



K-series super thin section ball bearings

Koyo K-series super thin section ball bearings were developed to meet current engineering needs for thinner, lighter bearings. They are used extensively in automation and labor saving equipment, such as industrial robots.

These bearings are sorted into nine dimension series according to cross-sectional area.

Those of the same dimension series have an equivalent cross-sectional area irrespective of the bore diameter.

They are available in three types that differ in structure.

■ Deep groove type

Carries radial load, axial load in both directions, and combined loads.

■ Angular contact type

Has a 30° contact angle, and carries radial load and axial load in one direction.

Two bearings are usually used together facing one another.

■ Four-point contact type

Has a contact angle of 30° both to the right and to the left.

Able to carry axial load in both directions. Also able to support moment and radial loads.

Dimension series code	Cross-sectional dimension $B = E$ (mm)	Bearing type code			Bore diameter (mm)
		C (Deep groove type)	A (Angular contact type)	X (Four-point contact type)	
T	4.762	K T C	K T A	K T X	25.4 to 38.1
A	6.35	K A C	K A A	K A X	50.8 to 304.8
B	7.938	K B C	K B A	K B X	50.8 to 508
C	9.525	K C C	K C A	K C X	101.6 to 762
D	12.7	K D C	K D A	K D X	101.6 to 1 016
F	19.05	K F C	K F A	K F X	
G	25.4	K G C	K G A	K G X	
J	$B = 11.1$ $E = 9.525$	—	KJA...RD 	—	101.6 to 304.8
U	$B = 12.7$ $E = 9.525$	KUC...2RD 	—	KUX...2RD 	

Table 1 K-series super thin section ball bearings : tolerance

Unit : μm

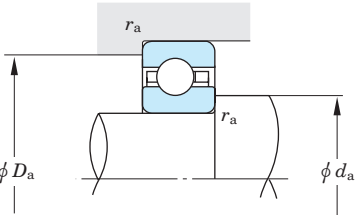
Bore diameter number	Single plane mean bore diameter deviation					Single plane mean outside diameter deviation					Single inner (outer) ring width deviation $\Delta B_s, \Delta C_s$			Radial runout of assembled bearing ring, max.										Assembled bearing ring face runout with raceway, max.				Bore diameter number													
	Δ_{dmp}					Δ_{Dmp}								Inner ring K_{ia}					Outer ring K_{ea}					Inner ring S_{ia}		Outer ring S_{ea}															
	classes K0, K1, K2		class K3	class K4	class K6	classes K0, K1, K2		class K3	class K4	class K6	classes K0, K1, K2	classes K3, K4	class K6	class K0		class K3	classes K1, K4	classes K2, K6	class K0		class K3	classes K1, K4	classes K2, K6	classes K1, K4	classes K0, K2 K3, K6	classes K1, K4	classes K0, K2 K3, K6														
	div. I	div. II				div. I	div. II							div. I	div. II					div. I	div. II																				
010	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -5 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -5 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -4 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -8 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -5 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -5 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -127 \end{smallmatrix}$			13	8	8	$\begin{smallmatrix} 5 \\ 4 \end{smallmatrix}$	$\begin{smallmatrix} 20 \\ 10 \end{smallmatrix}$	10	10	5	$\begin{smallmatrix} 5 \\ 8 \end{smallmatrix}$	$\begin{smallmatrix} 8 \\ 10 \end{smallmatrix}$	Same as limit values for radial runout of assembled bearing inner ring	Same as limit values for radial runout of assembled bearing outer ring	8	$\begin{smallmatrix} 10 \\ 13 \end{smallmatrix}$	010													
015	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -8 \end{smallmatrix}$											15	10				10	5	8					015															
020	$\begin{smallmatrix} 0 \\ -15 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -5 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -5 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -8 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -8 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -5 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -8 \end{smallmatrix}$	20	13	10	25			13	13	8	10				020															
025													25	15	15				30	15	15	10					$\begin{smallmatrix} 10 \\ 13 \end{smallmatrix}$	025													
030																												030													
035	$\begin{smallmatrix} 0 \\ -20 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -8 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -6 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -6 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -20 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$		25	13			5			36			20		20	10						035						
040																																			040						
042																																			042						
045	$\begin{smallmatrix} 0 \\ -25 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -15 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -8 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -8 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -25 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -15 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$		30	25			15			41			25		23	13						045						
047																																			047						
050																																			050						
055	$\begin{smallmatrix} 0 \\ -30 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -18 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -30 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -18 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$		41	30			20			46			30		25	10						055						
060																																			060						
065																																			065						
070	$\begin{smallmatrix} 0 \\ -36 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -20 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -36 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -20 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$		46	36			25			36			30		15	10						070						
075																																			075						
080																																			080						
090	$\begin{smallmatrix} 0 \\ -41 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -23 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -15 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -10 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -41 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -23 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -15 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -15 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -254 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -254 \end{smallmatrix}$		51	46			30			51	41		41		20	13					090							
100																																		100							
110																																		110							
120	$\begin{smallmatrix} 0 \\ -46 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -25 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -18 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -46 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -25 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -18 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -18 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -254 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -254 \end{smallmatrix}$		51	41			36			41	41		20		10						120							
140																																		140							
160																																		160							
180	$\begin{smallmatrix} 0 \\ -51 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -25 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -18 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -51 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -25 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -20 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -20 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -254 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -254 \end{smallmatrix}$		51	46			41			46	46		23		10						180							
200																																		200							
250																																		250							
300	$\begin{smallmatrix} 0 \\ -76 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -46 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -25 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -18 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -13 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -76 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -46 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -20 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -20 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -254 \end{smallmatrix}$		$\begin{smallmatrix} 0 \\ -254 \end{smallmatrix}$		51	46			41			46	46		23		10						300							
350																																		350							
400																																		400							

[Notes] Division I is for deep groove type ball bearings.
Division II is for angular contact type and four-point contact type ball bearings.

Table 2 Standard radial internal clearance of deep groove and four-point contact type ball bearings Unit : μm

Bore diameter number	Radial internal clearance				
	classes K0, K1, K2		class K3	class K4	class K6
	Deep groove type	Four-point contact type			
010	25 – 41	25 – 38	18 – 28	13 – 23	10 – 20
015	30 – 46	30 – 43	20 – 30		13 – 23
020	30 – 61	30 – 56	20 – 46	15 – 30	10 – 25
025					15 – 30
030					
035	41 – 71	41 – 66	25 – 51	20 – 36	20 – 36
040					
042					
045	51 – 86	51 – 76	30 – 56	25 – 41	25 – 41
047					
050					
055					
060					
065	61 – 107	61 – 86	36 – 61	30 – 46	30 – 46
070					
075					
080	71 – 122	71 – 97	41 – 66	36 – 51	36 – 51
090					
100	81 – 132	81 – 107	51 – 76	61 – 86	61 – 86
110					
120	91 – 142	81 – 107	51 – 76	36 – 51	36 – 51
140					
160					
180	102 – 152	91 – 117	61 – 86	36 – 56	36 – 56
200					
250	152 – 203	102 – 127	102 – 127	102 – 127	102 – 127
300					
350	203 – 254	102 – 127	102 – 127	102 – 127	102 – 127
400					

Table 3 Mounting dimensions



Dimension series	Bearing type			ϕd_a		ϕD_a		r_a
				max.	min.	min.	max.	max.
T	KTC	KTA	KTX	$d + 5.3$	$d + 3.4$	$d + 4.2$	$d + 6.1$	0.2
A	KAC	KAA	KAX	$d + 7.3$	$d + 4.6$	$d + 5.4$	$d + 8.2$	0.4
B	KBC	KBA	KBX	$d + 9.3$	$d + 5.7$	$d + 6.6$	$d + 10.2$	0.8
C	KCC	KCA	KCX	$d + 11.3$	$d + 6.9$	$d + 7.7$	$d + 12.2$	0.8
D	KDC	KDA	KDX	$d + 15.3$	$d + 9.2$	$d + 10.1$	$d + 16.2$	1.3
F	KFC	KFA	KFX	$d + 23.3$	$d + 13.9$	$d + 14.8$	$d + 24.2$	1.8
G	KGC	KGA	KGX	$d + 31.3$	$d + 18.7$	$d + 19.5$	$d + 32.1$	1.8
J	–	KJA	–	$d + 11.3$	$d + 6.9$	$d + 7.7$	$d + 12.2$	0.2
U	KUC	–	KUX					

