SECTION 4 - Bearing Tolerances, Fits, & Clearances

RECOMMENDED SHAFT FITS FOR RADIAL BEARINGS (classes 0, 6X, 6)

Conditions[1]		Ball bearing		Cylindrical roller bearing Tapered roller bearing		Spherical roller bearing		Class of shaft tolerance	Remarks
		Shaft diameter (mm)							
		Over	Up to	Over	Up to	Over	Up to		
Rotating inner ring load or indeterminate direction load	Light load or fluctuation load P/C ≤ 0.06	-	18	-	-	-	-	h5	For applications requiring high accuracy, js5, k5, and m5 should be used in place of js6, k6 and m6.
		18	100	-	40	-	-	js6	
		100	200	40	140	-	-	k6	
		-	-	140	200	-	-	m6	
	Normal load 0.06 < P/C ≤ 0.12	-	18	-	-	-	-	js5	For single-row tapered roller bearings and angular contact ball bearings, k 5 and m5 may be replaced by k6 and m6, because internal clearance reduction due to fit need not be considered.
		18	100	-	40	-	40	k5	
		100	140	40	100	40	65	m5	
		140	200	100	140	65	100		
		200	280	140	200	100	140	m6	
		-	-	200	400	140	280	n6	
		-	-	-	-	280	500	p6	
								r6	
	Heavy load or impact load P/C > 0.12	-	-	50	140	50	100	n6	Bearings with larger internal clearance than standard are required.
		-	-	140	200	100	140	p6	
		-	-	200	-	140	200	r6	

RECOMMENDED HOUSING FITS FOR RADIAL BEARINGS (classes 0, 6X, 6)

Conditions				Class of housing bore tolerance	Remarks	Applications (for reference)
Housing	Load type etc.[1]		Outer ring axial displacement [2]			
One piece or split type	Stationary outer ring load	All load types	Easily displaceable	H7	G7 may be applied when a large size bearing is used, or if the temperature difference is large between the outer ring and housing.	Ordinary bearing devices, railway rolling stock axle boxes, power transmission equipment etc.
		Light or normal load	Easily displaceable	H8	-	
		High temperature at shaft and inner ring	Easily displaceable	G7	F7 may be applied when a large size bearing is used, or if the temperature difference is large between the outer ring and housing.	Drying cylinders etc.
One piece type		Light or normal load, requiring high running accuracy	Not displaceable in principle	K6	Mainly applied to roller bearings.	
			Displaceable	JS6	Mainly applied to ball bearings.	
		Requiring low noise rotation	Easily displaceable	H6	-	
	Indeterminate direction load	Light or normal load	Normally displaceable	JS7	For applications requiring high accuracy, JS 6 and K 6 should be used in place of JS 7 and K 7.	Electric motors, pumps, crankshaft Normal or main bearings etc.
		Normal or heavy load	Not displaceable in principle	K7		
		High impact load	Not displaceable	M7	-	Traction motors etc.
	Rotating outer ring load	Light or fluctuating load	Not displaceable	M7	-	Conveyer rollers, ropeways, tension pulleys etc.
		Normal or heavy load	Not displaceable	N7	Mainly applied to ball bearings.	Wheel hubs with ball bearings etc.
		Thin section housing, heavy or high impact load	Not displaceable	P7	Mainly applied to roller bearings.	Wheel hubs with roller bearings, bearings for large end of connecting rods etc.

[Notes]
1) Loads are classified as stated in Note [1] to Table 6-1(1)
2) Indicating distinction between applications of non-separable bearings permitting and not permitting axial displacement of the outer rings.

Remarks: 1. This table is applicable to cast iron or steel housings
2. If only central axial load is applied to the bearing, select such tolerance range class as to provide clearance in the radial direction for outer ring.

