Koyo

Slim Series
DEEP GROOVE BALL BEARINGS



JTEKT

JTEKT CORPORATION

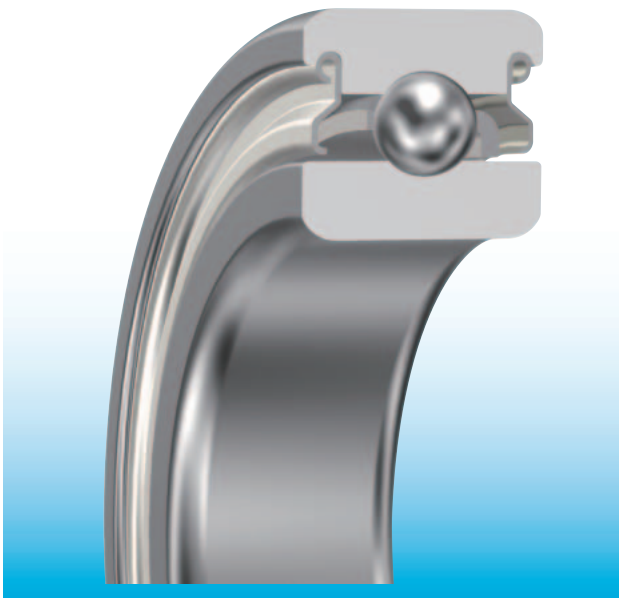
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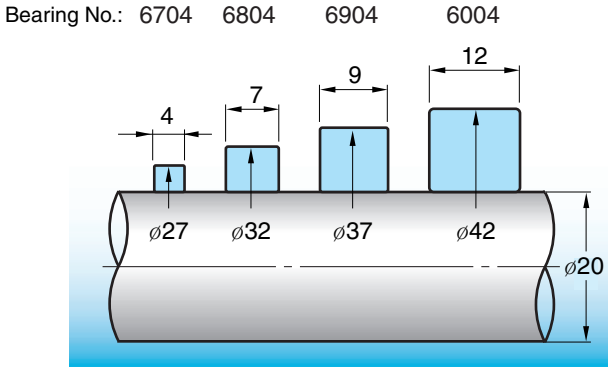
For size and weight reduction of equipment of OA facilities and various other machines.
Series of Slim type deep groove ball bearings to ISO standards.

Structures



Line-up of Slim type ball bearings based on **JTEKT**'S reliable technologies and past experience.

■ Comparison of bearing sizes



Features

■ Small size and light weight

Space required for installation is reduced to a maximum of 1/3 compared to the standard 6000 Series.

■ Various sealing types

Wide choices are available in mounting methods and lubrication system, for shielded type, non-contact type sealed and contact type sealed bearing are provided.

■ Low torque

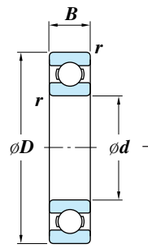
Small cross-sectional area indicate that these bearings require low running torque. In addition, the 6700 bearing series incorporates particularly low-friction seals.

■ Grease packed to meet your specific needs

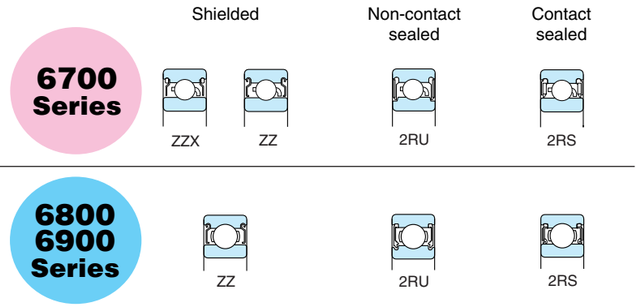
The required of quantity of grease is packed in sealed bearings. Various types of grease, including low- and high-temperature as well as static-dissipative (conductive) formulations, are available for specific applications. Table 2 lists some representative grease types and their applications.

