Advantages of the Inverting Filter Centrifuge

1. GENTLE – Solids discharge is performed by inverting the filter cloth and spinning the product off centrifugally. No discharge blade means that delicate crystals and macromolecules can be recovered without breakage.

2. HIGH YIELD – LOW RESIDUAL – High yield is achieved because the solids are discharged immediately by the inversion of the spinning filter and high centrifugal force. Because solids are discharged without the use of a blade or blowback, ultra-thin cakes can be processed efficiently.

3. IMPROVED CIP & VALIDATION – There are three (3) moving parts (filter, platen and basket) inside the Inverting Filter Centrifuge. Crevices, seals and the additional surface area associated with the discharge blade, feed line, spray line and local control are eliminated.

4. DRYING CAPABILITY – Removal of bound moisture is performed with dry or heated gas at up to 6 barg differential pressure across the cake. (HCS – HYPERBARIC CENTRIFUGATION SYSTEM)
Inverting Filter Centrifuge Design & Specifications

**DESIGN FEATURES**

- batch capacities from 7 l to 220 l
- high filtering capability with 1100 to 2000 gravities of force
- horizontal basket design ensures uniform load
- polypropylene or PTFE filter cloth
- outer housing is gas tight to 400 mm H2O
- inertia Pad with dampers allows installation directly on floor
- through-the-wall installation
- shafts and bearings serviceable from the service in rear making the process side free from contamination
- electro/mechanical filter cloth inversion; bearings grease lubricated (oil free execution)
- all process surfaces can be visually inspected
- clean in place design
- available in 316L stainless steel, Hastelloy & other exotic alloy
- all levels of surface finish available

**CONTROL OPTIONS**

- complete PLC controls with touch screen interface
- switch between automatic and manual operation
- variable frequency drive (VFD) speed control
- ATEX electrical enclosures
- optional instrumentation integrated into the control system including oxygen monitoring, temperature, pressure, liquid feed flow, N2 purge flow and effluent particle clarity

**AFTER-MARKET SUPPORT**

- field service & technical support available 24/7
- mechanical and electrical parts
- process control and maintenance manuals
- certifications and construction documentation
- mechanical and electrical upgrades

**Centrifuge Model**

<table>
<thead>
<tr>
<th>HT/GMP</th>
<th>Units</th>
<th>300/110</th>
<th>470/180</th>
<th>600/225</th>
<th>800/345</th>
<th>1000/430</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basket diameter (mm)</td>
<td>mm</td>
<td>300</td>
<td>470</td>
<td>600</td>
<td>800</td>
<td>1000</td>
</tr>
<tr>
<td>Basket length (mm)</td>
<td>mm</td>
<td>110</td>
<td>180</td>
<td>225</td>
<td>345</td>
<td>430</td>
</tr>
<tr>
<td>Filtering surface (m²)</td>
<td>m²</td>
<td>0.10</td>
<td>0.26</td>
<td>0.45</td>
<td>0.90</td>
<td>1.35</td>
</tr>
<tr>
<td>Cake volume (dm³)</td>
<td>dm³</td>
<td>7</td>
<td>27</td>
<td>60</td>
<td>145</td>
<td>220</td>
</tr>
<tr>
<td>Slurry density (kg/dm³)</td>
<td>1,25</td>
<td>1,25</td>
<td>1,25</td>
<td>1,25</td>
<td>1,25</td>
<td></td>
</tr>
<tr>
<td>Maximum basket load (kg)</td>
<td>kg</td>
<td>9</td>
<td>34</td>
<td>75</td>
<td>181</td>
<td>275</td>
</tr>
<tr>
<td>Maximum basket speed (RPM)</td>
<td>RPM</td>
<td>3400</td>
<td>2500</td>
<td>2150</td>
<td>1700</td>
<td>1400</td>
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<tr>
<td>G-factor x g</td>
<td>G</td>
<td>1927</td>
<td>1640</td>
<td>1550</td>
<td>1300</td>
<td>1100</td>
</tr>
<tr>
<td>Centrifuge weight (kg)</td>
<td>kg</td>
<td>700</td>
<td>3000</td>
<td>4000</td>
<td>7500</td>
<td>8800</td>
</tr>
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