### High-Pressure Spindles, Mechanical

with integrated wedge system

clamping force 40 to 140 kN

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**Application**
- In bars and blocks
- Clamping and locking of workpieces and dies
- When the available space is limited
- In presses, punching machines and machine tools

**Description**

Following manual positioning of the high-pressure spindle against the clamping edge, the drive spindle is operated by turning the hexagon nut SW1. Thus, the clamping force is transmitted in axial direction to the clamping point by the wedge system.

The required clamping force is achieved by selecting the appropriate torque on the torque wrench (see force torque diagram). For unclamping, proceed in the reverse order.

**Accessories**

- Torque wrench 20 – 100 Nm
  - Part no. 937926610
- Torque wrench 40 – 200 Nm
  - Part no. 937926620

**Application example**

- **Advantages**
  - Easy to retrofit
  - Temperature resistance up to 250 °C
  - Compact design allows for multiple clamping
  - High clamping force with low tightening torque
  - Self-locking due to patented wedge system
  - Individual use

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**Application example**

![Section of high-pressure spindle](image)

**Clamping force/tightening torque diagram**

**Important note**

Before applying the tightening torque, the high-pressure spindle must be screwed against the clamping edge so that there is no play. If the parts are not rigid, tighten the high-pressure spindle using the hexagon nut SW2 until there is no play.

The clamping screws are permanently lubricated and maintenance free in case of normal operating conditions.

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**Table:**

<table>
<thead>
<tr>
<th>Clamping force [kN]</th>
<th>40</th>
<th>80</th>
<th>140</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clamping stroke [mm]</td>
<td>1.5</td>
<td>2.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Max. tightening torque [Nm]</td>
<td>30</td>
<td>70</td>
<td>120</td>
</tr>
<tr>
<td>Max. static load [kN]</td>
<td>80</td>
<td>160</td>
<td>240</td>
</tr>
<tr>
<td>a [mm]</td>
<td>62</td>
<td>75</td>
<td>90</td>
</tr>
<tr>
<td>b [mm]</td>
<td>73</td>
<td>90</td>
<td>110</td>
</tr>
<tr>
<td>Ø d [mm]</td>
<td>19</td>
<td>28</td>
<td>39</td>
</tr>
<tr>
<td>g [mm]</td>
<td>M36 x 3</td>
<td>M48 x 3</td>
<td>M64 x 4</td>
</tr>
<tr>
<td>Monitoring of clamping stroke s [mm]</td>
<td>5</td>
<td>7.5</td>
<td>8.5</td>
</tr>
<tr>
<td>SW 1 [mm]</td>
<td>13</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>SW 2 [mm]</td>
<td>30</td>
<td>41</td>
<td>55</td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>0.5</td>
<td>2.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Part no.</td>
<td>2272210</td>
<td>2273210</td>
<td>2274210</td>
</tr>
</tbody>
</table>

Other sizes and threads (e.g. inch) are available on request.

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**Figure:** Section of high-pressure spindle

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Actual issue see www.roemheld-group.com

Subject to modifications