

杭州恒力传动件有限公司

HANGZHOU EVER-POWER TRANSMISSION CO.,LTD.





回转支承类型和系列

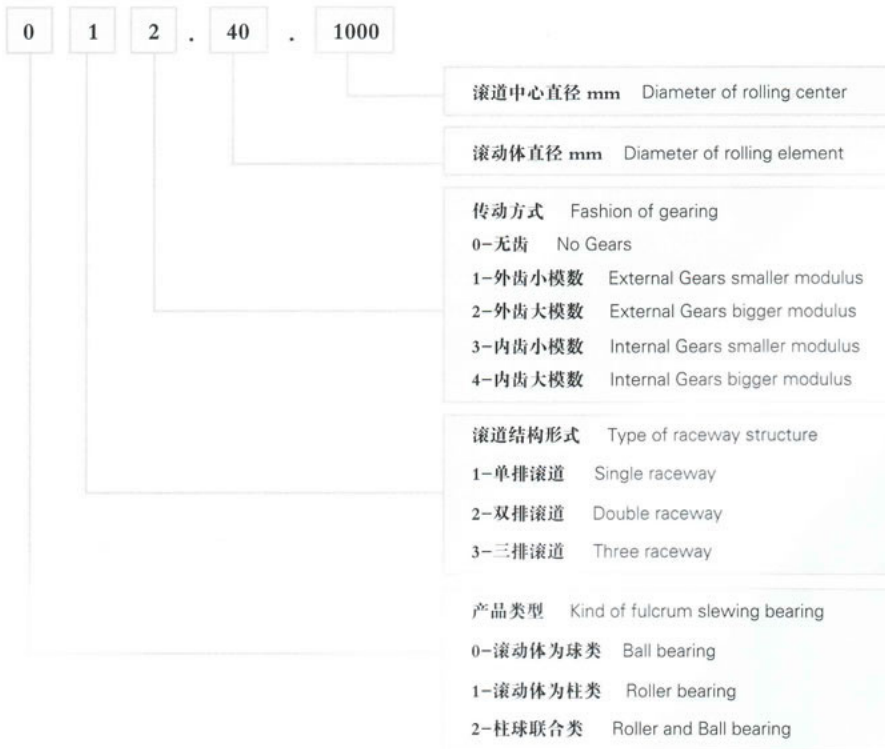
- (1) 产品类别: 0-球类回转支承 1-滚柱类回转支承
- (2) 滚道结构型式: 1-单排交叉滚柱式、单排四点接触球式 2-双排异径球式 3-三排滚柱式
- (3) 传动方式: 0-无齿式 1-渐开线圆柱齿轮外啮合小模数 2-渐开线圆柱齿轮外啮合大模数
3-渐开线圆柱齿轮内啮合小模数 4-渐开线圆柱齿轮内啮合大模数
- (4) 滚动物体(钢球或滚柱)直径
- (5) 滚道中心圆直径

基本型号规格举例

回转支承基本型号规格举例

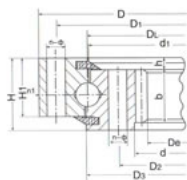
The slewing bearing examples of specification of the basic types

一. JB2300-99标准回转支承编号方法

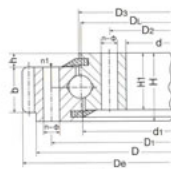


单排球式回转支承 (01系列)

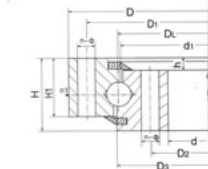
Single-Row Slewing Ring (Standard Series 01)