Table 4 Shaft diameter and housing bore diameter tolerance

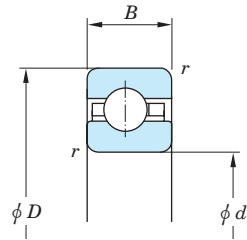
Unit : μm

Bore diameter number	Inner ring rotation											Outer ring rotation										Bore diameter number
	Shaft diameter tolerance					Housing bore diameter tolerance						Shaft diameter tolerance					Housing bore diameter tolerance					
	classes K0, K1, K2		class K3	class K4	class K6	classes K0, K1, K2		class K3	class K4	class K6		classes K0, K1, K2		class K3	class K4	class K6						
	div. I	div. II				div. I	div. II					div. I	div. II									
010	+ 10 0		+ 5 0	+ 4 0	+ 13 0	+ 13 0	+ 8 0	+ 5 0	+ 5 0		- 10 - 20		- 5 - 10	- 5 - 8	- 13 - 25	- 8 - 15	- 5 - 10	- 5 - 10	010			
015	+ 13 0										+ 10 0	+ 5 0							+ 15 0	+ 10 0	+ 8 0	+ 8 0
020	+ 15 0		+ 10 0	+ 5 0	+ 15 0	+ 10 0	+ 8 0	+ 8 0	- 15 - 30	- 10 - 20			- 8 - 15	- 5 - 10	- 15 - 30	- 15 - 30	- 10 - 20	- 8 - 15				
025											+ 20 0	+ 13 0							+ 6 0	+ 20 0	+ 13 0	+ 10 0
030	+ 25 0	+ 15 0	+ 10 0	+ 8 0	+ 10 0	+ 10 0	- 25 - 50	- 15 - 30	- 10 - 20	- 8 - 15			- 13 - 25	- 30 - 60	- 18 - 35	- 13 - 25	- 30 - 60	- 18 - 35				
035											+ 30 0	+ 18 0							+ 10 0	+ 10 0	+ 30 0	+ 18 0
040	+ 40 0	+ 35 0	+ 20 0	+ 13 0	+ 35 0	+ 35 0	+ 20 0	+ 15 0	+ 15 0	- 48 - 80			- 35 - 70	- 20 - 40	- 15 - 30	- 13 - 25	- 40 - 80	- 40 - 80				
042											+ 45 0	+ 40 0							+ 23 0	+ 15 0	+ 45 0	+ 40 0
045	+ 50 0	+ 45 0	+ 25 0	+ 18 0	+ 50 0	+ 45 0	+ 30 0	+ 20 0	- 50 - 100	- 45 - 90			- 25 - 50	- 15 - 35	- 50 - 100	- 75 - 150	- 45 - 90	- 45 - 90				
047											+ 55 0	+ 40 0							+ 23 0	+ 15 0	+ 55 0	+ 40 0
050	+ 60 0	+ 45 0	+ 23 0	+ 15 0	+ 60 0	+ 45 0	+ 30 0	+ 20 0	- 100 - 200	- 50 - 100			- 25 - 50	- 15 - 35	- 100 - 200	- 50 - 100	- 45 - 90	- 45 - 90				
055											+ 65 0	+ 40 0							+ 23 0	+ 15 0	+ 65 0	+ 40 0
060	+ 70 0	+ 40 0	+ 23 0	+ 15 0	+ 70 0	+ 40 0	+ 30 0	+ 20 0	- 100 - 200	- 50 - 100			- 25 - 50	- 15 - 35	- 100 - 200	- 50 - 100	- 45 - 90	- 45 - 90				
065											+ 75 0	+ 40 0							+ 23 0	+ 15 0	+ 75 0	+ 40 0
070	+ 80 0	+ 40 0	+ 23 0	+ 15 0	+ 80 0	+ 40 0	+ 30 0	+ 20 0	- 100 - 200	- 50 - 100			- 25 - 50	- 15 - 35	- 100 - 200	- 50 - 100	- 45 - 90	- 45 - 90				
075											+ 85 0	+ 40 0							+ 23 0	+ 15 0	+ 85 0	+ 40 0
080	+ 90 0	+ 40 0	+ 23 0	+ 15 0	+ 90 0	+ 40 0	+ 30 0	+ 20 0	- 100 - 200	- 50 - 100			- 25 - 50	- 15 - 35	- 100 - 200	- 50 - 100	- 45 - 90	- 45 - 90				
090											+ 95 0	+ 40 0							+ 23 0	+ 15 0	+ 95 0	+ 40 0
100	+ 100 0	+ 40 0	+ 23 0	+ 15 0	+ 100 0	+ 40 0	+ 30 0	+ 20 0	- 100 - 200	- 50 - 100			- 25 - 50	- 15 - 35	- 100 - 200	- 50 - 100	- 45 - 90	- 45 - 90				
110											+ 105 0	+ 40 0							+ 23 0	+ 15 0	+ 105 0	+ 40 0
120	+ 110 0	+ 40 0	+ 23 0	+ 15 0	+ 110 0	+ 40 0	+ 30 0	+ 20 0	- 100 - 200	- 50 - 100			- 25 - 50	- 15 - 35	- 100 - 200	- 50 - 100	- 45 - 90	- 45 - 90				
140											+ 115 0	+ 40 0							+ 23 0	+ 15 0	+ 115 0	+ 40 0
160	+ 120 0	+ 40 0	+ 23 0	+ 15 0	+ 120 0	+ 40 0	+ 30 0	+ 20 0	- 100 - 200	- 50 - 100			- 25 - 50	- 15 - 35	- 100 - 200	- 50 - 100	- 45 - 90	- 45 - 90				
180											+ 125 0	+ 40 0							+ 23 0	+ 15 0	+ 125 0	+ 40 0
200	+ 130 0	+ 40 0	+ 23 0	+ 15 0	+ 130 0	+ 40 0	+ 30 0	+ 20 0	- 100 - 200	- 50 - 100			- 25 - 50	- 15 - 35	- 100 - 200	- 50 - 100	- 45 - 90	- 45 - 90				
250											+ 135 0	+ 40 0							+ 23 0	+ 15 0	+ 135 0	+ 40 0
300	+ 140 0	+ 40 0	+ 23 0	+ 15 0	+ 140 0	+ 40 0	+ 30 0	+ 20 0	- 100 - 200	- 50 - 100			- 25 - 50	- 15 - 35	- 100 - 200	- 50 - 100	- 45 - 90	- 45 - 90				
350											+ 145 0	+ 40 0							+ 23 0	+ 15 0	+ 145 0	+ 40 0
400	+ 150 0	+ 40 0	+ 23 0	+ 15 0	+ 150 0	+ 40 0	+ 30 0	+ 20 0	- 100 - 200	- 50 - 100			- 25 - 50	- 15 - 35	- 100 - 200	- 50 - 100	- 45 - 90	- 45 - 90				

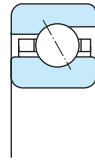
[Notes] Division I is for deep groove type ball bearings.
Division II is for angular contact type and four-point contact type ball bearings.