RECOMMENDED SHAFT FITS FOR INCH SERIES TAPERED ROLLER BEARINGS

Bearing Tolerance : class 4, class 2

Load type		Nominal bore diameter d mm (1/25.4 inches)				Deviation of a single bore diameter Δd_s, μm		Dimensional tolerance of shaft diameter μm		Remarks
		over		up to		upper	lower	upper	lower	
		mm	in	mm	in					
Rotating cone load	Normal load	-	-	76.2	3.0	+13	0	+38	+25	
		76.2	3.0	304.8	12.0	+25	0	+64	+38	
		304.8	12.0	609.6	24.0	+51	0	+127	+76	
		609.6	24.0	914.4	36.0	+76	0	+190	+114	
	Heavy load Impact load High speed rotation	-	-	76.2	3.0	+13	0	Should be such that average interference stands at 0.0005 X d(mm)		Generally, bearing internal clearance should be larger than standard.
		76.2	3.0	304.8	12.0	+25	0			
		304.8	12.0	609.6	24.0	+51	0			
		609.6	24.0	914.4	36.0	+76	0			
Rotating cup load	Normal load without impact	-	-	76.2	3.0	+13	0	+13	0	
		76.2	3.0	304.8	12.0	+25	0	+25	0	
		304.8	12.0	609.6	24.0	+51	0	+51	0	
		609.6	24.0	914.4	36.0	+76	0	+76	0	
	Normal load without impact	-	-	76.2	3.0	+13	0	0	+13	Cone is displaceable in axial direction.
		76.2	3.0	304.8	12.0	+25	0	0	+25	
		304.8	12.0	609.6	24.0	+51	0	0	+51	
		609.6	24.0	914.4	36.0	+76	0	0	+76	
	Heavy load Impact load High speed rotation	-	-	76.2	3.0	+13	0	Should be such that average interference stands at 0.0005 X d(mm)		Generally, bearing internal clearance should be larger than standard.
		76.2	3.0	304.8	12.0	+25	0			
		304.8	12.0	609.6	24.0	+51	0			
		609.6	24.0	914.4	36.0	+76	0			

RECOMMENDED HOUSING FITS FOR RADIAL BEARINGS (classes 0, 6X, 6)

Load type		Nominal outside diameter D mm (1/25.4 inches)				Deviation of a single outside diameter ΔD_s, μm		Dimensional tolerance of housing bore diameter μm		Remarks
		over		up to		upper	lower	upper	lower	
		mm	in	mm	in					
Rotating cone load	Used for free or fixed side.	-	-	76.2	3.0	+25	0	+76	+51	Cup is easily displaceable in axial direction.
		76.2	3.0	127.0	5.0	+25	0	+76	+51	
		127.0	5.0	304.8	12.0	+25	0	+76	+51	
		304.8	12.0	609.6	24.0	+51	0	+152	+102	
		609.6	24.0	914.4	36.0	+76	0	+229	+152	
	Position of cup is adjustable (in axial direction)	-	-	76.2	3.0	+25	0	+25	0	Cup is displaceable in axial direction.
		76.2	3.0	127.0	5.0	+25	0	+25	0	
		127.0	5.0	304.8	12.0	+25	0	+51	0	
		304.8	12.0	609.6	24.0	+51	0	+76	+25	
		609.6	24.0	914.4	36.0	+76	0	+127	+51	
	Position of cup is not adjustable (in axial direction).	-	-	76.2	3.0	+25	0	-13	-38	Cup is fixed in axial direction.
		76.2	3.0	127.0	5.0	+25	0	-25	+51	
		127.0	5.0	304.8	12.0	+25	0	-25	+51	
		304.8	12.0	609.6	24.0	+51	0	-25	-76	
		609.6	24.0	914.4	36.0	+76	0	-25	-102	
Rotating cup load	Position of cup is not adjustable (in axial direction).	-	-	76.2	3.0	+25	0	-13	-38	Cup is fixed in axial direction.
		76.2	3.0	127.0	5.0	+25	0	-25	+51	
		127.0	5.0	304.8	12.0	+25	0	-25	+51	
		304.8	12.0	609.6	24.0	+51	0	-25	-76	
		609.6	24.0	914.4	36.0	+76	0	-25	-102	

SECTION 4 - Bearing Tolerances, Fits, & Clearances

FITTING PRACTICE TABLES

The following tables show recommended shaft and housing fitting practice values for ball, cylindrical roller, and tapered roller bearings. The fitting practices shown for ball and cylindrical roller bearings are commonly used for electric motors and most other applications using these single row bearings.

RECOMMENDED FITS FOR CYLINDRICAL ROLLER BEARINGS(NU200 & NU300) Bearing Tolerance Class 0, 6X, & 6