013,014



011,012



010

JB/2300-1999

序号 Item No.	基本型号 Basic type			外型尺寸 Configuration size		安装孔尺寸 Mounting size		结构尺寸 Structural size				齿轮参数 Gear Data		外齿参数 Ext Gear		内齿参数 Int Gear		齿轮圆周力 Tangential Tooth load						
	无齿式 Toothless DL mm	外齿式 Ext Toothed DL mm	内齿式 Int Toothed DL mm	D mm	d mm	H mm	D1 mm	D2 mm	n	φ mm	n1	D3 mm	d1 mm	H1 mm	h mm	b mm	x mm	m mm	De mm	Z	De mm	Z	正火 Normalized Z 10 ⁴ N	调质 Tempered T 10 ⁴ N
1	010 25.315	011 25.315	013 25.315	408	222	70	372	258	20	18	2	316	314	60	10	50	+0.5	5	435	85	190	40	2.9	4.4
2	010 25.355	011 25.355	013 25.355	448	262	70	412	298	20	18	2	356	354	60	10	50	+0.5	5	475	93	235	49	2.9	4.4
3	010 25.400	011 25.400	013 25.400	493	307	70	475	343	20	18	2	401	399	60	10	50	+0.5	6	528	86	276	48	3.5	5.3
4	010 25.450	011 25.450	013 25.450	543	357	70	507	393	20	18	2	451	449	60	10	50	+0.5	6	576	94	324	56	3.5	5.3
5	010 30.500	011 30.500	013 30.500	602	398	80	566	434	20	18	4	501	498	70	10	60	+0.5	5	629	123	367	74	3.7	5.2
5'	010 25.500	011 25.500	013 25.500	602	398	80	566	434	20	18	4	501	499	70	10	60	+0.5	6	628.8	102	368.4	62	4.5	6.2
6	010 30.560	011 30.560	013 30.560	662	458	80	626	494	20	18	4	561	558	70	10	60	+0.5	5	689	135	427	86	3.7	5.2
6'	010 25.560	011 25.560	013 25.560	662	458	80	626	494	20	18	4	561	559	70	10	60	+0.5	6	688.8	112	428.4	72	4.5	6.2
7	010 25.630	011 25.630	013 25.630	732	528	80	696	564	24	18	4	631	629	70	10	60	+0.5	5	689	135	427	86	3.1	4.3
8	010 30.710	011 30.710	013 30.710	812	608	80	776	644	24	18	4	711	708	70	10	60	+0.5	8	772.8	126	494.4	83	3.8	5.2
8'	010 25.710	011 25.710	013 25.710	812	608	80	776	644	24	18	4	711	709	70	10	60	+0.5	8	774.4	94	494.2	62	5.0	6.9
9	010 40.800	011 40.800	013 40.800	922	678	80	878	722	30	22	6	801	798	90	10	80	+0.5	8	966.4	118	635.2	80	6.0	8.3
9'	010 30.800	011 30.800	013 30.800	922	678	100	878	722	30	22	6	801	798	90	10	80	+0.5	10	968	94	634	64	10.0	14.0
10	010 40.900	011 40.900	013 40.900	1022	778	100	978	822	30	22	6	901	898	90	10	80	+0.5	8	1062.4	130	739.2	93	8.0	11.1
10'	010 30.900	011 30.900	013 30.900	1022	778	100	978	822	30	22	6	901	898	90	10	80	+0.5	10	1068	104	734	74	10.0	14.0
11	010 40.1000	011 40.1000	013 40.1000	1122	878	100	1078	922	36	22	6	1001	998	90	10	80	+0.5	10	1188	116	824	83	10.0	14.0
11'	010 30.1000	011 30.1000	013 30.1000	1122	878	100	1078	922	36	22	6	1001	998	90	10	80	+0.5	12	1185.6	96	820.8	69	9.0	12.5
12	010 40.1120	011 40.1120	013 40.1120	1242	998	100	1198	1042	36	22	6	1121	1118	90	10	80	+0.5	12	1298	127	944	95	10.0	14.0
12'	010 30.1120	011 30.1120	013 30.1120	1242	998	100	1198	1042	36	22	6	1121	1118	90	10	80	+0.5	12	1305.6	106	940.8	79	12.0	16.7
13	010 45.1250	011 45.1250	013 45.1250	1390	1110	110	1337	1163	40	26	5	1252	1248	100	10	90	+0.5	14	1453.2	101	1041.6	75	15.8	21.9
13'	010 35.1250	011 35.1250	013 35.1250	1390	1110	110	1337	1163	40	26	5	1251	1248	100	10	90	+0.5	12	1449.6	118	1048.8	88	10.5	14.6
14	010 45.1400	011 45.1400	013 45.1400	1540	1260	110	1487	1313	40	26	5	1402	1398	100	10	90	+0.5	14	1532.2	101	1041.6	75	15.8	21.9
14'	010 35.1400	011 35.1400	013 35.1400	1540	1260	110	1487	1313	40	26	5	1401	1398	100	10	90	+0.5	14	1607.2	112	1195.6	86	12.3	17.0
15	010 45.1600	011 45.1600	013 45.1600	1740	1460	110	1687	1513	45	26	5	1602	1598	100	10	90	+0.5	14	1817.2	127	1391.6	100	15.8	21.9
15'	010 35.1600	011 35.1600	013 35.1600	1740	1460	110	1687	1513	45	26	5	1601	1598	100	10	90	+0.5	16	1820.8	111	1382.4	87	18.1	25.0
16	010 45.1800	011 45.1800	013 45.1800	1940	1660	110	1887	1713	45	26	5	1802	1798	100	10	90	+0.5	14	1817.2	127	1391.6	100	12.3	17.0
16'	010 35.1800	011 35.1800	013 35.1800	1940	1660	110	1887	1713	45	26	5	1801	1798	100	10	90	+0.5	16	1820.8	111	1382.4	87	14.1	19.4
17	010 60.2000	011 60.2000	013 60.2000	2178	1825	144	2110	1891	48	33	8	2002	1998	132	12	120	+0.5	14	2013.2	141	1573.6	113	15.8	21.9
17'	010 40.2000	011 40.2000	013 40.2000	2178	1825	144	2110	1891	48	33	8	2001	1998	132	12	120	+0.5	16	2012.8	123	1574.4	99	18.1	20.5
18	010 60.2240	011 60.2240	013 60.2240	2418	2065	144	2350	2131	48	33	8	2242	2238	132	12	120	+0.5	14	2013.2	141	1573.6	113	12.3	17.0
18'	010 40.2240	011 40.2240	013 40.2240	2418	2065	144	2350	2131	48	33	8	2241	2238	132	12	120	+0.5	16	2012.8	123	1574.4	99	14.1	19.4
19	010 60.2500	011 60.2500	013 60.2500	2678	2325	144	2610	2391	56	33	8	2502	2498	132	12	120	+0.5	16	2268.8	139	1734.4	109	24.1	33.3
19'	010 40.2500	011 40.2500	013 40.2500	2678	2325	144	2610	2391	56	33	8	2501	2498	132	12	120	+0.5	18	2268.4	123	1735.2	97	27.1	37.5
20	010 60.2800	011 60.2800	013 60.2800	2978	2625	144	2910	2691	56	33	8	2802	2798	132	12	120	+0.5	16	2268.8	139	1734.4	109	16.1	22.2
20'	010 40.2800	011 40.2800	013 40.2800	2978	2625	144	2910	2691	56	33	8	2801	2798	132	12	120	+0.5	18	2276	136	2228	112	30.1	41.8
21	010 40.2800	011 40.2800	013 40.2800	3376	2922	174	3286	3014	56	45	8	3152	3147	162	12	150	+0.5	18	2768.4	151	2239.2	126	18.1	25.0
22	010 75.3150	011 75.3150	013 75.3150	3376	2922	174	3286	3014	56	45	8	3152	3148	162	12	150	+0.5	20	2776	136	2228	112	20.1	27.9
22'	010 50.3150	011 50.3150	013 50.3150	3376	2922	174	3286	3014	56	45	8	3152	3148	162	12	150	+0.5	22	3471.6	155	2824.8	129	41.5	57.4
22''	010 50.3150	011 50.3150	013 50.3150	3376	2922	174	3286	3014	56	45	8	3152	3148	162	12	150	+0.5	22	3471.6	155	2824.8	129	27.7	38.3

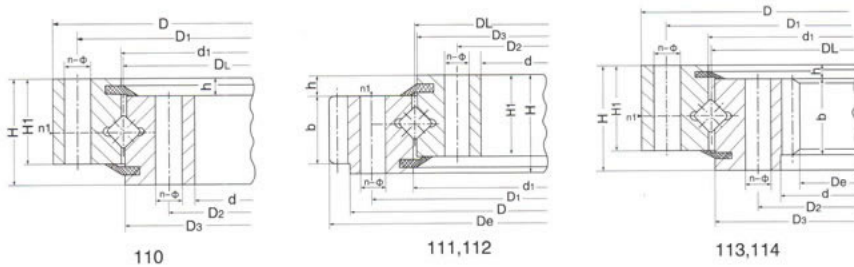


杭州恒力传动件有限公司

HANGZHOU EVER-POWER TRANSMISSION CO.,LTD.

