

ROTARY TABLE BEARING



Have you met any following conditions regarding bearings & its neighboring parts?

Heavy noise

Frequent failures

Overheating of operation

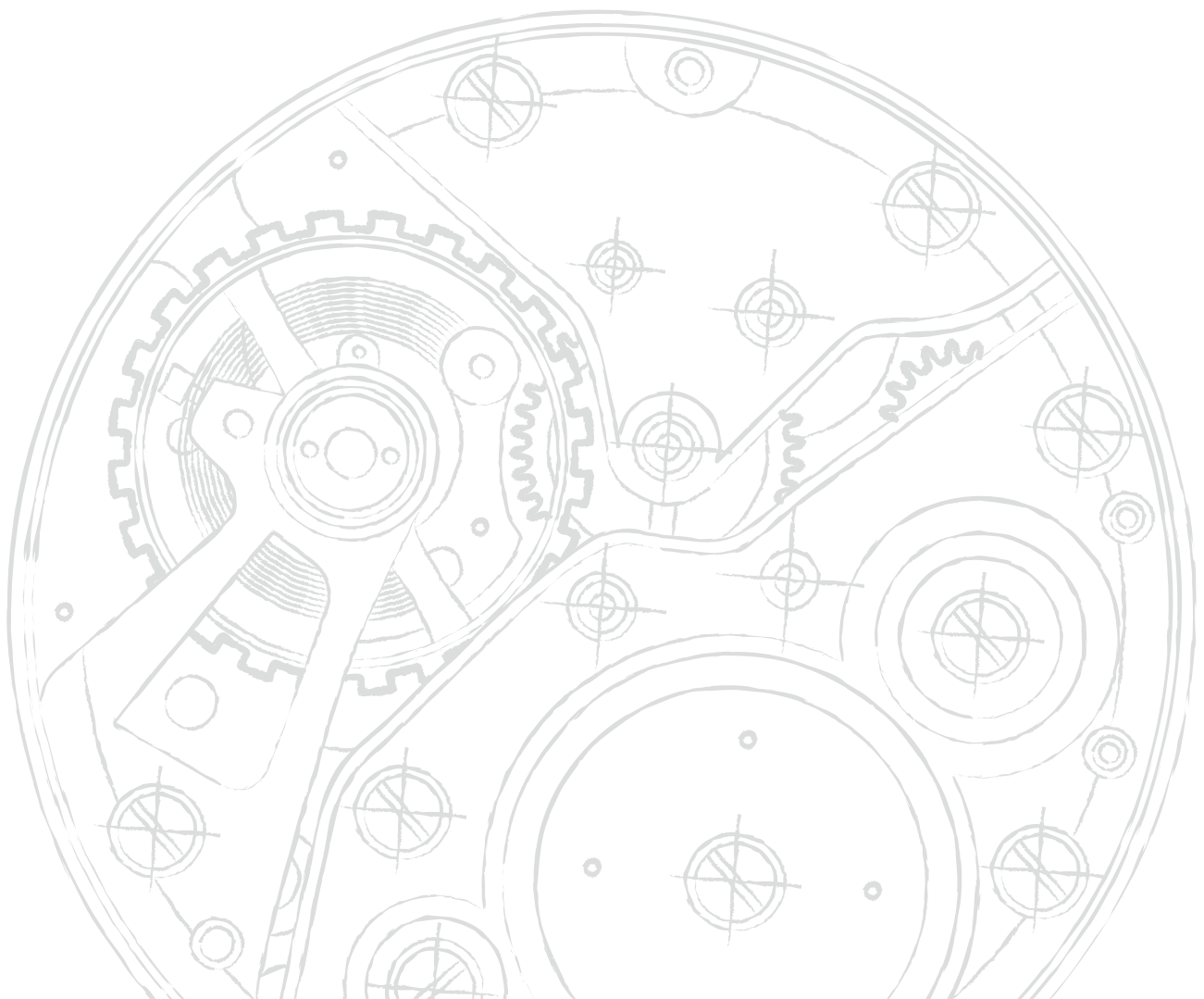
Shorter service life

**Do you want to find out the causes and
get effective solutions?**

THB can help you do that.



**THB's specialized
technical services for
various applications **include****





DESIGN SELECTION

Application analysis

To understand the difficulties in the transmission system; to prevent clients from potential problems in equipment design or operation.

Product selection

To provide advices for selecting optimal bearing, in order to match clients' design requirements based on application characteristics.

Application of special technologies

Depending on the application, special technologies (e.g., special coatings) will be selected to adapt to client's extreme working condition.

Customizing bearing units products

To customize the complete mechanical unit, including bearings. Which can benefit both operation precision and assembly efficiency for clients.

Optimization of design

Through analysis and optimization of the existing transmission design, enable the equipment to run faster at less energy consumption, as well as increasing reliability.



STATUS ANALYSIS

Performance Test

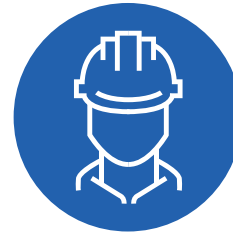
To use simulation software analysis and actual testing of the test machine to determine whether the bearings and its surrounding components could meet the requirements of the client (load, speed, temperature rise, noise and service life).

Failure analysis

To analyze the materials, geometrical accuracy, surface damage and microstructure to identify the cause of any failure and then to provide an effective solution timely.

Lubrication analysis and management

To analyze the equipment operation status and determine the lubrication management plan, including the selection of lubricants; lubricants application method and optimal lubrication cycle. Thus, it may help optimize the maintenance plan and improve the equipment efficiency.



AFTER SALES SERVICES

Bearing application training

To provide clients with professional training in product selection, application technologies, installation and maintenance to help them improve their competitiveness.

Industrial bearing remanufacturing

To provide diagnostic and effective remanufacturing services for heavy-duty, high-value products with long production cycles to extend bearing life and reduce costs.

Maintenance solutions

Based on the characteristics of the industry and equipment operation, we can provide targeted maintenance and upgrade solutions to aid concern identification and improve equipment performance at an early stage.