open type

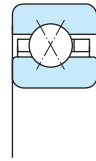
d 25.4 ~ (114.3) mm



Deep groove type



Angular contact type

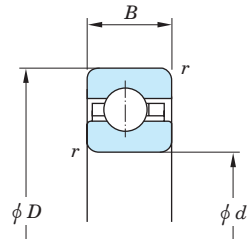


Four-point contact type

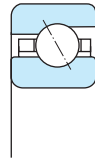
Boundary dimensions (mm)				Deep groove type Basic load ratings			Angular contact type Basic load ratings						Four-point contact type Basic load ratings					(Refer.) Mass (kg)			
<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i> min.	Bearing No.	<i>C_r</i>	<i>C_{0r}</i>	Bearing No.	<i>C_r</i>	<i>C_{0r}</i>	<i>C_a</i>	<i>C_{0a}</i>		Bearing No.	<i>C_r</i>	<i>C_{0r}</i>	<i>C_a</i>	<i>C_{0a}</i>	Deep groove type	Angular contact type	Four-point contact type	
25.4	34.925	4.762	0.4	KTC010	2.50	1.95	KTA010	2.65	2.20	3.45	6.70		KTX010	2.15	1.65	3.70	7.15	0.012	0.011	0.012	
38.1	47.625	4.762	0.4	KTC015	2.90	2.70	KTA015	3.05	3.10	4.00	9.35		KTX015	2.50	2.30	4.20	10.5	0.018	0.017	0.018	
50.8	63.5	6.35	0.6	KAC020	4.50	4.30	KAA020	4.75	4.95	6.25	14.9		KAX020	3.90	3.70	6.60	16.9	0.045	0.045	0.045	
	66.675	7.938	1	KBC020	6.35	5.85	KBA020	6.75	6.70	8.90	20.4		KBX020	5.55	5.00	9.35	22.0	0.073	0.068	0.073	
63.5	76.2	6.35	0.6	KAC025	4.85	5.20	KAA025	5.10	5.95	6.75	18.0		KAX025	4.20	4.45	7.05	20.9	0.059	0.054	0.059	
	79.375	7.938	1	KBC025	6.90	7.00	KBA025	7.35	8.15	9.65	24.6		KBX025	6.00	6.00	10.0	27.3	0.086	0.086	0.086	
76.2	88.9	6.35	0.6	KAC030	5.20	6.10	KAA030	5.45	7.00	7.15	21.2		KAX030	4.50	5.25	7.45	24.9	0.068	0.064	0.068	
	92.075	7.938	1	KBC030	7.35	8.15	KBA030	7.70	9.35	10.2	28.3		KBX030	6.35	7.00	10.6	32.5	0.109	0.100	0.109	
88.9	101.6	6.35	0.6	KAC035	5.45	7.00	KAA035	5.75	8.00	7.55	24.3		KAX035	4.75	6.00	7.80	29.0	0.082	0.077	0.082	
	104.775	7.938	1	KBC035	7.75	9.30	KBA035	8.20	10.7	10.8	32.5		KBX035	6.70	8.00	11.1	37.8	0.122	0.122	0.122	
101.6	114.3	6.35	0.6	KAC040	5.75	7.85	KAA040	6.00	9.05	7.90	27.4		KAX040	4.95	6.80	8.10	33.0	0.086	0.086	0.086	
	117.475	7.938	1	KBC040	8.10	10.5	KBA040	8.60	12.1	11.3	36.8		KBX040	7.05	9.00	11.6	43.1	0.136	0.136	0.136	
	120.65	9.525	1	KCC040	10.3	12.4	KCA040	11.2	14.9	14.7	45.1		KCX040	8.95	10.6	14.8	50.0	0.204	0.200	0.204	
	127	12.7	1.5	KDC040	15.7	17.2	KDA040	16.5	19.7	21.7	59.8		KDX040	13.6	14.8	22.6	67.4	0.354	0.363	0.354	
	139.7	19.05	2	KFC040	28.2	28.1	KFA040	30.3	32.9	39.8	99.6		KFX040	24.6	24.0	41.0	103	0.862	0.871	0.862	
	152.4	25.4	2	KGC040	42.6	39.6	KGA040	45.2	46.0	59.5	139		KGX040	37.3	34.5	62.4	141	1.63	1.64	1.63	
	107.95	120.65	6.35	0.6	KAC042	5.85	8.30	KAA042	6.15	9.55	8.10	29.0		KAX042	5.10	7.15	8.25	35.0	0.091	0.091	0.091
		123.825	7.938	1	KBC042	8.25	10.9	KBA042	8.75	12.7	11.5	38.6		KBX042	7.15	9.40	11.7	45.2	0.141	0.141	0.141
127		9.525	1	KCC042	10.5	13.0	KCA042	11.5	15.8	15.1	47.8		KCX042	9.15	11.2	15.0	53.0	0.213	0.209	0.213	
133.35		12.7	1.5	KDC042	15.8	17.8	KDA042	16.8	20.8	22.1	62.9		KDX042	13.7	15.3	22.8	70.2	0.376	0.381	0.376	
146.05		19.05	2	KFC042	28.8	29.4	KFA042	30.6	34.0	40.3	103		KFX042	25.1	25.2	41.8	109	0.907	0.925	0.907	
158.75		25.4	2	KGC042	42.2	39.9	KGA042	46.2	48.0	60.8	146		KGX042	36.9	34.3	61.8	142	1.72	1.74	1.72	
114.3	127	6.35	0.6	KAC045	6.00	8.75	KAA045	6.25	10.1	8.25	30.5		KAX045	5.20	7.55	8.40	37.0	0.100	0.095	0.100	
	130.175	7.938	1	KBC045	8.45	11.6	KBA045	8.90	13.3	11.7	40.4		KBX045	7.35	10.0	12.0	48.3	0.150	0.154	0.150	
	133.35	9.525	1	KCC045	10.7	13.7	KCA045	11.7	16.6	15.4	50.4		KCX045	9.30	11.8	15.3	56.1	0.218	0.222	0.218	
	139.7	12.7	1.5	KDC045	16.3	19.0	KDA045	17.2	21.8	22.6	66.0		KDX045	14.2	16.3	23.4	75.5	0.399	0.399	0.399	

open type

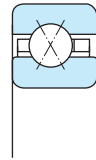
d (114.3) ~ (165.1) mm



Deep groove type



Angular contact type

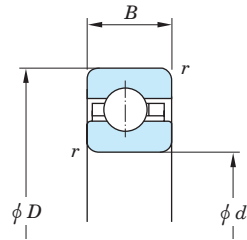


Four-point contact type

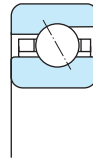
Boundary dimensions (mm)				Deep groove type			Angular contact type						Four-point contact type					(Refer.) Mass		
<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i> min.	Bearing No.	Basic load ratings (kN)		Bearing No.	Basic load ratings (kN)					Bearing No.	Basic load ratings (kN)				Deep groove type	Angular contact type	Four-point contact type
					<i>C_r</i>	<i>C_{0r}</i>		<i>C_r</i>	<i>C_{0r}</i>	<i>C_a</i>	<i>C_{0a}</i>			<i>C_r</i>	<i>C_{0r}</i>	<i>C_a</i>	<i>C_{0a}</i>			
114.3	152.4	19.05	2	KFC045	29.4	30.8	KFA045	31.7	36.4	41.7	110		KFX045	25.6	26.3	42.6	115	0.953	0.971	0.953
	165.1	25.4	2	KGC045	43.6	42.7	KGA045	47.1	50.1	62.0	152		KGX045	38.1	36.4	63.6	152	1.81	1.79	1.81
120.65	133.35	6.35	0.6	KAC047	6.10	9.20	KAA047	6.40	10.6	8.40	32.1		KAX047	5.30	7.95	8.55	39.0	0.104	0.100	0.104
	136.525	7.938	1	KBC047	8.55	12.1	KBA047	9.10	14.2	12.0	42.9		KBX047	7.45	10.4	12.1	50.4	0.154	0.159	0.154
	139.7	9.525	1	KCC047	10.9	14.4	KCA047	12.0	17.5	15.7	53.0		KCX047	9.50	12.4	15.5	59.1	0.227	0.231	0.227
	146.05	12.7	1.5	KDC047	16.5	19.6	KDA047	17.5	22.8	23.0	69.1		KDX047	14.3	16.8	23.6	78.2	0.426	0.422	0.426
	158.75	19.05	2	KFC047	29.9	32.1	KFA047	32.0	37.5	42.2	114		KFX047	26.1	27.5	43.3	121	0.998	1.03	0.998
	171.45	25.4	2	KGC047	44.9	45.2	KGA047	48.0	52.1	63.1	158		KGX047	39.2	38.6	65.4	162	1.86	1.89	1.86
127	139.7	6.35	0.6	KAC050	6.20	9.65	KAA050	6.50	11.1	8.55	33.6		KAX050	5.35	8.35	8.65	41.1	0.109	0.104	0.109
	142.875	7.938	1	KBC050	8.80	12.8	KBA050	9.25	14.8	12.2	44.7		KBX050	7.60	11.0	12.4	53.6	0.172	0.168	0.172
	146.05	9.525	1	KCC050	11.1	15.0	KCA050	12.2	18.4	16.0	55.7		KCX050	9.65	12.9	15.8	62.1	0.263	0.245	0.263
	152.4	12.7	1.5	KDC050	16.9	20.8	KDA050	17.8	23.8	23.4	72.2		KDX050	14.7	17.9	24.2	83.5	0.454	0.445	0.454
	165.1	19.05	2	KFC050	30.5	33.4	KFA050	32.4	38.6	42.6	117		KFX050	26.5	28.7	44.0	127	1.04	1.08	1.04
	177.8	25.4	2	KGC050	46.2	47.6	KGA050	48.8	54.2	64.3	164		KGX050	40.3	40.7	67.1	173	1.95	2.00	1.95
139.7	152.4	6.35	0.6	KAC055	6.40	10.5	KAA055	6.75	12.1	8.85	36.8		KAX055	5.55	9.10	8.90	45.1	0.113	0.113	0.113
	155.575	7.938	1	KBC055	9.10	13.9	KBA055	9.60	16.2	12.6	49.0		KBX055	7.85	12.0	12.7	58.8	0.186	0.181	0.186
	158.75	9.525	1	KCC055	11.5	16.4	KCA055	12.5	19.8	16.5	60.0		KCX055	10.0	14.1	16.2	68.2	0.268	0.263	0.268
	165.1	12.7	1.5	KDC055	17.5	22.6	KDA055	18.4	25.9	24.2	78.5		KDX055	15.2	19.4	24.9	91.6	0.481	0.481	0.481
	177.8	19.05	2	KFC055	31.5	36.1	KFA055	33.6	42.1	44.3	128		KFX055	27.4	31.0	45.3	140	1.13	1.17	1.13
	190.5	25.4	2	KGC055	47.0	49.8	KGA055	50.5	58.3	66.4	177		KGX055	41.0	42.6	68.0	184	2.13	2.15	2.13
152.4	165.1	6.35	0.6	KAC060	6.60	11.4	KAA060	6.95	13.2	9.15	39.9		KAX060	5.75	9.85	9.15	49.1	0.127	0.127	0.127
	168.275	7.938	1	KBC060	9.35	15.1	KBA060	9.90	17.6	13.0	53.3		KBX060	8.10	13.0	13.1	64.1	0.200	0.200	0.200
	171.45	9.525	1	KCC060	11.9	17.7	KCA060	12.9	21.5	17.0	65.3		KCX060	10.3	15.3	16.7	74.2	0.286	0.290	0.286
	177.8	12.7	1.5	KDC060	18.0	24.4	KDA060	19.0	27.9	24.9	84.7		KDX060	15.7	21.0	25.5	99.7	0.526	0.522	0.526
	190.5	19.05	2	KFC060	32.5	38.8	KFA060	34.8	45.6	45.8	138		KFX060	28.2	33.3	46.5	152	1.22	1.23	1.22
	203.2	25.4	2	KGC060	49.3	54.7	KGA060	52.0	62.4	68.4	189		KGX060	42.9	46.8	71.1	205	2.31	2.30	2.31
165.1	177.8	6.35	0.6	KAC065	6.80	12.3	KAA065	7.15	14.2	9.40	43.0		KAX065	5.90	10.6	9.40	53.2	0.136	0.136	0.136
	180.975	7.938	1	KBC065	9.65	16.3	KBA065	10.1	18.8	13.3	56.9		KBX065	8.35	14.0	13.4	69.3	0.213	0.213	0.213