单排交叉滚柱式回转支承 (11系列)

Single-Row Crossed Rollers Slewing Ring (Standard Series 11)



JB/T2300-1999

◎ 结构特点.性能.适用范围

单排交叉滚柱式回转支承,由两个座圈组成,结构紧凑,重量轻,装配间隙小,对安装精度要求高,滚柱为1:1交叉排列,能同时承受轴向力,倾翻力矩和较大的径向力,被广泛的用于起重运输,工程机械和军工产品上。

◎ CHARACTERISTIC OF STRUCTURE, PERFORMANCE AND APPLICATION

The single-row crossed roller slewing ring is composed of two seatrings.It features compact in design,light in weight,high precision and small fitting clearance.

As the rollers are 1:1 cross aranged,it is suitable for high precision mounting and capable to bear axial force,resultant moment and considerable large radial force.

The single-row crossed roller slewing rings are widely used for hoisting,transporting,engineering machines as well as for military products.

注: 1、n1为润滑油孔数,均布;油杯M10X1GB1152-1153-79。

2、安装孔 $n-\phi$ 可改用螺孔;齿宽b可改为H-h。

3、表内齿圆周力为最大圆周力,额定圆周力取其1/2。

4、外齿修顶系数0.1,内齿修顶系数为0.2。

Note:1 n1-number of lubricating holes,evenly distributed,lubricating nipple M10x1GB1152-1153-79.

2.Mounting hole $n-\phi$ may be replaced with screw hole,tooth width b may be taken as H-h.

3.Gear force of periphery given in the table is its maximum value,nominal force of periphery is taken 1/2 of the given value.

4.The trim top coefficient of outer and inner tooth 0.1 and 0.2 respectively.

Load Diagram 曲线 圆 圈 编 号	Basic type			Configuration size		Mounting size			Structural size			Gear Data			Ext Gear		Int Gear		Tangential Tooth load		Reference weight kg			
	无齿式 DL	外齿式 DL	内齿式 DL	D	d	H	H1	H2	n	φ	d1	d2	h	b	x	De	Z	De	Z	正火 Z		调质 T		
1	110.25.500	111.25.500	113.25.500	602	398	75	556	434	20	18	4	498	502	65	10	+0.5	5	629	123	367	74	3.7	5.2	80
2	110.25.560	112.25.560	114.25.560	662	458	75	626	494	20	18	4	558	562	65	10	+0.5	5	688.8	135	427	86	3.7	5.2	90
3	110.25.630	111.25.630	113.25.630	732	528	75	696	564	24	18	4	628	632	65	10	+0.5	6	772.8	126	494.4	83	4.5	6.2	100
4	110.25.710	112.25.710	114.25.710	812	608	75	776	644	24	18	4	708	712	65	10	+0.5	6	850.8	139	572.4	96	4.5	6.2	110
5	110.28.800	111.28.800	113.28.800	922	678	82	878	722	30	22	6	798	802	72	10	+0.5	8	966.4	118	635.2	80	6.5	9.1	170
6	110.28.900	112.28.900	114.28.900	1022	778	82	978	822	30	22	6	898	902	72	10	+0.5	8	1062.4	130	7395.2	93	6.5	9.1	190
7	110.28.1000	111.28.1000	113.28.1000	1122	878	82	1078	922	36	22	6	998	1002	72	10	+0.5	10	1188	116	824	83	8.1	11.4	210
8	110.28.1200	112.28.1200	114.28.1200	1242	988	82	1198	1042	36	22	6	1118	1122	72	10	+0.5	12	1305.6	106	940.8	79	9.7	13.6	230
9	110.32.1250	111.32.1250	113.32.1250	1390	1110	91	1337	1163	40	26	5	1248	1252	81	10	+0.5	14	1449.6	118	1048.8	88	11.3	15.7	350
10	110.32.1400	112.32.1400	114.32.1400	1540	1260	91	1487	1313	40	26	5	1398	1402	81	10	+0.5	14	1607.2	112	1192.8	100	11.3	15.7	400
11	110.32.1600	111.32.1600	113.32.1600	1740	1460	91	1687	1531	45	26	5	1598	1602	81	10	+0.5	16	1820.8	111	1382.4	87	15.1	22.4	440
12	110.32.1800	112.32.1800	114.32.1800	1940	1660	91	1887	1713	45	26	5	1798	1802	81	10	+0.5	14	2013.2	141	1573.6	113	13.2	18.2	500
13	110.40.2000	111.40.2000	113.40.2000	2178	1825	112	2110	1891	48	33	8	1987	2003	100	10	+0.5	16	2268.8	139	1734.4	109	18.1	25.0	900
14	110.40.2240	112.40.2240	114.40.2240	2418	2065	112	2350	2431	48	33	8	2237	2243	100	12	+0.5	16	2492.8	153	1990.4	125	18.1	25.0	1000
15	110.40.2500	111.40.2500	113.40.2500	2678	2325	112	2610	2391	56	33	8	2497	2503	100	12	+0.5	18	2768.4	136	1987.2	111	20.3	28.1	1100
16	110.40.2800	112.40.2800	114.40.2800	2978	2625	112	2910	2691	56	33	8	2798	2803	100	12	+0.5	18	3074.4	168	2527.2	141	20.3	28.1	1250
17	110.50.3150	111.50.3150	113.50.3150	3376	2922	134	3286	3014	56	45	8	3147	3153	122	12	+0.5	20	3476	171	2828	142	27.6	38.3	2150
18	110.50.3550	112.50.3550	114.50.3550	3776	3322	134	3686	3414	56	45	8	3547	3553	122	12	+0.5	22	3889.6	174	3220.8	147	30.4	42.1	2470
19	110.50.4000	111.50.4000	113.50.4000	4226	3772	134	4136	3864	60	45	10	3997	4003	122	12	+0.5	25	4345	171	3660	147	34.5	47.8	2800
20	110.50.4500	112.50.4500	114.50.4500	4726	4272	134	4636	4364	60	45	10	4497	4503	122	12	+0.5	25	4845	191	4166.8	190	30.4	42.1	3100