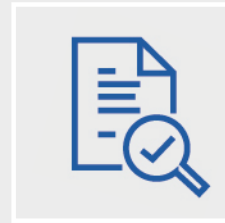
Who is THB



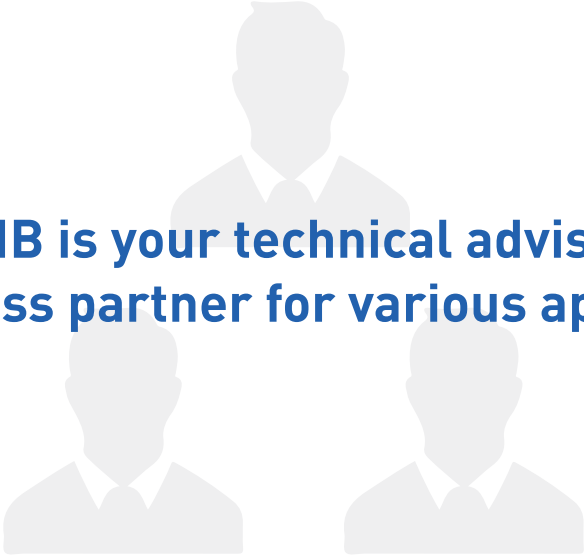
THB-
a bearing technical
service engineer at the
R&D center who
simulates the client's
equipment conditions
with professional
design software to give
professional bearing
selection and design
optimization advices.



THB-
a bearing application
engineer with exten
sive experience in
equipment manufac
turing and operation
sites, focusing on
researching and
solving bearing
problems.



THB-
a Chinese craftsman
who provides clients
with high quality
products, focusing on
bearing manufacturing
processes and bearing
quality control.



**THB is your technical advisor
and business partner for various applications.**

Rotary Table Bearing Menu

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1. Product Structure and Features

1.1 Standard Rotary Table Bearings YRT Series

Structure

It features a bidirectional axial thrust needle-roller or cylindrical-roller cage assembly, a single outer ring, an L-shaped ring, and a positioning shaft ring. The thrust components are preloaded in the axial direction upon installation. The radial rolling elements consist of full-complement cylindrical rollers. The outer ring, L-shaped ring, and positioning shaft ring are all provided with mounting holes for easy installation. The bearing is pre-assembled as a single unit with tightening bolts at the factory, ensuring easy installation, transport, and handling. The bearing is not sealed.

Features

High-precision rotary table bearings are suitable for combined loads, capable of withstanding radial loads, bidirectional axial loads, and tilting moments simultaneously. YRT series is generally used in low-speed, heavy-load, and intermittent operation conditions, such as indexing tables and rotary milling heads.



1.2 High-Speed Rotary Table Bearings YRTS Series

Structure

It features a bidirectional axial cylindrical-roller cage assembly, a single outer ring, an L-shaped ring, and a positioning shaft ring. The thrust components are preloaded in the axial direction upon installation. The radial rolling elements are arranged in a caged cylindrical-roller assembly. The outer ring, L-shaped ring, and positioning shaft ring are all provided with mounting holes for easy installation. The bearing is pre-assembled as a single unit with tightening bolts at the factory, ensuring easy installation, transport, and handling. The bearing is not sealed.

Features

High-precision rotary table bearings are suitable for combined loads, capable of with standing radial loads, bidirectional axial loads, and tilting moments simultaneously. YRTS series is generally used in high-speed, heavy-load applications, featuring low and uniform friction, making it especially suitable for torque motor applications.



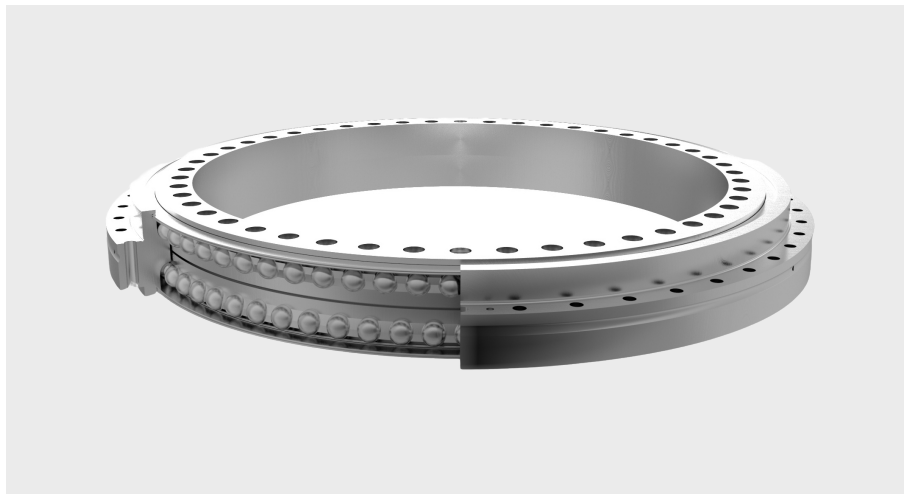
1.3 High-Speed Rotary Table Bearings Angular Contact Ball Bearing ZKLDF Series

Structure

It features a double-groove integral outer ring, two inner rings, and a double-row ball cage assembly with a contact angle of 60° . Both the outer and inner rings are provided with mounting holes for easy installation. The bearing is pre-assembled as a single unit with tightening bolts at the factory, ensuring easy installation, transport, and handling. The bearing is sealed on both sides.

Features

High-precision rotary table bearings are suitable for combined loads, capable of with standing radial loads, bidirectional axial loads, and tilting moments simultaneously. ZKLDF series is suitable for high-speed, continuous operation applications where low friction is required.



2. Design Guidelines

During the application of rotary table bearings, customers must verify the bearing's load capacity and service life.

Please contact us for basic rated life verification. Provide application speed and load spectrum (axial load, radial load, overturning moment, duty cycle) data.

2.1 Static Load Safety Factor

The static load safety factor S_o indicates the safety against unacceptable plastic deformation:

$$S_o = C_{or}/F_{or} \quad \text{or} \quad S_o = C_{oa}/F_{oa}$$

Where:

1. S_o , Static load safety factor

2. C_{or} , C_{oa} : Basic rated static load (refer to dimension parameter tables)

3. F_{or} , F_{oa} : Equivalent static radial or axial load on bearing

Recommendation: In machine tool and similar high-reliability applications, S_o must be > 4 .