open type

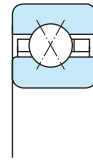
d (165.1) ~ 228.6 mm



Deep groove type



Angular contact type

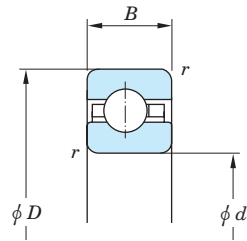


Four-point contact type

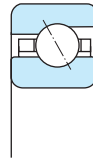
Boundary dimensions (mm)				Deep groove type Basic load ratings			Angular contact type Basic load ratings						Four-point contact type Basic load ratings					(Refer.) Mass (kg)		
d	D	B	r min.	Bearing No.	C_r	C_{0r}	Bearing No.	C_r	C_{0r}	C_a	C_{0a}		Bearing No.	C_r	C_{0r}	C_a	C_{0a}	Deep groove type	Angular contact type	Four-point contact type
165.1	184.15	9.525	1	KCC065	12.2	19.0	KCA065	13.4	23.3	17.6	70.6		KCX065	10.6	16.4	17.1	80.3	0.308	0.308	0.308
	190.5	12.7	1.5	KDC065	18.6	26.1	KDA065	19.5	30.0	25.6	90.9		KDX065	16.1	22.5	26.2	108	0.553	0.562	0.553
	203.2	19.05	2	KFC065	33.4	41.5	KFA065	36.0	49.1	47.3	149		KFX065	29.0	35.6	47.7	164	1.32	1.33	1.32
	215.9	25.4	2	KGC065	50.0	57.0	KGA065	53.5	66.5	70.3	202		KGX065	43.5	48.8	71.8	216	2.45	2.45	2.45
177.8	190.5	6.35	0.6	KAC070	7.00	13.2	KAA070	7.35	15.2	9.65	46.1		KAX070	6.05	11.4	9.60	57.2	0.141	0.145	0.141
	193.675	7.938	1	KBC070	9.90	17.4	KBA070	10.4	20.2	13.7	61.2		KBX070	8.55	15.0	13.7	74.6	0.227	0.227	0.227
	196.85	9.525	1	KCC070	12.5	20.4	KCA070	13.6	24.7	17.9	74.9		KCX070	10.9	17.6	17.5	86.3	0.331	0.336	0.331
	203.2	12.7	1.5	KDC070	19.0	27.9	KDA070	20.0	32.1	26.3	97.2		KDX070	16.5	24.0	26.7	116	0.594	0.603	0.594
	215.9	19.05	2	KFC070	34.3	44.1	KFA070	37.0	52.6	48.7	159		KFX070	29.8	37.9	48.7	176	1.45	1.43	1.45
	228.6	25.4	2	KGC070	52.1	61.8	KGA070	54.8	70.7	72.2	214		KGX070	45.3	53.0	74.5	237	2.63	2.66	2.63
190.5	203.2	6.35	0.6	KAC075	7.15	14.1	KAA075	7.50	16.2	9.90	49.2		KAX075	6.20	12.2	9.80	61.3	0.154	0.154	0.154
	206.375	7.938	1	KBC075	10.1	18.6	KBA075	10.7	21.6	14.1	65.4		KBX075	8.80	16.0	14.0	79.8	0.240	0.245	0.240
	209.55	9.525	1	KCC075	12.8	21.7	KCA075	14.0	26.5	18.4	80.2		KCX075	11.1	18.7	17.8	92.4	0.354	0.354	0.354
	215.9	12.7	1.5	KDC075	19.5	29.7	KDA075	20.5	34.1	27.0	103		KDX075	16.9	25.6	27.3	124	0.640	0.644	0.640
	228.6	19.05	2	KFC075	35.1	46.8	KFA075	37.5	54.8	49.3	166		KFX075	30.5	40.2	49.8	188	1.54	1.54	1.54
	241.3	25.4	2	KGC075	52.6	64.1	KGA075	56.2	74.8	73.9	227		KGX075	45.8	55.0	75.2	249	2.77	2.81	2.77
203.2	215.9	6.35	0.6	KAC080	7.35	15.0	KAA080	7.70	17.3	10.1	52.3		KAX080	6.35	13.0	10.0	65.3	0.172	0.163	0.172
	219.075	7.938	1	KBC080	10.4	19.7	KBA080	11.0	23.0	14.4	69.7		KBX080	9.00	17.0	14.3	85.1	0.259	0.259	0.259
	222.25	9.525	1	KCC080	13.1	23.1	KCA080	14.4	28.2	18.9	85.5		KCX080	11.4	19.9	18.2	98.5	0.381	0.381	0.381
	228.6	12.7	1.5	KDC080	20.0	31.5	KDA080	21.0	36.2	27.6	110		KDX080	17.3	27.1	27.9	132	0.694	0.689	0.694
	241.3	19.05	2	KFC080	35.9	49.5	KFA080	38.5	58.3	50.6	177		KFX080	31.2	42.5	50.7	200	1.59	1.64	1.59
	254	25.4	2	KGC080	54.5	69.0	KGA080	57.4	78.9	75.5	239		KGX080	47.4	59.2	77.6	270	2.95	2.97	2.95
228.6	241.3	6.35	0.6	KAC090	7.65	16.8	KAA090	8.00	19.3	10.5	58.6		KAX090	6.60	14.5	10.4	73.4	0.200	0.186	0.200
	244.475	7.938	1	KBC090	10.8	22.1	KBA090	11.4	25.6	15.0	77.6		KBX090	9.35	19.1	14.8	95.6	0.299	0.290	0.299
	247.65	9.525	1	KCC090	13.7	25.7	KCA090	14.9	31.4	19.6	95.1		KCX090	11.9	22.2	18.9	111	0.426	0.445	0.426
	254	12.7	1.5	KDC090	20.8	35.0	KDA090	21.8	40.3	28.7	122		KDX090	18.0	30.2	28.9	148	0.780	0.767	0.780
	266.7	19.05	2	KFC090	37.4	54.8	KFA090	40.3	65.3	53.1	198		KFX090	32.5	47.2	52.6	224	1.77	1.79	1.77
	279.4	25.4	2	KGC090	56.8	76.1	KGA090	59.8	87.1	78.7	264		KGX090	49.4	65.3	80.5	302	3.27	3.27	3.27