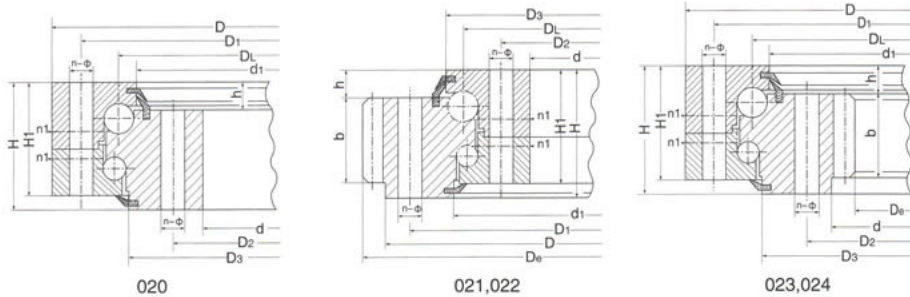


杭州恒力传动件有限公司

HANGZHOU EVER-POWER TRANSMISSION CO.,LTD.

双排球式回转支承 (02系列)

Double-Row Balls Slewing Ring (Standard Series 02)



JB/T2300-1999

◎ 结构特点.性能.适用范围

双排球式回转支承具有三个座圈,钢球和隔离块可直接排入上下滚道,根据受力状况,安排了上下两排直径不同的钢球。

这种开式装配非常方便,上下圆弧滚道的承载角都为 90° ,能承受很大的轴向力和倾翻力矩。当径向力大于0.1倍的轴向力时滚道须特殊设计。双排球式回转支承的轴向、径向尺寸都比较大,结构坚固,特别适用于要求中等以上直径的塔式起重机、汽车起重机等装卸机械上。

◎ CHARACTERISTIC OF STRUCTURE, PERFORMANCE AND APPLICATION

The double-row Ball slewing bearing has three seat-rings.The steel balls and the spacers may be directly arranged into the upper and lower races.Two rows of steel balls with different diameters are fitted according to the force bom.

Such open mode fitting features extraordinary convenience.The load angles of both upper and lower races are 90° , which enable the bearing to bear large axial force and the tipping moment.

When the radial force is larger than 1/10 of the axail force the races should be newly designed.

As the axle and the dimension of the double-row ball slewing bearing are rather large,the bearing construction is sturdy ,hence it is especially suitable for tower cranes which require working radius over medium range,mobile cranes and loading and unloading machines.

注: 1、n1为润滑油孔数,均布;油杯M10X1GB1152-1153-79。

2、安装孔 $n-\phi$ 可改用螺孔;齿宽b可改为 $H-h$ 。

3、表内齿轮圆周力为最大圆周力,额定圆周力取其1/2。

4、外齿修顶系数0.1,内齿修顶系数为0.2。

Note:1.n1-number of lubricating holes,evenly distributed,lubricating nipple M10x1GB1152-1153-79.

2.Mounting hole $n-\phi$ may be replaced with screw hole,tooth width b may be taken as $H-h$.

3.Gear force of periphery given in the table is its maximum value,nominal force of periphery is taken 1/2 of the given value.

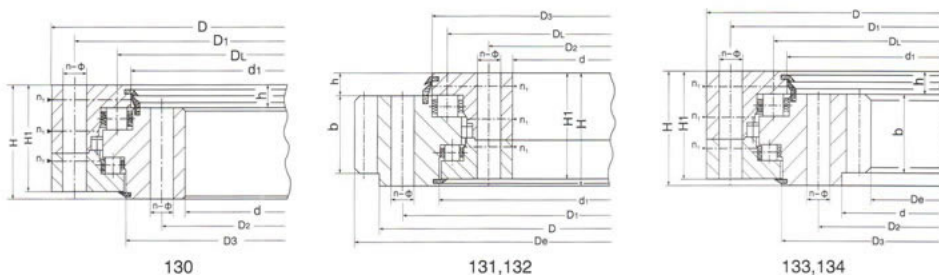
4.The trim top coefficient of outer and inner tooth 0.1 and 0.2 respectively.

