Operations and maintenance instructions

Servo - Drive adapter Type SEP / SEK

This safety notes must be retained

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1. Notes

1.1 General remarks

Carefully read these operating instructions before working on the drive cylinder and/or starting its operation. These operating instructions must be absolutely followed. They must be retained in immediate proximity of the gear.

Please contact Getriebebau NORD if you do not understand parts of these operating instructions!

All job activities such as transport, storage, setup, electrical connection, initial operation, service, maintenance and repair may only be performed by qualified professionals.

Assembly and maintenance activities must only be performed when the drive is not in operation. The drive must be free of voltage and must be secured against accidental switching on.

2. Description

E = Coupling assembly distance from flange surface
Table 1) Assignment gear type / coupling / motor

<table>
<thead>
<tr>
<th>Cylinder type</th>
<th>Coupling size*</th>
<th>Assembly distance E [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE. 100</td>
<td>GS 19</td>
<td>40</td>
</tr>
<tr>
<td>SE. 130</td>
<td>GS 24</td>
<td>50</td>
</tr>
<tr>
<td>SE. 165</td>
<td>GS 28</td>
<td>58</td>
</tr>
<tr>
<td>SE. 215</td>
<td>GS 28</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>GS 48</td>
<td>80</td>
</tr>
<tr>
<td>SE. 300</td>
<td>GS 48</td>
<td>82</td>
</tr>
</tbody>
</table>

*) All coupling sizes can be delivered in SEP or SEK design, hardness of sprocket gear (Shore) is principally 98 Sh-A-GS, red color

3. Assembly

Because of the elastic prestress of the sprocket gear, an axial assembly force develops when pushing the coupling hubs together with the sprocket gear. This assembly force can be reduced by lightly spraying the sprocket gear with oil.

Observe the distance E listed in table 1 to prevent damaging the coupling!

3.1 Hub type SEP

- The precision bores and shaft ends must be freed of preservation agents and cleaned prior to the assembly.
- Slightly heating the hub (max. 80° C) facilitates drawing onto the motor shaft.
- Push the coupling hub on the motor shaft until the appropriate distance E (table 1) has been reached.
- Secure the hub by tightening the setscrews DIN 916.

3.2 Hub type SEK

- Oil cleaned hub bore and motor shaft with low viscosity oil. (e.g.: Castrol 4 in 1 or Klüber Quitsch EX)
- Do not use oils or greases containing molybdenum disulphide or other high-pressure additives as well as lubricant pastes!
- Slightly loosen clamping screw until the clamping ring rests loosely on the hub.
- Push the clamping ring hub onto the motor shaft and position while observing the E distance from table 1.
- Slightly tighten clamping screws allowing the clamping flange to set properly.
- Tighten clamping screw evenly crosswise until the fastening torque specified in table 2 has been reached. The procedure must be repeated until the fastening torque has been reached with all clamping screws. Even during interim steps, the procedure must be repeated until the respective fastening torque has been reached with all clamping screws.
Disassembly

- Loosen the clamping screws evenly one after the other. Loosen each screw only half a turn per revolution. Unscrew all clamping screws by 3-4 turns.

Unscrew the clamping screws located next to the disassembly threads and screw into the respective disassembly thread until limit is reached.

- The clamping ring will be loosened by incremental even and crosswise tightening of the screws.

- For the reassembly, clean the hub bore, shaft and conical surfaces of the clamping ring and of the clamping ring hub and subsequently oil with low viscosity oil. (e.g.: Castrol 4 in 1 or Klüber Quitsch EX)

- Do not use oils or greases containing molybdenum disulphide or other high-pressure additives as well as lubricant pastes!

Table 2) Fastening torques

<table>
<thead>
<tr>
<th>Coupling</th>
<th>SEP</th>
<th>Clamping screw</th>
<th>Fastening torque [Nm]</th>
<th>Quantity</th>
<th>Clamping screw</th>
<th>Fastening torque [Nm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS 19</td>
<td>M 5</td>
<td>M 4</td>
<td>6</td>
<td>2.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GS 24</td>
<td>M 5</td>
<td>M 5</td>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GS 28</td>
<td>M 8</td>
<td>M 5</td>
<td>8</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GS 48</td>
<td>M 8</td>
<td>M 10</td>
<td>4</td>
<td>60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Wear limits of sprocket gear

No abrasion or wear is allowed for zero backlash applications since the function principle of these couplings (zero backlash) is otherwise no longer given. This means that the sprocket gear must be replaced in case of backlash.

Use only sprocket gear with same color (red)!

For jaw couplings (Rotex), measure the tooth thickness of the elastomer sprocket gear according to illustration 4. B is the nominal dimension when new.

Nominal dimension
Coupling sprocket gears

<table>
<thead>
<tr>
<th>Type</th>
<th>R24</th>
<th>R28</th>
<th>R48</th>
</tr>
</thead>
<tbody>
<tr>
<td>B [mm]</td>
<td>8.8</td>
<td>11</td>
<td>18</td>
</tr>
</tbody>
</table>