2.2 Limit Static Load Diagram

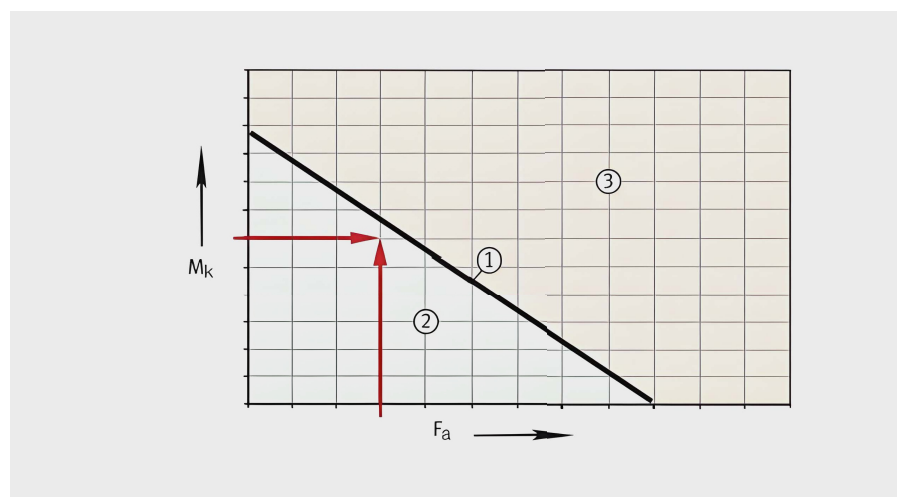
The limit static load diagram is generated based on static load safety factor ≥ 4 and meeting the strength requirements of bolts and bearing rings.

Main applications:

Quickly determine bearing model and size when the bearing mainly bears static load;

Calculate the maximum overturning moment under predetermined axial load.

Example:



As shown in the diagram above: M_k : Tilting moment F_a : Axial load

① Corresponding bearing static load curve

② Allowable axial load and overturning moment selection area

③ Axial load and overturning moment area not to be exceeded in selection

Please contact us if customers require the limit load diagram.

2.3 Limit Speed

The limit speed of rotary table bearings can be found in the parameter table. It can be calculated through thermal balance analysis based on friction torque. Please contact us for verification when environmental conditions differ significantly from general technical requirements, such as adjacent structure tolerance, lubrication, ambient temperature, heat dissipation, and general machine tool operating conditions.

2.4 Bearing Preload and Temperature Difference with Adjacent Structure

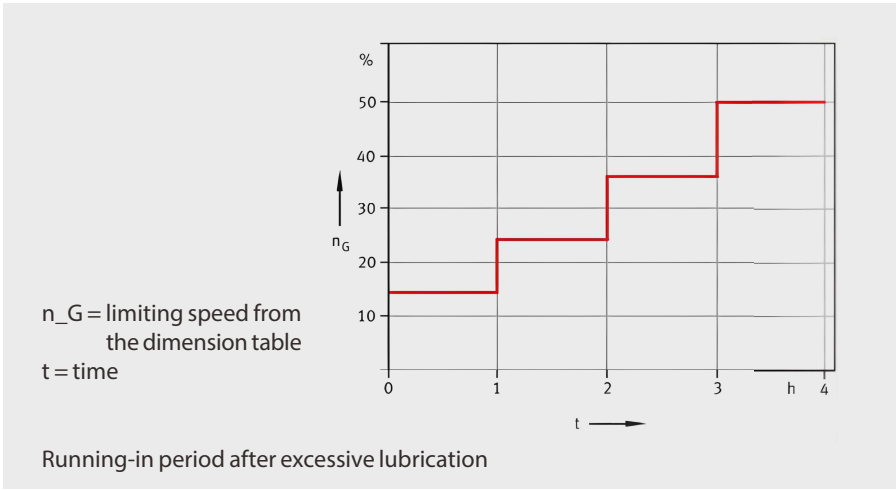
After rotary table bearing installation and bolt tightening, the bearing has both radial and axial preload. At this time, the temperature difference between adjacent mating positions has a significant impact on bearing preload. If the shaft temperature is higher than the bearing housing temperature, the radial preload of the turbo table bearing will increase proportionally, leading to increased bearing friction and temperature. If the shaft temperature is lower than the bearing housing temperature, the radial preload will decrease proportionally, reducing bearing preload, and even causing radial clearance, resulting in reduced bearing stiffness and accelerated turbo table bearing wear during operation.

2.5 Friction Torque

The friction torque of rotary table bearings depends on lubricant viscosity, filling quantity, and bearing preload. Among these:
Lubricant viscosity and filling quantity depend on lubricant grade and operating temperature
Bearing preload depends on installation fit of related positions, adjacent structure precision, temperature difference, tightening torque of mounting bolts, and installation method (whether the inner ring of rotary table bearing has single-sided or double-sided axial support).
Refer to the parameter table for rotary table bearing friction torque. This data is measured at 5 RPM. Deviation in mounting bolt tightening torque will negatively affect preload and friction torque.
For YRT rotary table bearings, note that friction torque will increase by 2 to 2.5 times as operating speed increases. For ZKLDF bearings, consider that starting friction torque is 1.5 times the parameter table data.

2.6 Lubrication

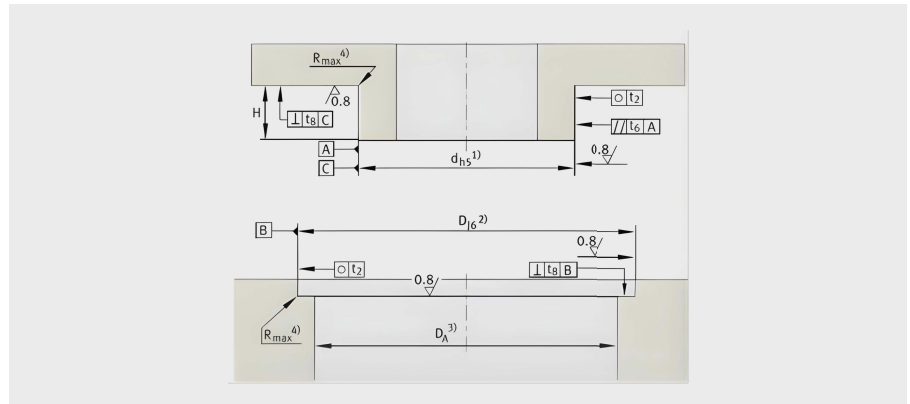
YRT, YRTS rotary table bearings can be relubricated through the bearing's L-shaped ring. Angular contact ball type rotary table bearing ZKLDF can be relubricated through the outer ring.
Factory-installed grease is compatible with mineral oil-based lubricants. The quantity of relubricant and lubrication interval should be confirmed based on actual customer operating conditions (speed, load, continuous operation time) and environmental conditions. Please contact us if needed.
Note: If the bearing is overlubricated, bearing friction torque and temperature will increase. To achieve initial friction torque, a certain period of initial running-in operation should be performed. The following diagram shows the reference running-in cycle.