Load Diagram Number 载荷图编号	Basic type 基本型号		Configuration size 外型尺寸mm		Mounting size 安装孔尺寸		Structural size 结构尺寸			Gear Data 齿轮参数			Ext. Gear 外齿参数		Int. Gear 内齿参数		Tooth load 齿轮周力		Reference weight 参考重量 kg				
	Toothness DL mm	Ext. Tooth DL mm	Int. Tooth DL mm	D mm	d mm	H mm	D1 mm	D2 mm	n	φ mm	n1	H1 mm	h mm	b mm	x	m mm	De mm	Z		De mm	Z	Normal Z	Dynamic T
1	020.25.500	021.25.500	023.25.500	616	384	106	580	420	20	18	4	96	26	60	+0.5	5	644	126	257	72	3.7	5.2	100
2	020.25.560	022.25.560	024.25.560	676	444	106	640	480	20	18	4	96	26	60	+0.5	5	704	138	417	84	3.7	5.2	115
3	020.25.630	021.25.630	023.25.630	746	514.5	106	710	550	24	18	4	96	26	60	+0.5	6	790.8	129	482.4	81	4.5	6.2	130
4	020.25.710	022.25.710	024.25.710	826	594	106	790	630	24	18	4	96	26	80	+0.5	8	862.8	141	560.4	94	4.5	6.2	140
5	020.30.800	021.30.800	023.30.800	942	658	124	898	702	30	22	6	114	29	80	+0.5	10	988	96	614	62	10.0	14.1	200
6	020.30.900	022.30.900	024.30.900	1042	758	124	998	802	30	22	6	114	29	80	+0.5	8	1066.4	133	715.2	90	8.0	11.1	250
7	020.30.1000	021.30.1000	023.30.1000	1142	858	124	1098	902	36	22	6	114	29	80	+0.5	10	1198	117	814	82	10.0	14.0	300
8	020.30.1200	022.30.1200	024.30.1200	1262	978	124	1218	1022	36	22	6	114	29	80	+0.5	12	1317.6	107	916.8	77	12.0	16.7	340
9	020.40.1250	021.40.1250	023.40.1250	1426	1047	160	1374	1126	40	26	5	150	39	90	+0.5	12	1497.6	122	1012.8	85	13.5	18.8	580
10	020.40.1400	022.40.1400	024.40.1400	1576	1224	160	1524	1272	40	26	5	150	39	90	+0.5	12	1641.6	134	1158.8	97	13.5	18.8	650
11	020.40.1600	021.40.1600	023.40.1600	1776	1424	160	1724	1476	45	26	5	150	39	90	+0.5	14	1845.2	129	1349.6	97	15.8	21.9	750
12	020.40.1800	022.40.1800	024.40.1800	1976	1624	160	1924	1676	45	26	5	150	39	90	+0.5	14	2055.2	144	1545.6	111	15.8	21.9	820
13	020.50.2000	021.50.2000	023.50.2000	2215	1785	190	2149	1851	48	33	8	178	47	120	+0.5	16	2068.8	126	1542.4	97	18.1	26.0	1150
14	020.50.2240	022.50.2240	024.50.2240	2455	2025	190	2389	2091	48	33	8	178	47	120	+0.5	16	2300.8	141	1702.4	107	24.1	33.3	1500
15	020.50.2500	021.50.2500	023.50.2500	2715	2285	190	2649	2351	56	33	8	178	47	120	+0.5	18	2804.4	153	2203.2	123	27.1	37.5	1700
16	020.50.2800	022.50.2800	024.50.2800	3015	2585	190	2949	2651	56	33	8	178	47	120	+0.5	18	3110.4	170	2491.2	139	27.1	37.5	1900
17	020.60.3150	021.60.3150	023.60.3150	3428	2872	226	3338	2962	56	45	8	214	56	150	+0.5	20	3536.8	158	2758.8	126	41.5	57.4	3300
18	020.60.3550	022.60.3550	024.60.3550	3828	3272	226	3738	3362	56	45	8	214	56	150	+0.5	22	3936	194	3168	159	37.7	52.2	3700
19	020.60.4000	021.60.4000	023.60.4000	4278	3722	226	4188	3812	60	45	10	214	56	150	+0.5	22	4395.6	176	3176.8	145	41.5	57.4	4200
20	020.60.4500	022.60.4500	024.60.4500	4778	4222	226	4688	4312	60	45	10	214	56	150	+0.5	25	4879.6	219	4122.8	188	41.5	57.4	4700



三排滚柱式回转支承 (13系列)

Three-Row Roller Slewing Ring (Standard Series 13)



JB/T2300-1999

◎ 结构特点.性能.适用范围

三排滚柱式回转支承具有三个座圈,上下及径向滚道各自分开,使得每一排滚柱的负载都能确切地加以确定。能够同时承受各种载荷,是四种产品中承载能力最大的一种,轴、径向尺寸都较大,结构牢固,特别适用于要求较大直径的重型机械,如斗轮式挖掘机、轮式起重机、船用起重机、港口起重机、钢水运台及大吨位汽车起重机等机械上。

◎ CHARACTERISTIC OF STRUCTURE, PERFORMANCE AND APPLICATION

Three-row roller slewing ring has three seat-rings,which separatyng the upper,lower and radial raceways, via which the load of each row of the rollers maybe specified.It may bear different loads simultaneously and its load capacity is the largest one among the four models.

Owing to large size of its axle and radius,it is sturdy and especially suitable for heavy-duty machines which require large working diametre.such as bucketwheel excavators,wheeled cranes,deck cranes,port cranes,steel transporters,heavyduty mobile cranes etc.

注: 1、n1为润滑油孔数,均布;油杯M10X1GB1152-1153-79。

2、安装孔 $n-\phi$ 可改用螺孔;齿宽b可改为 $H-h_0$ 。

3、表内齿轮圆周力为最大圆周力,额定圆周力取其1/2。

4、外齿修顶系数0.1,内齿修顶系数为0.2。

Note:1.n1-number of lubricating holes,evenly distributed,lubricating nipple M10x1GB1152-1153-79.

2.Mounting hole $n-\phi$ may be replaced with screw hole,tooth width b may be taken as $H-h_0$.

3.Gear force of periphery given in the table is its maximum value,nominal force of periphery is taken 1/2 of the given value.

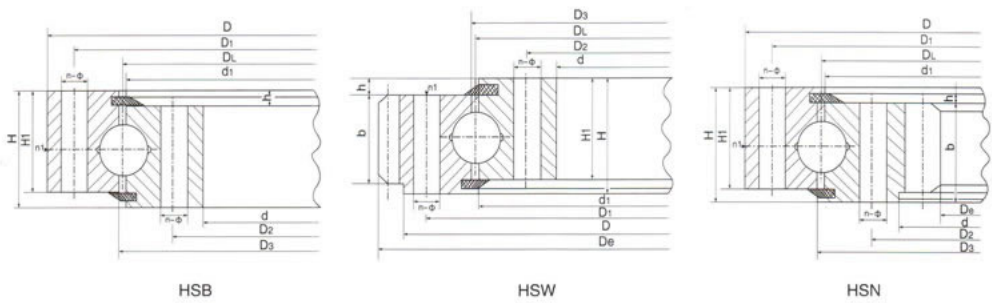
4.The trim top coefficient of outer and inner tooth 0.1 and 0.2 respectively.

