**INSTALLATION OF PULL-RING CONNECTIONS WITH A U-SHAPED SEAL**

Pull-rings are used in conjunction with U-shaped seals to connect pipe components and pressed components with a 6 mm lip. The use of different U-shaped seal profiles enables the same pull-ring to be used with 1 to 2 mm thick pipe components and pressed components.

To meet the different requirements of every system, JACOB offers a comprehensive and wide-ranging standard range which covers most requirements.

**U-shaped seals**

<table>
<thead>
<tr>
<th>Profile for 1 mm wall thickness</th>
<th>Profile for 2 and 3 mm wall thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBR, silicone, Viton</td>
<td>NBR, silicone, Viton, EPDM conductive</td>
</tr>
<tr>
<td></td>
<td>For 3 mm wall thickness, the use of U-shaped seals made of NBR or silicone is recommended. Only in conjunction with the pull-ring for 3 mm pipework.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pipe component B</th>
<th>Wall thickness pipe component A</th>
<th>Wall thickness pipe component A</th>
<th>Wall thickness pipe component A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mm</td>
<td>1.5 mm</td>
<td>2 mm</td>
</tr>
<tr>
<td>1 mm</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>1.5 mm</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>2 mm</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>3 mm</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
</tbody>
</table>

**Pull-rings**

<table>
<thead>
<tr>
<th>QUICK CONNECT pull-ring</th>
<th>Pull-ring (without sealant)</th>
</tr>
</thead>
</table>

**GENERAL INSTALLATION INFORMATION ON CREATING LEAK-PROOF CONNECTIONS**

- Repair damaged lipped ends (align)
- Eliminate any unevenness from the lipped end
- Assemble the pipework tension-free
- Ensure when fitting the pull-ring that the U-shaped seal does not form any loops
- Support horizontal pipework roughly every 4 metres. If there are several short pipe components in the pipeline, the interval between supports should be reduced
- Attach branch pipes so that they do not generate any tension in the main pipeline
- Tighten the bolts of two-part pull-rings evenly on both sides
- Re-tighten the pull-rings after 24 hours to ensure they are as leak-proof as possible
INSTALLATION OF PULL-RING CONNECTIONS WITH A U-SHAPED SEAL

Note: To connect JACOB pipe components with a 6 mm lip. A U-shaped seal and a pull-ring are needed for each connection. You need a 6 mm hexagon cap screwdriver to mount the pull-rings.

Step 1
Attach a U-shaped seal over one of the lipped pipe ends.
• The U-shaped seal must be slightly stretched to enable it to be attached
• The profiled side must face the pipe component that is being connected

Step 2
Position the connecting pipe and slide one pull-ring half over the lipped pipe end.

QUICK CONNECT pull-ring
First, attach the pull-ring half without the toggle clip

Two-part pull-ring
We recommend separating the two halves of the pull-ring beforehand

Ensure that the pipe components are properly aligned and the U-shaped seal is in the right position.

Note: We recommend that when fitting horizontal pipelines where condensate occurs, any points at which the U-shaped seal is glued should be positioned on top, and the connecting points of the pull-ring halves are horizontal. This ensures the maximum possible tightness at the lowest point of the connection.

Step 3
Press the second pull-ring half onto the lipped pipe ends.

N.B.: When closing the pull-ring, the U-shaped seal must not form any loops.

QUICK CONNECT pull-ring
• Place the clasp over the closing hook and close the clip
• To prevent the connection from loosening accidentally (such as due to vibration) tighten the bolt with a 10 Nm torque on the mounting face

Two-part pull-ring
• Tighten the bolts evenly with a torque of 10 Nm

N.B.: A bolt tightening torque of 10 Nm is necessary for the QUICK CONNECT pull-ring, or 25 Nm for the two-part pull-ring, for shock explosion proof connection of up to 3 bar over-pressure.