2.7 Adjacent Structure Design Reference

2.7.1 Structure Reference

Rotary table bearings YRT, YRTS, ZKLDF have the same mounting dimensions. Refer to the following diagram for adjacent structures.



Description:

- This position must support the full height of the turntable, ensuring that the supporting structure has sufficient stiffness.
- If required by load or precision positioning, a precision fit should be applied at this position.
- Refer to the D1 dimension in the data sheet to ensure that the bearing rings have sufficient clearance from adjacent structures during rotation.
- Reference the maximum fillet radius on the mating surfaces according to the table.

2.7.2 Fit and Adjacent Structure Precision Reference

Rotary table bearing fits generally use transition fit. In actual installation, considering the tolerance bands of bearing and adjacent structure mating dimensions, clearance fit or interference fit may occur.

Excessively tight fit will increase bearing radial preload, cause abnormal friction heating, accelerate raceway load and wear, and also affect bearing maximum speed and service life.

Fit and adjacent component precision will affect rotary table bearing accuracy. To meet very high rotation accuracy, fit clearance should be as close to zero as possible.

Refer to the following table for recommended tolerances of YRT, ZKLDF turbo table bearing shaft and housing bore, as well as form and position tolerances of adjacent structures.

YRT ZKLDF Shaft Recommended Tolerances and Form/Position Tolerances

Shaft nominal diameter		Deviation		Roundness Parallelism Perpendicularity t_2, t_6, t_8
d mm		d		
greater than	To	Tolerance zone h5 μm		μm
50	80	0	-13	3
80	120	0	-15	4
120	180	0	-18	5
180	250	0	-20	7
250	315	0	-23	8
315	400	0	-25	9
400	500	0	-27	10
500	630	0	-32	11
630	800	0	-36	13
800	1000	0	-40	15
1000	1250	0	-47	18

YRT ZKLDF Housing Bore
Recommended Tolerances
and Form/Position
Tolerances

Nominal Diameter of Housing Bore		Deviation		Roundness Perpendicularity t_2, t_8
d mm		d		
greater than	To	Tolerance zone J6 μm		μm
120	180	+18	-7	5
180	250	+22	-7	7
250	315	+25	-7	8
315	400	+29	-7	9
400	500	+33	-7	10
500	630	+34	-7	11
630	800	+38	-8	13
800	1000	+44	-12	15
1000	1250	+52	-14	18

YRTS Recommended Shaft
and Housing Bore
Tolerances

Thrust / Radial Bearings	Shaft Diameter d μm	Bore Diameter of Housing D mm
YRT Speed 200	200 $\begin{smallmatrix} -0.01 \\ -0.024 \end{smallmatrix}$	300 $\begin{smallmatrix} -0.011 \\ -0.005 \end{smallmatrix}$
YRT Speed 260	260 $\begin{smallmatrix} -0.013 \\ -0.029 \end{smallmatrix}$	385 $\begin{smallmatrix} -0.013 \\ -0.005 \end{smallmatrix}$
YRT Speed 325	325 $\begin{smallmatrix} -0.018 \\ -0.036 \end{smallmatrix}$	450 $\begin{smallmatrix} -0.015 \\ -0.005 \end{smallmatrix}$
YRT Speed 395	395 $\begin{smallmatrix} -0.018 \\ -0.036 \end{smallmatrix}$	525 $\begin{smallmatrix} -0.017 \\ -0.005 \end{smallmatrix}$
YRT Speed 460	460 $\begin{smallmatrix} -0.018 \\ -0.036 \end{smallmatrix}$	600 $\begin{smallmatrix} -0.017 \\ -0.005 \end{smallmatrix}$

YRTS Shaft Form and
Position Tolerances

Thrust / Radial Bearings	Roundness t_2 μm	Parallelism t_6 μm	Perpendicularity t_8 μm
YRT speed 200	6	5	5
YRT speed 260 to YRT speed 460	8	5	7

YRTS Housing Bore Form
and Position Tolerances

Thrust / Radial Bearings	Roundness t_2 μm	Perpendicularity t_8 μm
YRT speed 200 to YRT speed 460	6	8

YRT, YRTS, ZKLDF Maximum
Fillet Radius of Mounting
Surface

Bore Diameter d mm	Maximum Fillet Radius R_{max} mm
50 to 150	0.1
Over 150 to 460	0.3
Over 460 to 950	1

2.8 Rotary Table Bearing Installation

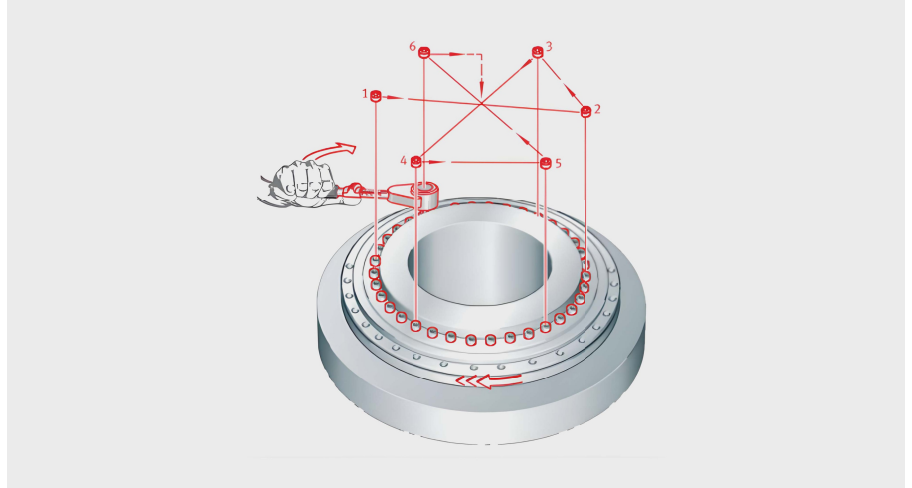
Rotary table bearings come with retention bolts to ensure bearing safety during handling and transportation. Before installing the rotary table bearing, to facilitate easier centering, the retention bolts need to be loosened before installation and tightened or removed after installation is complete.

