

Mounting and Maintenance Instructions

Series DC

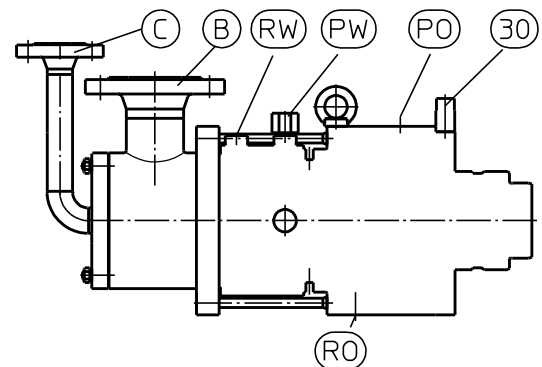
IDC_E.DOC-Version 05.04.01
 Page 1 of 3 Pages

1 Safety information for rotary joints

- Mount **protective cover** over rotary joint to **avoid contact, burns or escaping steam/hot water**.
- Operate rotary joints only with **sufficient torque supports**. We recommend that the antirotation device be electrically monitored and linked to the emergency shut down system to reduce damage to the bearings.
- Use only **flexible hose connections!**
- Operate rotary joint **only with water cooling supply. Never operate rotary joint without cooling!**
- For **safety reasons install temperature control** at the rotary joint - **electrical installation must be done by qualified electrician!** Perform electrical test as per DIN / VDE 0113 resp. EN 60 204.
- The service life of counter-rotating parts is limited. Therefore, exchange seals and bearings after 12 months usage!
- **Trouble-shooting and repair only by trained people.**

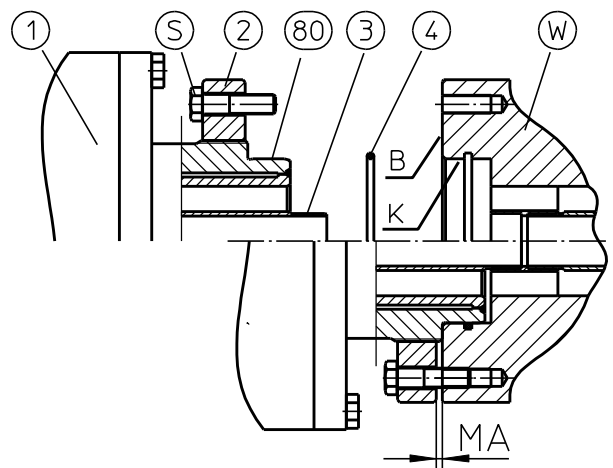
2 Preparation of housing connections

- **Cooling water connections PW, RW** always on the top.
- **Rotary joint with oil pressure lubrication :**
Oil inlet PO always on the top - **oil outlet RO** always at the bottom. **Do not reduce the cross-section of the oil outlet!** Otherwise malfunction in the bearing housing.
- **Steam connection B, condensate connection C** and position of the **locking fork 30** at the cover can be moved by $8 \times 45^\circ$.



3 Mounting rotary joint to roll

- Rotary joint with internal pipe: Place or screw internal pipe into the rotary joint (depending on version).
- Place internal pipe concentrically versus roll W and rotary joint 1. Excentric running and axial torsions lead to malfunction of the rotary joint. For easier mounting of the rotary joint with inner pipe we recommend to loosen the elbows at connection C. Do not damage flat packing 360! We recommend internal pipes of stainless steel.
- For smooth operation of rotary joint ensure concentricity and minimum run-out tolerance of roll!
- Clean centre bore K and roll shoulder B, apply mounting paste and insert O-ring 4 into roll. For special sealing part see additional instructions.
- Mount screwed flange 2 with screws S over rotor 80.
- Place rotary joint into roll - screw flange 2 into the roll and tighten. Minimum distance between roll and screwed flange $MA = 0,5 \text{ mm}$.



4 Connection of rotary joint

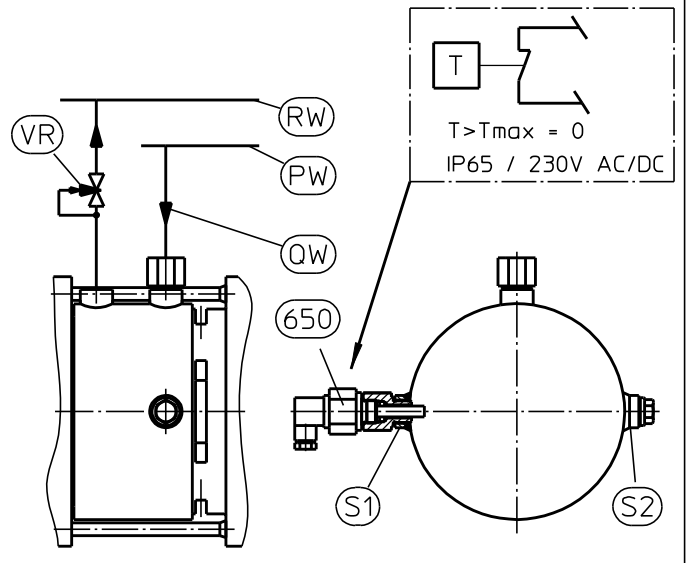
- **For safety reasons** always install **torque support 30** of the rotary joint housing. The support element must allow axial and radial movement of the housing.
- **Steam and condensate connections B and C:**
 Always **use flexible connections** in order to compensate thermal expansion and vibrations. Never apply torsion, tensile or pressure loads to metal hoses. Observe the minimum bending radius quoted by the manufacturer.