BEARING DESCRIP-TION	SHAFT TOLERANCE FIT = MIN/MAX		HOUSING TOLERANCE FIT = MIN/MAX		SHAFT SIZE (mm)		SHAFT SIZE (inches)		HSG SIZE (mm)		HSG SIZE (inches)	
	x 0.001 mm	x 0.0001 in	x 0.001 mm	x 0.0001 in	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
NU304	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/19	H6 = 0/7.5	20.002	20.011	0.7875	0.7878	52.000	52.019	2.0472	2.0480
NU305	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/19	H6 = 0/7.5	25.002	25.011	0.9843	0.9847	62.000	62.019	2.4409	2.4417
NU306	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/19	H6 = 0/7.5	30.002	30.011	1.1812	1.1815	72.000	72.019	2.8346	2.8354
NU307	k5 = 2/13	k5 = 0.8/5	H6 = 0/19	H6 = 0/7.5	35.002	35.013	1.3780	1.3785	80.000	80.019	3.1496	3.1504
NU308	k5 = 2/13	k5 = 0.8/5	H6 = 0/22	H6 = 0/8.7	40.002	40.013	1.5749	1.5753	90.000	90.022	3.5433	3.5442
NU309	m5 = 9/20	m5 = 3.5/8	H6 = 0/22	H6 = 0/8.7	45.009	45.020	1.7720	1.7724	100.000	100.022	3.9370	3.9379
NU310	m5 = 9/20	m5 = 3.5/8	H6 = 0/22	H6 = 0/8.7	50.009	50.020	1.9689	1.9693	110.000	110.022	4.3307	4.3316
NU311	m5 = 11/24	m5 = 4.3/9	H6 = 0/22	H6 = 0/8.7	55.011	55.024	2.1658	2.1663	120.000	120.022	4.7244	4.7253
NU312	m5 = 11/24	m5 = 4.3/9	H6 = 0/25	H6 = 0/9.8	60.011	60.024	2.3626	2.3631	130.000	130.025	5.1181	5.1191
NU313	m5 = 11/24	m5 = 4.3/9	H6 = 0/25	H6 = 0/9.8	65.011	65.024	2.5595	2.5600	140.000	140.025	5.5118	5.5128
NU314	m5 = 11/24	m5 = 4.3/9	H6 = 0/25	H6 = 0/9.8	70.011	70.024	2.7563	2.7569	150.000	150.025	5.9055	5.9065
NU315	m5 = 11/24	m5 = 4.3/9	H6 = 0/25	H6 = 0/9.8	75.011	75.024	2.9532	2.9537	160.000	160.025	6.2992	6.3002
NU316	m5 = 11/24	m5 = 4.3/9	H6 = 0/25	H6 = 0/9.8	80.011	80.024	3.1500	3.1506	170.000	170.025	6.6929	6.6939
NU317	m5 = 13/28	m5 = 5/11	H6 = 0/25	H6 = 0/9.8	85.013	85.028	3.3470	3.3476	180.000	180.025	7.0866	7.0876
NU318	m5 = 13/28	m5 = 5/11	H6 = 0/29	H6 = 0/11.4	90.013	90.028	3.5438	3.5444	190.000	190.029	7.4803	7.4815
NU319	m5 = 13/28	m5 = 5/11	H6 = 0/29	H6 = 0/11.4	95.013	95.028	3.7407	3.7413	200.000	200.029	7.8740	7.8752
NU320	m5 = 13/28	m5 = 5/11	H6 = 0/29	H6 = 0/11.4	100.013	100.028	3.9375	3.9381	215.000	215.029	8.4646	8.4657
NU321	m6 = 13/35	m6 = 5/14	H6 = 0/29	H6 = 0/11.4	105.013	105.035	4.1344	4.1352	225.000	225.029	8.8583	8.8594
NU322	m6 = 13/35	m6 = 5/14	H6 = 0/29	H6 = 0/11.4	110.013	110.035	4.3312	4.3321	240.000	240.029	9.4488	9.4500
NU324	m6 = 13/35	m6 = 5/14	H6 = 0/32	H6 = 0/12.6	120.013	120.035	4.7249	4.7258	260.000	260.032	10.2362	10.2375
NU326	m6 = 15/40	m6 = 6/16	H6 = 0/32	H6 = 0/12.6	130.015	130.040	5.1187	5.1197	280.000	280.032	11.0236	11.0249
NU328	m6 = 15/40	m6 = 6/16	H6 = 0/32	H6 = 0/12.6	140.015	140.040	5.5124	5.5134	300.000	300.032	11.8110	11.8123
NU330	n6 = 27/52	n6 = 11/20	H6 = 0/36	H6 = 0/14.2	150.027	150.052	5.9066	5.9076	320.000	320.036	12.5984	12.5998
NU332	n6 = 27/52	n6 = 11/20	H6 = 0/36	H6 = 0/14.2	160.027	160.052	6.3003	6.3013	340.000	340.036	13.3858	13.3872
NU334	n6 = 27/52	n6 = 11/20	H6 = 0/36	H6 = 0/14.2	170.027	170.052	6.6940	6.6950	360.000	360.036	14.1732	14.1746
NU336	n6 = 27/52	n6 = 11/20	H6 = 0/36	H6 = 0/14.2	180.027	180.052	7.0877	7.0887	380.000	380.036	14.9606	14.9620
NU338	n6 = 31/60	n6 = 12/24	H6 = 0/36	H6 = 0/14.2	190.031	190.060	7.4815	7.4827	400.000	400.036	15.7480	15.7494
NU340	n6 = 31/60	n6 = 12/24	H6 = 0/40	H6 = 0/15.7	200.031	200.060	7.8752	7.8764	420.000	420.040	16.5354	16.5370
NU344	p6 = 50/79	p6 = 20/31	H6 = 0/40	H6 = 0/15.7	220.050	220.079	8.6634	8.6645	460.000	460.040	18.1102	18.1118
NU348	p6 = 50/79	p6 = 20/31	H6 = 0/40	H6 = 0/15.7	240.050	240.079	9.4508	9.4519	500.000	500.040	19.6850	19.6866