承載曲綫圓編號 Load Diagram Number	基本型號 Basic type			外型尺寸/mm Configuration size			安裝孔尺寸 Mounting size			結構尺寸 Structural size			齒輪參數 Gear Data			外齒參數 Ext Gear		內齒參數 Int Gear		齒輪圓周力 Tangential Tooth load		參考重量 Reference weight kg	
	無齒式 Toothless DL mm	外齒式 Ext Teething DL mm	內齒式 Int Teething DL mm	D	d	H	D1	D2	n	φ	n1	H1	h	b	x	m	De	Z	De	Z	正火 Normalizing Z		測壓 Impressure T
1	130.25.500	131.25.500	133.25.500	634	366	148	598	402	24	18	4	138	32	80	+0.5	5	664	130	337	68	5.0	6.7	224
2	130.25.560	132.25.560	134.25.560	694	426	148	658	462	24	18	4	138	32	80	+0.5	6	664.8	108	338.4	57	6.0	8.0	240
3	130.25.630	131.25.630	133.25.630	764	496	148	728	532	28	18	4	138	32	80	+0.5	8	808.8	132	458.4	77	6.0	8.8	270
4	130.25.710	132.25.710	134.25.710	844	576	148	808	612	28	18	4	138	32	80	+0.5	6	886.8	145	536.4	90	6.0	8.0	300
5	130.32.800	131.32.800	133.32.800	964	636	182	920	680	36	22	4	172	40	120	+0.5	8	1006.4	123	595.2	75	12.1	16.7	500
6	130.32.900	132.32.900	134.32.900	1064	736	182	1020	780	36	22	4	172	40	120	+0.5	10	1008	98	594	60	15.1	20.9	600
7	130.32.1000	131.32.1000	133.32.1000	1164	836	182	1120	880	40	22	5	172	40	120	+0.5	10	1108	108	694	70	12.1	16.7	680
8	130.32.1200	132.32.1200	134.32.1200	1284	956	182	1240	1000	40	22	5	172	40	120	+0.5	12	1221.6	99	784.8	66	18.1	25.1	820
9	130.40.1250	131.40.1250	133.40.1250	1445	1055	220	1393	1107	45	26	5	210	50	150	+0.5	14	1509.2	105	985.6	71	26.3	36.6	1200
10	130.40.1400	132.40.1400	134.40.1400	1596	1205	220	1543	1257	45	26	5	210	50	150	+0.5	14	1665.6	136	114.8	96	22.9	31.4	1300
11	130.40.1600	131.40.1600	133.40.1600	1795	1405	220	1743	1457	48	26	6	210	50	150	+0.5	16	1873.2	131	1335.6	96	26.3	36.6	1520
12	130.40.1800	132.40.1800	134.40.1800	1995	1605	220	1943	1657	48	26	6	210	50	150	+0.5	16	2069.2	145	1531.6	110	26.3	36.6	1750
13	130.45.2000	131.45.2000	133.45.2000	2221	1779	231	2155	1845	60	33	6	219	54	160	+0.5	18	2300.8	141	1702.4	107	32.2	44.5	2400
14	130.45.2240	132.45.2240	134.45.2240	2461	2019	231	2395	2085	60	33	6	219	54	160	+0.5	16	2556.8	157	1926.4	121	32.2	44.5	2700
15	130.45.2500	131.45.2500	133.45.2500	2721	2279	231	2655	2345	72	33	8	219	54	160	+0.5	18	2822.4	154	2185.2	122	36.2	50.1	3000
16	130.45.2800	132.45.2800	134.45.2800	3021	2579	231	2955	2645	72	33	8	219	54	160	+0.5	18	3110.4	170	2491.2	139	36.2	50.1	3400
17	130.50.3150	131.50.3150	133.50.3150	3432	2888	270	3342	2958	72	45	8	258	65	180	+0.5	20	3536	174	2768	139	45.2	62.6	5000
18	130.50.3550	132.50.3550	134.50.3550	3832	3268	270	3742	3358	72	45	8	258	65	180	+0.5	22	3833.6	196	3168	159	45.2	62.6	5600
19	130.50.4000	131.50.4000	133.50.4000	4282	3718	270	4192	3808	80	45	8	258	65	180	+0.5	22	4395.6	197	3616.8	165	49.8	68.9	6400
20	130.50.4500	132.50.4500	134.50.4500	4782	4218	270	4692	4308	80	45	8	258	65	180	+0.5	25	4895.6	193	4110	165	56.5	78.3	7100



单排四点接触球式回转支承 (HS系列)

Single-Row Four-Point Contact Bearing Slewing Ring(Standard Series HS)



JB/2300-78A

◎ 结构特点.性能.适用范围

单排四点接触球式回转支承由两个座圈组成，结构紧凑，重量轻，钢球与圆弧滚道四点接触，能同时承受轴向力，径向力和倾翻力矩，回转式输送机，焊接操作机，中小型起重机和挖掘机等工程机械均可选用。

◎ CHARACTERISTIC OF STRUCTURE, PERFORMANCE AND APPLICATION

The single-row four point contact ball slewing ring is composed of 2 seatrings.It features compact in design,light in weight,the balls contact with the circular raceway at four points,via which the axial force,radial fore and resultant moment may be born simultaneously.It may be used for slewing conveyers,wedding operating consoles,light,medium duty cranes,excavators and other engineering machines.

- 注：1、n1为润滑油孔数，均布；油杯M10x1GB1152-1153-79。
 2、安装孔 $n-\phi$ 可改用螺孔；齿宽b可改为 $H-H_0$ 。
 3、表内齿顶圆周力为最大圆周力，额定圆周力取其1/2。
 4、表内双位系数均为孔齿轮双位系数，内齿轮双位系数均为+0.35。

- Note:1.n1-number of lubricating holes,evenly distributed,lubricating nipple M10x1GB1152-1153-79.
 2.Mounting hole $n-\phi$,may be replaced with screw hole,tooth width b may be taken as $H-h$.
 3.Gear force of periphery given in the table is its maximum value,nominal force of periphery is taken 1/2 of the given value.
 4.The spaceshift coefficient given in the tolde is the data of outer tooth,while that of inner tooth is +0.35.