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• Cooling water connections:

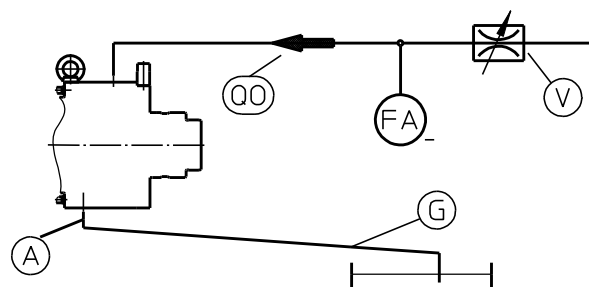
- **Cooling water connections PW, RW** always at the **highest point!**
Connection with flexible hoses only !
- **Cooling water temperature at PW max. 30 ° C.**
Otherwise contact manufacturer.
- **Control of the cooling water temperature by temperature guard 650** - it can be screwed either in neck 1 or in neck 2, as desired
- For safety reasons **temperature guard must be integrated into customer's controlling** device (e.g. PLC)! Electrical connections and apparatus execution see separate documentation. Repair must be done within 20 min. - otherwise damage of the mechanical seal.
- **Cooling water in demineralized quality.** Otherwise contact manufacturer.
- We recommend to control the **cooling water quantity** through a flow regulation valve (provided by customer) - max. water temperature at outlet 35 ° C.
- **Minimum required cooling water quantity QW if no flow regulation valve is foreseen :**



Nominal diameter of r.j.(DN)	25	32	40	50	65	80	100
Cooling water quantity (l/min)	> 3	> 3	> 5	> 6	> 6	> 8	> 10

• Rotary joint with oil pressure lubrication :

- **Required oil quality :**
(if not clear contact manufacturer)
... Clean, without particles
... Oil viscosity at least 100 cSt at 40°C
... Temperature stability at least 200°C
- **Control of the lubricating oil quantity through distributor V (to be provided by customer) with volume flow control FA** - for safety reasons it has to be integrated into customers's controlling device (e.g. PLC). **Repair must be done within 5 min.**
- otherwise damage of bearings.
- **Provide oil outlet** with sufficient slope G and do not reduce the outlet **cross-section A** - otherwise risk of malfunction of the rotary joint!
- Required lubricating **oil capacity QO :**



Nominal diameter of r.j.(DN)	25	32	40	50	65	80	100
Capacity of lubricating oil (l/min)	1,5	1,5	1,5	2	2	3	3,5

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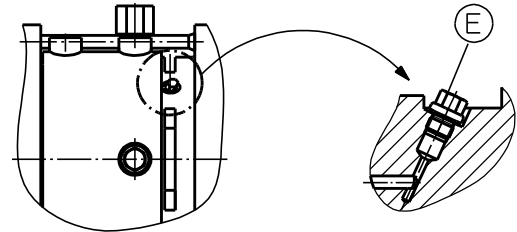
Series DC

IDC_E.DOC-Version 05.04.01

Page 3 of 3 Pages

5 Start-up

- **Application data** for rotary joint according to our instructions.
Dry run not allowed, with the exception of test run of max. 30 min. at very low speed.
- **For first start-up:** Open **screw E** a few turns for approx. 30 seconds until steam can escape.



6 Maintenance

- **The bearings of DC rotary joints** are filled with **high-quality grease**. **Grease only** with Lubricant Consult grease **Lubcon TURMO TEMP LP 5002**. Contact manufacturer if you want to use other grease brands! (Tel.: ++49-6109-76500)!
- **Relubrication** only with type Lubcon grease **TURMO TEMP LP 5002**. Contact manufacturer if you want to use other grease brands! (Tel.: ++49-6109-76500)
- **Lubrication intervals** : temperatures of

up to 150 °C	every six months
150 °C to 200 °C	every 8 weeks
higher than 200°C to 220 °C	every 4 weeks

For higher temperatures contact manufacturer

Nominal diameter of rotary joint (DN)	25	32	40	50	65	80	100
Lubrication capacity in full strokes of a DIN 1283 grease gun (1,2 cm ³ /stroke)	10	15	20	25	35	55	75

7 Customer service

- Maier rotary joints can be **repaired** by experienced mechanics. Repair according to separate instruction or send rotary joint back to manufacturer. Use only genuine Maier spare parts.

- We reserve the right to technical modifications -