**Designation**

<table>
<thead>
<tr>
<th>Designation</th>
<th>NCE GS 40 F - 120 / 250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td></td>
</tr>
<tr>
<td>Version for sanitary hot water</td>
<td></td>
</tr>
<tr>
<td>DN ports in mm</td>
<td></td>
</tr>
<tr>
<td>With flanges</td>
<td></td>
</tr>
<tr>
<td>Max. head in dm</td>
<td></td>
</tr>
<tr>
<td>connection size mm</td>
<td></td>
</tr>
</tbody>
</table>

**Construction**

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

**Applications**

Sanitary hot water systems.

**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: 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**

NCE GS.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.
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.

Operating mode-control panel
NCE GS.F could work in:
- automatic mode
- proportional pressure mode
- constant pressure mode
- fixed speed mode
The night mode could be selected with any operating mode.

Coverage chart

NCE GS.F

NCE GS 40F-120
NCE GS 50F-130
NCE GS 65F-130
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>Brass</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>
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</tbody>
</table>

Examples of installations

Dimensions and weights

<table>
<thead>
<tr>
<th>TYPE</th>
<th>DN</th>
<th>H</th>
<th>Q</th>
<th>P1</th>
<th>mm</th>
<th>kg</th>
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<tbody>
<tr>
<td>NCE GS 40F-120/250</td>
<td>40</td>
<td>12</td>
<td>25</td>
<td>0.18</td>
<td>2.2</td>
<td>65</td>
</tr>
<tr>
<td>NCE GS 50F-130/280</td>
<td>50</td>
<td>13</td>
<td>39</td>
<td>0.23</td>
<td>3.5</td>
<td>70</td>
</tr>
<tr>
<td>NCE GS 65F-130/340</td>
<td>65</td>
<td>13</td>
<td>65</td>
<td>0.33</td>
<td>4.8</td>
<td>80</td>
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