open type

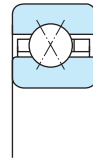
d 254 ~ 406.4 mm



Deep groove type



Angular contact type

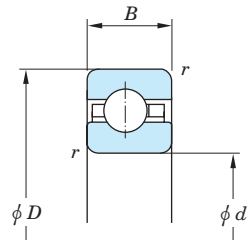


Four-point contact type

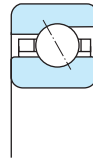
Boundary dimensions (mm)				Deep groove type Basic load ratings			Angular contact type Basic load ratings						Four-point contact type Basic load ratings					(Refer.) Mass		
d	D	B	r min.	Bearing No.	C_r	C_{0r}	Bearing No.	C_r	C_{0r}	C_a	C_{0a}		Bearing No.	C_r	C_{0r}	C_a	C_{0a}	Deep groove type	Angular contact type	Four-point contact type
254	266.7	6.35	0.6	KAC100	7.95	18.6	KAA100	8.30	21.4	11.0	64.8		KAX100	6.85	16.0	10.7	81.4	0.227	0.204	0.227
	269.875	7.938	1	KBC100	11.2	24.4	KBA100	11.9	28.4	15.6	86.1		KBX100	9.75	21.1	15.3	106	0.331	0.322	0.331
	273.05	9.525	1	KCC100	14.2	28.4	KCA100	15.6	34.9	20.5	106		KCX100	12.3	24.5	19.5	123	0.481	0.472	0.481
	279.4	12.7	1.5	KDC100	21.6	38.6	KDA100	22.7	44.4	29.8	135		KDX100	18.7	33.3	29.8	164	0.853	0.848	0.853
	292.1	19.05	2	KFC100	38.8	60.2	KFA100	41.6	71.1	54.7	215		KFX100	33.7	51.8	54.3	249	1.95	2.00	1.95
	304.8	25.4	2	KGC100	59.0	83.2	KGA100	62.0	95.3	81.6	289		KGX100	51.2	71.5	83.1	334	3.58	3.63	3.58
279.4	292.1	6.35	0.6	KAC110	8.20	20.3	KAA110	8.60	23.4	11.3	71.0		KAX110	7.10	17.6	11.1	89.5	0.236	0.227	0.236
	295.275	7.938	1	KBC110	11.6	26.7	KBA110	12.3	31.0	16.1	94.0		KBX110	10.1	23.1	15.7	117	0.340	0.354	0.340
	298.45	9.525	1	KCC110	14.7	31.1	KCA110	16.1	38.0	21.1	115		KCX110	12.7	26.8	20.1	135	0.526	0.517	0.526
	304.8	12.7	1.5	KDC110	22.3	42.2	KDA110	23.4	48.5	30.8	147		KDX110	19.3	36.4	30.7	180	0.934	0.930	0.934
	317.5	19.05	2	KFC110	40.2	65.5	KFA110	43.2	78.0	56.9	236		KFX110	34.8	56.4	55.9	273	2.18	2.15	2.18
	330.2	25.4	2	KGC110	61.0	90.3	KGA110	64.1	104	84.3	314		KGX110	52.9	77.7	85.5	366	3.90	3.94	3.90
304.8	317.5	6.35	0.6	KAC120	8.45	22.1	KAA120	8.90	25.5	11.7	77.3		KAX120	7.35	19.1	11.4	97.6	0.254	0.245	0.254
	320.675	7.938	1	KBC120	12.0	29.0	KBA120	12.7	33.8	16.7	103		KBX120	10.4	25.1	16.2	127	0.376	0.386	0.376
	323.85	9.525	1	KCC120	15.2	33.8	KCA120	16.5	41.2	21.8	125		KCX120	13.1	29.2	20.6	147	0.567	0.558	0.567
	330.2	12.7	1.5	KDC120	23.0	45.7	KDA120	24.2	52.6	31.8	160		KDX120	20.0	39.5	31.5	197	1.02	1.01	1.02
	342.9	19.05	2	KFC120	41.4	70.9	KFA120	44.3	83.8	58.3	254		KFX120	35.9	61.1	57.4	297	2.36	2.36	2.36
	355.6	25.4	2	KGC120	62.9	97.5	KGA120	66.0	112	86.9	339		KGX120	54.5	83.9	87.8	399	4.22	4.30	4.22
355.6	371.475	7.938	1	KBC140	12.7	33.7	KBA140	13.4	39.1	17.6	118		KBX140	11.0	29.1	17.0	148	0.476	0.445	0.476
	374.65	9.525	1	KCC140	16.0	39.1	KCA140	17.5	47.9	23.0	145		KCX140	13.9	33.8	21.6	171	0.689	0.649	0.689
	381	12.7	1.5	KDC140	24.3	52.9	KDA140	25.5	60.9	33.6	184		KDX140	21.1	45.7	33.1	229	1.24	1.17	1.24
	393.7	19.05	2	KFC140	43.7	81.5	KFA140	46.8	96.5	61.6	293		KFX140	37.9	70.3	60.2	345	2.72	2.61	2.72
	406.4	25.4	2	KGC140	66.3	112	KGA140	69.7	128	91.7	389		KGX140	57.5	96.2	92.0	463	4.90	4.94	4.90
406.4	422.275	7.938	1	KBC160	13.3	38.3	KBA160	14.0	44.5	18.4	135		KBX160	11.5	33.1	17.7	169	0.544	0.508	0.544
	425.45	9.525	1	KCC160	16.8	44.4	KCA160	18.4	54.5	24.2	165		KCX160	14.6	38.4	22.6	195	0.785	0.739	0.785
	431.8	12.7	1.5	KDC160	25.5	60.0	KDA160	26.8	69.1	35.2	209		KDX160	22.1	51.8	34.5	261	1.41	1.33	1.41
	444.5	19.05	2	KFC160	45.8	92.2	KFA160	49.0	109	64.5	331		KFX160	39.7	79.6	62.7	394	3.22	3.08	3.22
	457.2	25.4	2	KGC160	69.5	126	KGA160	73.0	145	96.0	439		KGX160	60.3	109	95.9	528	5.58	5.62	5.58

open type

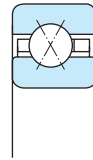
d 457.2 ~ 1 016 mm



Deep groove type



Angular contact type

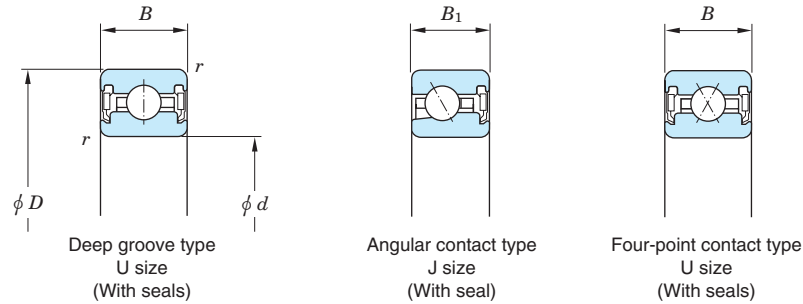


Four-point contact type

Boundary dimensions (mm)				Deep groove type Basic load ratings			Angular contact type Basic load ratings						Four-point contact type Basic load ratings					(Refer.) Mass		
<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i> min.	Bearing No.	<i>C_r</i>	<i>C_{0r}</i>	Bearing No.	<i>C_r</i>	<i>C_{0r}</i>	<i>C_a</i>	<i>C_{0a}</i>		Bearing No.	<i>C_r</i>	<i>C_{0r}</i>	<i>C_a</i>	<i>C_{0a}</i>	Deep groove type	Angular contact type	Four-point contact type
457.2	473.075	7.938	1	KBC180	13.9	42.9	KBA180	14.6	49.9	19.2	151		KBX180	12.0	37.1	18.4	190	0.612	0.572	0.612
	476.25	9.525	1	KCC180	17.5	49.8	KCA180	19.2	61.2	25.3	185		KCX180	15.2	43.0	23.4	220	0.880	0.830	0.880
	482.6	12.7	1.5	KDC180	26.6	67.1	KDA180	27.6	77.3	36.3	234		KDX180	23.0	58.0	35.8	293	1.58	1.49	1.58
	495.3	19.05	2	KFC180	47.8	103	KFA180	51.5	123	67.7	373		KFX180	41.4	88.8	65.0	442	3.58	3.48	3.58
	508	25.4	2	KGC180	72.5	140	KGA180	76.0	161	100	488		KGX180	62.8	121	99.4	592	6.21	6.26	6.21
508	523.875	7.938	1	KBC200	14.4	47.6	KBA200	15.2	55.3	20.0	168		KBX200	12.5	41.2	19.0	211	0.680	0.635	0.680
	527.05	9.525	1	KCC200	18.2	55.1	KCA200	19.9	67.5	26.2	205		KCX200	15.8	47.7	24.2	244	0.980	0.921	0.980
	533.4	12.7	1.5	KDC200	27.6	74.3	KDA200	29.0	85.6	38.1	259		KDX200	23.9	64.2	37.0	326	1.75	1.66	1.75
	546.1	19.05	2	KFC200	49.6	114	KFA200	53.4	136	70.3	412		KFX200	43.0	98.1	67.2	491	4.04	3.84	4.04
	558.8	25.4	2	KGC200	75.2	154	KGA200	78.9	178	104	538		KGX200	65.2	133	103	657	8.53	6.89	8.53
635	654.05	9.525	1	KCC250	19.7	68.5	KCA250	21.6	84.0	28.4	255		KCX250	17.1	59.2	26.0	304	1.22	1.14	1.22
	660.4	12.7	1.5	KDC250	29.9	92.1	KDA250	31.4	106	41.3	322		KDX250	25.9	79.6	39.7	407	2.17	2.06	2.17
	673.1	19.05	2	KFC250	53.7	140	KFA250	57.6	167	75.8	506		KFX250	46.5	121	72.0	612	4.94	4.76	4.94
	685.8	25.4	2	KGC250	81.4	190	KGA250	85.4	219	112	663		KGX250	70.5	164	110	819	8.85	8.53	8.85
762	781.05	9.525	1	KCC300	21.1	81.9	KCA300	23.1	101	30.3	305		KCX300	18.3	70.8	27.6	365	1.46	1.37	1.46
	787.4	12.7	1.5	KDC300	32.0	110	KDA300	33.5	127	44.1	384		KDX300	27.7	95.0	42.1	487	2.60	2.47	2.60
	800.1	19.05	2	KFC300	57.3	167	KFA300	61.6	200	81.0	605		KFX300	49.6	144	76.3	733	5.90	5.67	5.90
	812.8	25.4	2	KGC300	86.8	226	KGA300	91.1	260	120	788		KGX300	75.2	195	116	980	10.6	10.2	10.6
889	927.1	19.05	2	KFC350	60.6	194	KFA350	65.2	232	85.8	703		KFX350	52.5	168	80.1	854	6.85	6.62	6.85
	939.8	25.4	2	KGC350	91.7	261	KGA350	96.2	301	127	912		KGX350	79.4	226	122	1 140	12.3	11.9	12.3
1 016	1 054.1	19.05	2	KFC400	63.5	221	KFA400	68.4	264	90.0	801		KFX400	55.0	191	83.6	975	7.80	7.53	7.80
	1 066.8	25.4	2	KGC400	96.2	297	KGA400	101	342	133	1 040		KGX400	83.3	257	128	1 300	14.0	13.5	14.0