基本型号规格举例

回转支承基本型号规格举例

The slewing bearing examples of specification of the basic types

二. JJ36-91标准回转支承编号方法



1. 无齿式单排式回转支承由相同滚道中心直径的外齿式内圈和内齿式外圈组成，其堵塞与油孔布置在外圈上。

2. 交叉滚柱式回转支承其滚道中心直径系列与单排球式回转支承滚道中心直径系列完全一致。但同一滚道中心直径的交叉滚柱回转支承和单排球式回转支承的滚动体直径不同，对应如下：

Q系列钢球直径	20	25	32	40	50	60
J系列圆柱滚子直径	14	18	22	28	36	45



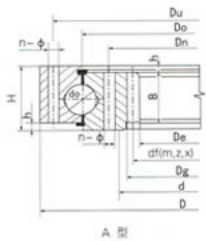
单排球式回转支承

单排球式回转支承,采用国际先进四点接触球式结构,与各类起重机、挖掘机、打桩机、消防云梯车、高空作业车、地铁机车等机械设备配套。这种支承是需要承受轴向力、径向力、倾复力矩且两大部分需相对旋转的机械最理想的配套件。

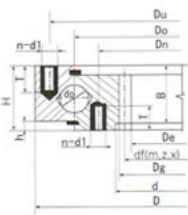
Single-Row slewing ring,featured in quadruple-loading-points,an advanced structure in the world,is suitable to be assembled to the mechanical part of various cranes,excavators,piledrivers,scalling-ladder of fire trucks and under-ground engines,etc.Whatever these turnable parts require a strong stand to aial radial load and tilting moment,this rotary kind of slewing ring will be your best choice.

注:交叉滚柱(锥)式回转支承除滚动体型式和滚动体直径外,其余基本参数与同一滚道中心直径的单排球式回转支承基本参数完全一致。

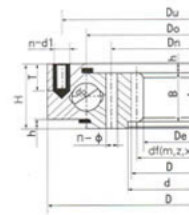
Note:Cross roler slewing rings,except type and diameter of their rolling object,are in accord with single-row slewing rings in their basic for datas for same diameter of rolling centre.



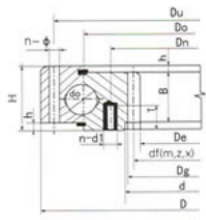
A 型



B 型



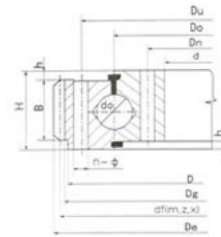
C 型



D 型

QN内齿式结构

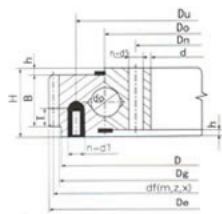
QN Cross-section with internal gear



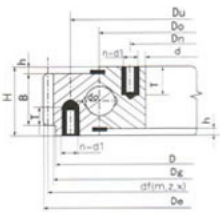
A 型

QW外齿式结构图

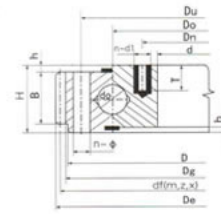
QW Cross-section with external gear



C 型



B 型



D 型



单排球式回转支承基本参数系列 (JJ36-99)

SINGLE-ROW BALL SLEWING RING

QW QN系列外齿式、内齿式基本参数

序 号	型 号	外型尺寸mm				安装孔尺寸					齿轮参数						质量kg				
		外齿式		内齿式		H	h	Du	Dn	n	通孔 螺孔			m	B	外 齿		内 齿		外 齿 式	内 齿 式
		D	d	D	d						A型	B.C.D型	Φ			d1	T	X=-0.5	X=+0.5		
1	315.20	406	222	408	224	60	10	370	260	10	17	M16	24	3	40	423	140	207	70	35	34
	315.20A													4	40	428	106	200	51	36	35
2	355.20	446	262	448	164	60	10	410	300	10	17	M16	24	3	40	462	153	246	84	40	39
	355.20A													4	40	468	116	240	61	41	40
3	400.20	490	307	496	310	60	10	455	345	12	17	M16	24	4	40	512	127	288	73	45	44
	400.20A													5	40	520	103	280	57	47	46
4	450.20	540	357	543	360	60	10	505	395	12	17	M16	24	4	40	564	140	336	85	51	50
	450.20A													5	40	570	113	330	67	53	52
5	500.20	590	404	593	410	60	10	555	445	14	17	M16	24	5	40	615	122	385	78	56	55
	500.20A													6	40	624	103	378	64	58	57
6	560.20	654	464	656	468	70	10	618	502	14	17	M16	30	4	50	680	169	440	111	78	76
	560.20A													5	50	685	136	435	88	79	77
7	630.20	724	534	726	538	70	10	688	572	16	17	M16	30	4	50	748	186	512	129	86	84
	630.20A													5	50	755	150	505	102	88	86
8	710.20	804	614	806	618	70	10	768	652	18	17	M16	30	5	50	835	166	585	118	99	97
	710.20A													6	50	840	139	582	98	101	97
9	800.20	894	704	896	708	70	10	858	742	20	17	M16	30	6	50	930	154	672	113	114	110
	800.20A													8	50	936	116	664	84	114	111
10	800.25	904	692	908	694	78	10	864	736	18	22	M20	36	6	58	942	156	654	110	143	142
	800.25A													8	58	952	118	648	82	147	142
11	900.25	1004	792	1008	794	78	10	964	836	20	22	M20	36	8	58	1048	130	744	94	162	163
	900.25A													10	58	1060	105	740	75	168	162
12	1000.25	1104	892	1108	894	78	10	1064	936	24	22	M20	36	8	58	1152	143	848	107	182	178
	1000.25A													10	58	1160	115	840	85	185	179
13	1000.32	1120	876	1124	880	90	10	1074	926	24	24	M22	40	8	70	1160	144	832	105	227	230
	1000.32A													10	70	1170	116	830	84	232	227
14	1120.32	1240	996	1244	1000	90	10	1194	1046	28	24	M22	40	10	70	1300	129	940	95	272	263
	1120.32A													12	70	1308	108	936	79	275	262
15	1250.32	1370	1126	1374	1130	90	10	1324	1176	32	24	M22	40	10	70	1430	142	1070	108	302	294
	1250.32A													12	70	1440	119	1068	90	309	290
16	1400.32	1520	1276	1524	1280	90	10	1474	1326	36	24	M22	40	12	70	1584	131	1212	102	337	333
	1400.32A													14	70	1596	113	1204	87	347	336
17	1250.40	1390	1108	1394	1110	102	12	1336	1164	32	26	M24	45	10	80	1450	144	1050	106	396	388
	1250.40A													12	80	1452	120	1044	88	392	388
18	1400.40	1540	1258	1544	1260	102	12	1486	1314	36	26	M24	45	12	80	1608	133	1188	100	448	444
	1400.40A													14	80	1610	114	1190	86	443	434
19	1600.40	1740	1458	1744	1460	102	12	1686	1514	40	26	M24	45	12	80	1812	150	1392	117	528	509
	1600.40A													14	80	1820	129	1386	100	534	511
20	1800.40	1940	1658	1944	1660	102	12	1886	1714	44	26	M24	45	14	80	2016	143	1582	114	583	576
	1800.40A													16	80	2032	126	1568	99	607	591
21	1600.50	1762	1434	1766	1438	124	12	1704	1496	40	30	M27	50	12	100	1824	151	1368	115	714	714
	1600.50A													14	100	1834	130	1358	98	727	723
22	1800.50	1964	1634	1966	1638	124	12	1094	1696	44	30	M27	50	14	100	2044	145	1568	113	845	794
	1800.50A													16	100	2048	127	1552	98	843	818
23	2000.50	2162	1834	2166	1842	124	12	2104	1896	48	30	M27	50	16	100	2240	139	1760	111	912	891
	2000.50A													18	100	2250	124	1746	98	927	913
24	2240.50	2402	2074	2406	2078	124	12	2344	2136	54	30	M27	50	16	100	2480	154	1984	125	1020	1044
	2240.50A													18	100	2502	138	1980	111	1078	1041
25	2500.50	2662	2334	2666	2342	124	12	2604	2396	60	30	M27	50	18	100	2754	152	2250	126	1171	1132
	2500.50A													20	100	2760	137	2240	113	1175	1148
26	2500.60	2696	2304	2696	2308	150	14	2626	2374	60	33	M30	56	18	122	2790	154	2214	124	1677	1621
	2500.60A													20	122	2800	139	2200	111	1701	1654