Dimension Table

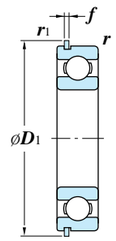
■ Boundary dimension



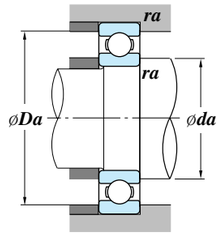
■ Series variation

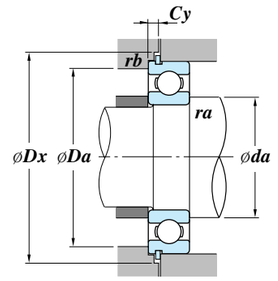


With locating snap ring



■ Installation





■ Equivalent radial load

Dynamic equivalent radial load : $P_r=XF_r+YF_a$ (For X and Y, see the Table below.)
Static equivalent radial load : $P_{0r}=0.6F_r+0.5F_a$ (when $P_{0r}<F_r$, $P_{0r}=F_r$)

$if_0\,F_a/C_{0r}$	e	$F_a/F \le e$		$F_a/F_r > e$	
		X	Y	X	Y
0.172	0.19	1	0	0.56	2.30
0.345	0.22				1.99
0.689	0.26				1.71
1.03	0.28				1.55
1.38	0.30				1.45
2.07	0.34				1.31
3.45	0.38				1.15
5.17	0.42				1.04
6.89	0.44				1.00

Notes: 1) Factor f_0 is shown in the bearing dimention table.
2) For i, use 2 for double-row and 1for single-low.