RECOMMENDED FITS FOR CYLINDRICAL ROLLER BEARINGS(NU200 & NU300) Bearing Tolerance Class 0, 6X, & 6 ... *cont'd*

BEARING DESCRIPTION	SHAFT TOLERANCE FIT = MIN/MAX		HOUSING TOLERANCE FIT = MIN/MAX		SHAFT SIZE (mm)		SHAFT SIZE (Inches)		HSG SIZE (mm)		HSG SIZE (Inches)	
	x 0.001 mm	x 0.0001 In	x 0.001 mm	x 0.0001 In	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
NU204	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/16	H6 = 0/6.3	20.002	20.011	0.7875	0.7878	47.000	47.016	1.8504	1.8510
NU205	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/19	H6 = 0/7.5	25.002	25.011	0.9843	0.9847	52.000	52.019	2.0472	2.0480
NU206	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/19	H6 = 0/7.5	30.002	30.011	1.1812	1.1815	62.000	62.019	2.4409	2.4417
NU207	k5 = 2/13	k5 = 0.8/5	H6 = 0/19	H6 = 0/7.5	35.002	35.013	1.3780	1.3785	72.000	72.019	2.8346	2.8354
NU208	k5 = 2/13	k5 = 0.8/5	H6 = 0/19	H6 = 0/7.5	40.002	40.013	1.5749	1.5753	80.000	80.019	3.1496	3.1504
NU209	m5 = 9/20	m5 = 3.5/8	H6 = 0/22	H6 = 0/8.7	45.009	45.020	1.7720	1.7724	85.000	85.022	3.3465	3.3473
NU210	m5 = 9/20	m5 = 3.5/8	H6 = 0/22	H6 = 0/8.7	50.009	50.020	1.9689	1.9693	90.000	90.022	3.5433	3.5442
NU211	m5 = 11/24	m5 = 4.3/9	H6 = 0/22	H6 = 0/8.7	55.011	55.024	2.1658	2.1663	100.000	100.022	3.9370	3.9379
NU212	m5 = 11/24	m5 = 4.3/9	H6 = 0/22	H6 = 0/8.7	60.011	60.024	2.3626	2.3631	110.000	110.022	4.3307	4.3316
NU213	m5 = 11/24	m5 = 4.3/9	H6 = 0/22	H6 = 0/8.7	65.011	65.024	2.5595	2.5600	120.000	120.022	4.7244	4.7253
NU214	m5 = 11/24	m5 = 4.3/9	H6 = 0/25	H6 = 0/9.8	70.011	70.024	2.7563	2.7569	125.000	125.025	4.9213	4.9222
NU215	m5 = 11/24	m5 = 4.3/9	H6 = 0/25	H6 = 0/9.8	75.011	75.024	2.9532	2.9537	130.000	130.025	5.1181	5.1191
NU216	m5 = 11/24	m5 = 4.3/9	H6 = 0/25	H6 = 0/9.8	80.011	80.024	3.1500	3.1506	140.000	140.025	5.5118	5.5128
NU217	m5 = 13/28	m5 = 5/11	H6 = 0/25	H6 = 0/9.8	85.013	85.028	3.3470	3.3476	150.000	150.025	5.9055	5.9065
NU218	m5 = 13/28	m5 = 5/11	H6 = 0/25	H6 = 0/9.8	90.013	90.028	3.5438	3.5444	160.000	160.025	6.2992	6.3002
NU219	m5 = 13/28	m5 = 5/11	H6 = 0/25	H6 = 0/9.8	95.013	95.028	3.7407	3.7413	170.000	170.025	6.6929	6.6939
NU220	m5 = 13/28	m5 = 5/11	H6 = 0/25	H6 = 0/9.8	100.013	100.028	3.9375	3.9381	180.000	180.025	7.0866	7.0876
NU221	m6 = 13/35	m6 = 5/14	H6 = 0/29	H6 = 0/11.4	105.013	105.035	4.1344	4.1352	190.000	190.029	7.4803	7.4815
NU222	m6 = 13/35	m6 = 5/14	H6 = 0/29	H6 = 0/11.4	110.013	110.035	4.3312	4.3321	200.000	200.029	7.8740	7.8752
NU224	m6 = 13/35	m6 = 5/14	H6 = 0/29	H6 = 0/11.4	120.013	120.035	4.7249	4.7258	215.000	215.029	8.4646	8.4657
NU226	m6 = 15/40	m6 = 6/16	H6 = 0/29	H6 = 0/11.4	130.015	130.040	5.1187	5.1197	230.000	230.029	9.0551	9.0563
NU228	m6 = 15/40	m6 = 6/16	H6 = 0/29	H6 = 0/11.4	140.015	140.040	5.5124	5.5134	250.000	250.029	9.8425	9.8437
NU230	n6 = 27/52	n6 = 11/20	H6 = 0/32	H6 = 0/12.6	150.027	150.052	5.9066	5.9076	270.000	270.032	10.6299	10.6312
NU232	n6 = 27/52	n6 = 11/20	H6 = 0/32	H6 = 0/12.6	160.027	160.052	6.3003	6.3013	290.000	290.032	11.4173	11.4186
NU234	n6 = 27/52	n6 = 11/20	H6 = 0/32	H6 = 0/12.6	170.027	170.052	6.6940	6.6950	310.000	310.032	12.2047	12.2060
NU236	n6 = 27/52	n6 = 11/20	H6 = 0/36	H6 = 0/14.2	180.027	180.052	7.0877	7.0887	320.000	320.036	12.5984	12.5998
NU238	n6 = 31/60	n6 = 12/24	H6 = 0/36	H6 = 0/14.2	190.031	190.060	7.4815	7.4827	340.000	340.036	13.3858	13.3872
NU240	n6 = 31/60	n6 = 12/24	H6 = 0/36	H6 = 0/14.2	200.031	200.060	7.8752	7.8764	360.000	360.036	14.1732	14.1746
NU244	p6 = 50/79	p6 = 20/31	H6 = 0/36	H6 = 0/14.2	220.050	220.079	8.6634	8.6645	400.000	400.036	15.7480	15.7494
NU248	p6 = 50/79	p6 = 20/31	H6 = 0/40	H6 = 0/15.7	240.050	240.079	9.4508	9.4519	440.000	440.040	17.3228	17.3244
NU252	p6 = 56/88	p6 = 22/35	H6 = 0/40	H6 = 0/15.7	260.056	260.088	10.2384	10.2397	480.000	480.040	18.8976	18.8992
NU256	p6 = 56/88	p6 = 22/35	H6 = 0/40	H6 = 0/15.7	280.056	280.088	11.0258	11.0271	500.000	500.040	19.6850	19.6866

