**VACUUM DISC FILTERS CDF**

**TECHNICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>CDF 0.5</th>
<th>CDF 1</th>
<th>CDF 3</th>
<th>CDF 15</th>
<th>CDF 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtration area m²</td>
<td>0.5</td>
<td>1</td>
<td>3</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Number of plates per disc</td>
<td>10</td>
<td>10</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Disc diameter mm</td>
<td>720</td>
<td>720</td>
<td>1900</td>
<td>~2260</td>
<td>~2260</td>
</tr>
<tr>
<td>Filter sizes mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length mm</td>
<td>1935</td>
<td>1935</td>
<td>1935</td>
<td>1935</td>
<td>1935</td>
</tr>
<tr>
<td>Width mm</td>
<td>995</td>
<td>995</td>
<td>2500</td>
<td>~3910</td>
<td>~3910</td>
</tr>
<tr>
<td>Height mm</td>
<td>1280</td>
<td>1280</td>
<td>2800</td>
<td>~3300</td>
<td>~3300</td>
</tr>
<tr>
<td>Vacuum pump drive capacity</td>
<td>0.75</td>
<td>1.5</td>
<td>1.5</td>
<td>2.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Installed power kW</td>
<td>1.75</td>
<td>2.7</td>
<td>16</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>Installed power kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filter weight kg</td>
<td>210</td>
<td>300</td>
<td>1800</td>
<td>8500</td>
<td>15000</td>
</tr>
<tr>
<td>Filter operating area m²</td>
<td>8.1</td>
<td>8</td>
<td>17</td>
<td>36</td>
<td>45</td>
</tr>
<tr>
<td>Filter vat slurry level m²</td>
<td>0.1</td>
<td>0.4</td>
<td>1.3</td>
<td>3.8</td>
<td>5.8</td>
</tr>
</tbody>
</table>

**CDF FOR MINERAL AND MINING SLURRIES WITH HIGH SOLIDS CONCENTRATION**

- High rate filtration
- Low final cake moisture
- Low energy consumption
- Continuous operation
- High availability with minimal downtime
- Clean recycle filtrates
- Lowest maintenance and operating costs

**BAKOR OFFERS INNOVATIVE PRODUCTS AND HIGH QUALITY SERVICES FOR ENERGY EFFECTIVE AND COST EFFICIENT FILTRATION, BASED ON CDF FILTERS:**

- Scientific research of customer's projects and problems
- Design and development of filtration processes
- Development of the most efficient solutions for customer's tasks
- Test works
- Production and delivery of filtration equipment
- Continuous audit and service
- Repair and reduction of customers' operation by refurbishment of their ceramic filters with our ceramic filtering elements.

WWW.NTCBAKOR.RU, BAKOR@NTCBAKOR.RU
CDF vacuum disc filters with ceramic filter plates are the best solution for filtration (dewatering) of slurries with high content of solids (from 15 to 70%), when it is required to obtain the dry final cake with minimum operational costs, high filtration rate due to a big filtration area. Ceramic disc filter is the best filter type when the production space is limited.

**APPLICATIONS**

- MINING AND MINERAL INDUSTRIES, FERROUS AND NONFERROUS METALLURGY:
  - Filtration of concentrates
  - Filtration of tails and slimes
- ALUMINA PRODUCTION
  - Filtration of concentrates
- MUNICIPAL, ENGINEERING, CHEMICAL AND FOOD INDUSTRIES:
  - Organization of local water-looped cycles

**TYPICAL CONCENTRATE RESULTS**

<table>
<thead>
<tr>
<th>Concentrate</th>
<th>Moisture, %</th>
<th>Filtration rate, kg/m² per hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper concentrate</td>
<td>7.0-8.5</td>
<td>800-1500*</td>
</tr>
<tr>
<td>Zink concentrate</td>
<td>6.0-9.0</td>
<td>700-950</td>
</tr>
<tr>
<td>Lead concentrate</td>
<td>4.0-7.0</td>
<td>800-3500</td>
</tr>
<tr>
<td>Chrome concentrate</td>
<td>6.0-8.0</td>
<td>1100-1500</td>
</tr>
<tr>
<td>Iron-ore concentrate</td>
<td>7.5-8.5</td>
<td>900-3500</td>
</tr>
<tr>
<td>Molybdenic concentrate</td>
<td>8.0</td>
<td>900-1000</td>
</tr>
</tbody>
</table>

**CDF ADVANTAGES**

- **HIGH SPECIFIC OUTPUT**
  - 1.5-5 times higher than other vacuum and pressure filters
  - Big filtration area per the unit of plant space
- **DRY CAKE**
  - Concentrate filter cake moisture content 7-8 wt %
- **POWER CONSUMPTION ECONOMY**
  - 10-20 times less power consumption
  - Compared to vacuum and pressure filter designs
  - Concentrate driers eliminated
  - Reduction of heavy duty electrical components
- **CERAMIC FILTERING ELEMENTS**
  - Ceramic filtering elements’ life is 36 months
  - High thermal resistance and strength
  - High abrasion resistance
  - High open porosity—up to 45%
- **CLEAR FILTRATE, RAW MATERIALS ECONOMY**
  - No losses of solids with filtrate
  - (content of filtrate solids: 0.001-0.005 gram/liter)
  - Use of the filtrate in the looped water cycle for reduction of water consumption to 30-50%
- **MAINTENANCE AND OPERATING COSTS SAVINGS**
  - Filter media replacement cost
  - Minimal Operating & Maintenance manpower required
- **PLANT ENVIRONMENTAL AND SAFETY**
  - No aerosol blowouts and reduction in man power leads to improved safety record
  - No filtrate solids allows to use the filtrate in the looped water cycle

**APPLICATIONS**

**ADVANTAGE – BAKOR CERAMIC SECTOR**

- **HIGH RATE TURBO DESIGN**
- **CONTROL THE PORE SIZE**
- **APPLICATION SPECIFIC MATERIAL SELECTION**
- **MAXIMIZING MECHANICAL STRENGTH**
- **NON-CLOGGING DESIGN**
- **ABRASION RESISTANT**
- **HIGH TEMPERATURE RESISTANCE**
- **RESISTANCE IN AGGRESSIVE ENVIRONMENTS**

**LABORATORY AND SITE TESTING**

The preliminary research in filterability of pulp is conducted at the testing laboratory unit under laboratory conditions or in the customers shops.

When the test results are positive, then the laboratory test using the CDF-0.5 testing filter with a filtering area 0.5 m² is performed.

The CDF-0.5 is an industrial filter, fully equipped with automatic and regeneration system.