Boundary Dimensions (mm)					Basic Load Ratings (kN)		Factor	Limiting Speeds (rpm)			Bearing No. [1]					Dimensions of Locating Snap Ring (mm)		Mounting Dimensions (mm)						(Ref.) Mass (kg)
								Grease lubrication		Oil lubrication	Open type	Shielded	Non-contact sealed	Contact sealed	With locating snap ring										
d	D	B	r (min.)	r_1 (min.)	Cr	Cor	fo	Open type ZZX,ZZ,2RU	(2RS)	Open type ZZ						D_1 (max.)	f ±0.05	da (min.)	Da (max.)	Dx (min.)	Cy (max.)	ra (max.)	rb (max.)	(Open type)
10	15	3	0.1	-	0.85	0.44	15.7	39000	25000	47000	**6700**	-	-	-	-	-	-	10.8	14.2	-	-	0.1	-	0.0015
	19	5	0.3	-	1. 0	0.84	14.8	37000	22000	43000	**6800**	**6800 ZZ**	**6800 2RU**	**6800 2RS**	-	-	-	12	17	-	-	0.3	0.3	0.005
	22	6	0.3	0.3	2.70	1.25	14.0	34000	21000	41000	**6900**	**6900 ZZ**	**6900 2RU**	**6900 2RS**	**6900 NR**	24.8	0.65	12	20	25.5	1.5	0.3	0.3	0.010
12	18	4	0.2	-	0.92	0.53	16.2	34000	20000	41000	**6701**	**6701 ZZX**	***6701 2RU***	***6701 2RS***	-	-	-	13.6	16.4	-	-	0.2	-	0.003
	21	5	0.3	-	1.90	1.05	15.3	33000	20000	39000	**6801**	**6801 ZZ**	**6801 2RU**	**6801 2RS**	-	-	-	14	19	-	-	0.3	0.3	0.006
	24	6	0.3	0.3	2.90	1.45	14.5	31000	18000	36000	**6901**	**6901 ZZ**	**6901 2RU**	**6901 2RS**	**6901 NR**	26.8	0.65	14	22	27.5	1.5	0.3	0.3	0.011
15	21	4	0.2	-	0.93	0.58	16.7	29000	16000	35000	**6702**	**6702 ZZX**	***6702 2RU***	**6702 2RS**	-	-	-	16.6	19.4	-	-	0.2	-	0.004
	24	5	0.3	-	2.10	1.25	15.8	28000	16000	33000	**6802**	**6802 ZZ**	**6802 2RU**	**6802 2RS**	-	-	-	17	22	-	-	0.3	0.3	0.007
	28	7	0.3	0.3	4.30	2.25	14.3	26000	15000	30000	**6902**	**6902 ZZ**	**6902 2RU**	**6902 2RS**	**6902 NR**	30.8	0.8	17	26	31.5	1.9	0.3	0.3	0.017
17	23	4	0.2	-	0.99	0.66	16.9	27000	15000	32000	**6703**	**6703 ZZ**	***6703 2RU***	***6703 2RS***	-	-	-	18.6	21.4	-	-	0.2	-	0.005
	26	5	0.3	-	2.60	1.55	15.7	26000	14000	30000	**6803**	**6803 ZZ**	**6803 2RU**	**6803 2RS**	-	-	-	19	24	-	-	0.3	0.3	0.008
	30	7	0.3	0.3	4.60	2.55	14.7	23000	13000	28000	**6903**	**6903 ZZ**	**6903 2RU**	**6903 2RS**	**6903 NR**	33.2	0.8	19	28	33.5	1.9	0.3	0.3	0.018
20	27	4	0.2	-	1.05	0.73	16.1	23000	12000	27000	**6704**	**6704 ZZ**	***6704 2RU***	**6704 2RS**	-	-	-	21.6	25.4	-	-	0.2	-	0.006
	32	7	0.3	0.3	4.00	2.45	15.5	21000	12000	25000	**6804**	**6804 ZZ**	**6804 2RU**	**6804 2RS**	**6804 NR**	34.8	0.8	22	30	35.5	1.9	0.3	0.3	0.018
	37	9	0.3	0.3	6.35	3.70	14.7	19000	11000	23000	**6904**	**6904 ZZ**	**6904 2RU**	**6904 2RS**	**6904 NR**	39.8	0.8	22	35	40.5	2.3	0.3	0.3	0.036
25	32	4	0.2	-	1.10	0.84	15.8	19000	10000	22000	**6705**	**6705 ZZ**	***6705 2RU***	**6705 2RS**	-	-	-	26.6	30.4	-	-	0.2	-	0.006
	37	7	0.3	0.3	4.30	2.95	16.0	18000	10000	21000	**6805**	**6805 ZZ**	**6805 2RU**	**6805 2RS**	**6805 NR**	39.8	0.8	27	35	40.5	1.9	0.3	0.3	0.022
	42	9	0.3	0.3	7.00	4.55	15.4	16000	9300	19000	**6905**	**6905 ZZ**	**6905 2RU**	**6905 2RS**	**6905 NR**	44.8	0.8	27	40	45.5	2.3	0.3	0.3	0.041
30	37	4	0.2	-	1.15	0.95	15.7	16000	8800	19000	**6706**	**6706 ZZ**	**6706 2RU**	***6703 2RS***	-	-	-	31.6	35.4	-	-	0.2	-	0.008
	42	7	0.3	0.3	4.55	3.40	16.4	15000	8600	18000	**6806**	**6806 ZZ**	**6806 2RU**	**6806 2RS**	**6806 NR**	44.8	0.8	32	40	45.5	1.9	0.3	0.3	0.026
	47	9	0.3	0.3	7.25	5.00	15.8	14000	8200	17000	**6906**	**6906 ZZ**	**6906 2RU**	**6906 2RS**	**6906 NR**	49.8	0.8	32	45	50.5	2.3	0.3	0.3	0.045
35	47	7	0.3	0.3	4.75	3.85	16.5	13000	7400	16000	**6807**	**6807 ZZ**	**6807 2RU**	**6807 2RS**	**6807 NR**	49.8	0.8	37	45	50.5	1.9	0.3	0.3	0.030
	55	10	0.6	0.6	10.9	7.75	15.7	12000	6800	14000	**6907**	**6907 ZZ**	**6907 2RU**	**6907 2RS**	**6907 NR**	57.8	0.8	39	51	58.5	2.3	0.6	0.6	0.073
40	52	7	0.3	0.3	4.95	4.20	16.3	12000	6700	14000	**6808**	**6808 ZZ**	**6808 2RU**	**6808 2RS**	**6808 NR**	54.8	0.8	42	50	55.5	1.9	0.3	0.3	0.033
	62	12	0.6	0.6	13.7	9.95	15.6	11000	6100	13000	**6908**	**6908 ZZ**	**6908 2RU**	**6908 2RS**	**6908 NR**	64.8	0.8	44	58	65.5	2.3	0.6	0.6	0.112
45	58	7	0.3	0.3	6.20	5.40	16.3	11000	5900	13000	**6809**	**6809 ZZ**	**6809 2RU**	**6809 2RS**	**6809 NR**	60.8	0.8	47	56	61.5	1.9	0.3	0.3	0.040
	68	12	0.6	0.6	14.1	10.9	15.9	9700	5500	11000	**6909**	**6909 ZZ**	**6909 2RU**	**6909 2RS**	**6909 NR**	70.8	0.8	49	64	72	2.3	0.6	0.6	0.132
50	65	7	0.3	0.3	6.60	6.10	16.1	9600	5200	11000	**6810**	**6810 ZZ**	**6810 2RU**	**6810 2RS**	**6810 NR**	67.8	0.8	52	63	68.5	1.9	0.3	0.3	0.052
	72	12	0.6	0.6	14.5	11.7	16.1	9000	5000	11000	**6910**	**6910 ZZ**	**6910 2RU**	**6910 2RS**	**6910 NR**	74.8	0.8	54	68	76	2.3	0.6	0.6	0.133

