Energy saving twin circulating pumps with flanges

**Construction**
Energy saving variable speed circulating pump driven by a permanent magnet synchronous motor (pm) controlled by on board inverter.

**Applications**
Heating, conditioning, circulating systems.
For civil and industrial applications.

**Operating conditions**
- Liquid temperature from -10 °C to +110 °C
- Ambient temperature from 0 °C to +40 °C
- Maximum permissible working pressure: 6/10 bar
- Storage: -20°C/+70°C max. relative humidity 95% at 40 °C
- Certifications: in conformity with CE requirements
- Sound pressure ≤ 54 dB (A).
- Minimum suction pressure: - 0,5 bar at 50 °C.
  - 0,8 bar at 80 °C.
  - 1,4 bar at 110 °C.
- Maximum glycol quantity: 20%.
- EMC according to: EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-2.
- Connections: Flanges according to PN 6/10, EN 1092-2, DN 40, 50, 65, 80, 100.
- The benchmark for most efficient circulators is EEI ≤ 0,20.

**Motor**
Synchronous motor with permanent magnet.
- Motor: variable speed
- Standard voltage: single-phase 230 V (-10%;+6%)
- Frequency: 50-60 Hz
- Protection: IP 44
- Insulation class: H
- Overload protection (integrated).
- Cable: phases and neutral.
- Constructed in accordance with: EN 60335-1, EN 60335-2-51.

**Features**

**Smart pump**
**NCED G.F** adapt its functions to the system: the circulator measures the pressure and the flow and adjusts the speed to the selected pressure.

**Easy use**
There are different operating modes selectable from the control panel.

**Operation**

Operation of a single pump choosed by the customer, with the second pump on stand-by.
**Operating modes**

**Automatic mode**  
(factory setting):  
In this mode the pump automatically sets the operating pressure, depending on the hydraulic system. This mode is recommended in most systems.

**Proportional pressure mode:**  
The circulator changes the pressure proportionally to the current flow.  
The pressure value can be adjusted with the + and - buttons.

**Constant pressure mode:**  
The circulator maintains the pressure constant when the reference flow changes.  
The pressure value can be adjusted with the + and - buttons.

**Fixed speed mode:**  
The circulator works with constant curve and the curve could be changed using + e - buttons.

---

**Coverage chart**

![Coverage chart](image_url)
NCED G.F  Energy saving twin circulating pumps with flanges

Characteristic curves

Curve di funzionamento riferite a singola testa
**NCED G.F**  
Energy saving twin circulating pumps with flanges

### Materials

<table>
<thead>
<tr>
<th>Component</th>
<th>Pos.</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump casing</td>
<td>1</td>
<td>Cast iron</td>
</tr>
<tr>
<td>Impeller</td>
<td>2</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Shaft</td>
<td>3</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Bearings</td>
<td>4</td>
<td>Carbon</td>
</tr>
<tr>
<td>Thrust bearing</td>
<td>5</td>
<td>Steel</td>
</tr>
<tr>
<td>Rotor</td>
<td>6</td>
<td>Stainless steel jacket</td>
</tr>
<tr>
<td>Winding</td>
<td>7</td>
<td>Copper wire</td>
</tr>
<tr>
<td>Electronic card</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Gasket</td>
<td>9</td>
<td>EPDM</td>
</tr>
</tbody>
</table>

### Examples of installations

![Diagram of pump installations]

### Dimensions and weights

<table>
<thead>
<tr>
<th>TYPE</th>
<th>DN</th>
<th>H</th>
<th>Q</th>
<th>P&lt;sub&gt;1&lt;/sub&gt;</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>W min</td>
<td>W max</td>
</tr>
<tr>
<td>NCED G 65F-180/340</td>
<td>65</td>
<td>17</td>
<td>60</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>NCED G 80F-130/360</td>
<td>80</td>
<td>13</td>
<td>78</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>NCED G 80F-180/360</td>
<td>80</td>
<td>17</td>
<td>62</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DN</th>
<th>DE</th>
<th>DK</th>
<th>DG</th>
<th>N.</th>
<th>Ø</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>165</td>
<td>110/125</td>
<td>90</td>
<td>4</td>
<td>14/19</td>
</tr>
<tr>
<td>65</td>
<td>185</td>
<td>130/145</td>
<td>110</td>
<td>4</td>
<td>14/19</td>
</tr>
<tr>
<td>80</td>
<td>200</td>
<td>160</td>
<td>128</td>
<td>8</td>
<td>19</td>
</tr>
</tbody>
</table>