杭州恒力传动件有限公司

HANGZHOU EVER-POWER TRANSMISSION CO.,LTD.

回转支承的选型计算方法

回转支承所承受的作用力包括：总轴向力 $F_a(10^4 N)$ ，总倾翻力矩 $M(10^4 N.m)$ ，在力矩作用平面的总径向力 $F_r(10^4 N)$ 。选型计算时，静态工况下回转支承所承受的作用力 F_a 、 M 、 F_r 和动态工况所承受的作用力 F_a' 、 M' 、 F_r' 应分别计算。如果主机做提升动作，则提升载荷应乘以提升惯性系数 K ， $K=1.25$ 。

A1. 单排四点接触球式选型计算

A1.1. 按静态工况选型

方法I ($\alpha=60^\circ$)

$$F_a' = (F_a + 5.046F_r) f_1$$

$$M' = M f_2$$

方法II ($\alpha=45^\circ$)

$$F_a' = (1.225F_a + 2.676F_r) f_1$$

$$M' = 1.225M f_2$$

式中： F_a' ——回转支承当量中心轴向力， $10^4 N$ ；

M' ——回转支承当量倾翻力矩， $10^4 N.m$ ；

f_1 ——回转支承静态工况下安全系数（见表A1）。

A1.2. 按动态工况校核寿命

方法I ($\alpha=60^\circ$)

$$F_a' = (F_a + 5.046F_r) f_2$$

$$M' = M f_2$$

方法II ($\alpha=45^\circ$)

$$F_a' = (1.225F_a + 2.676F_r) f_2$$

$$M' = 1.225 M f_2$$

式中 f_2 ——回转支承动态工况下安全系数（见表A1）

A2. 双排异径球式选型计算

A2.1. 按静态工况选型

$$F_a' = F_a f_1$$

$$M' = M f_2$$

A2.2. 按动态工况校核寿命

$$F_a' = F_a f_2$$

$$M' = M f_2$$

A3. 单排交叉滚柱式选型计算

A3.1. 按静态工况选型

$$F_a' = (F_a + 2.05F_r) f_1$$

$$M' = M f_2$$

A3.2. 按动态工况校核寿命

$$F_a' = (F_a + 2.05F_r) f_2$$

$$M' = M f_2$$

A4. 三排滚柱式选型计算（径向力 F_r 由径向滚柱承受）

A4.1. 按静态工况选型

$$F_a' = F_a f_1$$

$$M' = M f_2$$

A4.2. 按动态工况校核寿命

$$F_a' = F_a f_2$$

$$M' = M f_2$$

A5. 安装螺栓的强度校核

在承载曲线图中，按静态工况计算出来的总轴向力 F_a 和总倾翻力矩 M 的交点，应落在所选的8.8级、10.9级、12.9级螺栓承载曲线的下方。

回转支承与主机安装时，安装螺栓的预紧力应达到螺栓材料屈服强度的0.7倍。

“承载力曲线图请向我公司索取，或参考JB/T2300-1999标准”

表A1 回转支承安全系数

应用主机			回转支承型式					
			01		02		11, 13	
			安全系数					
			f_1	f_2	f_3	f_4	f_5	
建筑用塔式起重机	上回转式	$M_2 \leq 0.5M$	1.25	1.36	1.25	1.00	1.25	1.00
		$0.5M < M_2 < 0.8M$	1.25	1.55	1.25	1.15	1.25	1.13
	下回转式	$M_2 \geq 0.8M$	1.25	1.71	1.25	1.26	1.25	1.23
						1.00		1.07
轮式起重机、堆取料机及各种工作台			1.10	1.36	1.10	1.10	1.10	1.00
悬臂式起重机、港口起重机、各种装卸机械			1.25	1.55	1.25	1.15	1.25	1.13
皮带运输机装卸用塔式起重机和履带起重机			1.25	1.71	1.10	1.26	1.25	1.23
抓斗及拉铲挖掘机、挖泥船、浮游起重机			1.45	2.50	1.45	1.71		1.62
斗容量小于1.6m ³ 的挖掘机			1.45	2.50			1.45	1.45
斗容量大于或等于1.6m ³ 的挖掘机			1.75	3.00		1.25	1.26	1.75
冶金用起重机、斗轮挖掘机、隧道掘进机			2.00	3.50	1.45	1.75		

注： M_2 为最小幅度时空载恢复力矩。



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