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

3.1 **Changing the synthetic lubricant**

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

- gear ratio $i = 6$ to $28.8 \rightarrow$ synthetic gear oil ISO VG 150
- gear ratio $i = 33.6$ to $48 \rightarrow$ synthetic hypoid oil

See more on this in the table below.

This gearbox is filled with a synthetic oil.

# N.B.! Do not mix mineral and/or 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. 1,000 operating hours. Further oil changes are necessary after every 10,000 operating hours. max. 3 years please work with point 3.3

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 specified 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.