SECTION 4 - Bearing Tolerances, Fits, & Clearances

FITTING PRACTICE TABLES

RECOMMENDED FITTING PRACTICE FOR DEEP GROOVE & ANGULAR CONTACT BALL BEARINGS(6200/7200 & 6300/7300)
Bearing Tolerance Class 0, 6X, & 6

BEARING	SHAFT O.D.	HSG DIA	SHAFT TOLERANCE FIT = MIN/MAX		HOUSING TOLERANCE FIT = MIN/MAX		SHAFT SIZE (mm)		SHAFT SIZE (inches)		HSG SIZE (mm)		HSG SIZE (inches)	
	mm	mm	x 0.001 mm	x 0.0001 in	x 0.001 mm	x 0.0001 in	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
6200/7200	10.000	30.000	js5 = -3/3	js5 = -1.2/1.2	H6 = 0/13	H6 = 0/5.1	9.997	10.003	0.3936	0.3938	30.000	30.013	1.1811	1.1816
6201/7201	12.000	32.000	js5 = -4/4	js5 = -1.6/1.6	H6 = 0/16	H6 = 0/6.3	11.996	12.004	0.4723	0.4726	32.000	32.016	1.2598	1.2605
6202/7202	15.000	35.000	js5 = -4/4	js5 = -1.6/1.6	H6 = 0/16	H6 = 0/6.3	14.996	15.004	0.5904	0.5907	35.000	35.016	1.3780	1.3786
6203/7203	17.000	40.000	js5 = -4/4	js5 = -1.6/1.6	H6 = 0/16	H6 = 0/6.3	16.996	17.004	0.6691	0.6694	40.000	40.016	1.5748	1.5754
6204/7204	20.000	47.000	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/16	H6 = 0/6.3	20.002	20.011	0.7875	0.7878	47.000	47.016	1.8504	1.8510
6205/7205	25.000	52.000	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/19	H6 = 0/7.5	25.002	25.011	0.9843	0.9847	52.000	52.019	2.0472	2.0480
6206/7206	30.000	62.000	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/19	H6 = 0/7.5	30.002	30.011	1.1812	1.1815	62.000	62.019	2.4409	2.4417
6207/7207	35.000	72.000	k5 = 2/13	k5 = 0.8/5	H6 = 0/19	H6 = 0/7.5	35.002	35.013	1.3780	1.3785	72.000	72.019	2.8346	2.8354
6208/7208	40.000	80.000	k5 = 2/13	k5 = 0.8/5	H6 = 0/19	H6 = 0/7.5	40.002	40.013	1.5749	1.5753	80.000	80.019	3.1496	3.1504
6209/7209	45.000	85.000	k5 = 2/13	k5 = 0.8/5	H6 = 0/22	H6 = 0/8.7	45.002	45.013	1.7717	1.7722	85.000	85.022	3.3465	3.3473
6210/7210	50.000	90.000	k5 = 2/13	k5 = 0.8/5	H6 = 0/22	H6 = 0/8.7	50.002	50.013	1.9686	1.9690	90.000	90.022	3.5433	3.5442
6211/7211	55.000	100.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/22	H6 = 0/8.7	55.002	55.015	2.1654	2.1659	100.000	100.022	3.9370	3.9379
6212/7212	60.000	110.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/22	H6 = 0/8.7	60.002	60.015	2.3623	2.3628	110.000	110.022	4.3307	4.3316
6213/7213	65.000	120.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/22	H6 = 0/8.7	65.002	65.015	2.5591	2.5596	120.000	120.022	4.7244	4.7253
6214/7214	70.000	125.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/25	H6 = 0/9.8	70.002	70.015	2.7560	2.7565	125.000	125.025	4.9213	4.9222