According to the specified bolt tightening torque MAM_AMA, use a torque wrench to tighten the mounting bolts in three steps, following a crosswise pattern (see figure below).

Step 1: 40% MA torque

Step 2: 70% MA torque

Step 3: 100% MA torque



Pay attention to the strength grade of mounting bolts during installation

Installation force should only be applied to the bearing ring being installed, and should not be transmitted through rolling elements.

During installation and disassembly, rotary table bearing components should not be disassembled or interchanged.

If rotary table bearing rotation is abnormally difficult after installation, loosen the mounting bolts and retighten them according to the bolt tightening method above. This eliminates deformation of the turbo table bearing caused by installation.

3. Rotary Table Bearing Accuracy

Rotary table bearing dimensional tolerance is P5 class, rotation accuracy is P4 class
Refer to the following table for YRT, ZKLDF series dimensional tolerances, mounting dimensions, and rotation accuracy

Dimensional tolerance ¹⁾				Mounting dimensions					Axial and radial runout ²⁾	
Inner diameter		Outer diameter		H ₁ mm	ΔH1S mm	Radial runout ³⁾ mm	H ₂ mm	ΔH2S mm	Standard μm	Radial runout ³⁾ μm
d mm	Δds mm	D mm	ΔDs mm							
50	-0.008	126	-0.011	20	±0.125	±0.025	10	±0.02	2	1
80	-0.009	146	-0.011	23.35	±0.15	±0.025	11.65	±0.02	3	1.5
100	-0.01	185	-0.015	25	±0.175	±0.025	13	±0.02	3	1.5
120	-0.01	210	-0.015	26	±0.175	±0.025	14	±0.02	3	1.5
150	-0.013	240	-0.015	26	±0.175	±0.03	14	±0.02	3	1.5
180	-0.013	280	-0.018	29	±0.175	±0.03	14	±0.025	4	2
200	-0.015	300	-0.018	30	±0.175	±0.03	15	±0.025	4	2
260	-0.018	385	-0.02	36.5	±0.2	±0.04	18.5	±0.025	6	3
325	-0.023	450	-0.023	40	±0.2	±0.05	20	±0.025	6	3
395	-0.023	525	-0.028	42.5	±0.2	±0.05	22.5	±0.025	6	3
460	-0.023	600	-0.028	46	±0.225	±0.06	24	±0.03	5	3
580	-0.025	750	-0.035	60	±0.25	±0.075	30	±0.03	10	5 ⁴⁾
650	-0.018	870	-0.05	78	±0.25	±0.1	44	±0.03	10	5 ⁴⁾
850	-0.05	1095	-0.065	80.5	±0.3	±0.12	43.5	±0.03	12	6 ⁴⁾
950	-0.05	1200	-0.065	86	±0.3	±0.12	46	±0.03	12	6 ⁴⁾
1 030	-0.015	1300	-0.08	92.5	±0.3	±0.15	52.5	±0.03	12	6 ⁴⁾

1) Diameter tolerance refers to the mean value.

2) For rotating inner and outer rings, measure the bearing while mounted on ideal adjacent structures.

3) Applicable to YRT type only.

4) Applicable to rotating outer rings only.

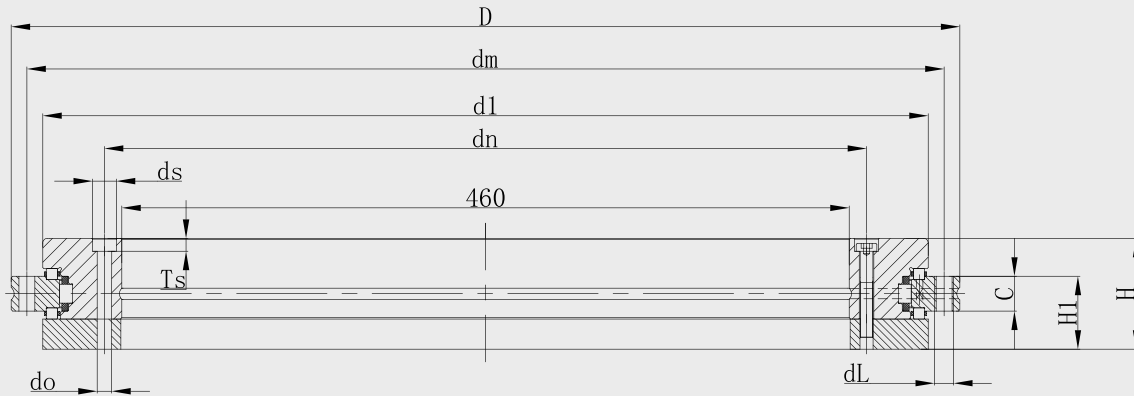
Refer to the following table for YRT, ZKLDF series dimensional tolerances, mounting dimensions, and rotation accuracy

Dimensional tolerance				Mounting dimensions			Axial and radial runout ¹⁾ μm
Inner diameter		Outer diameter		H1 mm	ΔH1s mm	H2 mm	
d mm	△ds mm	D mm	△Ds mm				
200	-0.015	300	-0.018	30	*0.04 -0.06	15	4
260	-0.018	385	-0.02	36.5	*0.05 -0.07	18.5	6
325	-0.023	450	-0.023	40	*0.06 -0.07	20	6
395	-0.023	525	-0.028	42.5	*0.06 -0.07	22.5	6
460	-0.023	600	-0.028	46	*0.07 -0.08	24	6