sealed type

d 101.6 ~ 304.8 mm



Boundary dimensions (mm)					Deep groove type Basic load ratings			Angular contact type Basic load ratings						Four-point contact type Basic load ratings					(Refer.) Mass (kg)		
d	D	B	B_1	r min.	Bearing No.	(kN)		Bearing No.	(kN)					Bearing No.	(kN)				Deep groove type	Angular contact type	Four-point contact type
						C_r	C_{0r}		C_r	C_{0r}	C_a	C_{0a}			C_r	C_{0r}	C_a	C_{0a}			
101.6	120.65	12.7	11.1	0.4	KUC040 2RD	10.3	12.4	KJA040 RD	11.2	14.9	14.7	45.1		KUX040 2RD	8.95	10.6	14.8	50.0	0.249	0.222	0.249
107.95	127	12.7	11.1	0.4	KUC042 2RD	10.5	13.0	KJA042 RD	11.5	15.8	15.1	47.8		KUX042 2RD	9.15	11.2	15.0	53.0	0.263	0.236	0.263
114.3	133.35	12.7	11.1	0.4	KUC045 2RD	10.7	13.7	KJA045 RD	11.7	16.6	15.4	50.4		KUX045 2RD	9.30	11.8	15.3	56.1	0.277	0.254	0.277
120.65	139.7	12.7	11.1	0.4	KUC047 2RD	10.9	14.4	KJA047 RD	12.0	17.5	15.7	53.0		KUX047 2RD	9.50	12.4	15.5	59.1	0.295	0.268	0.295
127	146.05	12.7	11.1	0.4	KUC050 2RD	11.1	15.0	KJA050 RD	12.2	18.4	16.0	55.7		KUX050 2RD	9.65	12.9	15.8	62.1	0.308	0.281	0.308
139.7	158.75	12.7	11.1	0.4	KUC055 2RD	11.5	16.4	KJA055 RD	12.5	19.8	16.5	60.0		KUX055 2RD	10.0	14.1	16.2	68.2	0.336	0.304	0.336
152.4	171.45	12.7	11.1	0.4	KUC060 2RD	11.9	17.7	KJA060 RD	12.9	21.5	17.0	65.3		KUX060 2RD	10.3	15.3	16.7	74.2	0.367	0.331	0.367
165.1	184.15	12.7	11.1	0.4	KUC065 2RD	12.2	19.0	KJA065 RD	13.4	23.3	17.6	70.6		KUX065 2RD	10.6	16.4	17.1	80.3	0.395	0.354	0.395
177.8	196.85	12.7	11.1	0.4	KUC070 2RD	12.5	20.4	KJA070 RD	13.6	24.7	17.9	74.9		KUX070 2RD	10.9	17.6	17.5	86.3	0.422	0.381	0.422
190.5	209.55	12.7	11.1	0.4	KUC075 2RD	12.8	21.7	KJA075 RD	14.0	26.5	18.4	80.2		KUX075 2RD	11.1	18.7	17.8	92.4	0.449	0.404	0.449
203.2	222.25	12.7	11.1	0.4	KUC080 2RD	13.1	23.1	KJA080 RD	14.4	28.2	18.9	85.5		KUX080 2RD	11.4	19.9	18.2	98.5	0.481	0.431	0.481
228.6	247.65	12.7	11.1	0.4	KUC090 2RD	13.7	25.7	KJA090 RD	14.9	31.4	19.6	95.1		KUX090 2RD	11.9	22.2	18.9	111	0.535	0.499	0.535
254	273.05	12.7	11.1	0.4	KUC100 2RD	14.2	28.4	KJA100 RD	15.6	34.9	20.5	106		KUX100 2RD	12.3	24.5	19.5	123	0.594	0.531	0.594
279.4	298.45	12.7	11.1	0.4	KUC110 2RD	14.7	31.1	KJA110 RD	16.1	38.0	21.1	115		KUX110 2RD	12.7	26.8	20.1	135	0.649	0.581	0.649
304.8	323.85	12.7	11.1	0.4	KUC120 2RD	15.2	33.8	KJA120 RD	16.5	41.2	21.8	125		KUX120 2RD	13.1	29.2	20.6	147	0.708	0.630	0.708



Linear ball bearings

Linear ball bearings have an outer cylinder and a cage with three or more elliptic raceways inside. Balls are aligned on these raceways.

Ball complement
bore diameter (mm)

SDM series	6 – 120
SDMF, SDMK series	6 – 80
SDE series	5 – 80

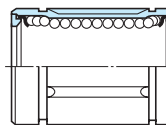
Standard type	Clearance adjustable type	Open type
		
Suitable for a wide range of applications and widely used in practice. The upper-class type is used for general purposes. The precision-class type is used when the bearing is required to be highly accurate.	The outer cylinder and side plate are slit axially so that the clearance between the bearing and shaft can be adjusted. Together with the use of a bore adjustable housing, a no-clearance state or light-preloaded state can be realized without fitting.	The outer cylinder and side plate each have a slit which is equivalent in size to a recirculating ball row raceway, so that the bearing does not interfere with a shaft strut during operation. This type is suitable for use with very long shafts. The bore diameter is adjustable.

Flanged type



Can be fit quickly, and helps make equipment smaller and lighter in weight. Helps reduce cost.

Sealed type



One or both side(s) is/are sealed with special synthetic rubber so that foreign material cannot enter the bearing while the grease is kept from leaking. This sealing can be provided on all bearings of the standard, clearance adjustable, open, and flanged types.

Bearing numbering system

SDM	35	UU	AJ		
Series code	Ball complement bore diameter number	Seal code	Shape code	Material code	Tolerance code
Series code		SDM : metric series SDMF : metric series (flanged type) SDMK : metric series (flanged type) SDE : metric series (popular ones in europe) SDB : inch series			
Ball complement bore diameter number	Metric series	35 : ball complement bore diameter 35 mm			
	Inch series	4 : ball complement bore diameter 4/16 = 1/4 inch			
Seal code		UU : both sides sealed U : single side sealed Not specified : not sealed			
Shape code		Not specified : standard type AJ : clearance adjustable type OP : open type			
Material code	Outer cylinder and balls	Not specified : high carbon chrome bearing steel			
	Cage	Not specified : cold rolled steel sheet MG : synthetic resin			
Tolerance code		Not specified : upper-class P : precision-class			

■ Linear ball bearing service life

Linear ball bearing service life refers to the distance that the bearing travels until the outer cylinder, balls or shaft become damaged because of rolling contact fatigue from repeated stress.

The basic dynamic load rating refers to the magnitude of a constant load which makes a bearing's service life end after it travels a distance of 50 km.

The linear ball bearing service life and the basic dynamic load rating bear the relation shown below :

$$L = 50 \left(\frac{C}{P} \right)^3$$

where :

L : service life km
 P : radial load on the bearing N
 C : bearing basic dynamic load rating N
 (refer to the specification table.)

Shaft surface hardness is closely related to running performance. In general, it is best for the hardness to be 60 thru 64 HRC.

If the hardness is 60 HRC or lower, the basic dynamic load rating (C) should be corrected by multiplying it by the appropriate hardness coefficient selected from Table 1.

Table 1 Hardness coefficients	
Shaft hardness HRC	Hardness coefficient f_H
60	1
59	0.97
57	0.88
55	0.76
53	0.64
51	0.52

● Ball row arrangement and load rating

The basic load ratings given in the specification table are those measured when a load is applied directly above a ball row (Q_1). When the load is applied between two ball rows, the load ratings become larger (Q_2). Table 2 lists the ratios of Q_2 ratings to Q_1 ratings.

Table 2 Ball row arrangement and the comparison of load ratings

Number of ball rows	When a load is applied directly above a row (Q_1)	When a load is applied between two rows (Q_2)	Ratios of Q_2 to Q_1
4			1.414
5			1.463
6			1.280

[Note] When there are only three rows, $Q_2 / Q_1 = 1$

■ Recommended fits for linear ball bearings

Table 3 lists the recommended fits for linear ball bearings.

When a bearing is mounted with a housing, the normal clearance fit should be selected. When the application is highly precise or special, the transition fit should be selected.

For the clearance adjustable and open type bearings, it is best for the shaft diameter to be smaller than the ball complement bore diameter lower deviation, and for the housing bore diameter to be larger than the bearing outside diameter upper deviation.