6215/7215	75.000	130.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/25	H6 = 0/9.8	75.002	75.015	2.9528	2.9533	130.000	130.025	5.1181	5.1191
6216/7216	80.000	140.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/25	H6 = 0/9.8	80.002	80.015	3.1497	3.1502	140.000	140.025	5.5118	5.5128
6217/7217	85.000	150.000	k5 = 3/18	k5 = 1.2/7	H6 = 0/25	H6 = 0/10	85.003	85.018	3.3466	3.3472	150.000	150.025	5.9055	5.9065
6218/7218	90.000	160.000	k5 = 3/18	k5 = 1.2/7	H6 = 0/25	H6 = 0/10	90.003	90.018	3.5434	3.5440	160.000	160.025	6.2992	6.3002
6219/7219	95.000	170.000	k5 = 3/18	k5 = 1.2/7	H6 = 0/25	H6 = 0/10	95.003	95.018	3.7403	3.7409	170.000	170.025	6.6929	6.6939
6220/7220	100.000	180.000	k5 = 3/18	k5 = 1.2/7	H6 = 0/25	H6 = 0/10	100.003	100.018	3.9371	3.9377	180.000	180.025	7.0866	7.0876
6221/7221	105.000	190.000	m5 = 13/28	m5 = 5/11	H6 = 0/29	H6 = 0/11	105.013	105.028	4.1344	4.1350	190.000	190.029	7.4803	7.4815
6222/7222	110.000	200.000	m5 = 13/28	m5 = 5/11	H6 = 0/29	H6 = 0/11	110.013	110.028	4.3312	4.3318	200.000	200.029	7.8740	7.8752
6224/7224	120.000	215.000	m5 = 13/28	m5 = 5/11	H6 = 0/29	H6 = 0/11	120.013	120.028	4.7249	4.7255	215.000	215.029	8.4646	8.4657
6226/7226	130.000	230.000	m5 = 15/33	m5 = 6/13	H6 = 0/29	H6 = 0/11	130.015	130.033	5.1187	5.1194	230.000	230.029	9.0551	9.0563
6228/7228	140.000	250.000	m5 = 15/33	m5 = 6/13	H6 = 0/29	H6 = 0/11	140.015	140.033	5.5124	5.5131	250.000	250.029	9.8425	9.8437
6230/7230	150.000	270.000	m6 = 15/40	m6 = 6/16	H6 = 0/32	H6 = 0/13	150.015	150.040	5.9061	5.9071	270.000	270.032	10.6299	10.6312
6232/7232	160.000	290.000	m6 = 15/40	m6 = 6/16	H6 = 0/32	H6 = 0/13	160.015	160.040	6.2998	6.3008	290.000	290.032	11.4173	11.4186
6234/7234	170.000	310.000	m6 = 15/40	m6 = 6/16	H6 = 0/32	H6 = 0/13	170.015	170.040	6.6935	6.6945	310.000	310.032	12.2047	12.2060
6236/7236	180.000	320.000	m6 = 15/40	m6 = 6/16	H6 = 0/36	H6 = 0/14	180.015	180.040	7.0872	7.0882	320.000	320.036	12.5984	12.5998
6238/7238	190.000	340.000	m6 = 17/46	m6 = 7/18	H6 = 0/36	H6 = 0/14	190.017	190.046	7.4810	7.4821	340.000	340.036	13.3858	13.3872
6240/7240	200.000	360.000	m6 = 17/46	m6 = 7/18	H6 = 0/36	H6 = 0/14	200.017	200.046	7.8747	7.8758	360.000	360.036	14.1732	14.1746
6244/7244	220.000	400.000	n6 = 31/60	n6 = 12/24	H6 = 0/36	H6 = 0/14	220.031	220.060	8.6626	8.6638	400.000	400.036	15.7480	15.7494
6248/7248	240.000	440.000	n6 = 31/60	n6 = 12/24	H6 = 0/40	H6 = 0/16	240.031	240.060	9.4500	9.4512	440.000	440.040	17.3228	17.3244