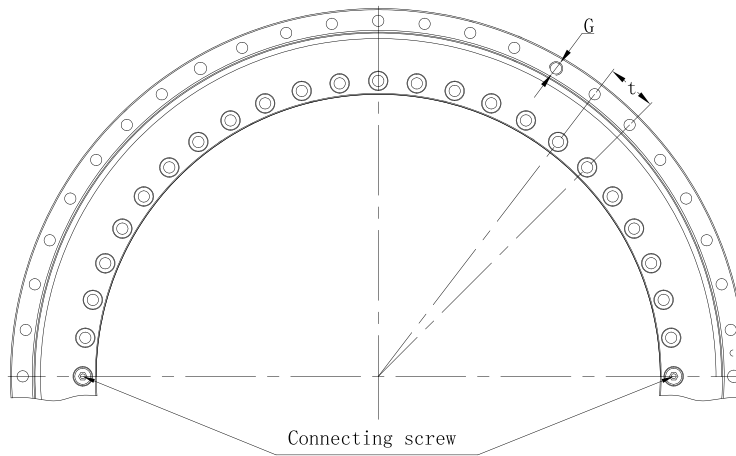
1) For rotating inner and outer rings, measure the bearing installed on an ideal adjacent structure

4. Parameter Table

4.1 YRT Standard Series



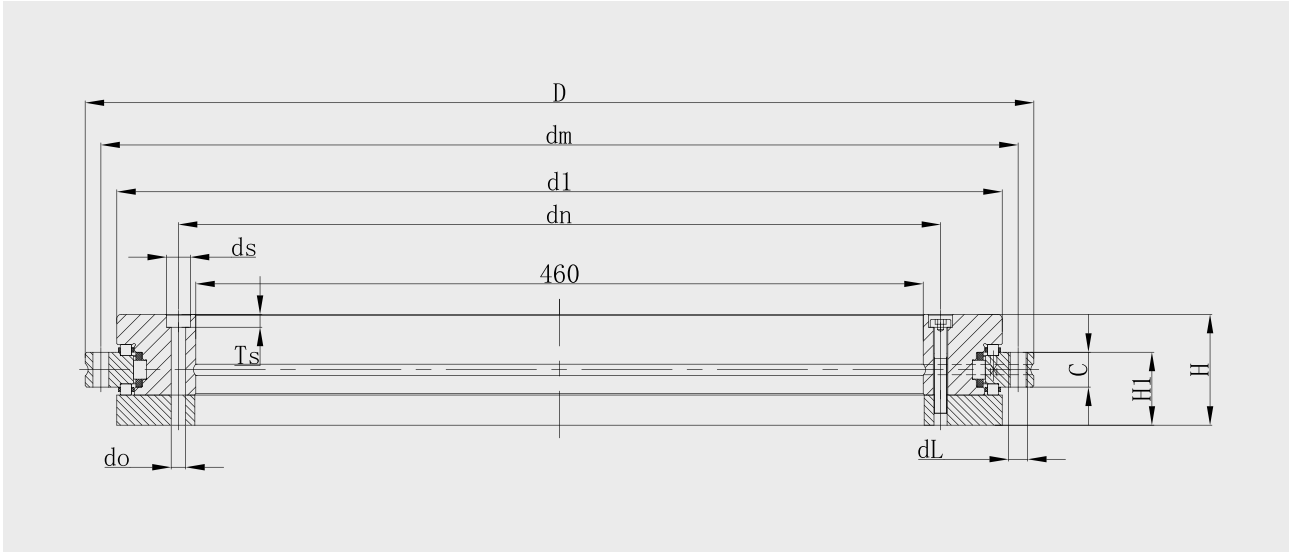
Nominal Model	Overall Dimensions									Fixing Holes						Inner Ring Mounting Screws Quantity	Outer Ring Lifting Holes		Pitch1)\ nt
	d	D	H	H1	H2	C	d1	dn	dm	Inner Ring				Outer Ring			G	Qty	Qtyxt
	Unit mm									do	ds	Ts	Quantity4)	dL	Quantity4)				
										mm				mm					
YRT50	50	126	30	20	10	10	105	63	116	5.6	9	4.2	10	5.6	12	2	-	-	12×30°
YRT80	80	146	35	23.35	11.65	12	130	92	138	5.6	10	4.2	10	4.6	12	2	-	-	12×30°
YRT100	100	185	38	25	13	12	160	112	170	5.6	10	5.4	16	5.6	15	2	M5	3	18×20°
YRT120	120	210	40	26	14	12	184	135	195	7	11	6.2	22	7	21	2	M8	3	24×15°
YRT150	150	240	40	26	14	12	214	165	225	7	11	6.2	34	7	33	2	M8	3	36×10°
YRT180	180	280	43	29	14	15	244	194	260	7	11	6.2	46	7	45	2	M8	3	48×7.5°
YRT200	200	300	45	30	15	15	274	215	285	7	11	6.2	46	7	45	2	M8	3	48×7.5°
YRT260	260	385	55	36.5	18.5	18	345	280	365	9.3	15	8.2	34	9.3	33	2	M12	3	36×10°
YRT325	325	450	60	40	20	20	415	342	430	9.3	15	8.2	34	9.3	33	2	M12	3	36×10°
YRT395	395	525	65	42.5	22.5	20	486	415	505	9.3	15	8.2	46	9.3	45	2	M12	3	48×7.5°
YRT460	460	600	70	46	24	22	560	482	580	10	15	8.2	46	10	45	2	M12	3	48×7.5°
YRT580	580	750	90	60	30	30	700	610	720	11.4	18	11	46	11.4	42	2	M12	6	48×7.5°
YRT650	650	870	122	78	44	34	800	680	830	14	20	13	45	14	42	2	M12	6	48×7.5°
YRT850	850	1095	124	80.5	43.5	37	1018	890	1055	18.5	26	17	57	18.5	54	3	M16	6	60×6°
YRT950	950	1200	132	86	46	40	1130	990	1160	18.5	26	17	57	18.5	54	3	M16	6	60×6°
YRT1030	1030	1300	145	92.5	52.5	40	1215	1075	1255	18.5	26	17	66	18.5	66	6	M16	6	72×5°
YRT1200	1200	1490	164	108	56	52	1410	1240	1445	18.5	26	17	66	18.5	66	6	M16	6	72×5°