Table 3 Linear ball bearing recommended fits

Bearing	Tolerance	Shaft tolerance class		Housing bore tolerance class	
		Normal clearance	Close clearance	Clearance fit	Transition fit
SDM, SDB	Upper-class	f 6, g 6	h 6	H 7	JS 7 (J 7)
	Precision-class	f 5, g 5	h 5	H 6	JS 6 (J 6)
SDE	—	h 6	js 6 (j 6)	H 7	JS 7 (J 7)

■ Linear ball bearing clearance

Linear ball bearings provide linear motion smoothly with little wear when the clearance is 0.003 to 0.012 mm. However, when clearance increase due to wear is considered critical, e.g. when the bearing is provided to press die sets, precision machine tools or precision testers; when the bearing becomes unable to slide because of moment; or when smooth bearing operation is needed with no clearance provided, the clearance is adjusted to zero or negative.

In such a case, shafts generally need to be mounted by "selective fitting."

They should be handled carefully so as not to be preloaded excessively.

As Fig. 1 shows, the clearance of bearings with numbers SDM 6 thru SDM 10 can be easily set to

zero or negative, by adjusting one of the three ball rows with a bolt.

Consult with JTEKT on the gauging of linear ball bearings and shafts which should be mounted by "selective fitting," as well as on the whole design of shafts.

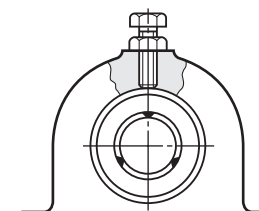


Fig. 1 Clearance adjustment

Table 4 SDM series linear ball bearing tolerances

Unit : μm

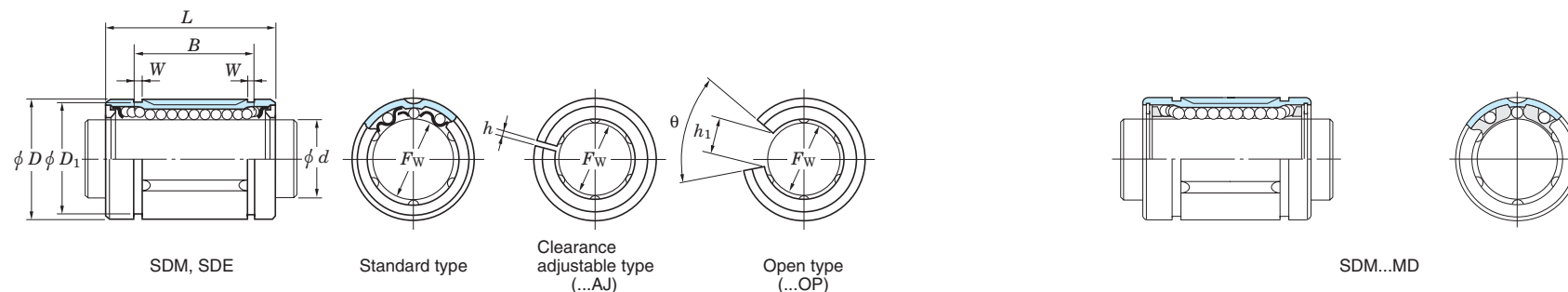
Bearing number SDM	Ball complement bore diameter (F_w) deviation				Outside diameter (D) deviation		Overall length (L) deviation		B deviation		Eccentricity	
	Precision- class		Upper- class								Precision- class	Upper- class
	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	max.	
6, 8	0	− 6	0	− 9	0	− 11	0	− 200	0	− 200	8	12
10, 12, 13, 16	0	− 6	0	− 9	0	− 13	0	− 200	0	− 200	8	12
20	0	− 7	0	− 10	0	− 16	0	− 200	0	− 200	10	15
25, 30	0	− 7	0	− 10	0	− 16	0	− 300	0	− 300	10	15
35, 38, 40, 50	0	− 8	0	− 12	0	− 19	0	− 300	0	− 300	12	20
60	0	− 9	0	− 15	0	− 22	0	− 300	0	− 300	17	25
80	0	− 9	0	− 15	0	− 22	0	− 400	0	− 400	17	25
100, 120	0	− 10	0	− 20	0	− 25	0	− 400	0	− 400	20	30

Table 5 SDE series linear ball bearing tolerances

Unit : μm

Bearing number SDE	Ball complement bore diameter (F_w) deviation		Outside diameter (D) deviation		Overall length (L) deviation		B deviation		Eccentricity
	upper	lower	upper	lower	upper	lower	upper	lower	max.
5, 8	+ 8	0	0	- 8	0	- 200	0	- 200	12
10, 12	+ 8	0	0	- 9	0	- 200	0	- 200	12
16	+ 9	- 1	0	- 9	0	- 200	0	- 200	12
20	+ 9	- 1	0	- 11	0	- 200	0	- 200	15
25, 30	+ 11	- 1	0	- 11	0	- 300	0	- 300	15
40, 50	+ 13	- 2	0	- 13	0	- 300	0	- 300	17
60	+ 13	- 2	0	- 15	0	- 400	0	- 400	20
80	+ 16	- 4	0	- 15	0	- 400	0	- 400	20

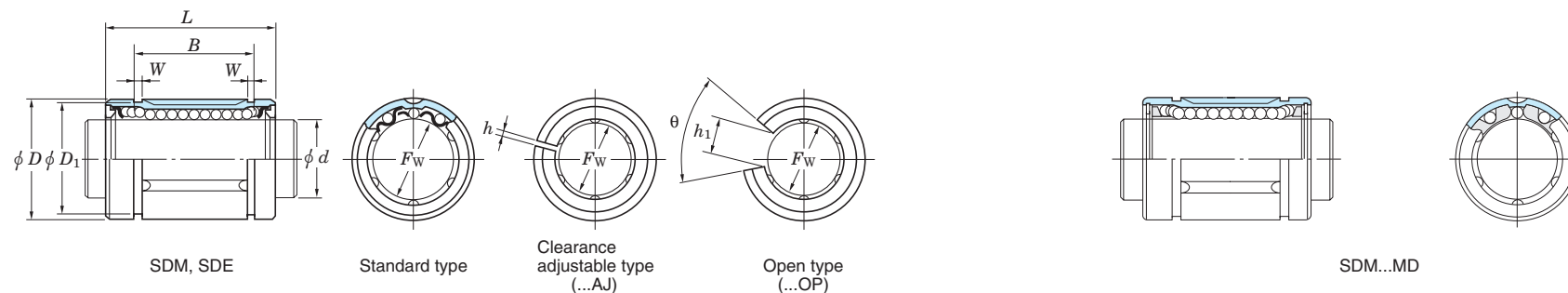
d 5 ~ (20) mm



Shaft dia. (mm)	Dimensions (mm)										Bearing No. ¹⁾			No. of ball rows			Basic load ratings (N)		(Refer.) Mass (g)
	d	F_w	D	L	B	W	D_1	h	h_1	θ	Standard type	Clearance adjustable type	Open type	Standard type	Clearance adjustable type	Open type	C_r	C_{0r}	Standard type
5	5	5	12	22	14.5	1.1	11.5	—	—	—	SDE5	—	—	3	—	—	108	183	10
6	6	6	12	19	13.5	1.1	11.5	1	—	—	SDM6	SDM6AJ	—	3	3	—	108	186	7
	6	6	12	19	13.5	1.1	11.5	1	—	—	SDM6MG	SDM6AJMG	—	4	4	—	108	186	6
8	8	8	15	17	11.5	1.1	14.3	1	—	—	SDM8S	SDM8SAJ	—	3	3	—	96	160	10
	8	8	15	17	11.5	1.1	14.3	1	—	—	SDM8SMG	SDM8SAJMG	—	4	4	—	96	160	9
	8	8	15	24	17.5	1.1	14.3	1	—	—	SDM8	SDM8AJ	—	3	3	—	122	223	14
	8	8	15	24	17.5	1.1	14.3	1	—	—	SDM8MG	SDM8AJMG	—	4	4	—	134	255	13
	8	8	16	25	16.5	1.1	15.2	1	—	—	SDE8	SDE8AJ	—	3	3	—	122	223	20
	8	8	16	25	16.5	1.1	15.2	1	—	—	SDE8MG	SDE8AJMG	—	4	4	—	134	255	18
	8	8	16	25	16.5	1.1	15.2	1	—	—	SDE8MG	SDE8AJMG	—	4	4	—	134	255	18
	8	8	16	25	16.5	1.1	15.2	1	—	—	SDE8MG	SDE8AJMG	—	4	4	—	134	255	18
10	10	10	19	29	22	1.3	18	1	6.8	80°	SDM10	SDM10AJ	SDM10OP	4	4	3	259	424	27
	10	10	19	29	22	1.3	18	1	—	—	SDM10MG	SDM10AJMG	—	4	4	—	259	424	23
	10	10	19	29	22	1.3	18	1	6.8	80°	SDE10	SDE10AJ	SDE10OP	4	4	3	259	424	27
	10	10	19	29	22	1.3	18	1	—	—	SDE10MG	SDE10AJMG	—	4	4	—	259	424	23
12	12	12	21	30	23	1.3	20	1.5	8	80°	SDM12	SDM12AJ	SDM12OP	4	4	3	260	431	31
	12	12	21	30	23	1.3	20	1.5	—	—	SDM12MG	SDM12AJMG	—	4	4	—	260	431	27
	12	12	22	32	22.9	1.3	21	1.5	7.5	78°	SDE12	SDE12AJ	SDE12OP	4	4	3	289	503	42
	12	12	22	32	22.9	1.3	21	1.5	—	—	SDE12MG	SDM12AJMG	—	4	4	—	289	503	37
13	13	13	23	32	23	1.3	22	1.5	9	80°	SDM13	SDM13AJ	SDM13OP	4	4	3	289	506	41
	13	13	23	32	23	1.3	22	1.5	—	—	SDM13MG	SDM13AJMG	—	4	4	—	289	506	35
16	16	16	26	36	24.9	1.3	24.9	1.5	10	78°	SDE16	SDE16AJ	SDE16OP	4	4	3	319	587	53
	16	16	26	36	24.9	1.3	24.9	1.5	—	—	SDE16MG	SDE16AJMG	—	4	4	—	319	587	47
	16	16	28	37	26.5	1.6	27	1.5	11	80°	SDM16	SDM16AJ	SDM16OP	4	4	3	480	766	69
	16	16	28	37	26.5	1.6	27	1.5	—	—	SDM16MG	SDM16AJMG	—	4	4	—	480	766	59
20	20	20	32	42	30.5	1.6	30.5	1.5	11	60°	SDM20	SDM20AJ	SDM20OP	5	5	4	590	1 010	92
	20	20	32	42	30.5	1.6	30.5	1.5	—	—	SDM20MG	SDM20AJMG	—	5	5	—	590	1 010	79