Note: 1) Please consult with **JTEKT** when are necessary the bearing numbers in Italics.

Dimension Stabilizing Treatment

When operating bearing over a long time at a temperature of over 120°C, normal heat treatment is insufficient to prevent dimension change. Special heat treatment is required for stabilization of dimensions. Table 1 shows codes and operating temperature range for special heat treatment.

Table 1 Dimension Stabilizing Treatment

Code	Operating Temperature Range
S0	Over 100°C up to 150°C
S1	Over 150°C up to 200°C
S2	Over 200°C up to 250°C

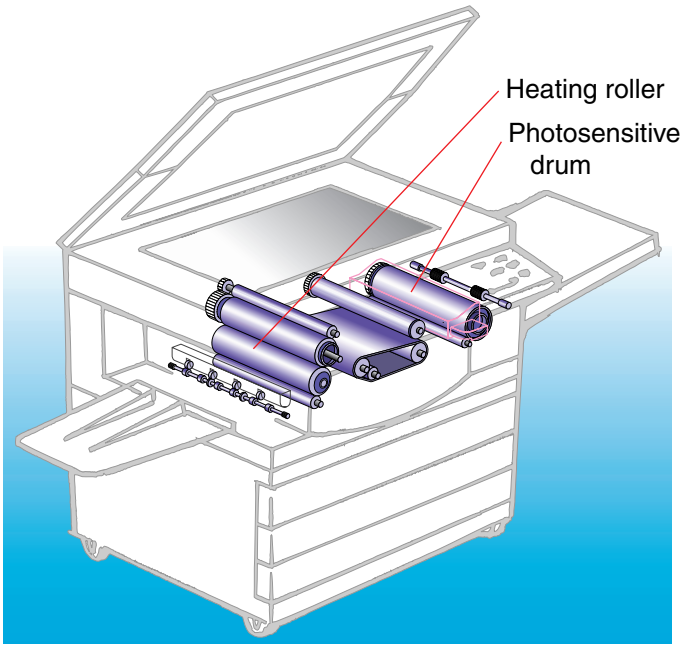
Grease

Table 2 shows typical grease for sealed or shielded bearings. If bearings are to be operated under special conditions, please contact **JTEKT**.

Table 2 Maincharacteristics and use of grease

Grease Brand	Thickener	Base oil	Operating Temperature Range(°C)	Example for use
ALVANA 2	Lithium soap	Mineral oil	–10 ~ 100	General
SR GREASE	Lithium soap	Ester oil	–40 ~ 100	Wide temp. range
KEX	Carbon black	PAO	0 ~ 130	Conducitive
SH44M	Lithium soap	Silicone oil	–30 ~ 180	Copying Machine's Fixing roller
KZ GREASE	Fluorine resin	PFPE	0 ~ 250	Copying Machine's Fixing roller
CY GREASE	Fluorine resin	PFPE	0 ~ 250	Copying Machine's Fixing roller (Conducitive)

Application Example in Copying Machine



Slim series bearings are suitable for photosensitive drums, heating roller support, and other parts that require space-saving designs.

