td>
<td>40 m³/h</td>
</tr>
<tr>
<td>Maximum differential height</td>
<td>7 mwc</td>
<td>15 mwc</td>
</tr>
<tr>
<td>Maximum solids intake</td>
<td>1,300 kg/h *</td>
<td>2,000 kg/h *</td>
</tr>
<tr>
<td>Pump</td>
<td>Hyginox SE20 with impeller Ø130</td>
<td>Hyginox SE26 with impeller Ø145</td>
</tr>
<tr>
<td>Motor</td>
<td>3 kW - 3,000 rpm</td>
<td>5,5 kW - 3,000 rpm</td>
</tr>
<tr>
<td>Maximum temperature</td>
<td>65°C</td>
<td>65°C</td>
</tr>
<tr>
<td>Connections (inlet/outlet)</td>
<td>CLAMP</td>
<td>CLAMP</td>
</tr>
<tr>
<td>Hopper capacity</td>
<td>25 L</td>
<td>48 L</td>
</tr>
<tr>
<td>Hopper valve</td>
<td>Butterfly valve CLAMP</td>
<td>Butterfly valve CLAMP</td>
</tr>
</tbody>
</table>

* Intake of solids may vary depending on their properties.

### Options

- **Gaskets**: FPM or PTFE.
- **Connections**: DIN, SMS.
- **Drain port**.
- **Vibrator for hopper**.
- **Pneumatically actuated valve + low level sensor for solids**.
- **Solids upper level sensor**.
- **Control panel for the vibrator, level sensors and automated valve**.
- **Grid for hopper**.
**I Dimensions**

| Blender | Hopper volume (l) | kW | DN1          | DN2          | A  | B  | C  | D  | E  | F  | G  | H  | I  | ØJ | Weight (kg) |
|---------|------------------|----|--------------|--------------|----|----|----|----|----|----|----|----|----|----------------|
| MH-20   | 25               | 3  | CLAMP 2"     | CLAMP 1 1/4" | 74 | 131| 240| 313| 490| 1045| 933| 900| 37 | 505 | 88         |
| MH-26   | 48               | 5,5| CLAMP 3"     | CLAMP 2"     | 72 | 145| 322| 325| 490| 1185| 1060| 1200| 40 | 605 | 103       |

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