SECTION 4 - Bearing Tolerances, Fits, & Clearances

RECOMMENDED FITTING PRACTICE FOR DEEP GROOVE & ANGULAR CONTACT BALL BEARINGS(6200/7200 & 6300/7300)
Bearing Tolerance Class 0, 6X, & 6 ... *cont'd*

BEARING	SHAFT O.D.	HSG DIA	SHAFT TOLERANCE FIT = MIN/MAX		HOUSING TOLERANCE FIT = MIN/MAX		SHAFT SIZE (mm)		SHAFT SIZE (Inches)		HSG SIZE (mm)		HSG SIZE (Inches)	
	mm	mm	x 0.001 mm	x 0.0001 in	x 0.001 mm	x 0.0001 in	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
6300/7300	10.000	35.000	js5 = -3/3	js5 = -1.2/1.2	H6 = 0/16	H6 = 0/6.3	9.997	10.003	0.3936	0.3938	35.000	35.016	1.3780	1.3786
6301/7301	12.000	37.000	js5 = -4/4	js5 = -1.6/1.6	H6 = 0/16	H6 = 0/6.3	11.996	12.004	0.4723	0.4726	37.000	37.016	1.4567	1.4573
6302/7302	15.000	42.000	js5 = -4/4	js5 = -1.6/1.6	H6 = 0/16	H6 = 0/6.3	14.996	15.004	0.5904	0.5907	42.000	42.016	1.6535	1.6542
6303/7303	17.000	47.000	js5 = -4/4	js5 = -1.6/1.6	H6 = 0/16	H6 = 0/6.3	16.996	17.004	0.6691	0.6694	47.000	47.016	1.8504	1.8510
6304/7304	20.000	52.000	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/19	H6 = 0/7.5	20.002	20.011	0.7875	0.7878	52.000	52.019	2.0472	2.0480
6305/7305	25.000	62.000	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/19	H6 = 0/7.5	25.002	25.011	0.9843	0.9847	62.000	62.019	2.4409	2.4417
6306/7306	30.000	72.000	k5 = 2/11	k5 = 0.8/4.3	H6 = 0/19	H6 = 0/7.5	30.002	30.011	1.1812	1.1815	72.000	72.019	2.8346	2.8354
6307/7307	35.000	80.000	k5 = 2/13	k5 = 0.8/5	H6 = 0/19	H6 = 0/7.5	35.002	35.013	1.3780	1.3785	80.000	80.019	3.1496	3.1504
6308/7308	40.000	90.000	k5 = 2/13	k5 = 0.8/5	H6 = 0/22	H6 = 0/8.7	40.002	40.013	1.5749	1.5753	90.000	90.022	3.5433	3.5442
6309/7309	45.000	100.000	k5 = 2/13	k5 = 0.8/5	H6 = 0/22	H6 = 0/8.7	45.002	45.013	1.7717	1.7722	100.000	100.022	3.9370	3.9379
6310/7310	50.000	110.000	k5 = 2/13	k5 = 0.8/5	H6 = 0/22	H6 = 0/8.7	50.002	50.013	1.9686	1.9690	110.000	110.022	4.3307	4.3316
6311/7311	55.000	120.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/22	H6 = 0/8.7	55.002	55.015	2.1654	2.1659	120.000	120.022	4.7244	4.7253
6312/7312	60.000	130.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/25	H6 = 0/9.8	60.002	60.015	2.3623	2.3628	130.000	130.025	5.1181	5.1191
6313/7313	65.000	140.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/25	H6 = 0/9.8	65.002	65.015	2.5591	2.5596	140.000	140.025	5.5118	5.5128
