3. Maintenance of Bevel-helical Gearboxes type KS / KSH / MKS / MKSH / MKSHF

3.1 Changing the lubricant

**N.B.!**
With this gear type, different oil grades must be used according to the gear ratio

- **gear ratio i = 6.0 to 28.8** → mineral gear oil ISO VG 150 DIN 51502
- **gear ratio i = 33.6 to 48** → special hypoid oil

See more on this in the table below.

In our Bevel-helical gearboxes, we use as standard mineral lubricants. Where synthetic lubricants are used, please refer back to us.

# N.B.! Do not mix mineral and synthetic oil grades. The gearbox could be damaged if this is done.

3.2 Oil change interval

The first oil change must be carried out after approx. 500 operating hours. Further oil changes are necessary after every 3000 operating hours. Max. 3 years.

3.3 Procedure

# Allow gears to warm up
# Secure drive and machine from unintentional movement or switching on
# Open drain plug. allow lubricant to drain out through drain hole
# Close drain plug
# Remove vent and fill with recommended oil grade to the oil level mark or the centre of the sight glass
# Replace vent

The table below specifies the required oil quantity.

3.4 Oil type according to parts list or equivalent oil from other manufacturers, miscibility must be checked.

3.5 Required oil quantities for all ratios

<table>
<thead>
<tr>
<th>Gearbox size</th>
<th>1</th>
<th>2</th>
<th>4</th>
<th>8</th>
<th>16</th>
<th>32</th>
<th>64</th>
<th>128</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil volume [Litres]</td>
<td>0.3</td>
<td>0.5</td>
<td>0.7</td>
<td>1.8</td>
<td>4</td>
<td>6.5</td>
<td>12</td>
<td>25</td>
</tr>
</tbody>
</table>

**N.B.!** The volumes stated are approximate values. The sight glass or oil dipstick is definitive for the precise oil volume.