



**Use Guide Of Slewing  
Rings**

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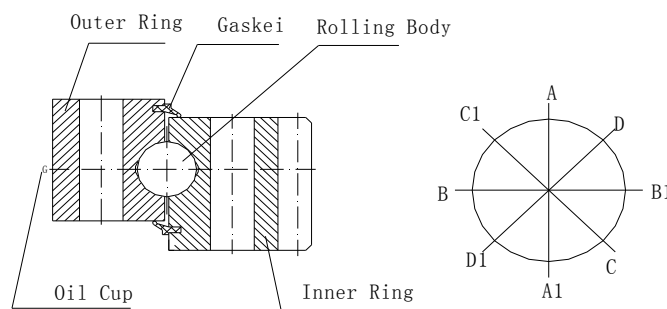
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## Slewing Rings Use Guide

### 1. Structure of Slewing Support

Take the single row ball-slewing support as an example



### 2. Name Print & Mark

The name print is sited at the flex band aside blocking of inner ring or outer ring.

The name print carries Manufacturer, type of the product, date of production, and serial number of product.

For block-free inner ring or outer ring, mark “R” or “S” at the flex band. The red or green paint is used to mark where the product gear fluctuates most, and adjust small gear at the marked spot.

### 3. Preparation before installation

#### 3.1. Slewing support

- a. Confirm the delivered slewing support type is in line with your order.
- b. Confirm the delivered slewing support in good order.

### 3.2. Bracket installation

- a. Confirm the bracket you shall install with enough strength and rigidity, lest deformation after installation and safety accident.
- b. The installation foundation surface must be cleaned, free from welding stag, and etc phenomenon.
- c. Welding operation is prohibited after the slewing support is installed.
- d. The flatness of the foundation surface for installation bracket is shown in the following table.

Table 1

Unite: mm

Central Diameter of the rolling trough	Flatness(within 100mm) of the plain cooperating with slewing support on bracket	The max flexibility of the bracket allowed
~1000	$\leq 0.15$	$\leq 0.6$
100~1500	$\leq 0.20$	$\leq 0.8$
1500~2000	$\leq 0.22$	$\leq 1.0$
2000~2500	$\leq 0.25$	$\leq 1.2$
2500~3000	$\leq 0.30$	$\leq 1.5$

### 4. Installation

- a. Check the grease of slewing bearings. Normally we greased only with workshop grease. It means that the slewing bearings must be greased again before assembled. The volume of grease should be enough until it come out of the seal and turn about 90° and grease another area. Repeat this until it is full greased. Normally the grease can be used shell EP2 or similar if without special grease is required.
- b. Lay horizontally the slewing support on the installation foundation (pay attention to the 2 hoist lugs on the inner or outer rings of the slewing support), use grange to inspect the



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contact situation; if there is any gap, it is probable to shim with plastics or shims for partial infilling;

c. Flew band (mark“R”or block) shall be located non-load area or non-often loaded area;

d. Align the installation holes, install screw bolts naturally into the relevant holes; if any blocking, rectify installation holes; adjusting by hammer is prohibited, lest bearing damage.

e. The bolts shall be high tension bolts in line with the situation of slewing support shall stand;

f. Enough pre-fastening force is needed for screw installation; the pre-fastening force is 0.7 times of the yielding tolerance of the bolt material. Use moment spanner in installation. Tighten the screws according to the relevant load, specification and quantity after strict calculation in a symmetrical way; tightening screws in and order way is prohibited. The actual pre-tightening torque or moment is shown in the following table2.

g. A-A1, B-B1, C-C1, D-D1 as shown in the left fig our.

Table 2

Bolt specification	Diameter of the installation hole(mm)	Bolt strength grade: GB3096.1-821		
		8.8	10.9	12.9
		Strength limit of bolt material sminN/MM <sup>2</sup>		
		640	900	1080
		Pre-tightening moment: MAIN/ml		
M10	11	44	62	75
M12	13.5	77.5	110	130
M14	15.5	120	170	210
M16	18	190	265	320
M18	20	260	365	435



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M20	22	370	520	620
M22	24	500	700	840
M24	26	640	900	1080
M27	30	950	1350	1620
M30	33	1300	1800	2160
Pre-Tightening Force FA(13N)				
M33	36	293	412	195
M36	39	344	484	518
M39	42	414	584	698
M42	45	473	665	798
M45	48	553	777	932
M48	52	623	876	1050
M52	56	749	1054	1265
M56	62	863	1214	1457
M60	66	1008	1418	1621

### 5. Inspection after installation

- a. Visual inspect first if any obstacles in the way of slewing, such as surplus length of screw bolt, hard foreign particles in-between dents and etc;
- b. Turn the slewing support to see if flex and any abnormal sound then;
- c. When it is necessary to weld something else, the slewing support is prohibited to be used as a part of circuit;

### 6. Daily care in use

6.1、 When the slewing support is to exit shop, the rolling trough is enter into a little Li-grease ( for example Shell EP2), When the new slewing was installing and using, the user



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should be filled with new Li-grease according to the different working conditions. Generally, lubricate once after running 100 hours for ball rolling support, and 50 hours for pole rolling support; when add in Li-grease, it is necessary to have the mechanism run slowly, greasing and turning at the same time, up to grease squeezing overflows, which means the old grease has been substituted. In case the mainframe is kept idle for a long period, fully greased before running. When add in grease, keep slowly, so as to let the grease fill uniformly.

### 6.2、Precautions for greasing:

- a. Keep lubrication material (grease) clean
- b. Never mix grease from different bands.
- c. Always clean grease spout before greasing
- d. Squeeze a little to cast off spout part contaminated grease before greasing with a greasing gun;

6.3、Inspect the dent surface according to different situations and often clean away foreign particles in case it is exposed in the air, and lubricate with appropriate grease;

6.4、In the first 3-4days of the running of slewing support, inspect if any screw loosening; and the once half a month or 500 hours, so as to ensure each bolt keep enough pre-tightening force. Generally, change all the bolts once every 6-7 years or 14000 hours;

6.5、During use, if any abnormal sound or blocking found inner slewing support, stop the machine for inspection, dismounting if necessary;

- a) The surface of the slewing support shall bear an anti-corrosion paint;
- b) Often check if the sealing band peeling off or broken, reset any peeling found, and change any broken.

## **7. Keeping**

When exit-shop the slewing support, it is well oiled and packed. The packed slewing support shall be kept in dry and on plain floor; generally, unpacking for inspection each 6 months of keeping idle, and repacking. Confer the following for packing:



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1. When unpacking, start from the most outer layer; and one layer by one layer;
2. Pour in grease to rolling trough;
3. Paint rust-proof grease (F20-1) or industrial Vaseline;
4. Re-packing as the original.

### **8. Shipping**

When transportation, please always keep the slewing support horizontally, and in a fixed way, lest gliding to and fro the slewing support; and according to the actual situation and requirements from the customer to adopt different packing.

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