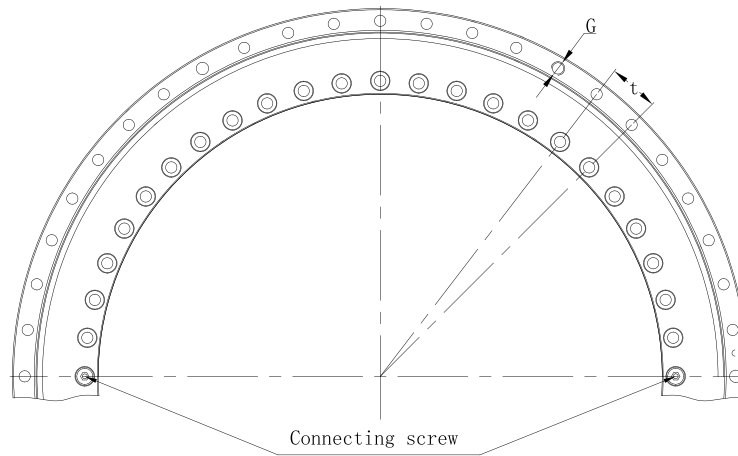
Screw Tightening Torque	Basic Rated Load				Limiting Speed5)	Bearing Friction Torque3)	Weight	Nominal Model
	Axial		Radial					
	Dynamic	Static	Dynamic	Static	Grease Lubrication			
MA2)	Ca	Coa	Cr	Cor				
Nm	KN				r/min	Nm	≈Kg	
8.5	38	158	28.5	49.5	600	2.5	1.6	YRT50
8.5	56	255	42.5	100	530	3	2.4	YRT80
8.5	76.5	415	47.5	120	430	3	4.1	YRT100
14	102	540	52	143	340	7	5.3	YRT120
14	112	630	56	170	320	10	6.2	YRT150
14	118	710	69.5	200	280	12	7.7	YRT180
14	120	765	81.5	220	260	14	9.7	YRT200
34	160	1060	93	290	200	20	18.3	YRT260
34	275	1930	120	345	170	40	25	YRT325
34	300	2280	186	655	140	55	33	YRT395
34	355	2800	200	765	120	70	45	YRT460
68	490	4250	228	965	80	140	89	YRT580
116	870	7400	430	1700	65	200	170	YRT650
284	1000	10010	455	1800	50	300	253	YRT850
284	1290	11400	530	2040	40	600	312	YRT950
284	1380	12000	620	2650	35	800	375	YRT1030
284	1435	12850	745	2800	25	1000	450	YRT1200

- 1) Including mounting screw holes and lifting holes, uniformly distributed around circumference.
- 2) Tightening torque for Grade 10.9 bolts.
- 3) Bearing friction torque should be measured at 5 r/min speed.
- 4) Used for fixing holes with shaft and bearing housing. Pay attention to the pitch and equal division of bearing fixing holes.
- 5) Use this value with caution for long-term and continuous operation conditions.
- 6) Model designation may vary slightly depending on operating conditions. Example: YRT200M indicates nylon cage.

4. 2 YRTS High-Speed Series



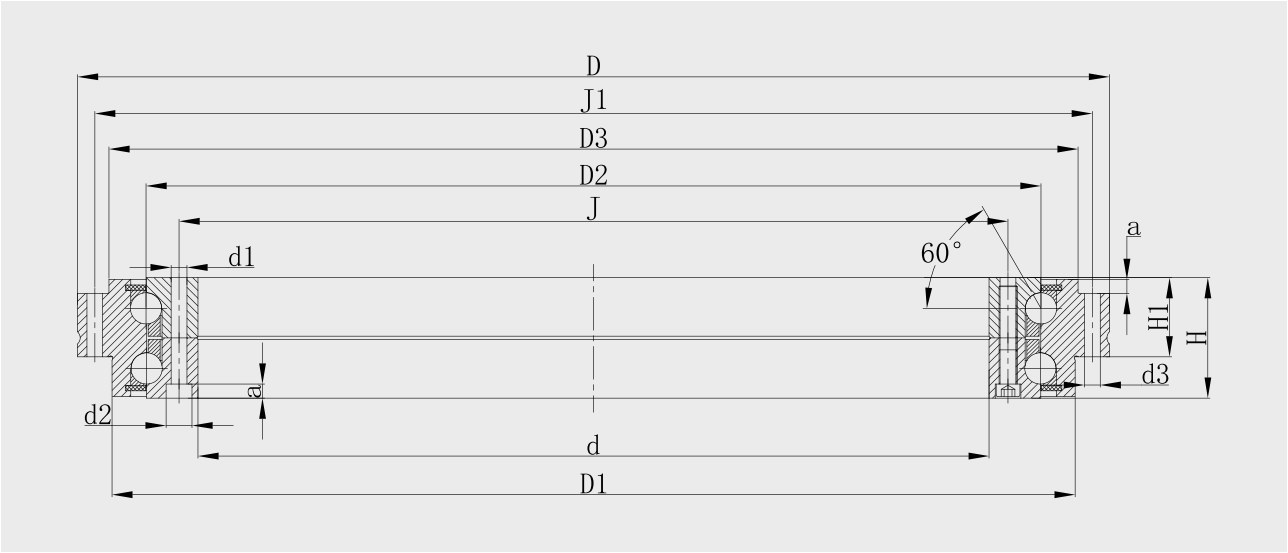
Nomin al Model	Overall Dimensions									Fixing Holes						Inner Ring Mounting Screws Quantity	Outer Ring Lifting Holes		Pitch1)\nt
	d	D	H	H1	H2	C	d1	dn	dm	Inner Ring				Outer Ring			G	Qty	Qtyxt
	Unit mm									do	ds	Ts	Quant ity4)	dL	Quant ity4)				
										mm				mm					
YRTS200	200	300	45	30	15	15	274	215	285	7	11	6.2	46	7	45	2	M8	3	48×7.5°
YRTS260	260	385	55	36.5	18.5	18	345	280	365	9.3	15	8.2	34	9.3	33	2	M12	3	36×10°
YRTS325	325	450	60	40	20	20	415	342	430	9.3	15	8.2	34	9.3	33	2	M12	3	36×10°
YRTS395	395	525	65	42.5	22.5	20	486	415	505	9.3	15	8.2	46	9.3	45	2	M12	3	48×7.5°
YRTS460	460	600	70	46	24	22	560	482	580	10	15	8.2	46	10	45	2	M12	3	48×7.5°



