Emergency stopping brake for Hoisting applications.

SHD9 caliper belongs to the SIME Brakes SHD range of Stromag. This fail-safe single-spring hydraulic caliper is an appreciated answer to the technological challenge imposed by lifting equipment. Robust construction and simplicity of operation bring to this caliper a high reliability. Its compact and light weight design allows an easy mounting and operation in a restricted space.

A large torques range enables the installation of this caliper on multiple equipments. Hydraulic Power Pack and further options can be provided in accordance with the installation requirement.

Applications
- Tower Cranes
- Port Cranes
- Offshore applications

Benefits include
- Hydraulic caliper
- Direct acting caliper / few components
- Designed for 200,000 cycles
- Compact and light weight design
- Braking force from 43 kN to 100 kN
- Protection level C3-H
- Positive lining fastening : easy replacement
- Opening and wear monitoring switches preset in factory
- Option : Closing monitoring switch
Caliper SHD9

- Fail safe braking
- Braking by spring application
- Hydraulic release
- Opening proximity switch for PLC (induction sensor)
- Lining wear detectors
- Association with discs thickness 30 mm

Working conditions:
- Ambient temperature: -10°C to +60°C
- Relative humidity ≤ 70%
- Dust in atmosphere ≥ 65μm
- Other conditions, consult Stromag.

Use:
- Emergency stopping brake in case of overspeed or loss of electrical supply

Options:
- Lining wear proximity switch
- Discs thickness 24 ≤ e < 30 mm.
- Option GF:
  - Dynamic braking: -30°C to +60°C
  - Parking braking: -40°C to +60°C
- Marine protection

Torque and effort values are subject to a variation of ±10%
Response time at nominal torque ≤ 0.3

<table>
<thead>
<tr>
<th>Designation</th>
<th>Caliper</th>
<th>SHD9-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Braking force BF for air gap disc/lining of 2x1mm</td>
<td>Dynamic</td>
<td>N 100 000</td>
</tr>
<tr>
<td></td>
<td>Static</td>
<td>N 88 000</td>
</tr>
<tr>
<td>Linear speed of the disc</td>
<td>m/s</td>
<td>≤ 10</td>
</tr>
<tr>
<td>Dynamic braking torque BT (m.N) for 1 caliper and disc ØD (mm) / D max ≤ 2000mm</td>
<td>N.m</td>
<td>BT = BF (D/2000 - 0.093)</td>
</tr>
<tr>
<td>Regulation pressure</td>
<td>Minimum</td>
<td>bar 180</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>bar 200</td>
</tr>
<tr>
<td>Setting pressure limit valve of hydraulic unit</td>
<td>bar</td>
<td>220</td>
</tr>
<tr>
<td>Total volume of oil displaced for air gap disc/lining of:</td>
<td>cm³</td>
<td>28</td>
</tr>
<tr>
<td>2 x 1mm (nominal opening)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x 1.5mm (nominal opening and wear before setting)</td>
<td>cm³</td>
<td>39</td>
</tr>
</tbody>
</table>

Electrical data:
- Opening proximity switch
  - Standard caliper and caliper option GF
    - 3 wires PNP NO
    - 10 to 58 VDC 200 mA with connector M12
  - Wear proximity switch (option):
    - Temperature -10°C to +60°C
      - 3 wires PNP NO
      - 10 to 58 VDC 200 mA with connector M12
    - Temperature -40°C to +60°C / Option GF
      - 3 wires PNP NO
      - 10 to 36 VDC 200 mA with connector M12

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