6314/7314	70.000	150.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/25	H6 = 0/9.8	70.002	70.015	2.7560	2.7565	150.000	150.025	5.9055	5.9065
6315/7315	75.000	160.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/25	H6 = 0/9.8	75.002	75.015	2.9528	2.9533	160.000	160.025	6.2992	6.3002
6316/7316	80.000	170.000	k5 = 2/15	k5 = 0.8/6	H6 = 0/25	H6 = 0/9.8	80.002	80.015	3.1497	3.1502	170.000	170.025	6.6929	6.6939
6317/7317	85.000	180.000	k5 = 3/18	k5 = 1.2/7	H6 = 0/25	H6 = 0/10	85.003	85.018	3.3466	3.3472	180.000	180.025	7.0866	7.0876
6318/7318	90.000	190.000	k5 = 3/18	k5 = 1.2/7	H6 = 0/29	H6 = 0/11	90.003	90.018	3.5434	3.5440	190.000	190.029	7.4803	7.4815
6319/7319	95.000	200.000	k5 = 3/18	k5 = 1.2/7	H6 = 0/29	H6 = 0/11	95.003	95.018	3.7403	3.7409	200.000	200.029	7.8740	7.8752
6320/7320	100.000	215.000	k5 = 3/18	k5 = 1.2/7	H6 = 0/29	H6 = 0/11	100.003	100.018	3.9371	3.9377	215.000	215.029	8.4646	8.4657
6321/7321	105.000	225.000	m5 = 13/28	m5 = 5/11	H6 = 0/29	H6 = 0/11	105.013	105.028	4.1344	4.1350	225.000	225.029	8.8583	8.8594
6322/7322	110.000	240.000	m5 = 13/28	m5 = 5/11	H6 = 0/29	H6 = 0/11	110.013	110.028	4.3312	4.3318	240.000	240.029	9.4488	9.4500
6324/7324	120.000	260.000	m5 = 13/28	m5 = 5/11	H6 = 0/32	H6 = 0/13	120.013	120.028	4.7249	4.7255	260.000	260.032	10.2362	10.2375
6326/7326	130.000	280.000	m5 = 15/33	m5 = 6/13	H6 = 0/32	H6 = 0/13	130.015	130.033	5.1187	5.1194	280.000	280.032	11.0236	11.0249
6328/7328	140.000	300.000	m5 = 15/33	m5 = 6/13	H6 = 0/32	H6 = 0/13	140.015	140.033	5.5124	5.5131	300.000	300.032	11.8110	11.8123
6330/7330	150.000	320.000	m6 = 15/40	m6 = 6/16	H6 = 0/36	H6 = 0/14	150.015	150.040	5.9061	5.9071	320.000	320.036	12.5984	12.5998
6332/7332	160.000	340.000	m6 = 15/40	m6 = 6/16	H6 = 0/36	H6 = 0/14	160.015	160.040	6.2998	6.3008	340.000	340.036	13.3858	13.3872
6334/7334	170.000	360.000	m6 = 15/40	m6 = 6/16	H6 = 0/36	H6 = 0/14	170.015	170.040	6.6935	6.6945	360.000	360.036	14.1732	14.1746
6336/7336	180.000	380.000	m6 = 15/40	m6 = 6/16	H6 = 0/36	H6 = 0/14	180.015	180.040	7.0872	7.0882	380.000	380.036	14.9606	14.9620
6338/7338	190.000	400.000	m6 = 17/46	m6 = 7/18	H6 = 0/36	H6 = 0/14	190.017	190.046	7.4810	7.4821	400.000	400.036	15.7480	15.7494
6340/7340	200.000	420.000	m6 = 17/46	m6 = 7/18	H6 = 0/40	H6 = 0/16	200.017	200.046	7.8747	7.8758	420.000	420.040	16.5354	16.5370