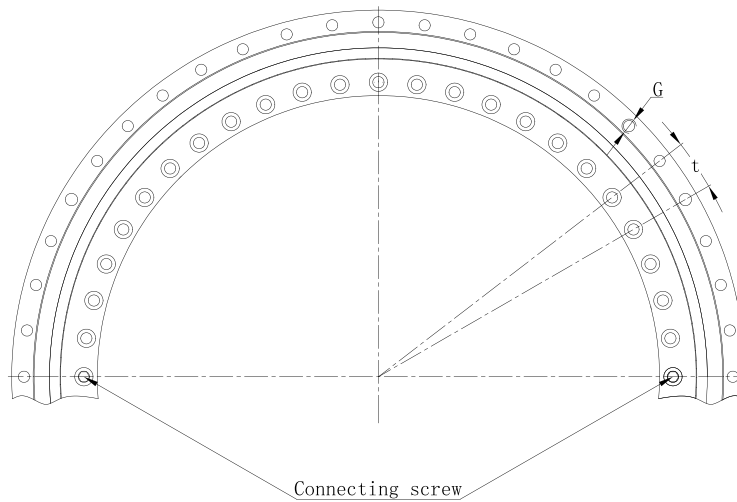
Screw Tightening Torque	Basic Rated Load				Limiting Speed5)	Bearing Friction Torque3)	Weight	Nominal Model
	Axial		Radial					
	Dynamic	Static	Dynamic	Static	Grease Lubrication r/min			
MA2) Nm	Ca	Coa	Cr KN	Cor		Nm	≈Kg	
14	105	635	78	202	950	9.7	9.7	YRTS200
34	131	840	85	275	800	18.3	18.3	YRTS260
34	191	1260	109	300	680	25	25	YRTS325
34	214	1540	121	390	600	33	33	YRTS395
34	221	1690	168	570	500	45	45	YRTS460

- 1) Including mounting screw holes and lifting holes, uniformly distributed around circumference.
- 2) Tightening torque for Grade 10.9 bolts.
- 3) Used for fixing holes with shaft and bearing housing. Pay attention to the pitch and equal division of bearing fixing holes.
- 4) Larger models can also be provided.
- 5) Model designation may vary slightly depending on operating conditions. Refer to drawing model for specifics.

4.3 Angular contact ball bearing ZKLDF series



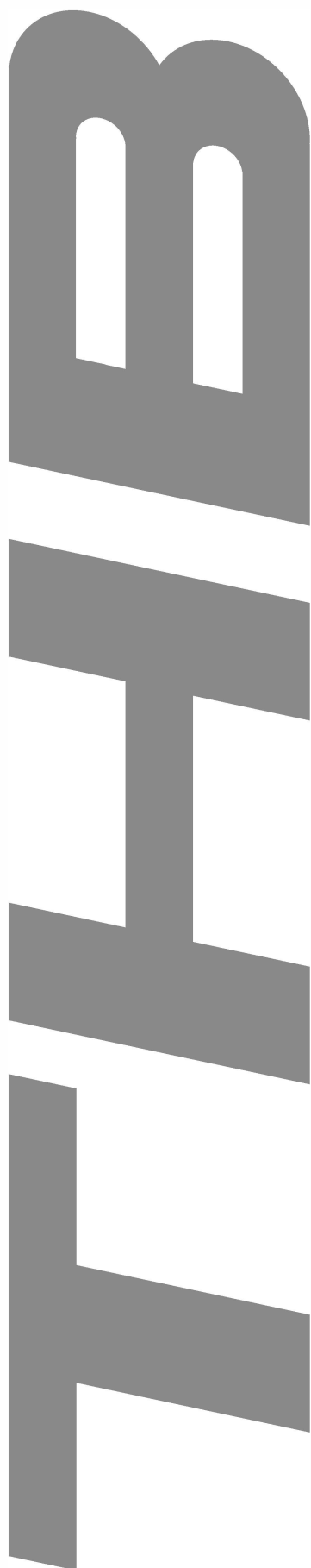
Model	Overall Dimensions										Fixed Holes					Inner Ring
	d	D	H	H ₁	D ₁	D ₂	D ₃	J	J ₁	a	Inner Ring			Outer Ring		
	mm										d ₁ mm	d ₂ mm	Qty ³	d ₃ mm	Qty ³	Screw Qty
ZKLDF100	100	185	38	25	160	136	158	112	170	5.4	5.6	10	16	5.6	15	2
ZKLDF120	120	210	40	26	184	159	181	135	195	6.2	7	11	22	7	21	2
ZKLDF150	150	240	40	26	214	188	211	165	225	6.2	7	11	34	7	33	2
ZKLDF200	200	300	45	30	274	243	271	215	285	6.2	7	11	46	7	45	2
ZKLDF260	260	385	55	36.5	345	313	348	280	365	8.2	9.3	15	34	9.3	33	2
ZKLDF325	325	450	60	40	415	380	413	342	430	8.2	9.3	15	34	9.3	33	2
ZKLDF395	395	525	65	42.5	486	450	488	415	505	8.2	9.3	15	46	9.3	45	2
ZKLDF460	460	600	70	46	560	520	563	482	580	8.2	9.3	15	46	9.3	45	3
ZKLDF580	580	750	90	60	702	656	700	610	720	11	11.4	18	45	11.4	42	3



Outer Ring Lifting Holes		Pitch ¹	Screw Torque M ²	Basic Rated Load		Limit Speed ⁴	Bearing Friction	Weight≈Kg
G	Qty			Axial				
				Nm	Dynam ic Ca KN	Static C _{0a} KN	r/min	Nm
M5	3	18×20°	8.5	67	251	2800	1.6	4.5
M8	3	24×15°	14	72	315	2400	2	6
M8	3	36×10°	14	76	365	2000	3	7.5
M8	3	48×7.5°	14	112	550	1600	4.5	11
M12	3	36×10°	34	155	920	1200	7.5	22
M12	3	36×10°	34	165	1110	1000	11	28
M12	3	48×7.5°	34	214	1470	800	16	39
M12	3	48×7.5°	34	255	1860	700	21	50
M12	6	48×7.5°	68	282	2150	500	40	82

Notes:

1. Including connection screw holes and thread relief holes, distributed circumferentially.
2. Tightening torque for 10.9 grade bolts.
3. Fixed holes include inner ring screw holes and outer ring screw holes.
4. Limit speed⁴ values are for grease lubrication conditions.



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