[Note] 1) JTEKT also manufactures sealed types, which are identified by U (one side sealed) or UU (both sides sealed) after ball complement bore diameter number.

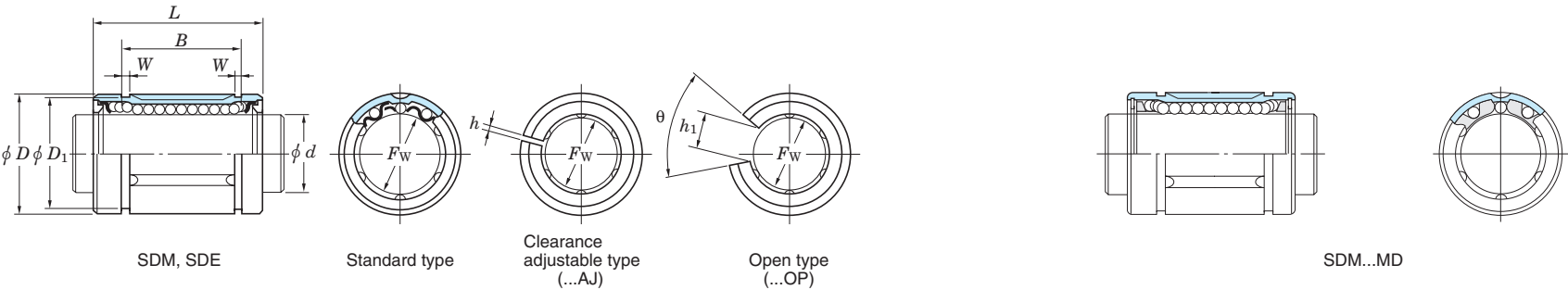
d (20) ~ 80 mm



Shaft dia. (mm)	Dimensions (mm)									Bearing No. ¹⁾				No. of ball rows			Basic load ratings (N)		(Refer.) Mass (g)
	<i>d</i>	<i>F_w</i>	<i>D</i>	<i>L</i>	<i>B</i>	<i>W</i>	<i>D</i> ₁	<i>h</i>	<i>h</i> ₁	θ	Standard type	Clearance adjustable type	Open type	Standard type	Clearance adjustable type	Open type	<i>C</i> _r	<i>C</i> _{0r}	Standard type
20	20	32	45	31.5	1.6	30.3	2	10	60°	SDE20	SDE20AJ	SDE20OP		5	5	4	590	1 010	96
	20	32	45	31.5	1.6	30.3	2	—	—	SDE20MG	SDE20AJMG	—		5	5	—	590	1 010	88
25	25	40	58	44.1	1.85	37.5	2	12.5	60°	SDE25	SDE25AJ	SDE25OP		5	5	4	1 130	2 030	190
	25	40	58	44.1	1.85	37.5	2	—	—	SDE25MG	SDE25AJMG	—		5	5	—	1 130	2 030	170
	25	40	59	41	1.85	38	2	12	60°	SDM25	SDM25AJ	SDM25OP		5	5	4	1 130	2 030	200
	25	40	59	41	1.85	38	2	—	—	SDM25MG	SDM25AJMG	—		5	5	—	1 130	2 030	170
30	30	45	64	44.5	1.85	43	2.5	15	50°	SDM30	SDM30AJ	SDM30OP		6	6	5	1 470	2 770	250
	30	45	64	44.5	1.85	43	2.5	—	—	SDM30MG	SDM30AJMG	—		6	6	—	1 470	2 770	220
	30	47	68	52.1	1.85	44.5	2	12.5	50°	SDE30	SDE30AJ	SDE30OP		6	6	5	1 470	2 770	340
	30	47	68	52.1	1.85	44.5	2	—	—	SDE30MG	SDE30AJMG	—		6	6	—	1 470	2 770	320
35	35	52	70	49.5	2.1	49	2.5	17	50°	SDM35	SDM35AJ	SDM35OP		6	6	5	1 580	3 070	370
	35	52	70	49.5	2.1	49	2.5	—	—	SDM35MG	SDM35AJMG	—		6	6	—	1 580	3 070	330
38	38	57	76	58.5	2.1	54.5	3	18	50°	SDM38	SDM38AJ	SDM38OP		6	6	5	2 020	3 600	490
40	40	60	80	60.5	2.1	57	3	20	50°	SDM40	SDM40AJ	SDM40OP		6	6	5	2 180	4 010	590
	40	60	80	60.5	2.1	57	3	—	—	SDM40MG	SDM40AJMG	—		6	6	—	2 180	4 010	530
	40	62	80	60.6	2.15	59	3	16.8	50°	SDE40	SDE40AJ	SDE40OP		6	6	5	2 180	4 010	710
	40	62	80	60.6	2.15	59	3	—	—	SDE40MG	SDE40AJMG	—		6	6	—	2 180	4 010	650
50	50	75	100	77.6	2.65	72	3	21	50°	SDE50	SDE50AJ	SDE50OP		6	6	5	4 020	7 110	1 050
	50	80	100	74	2.6	76.5	3	25	50°	SDM50	SDM50AJ	SDM50OP		6	6	5	4 420	7 150	1 500
60	60	90	110	85	3.15	86.5	3	30	50°	SDM60	SDM60AJ	SDM60OP		6	6	5	5 170	9 030	1 850
	60	90	125	101.7	3.15	86.5	3	27.2	54°	SDE60	SDE60AJ	SDE60OP		6	6	5	6 470	11 100	1 900
80	80	120	140	105.5	4.15	116	3	40	50°	SDM80	SDM80AJ	SDM80OP		6	6	5	8 180	12 800	4 200
	80	120	165	133.7	4.15	116	3	36.3	54°	SDE80	SDE80AJ	SDE80OP		6	6	5	8 890	14 500	4 800

[Note] 1) JTEKT also manufactures sealed types, which are identified by U (one side sealed) or UU (both sides sealed) after ball complement bore diameter number.

d 100 ~ 120 mm

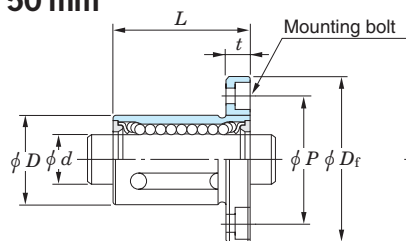


Shaft dia. (mm)	Dimensions (mm)									Bearing No. ¹⁾				No. of ball rows			Basic load ratings (N)		(Refer.) Mass (g)	
	<i>d</i>	<i>F</i> _w	<i>D</i>	<i>L</i>	<i>B</i>	<i>W</i>	<i>D</i> ₁	<i>h</i>	<i>h</i> ₁	θ	Standard type	Clearance adjustable type	Open type		Standard type	Clearance adjustable type	Open type	<i>C</i> _r	<i>C</i> _{0r}	Standard type
100	100	150	175	125.5	4.15	145	3	50	50°		SDM100	SDM100AJ	SDM100OP		6	6	5	12 300	19 700	8 200
120	120	180	200	158.6	4.15	175	4	85	80°		SDM120	SDM120AJ	SDM120OP		8	8	6	22 300	39 100	15 500

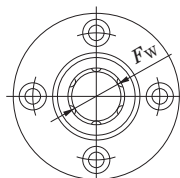
[Note] 1) JTEKT also manufactures sealed types, which are identified by U (one side sealed) or UU (both sides sealed) after ball complement bore diameter number.

flanged type

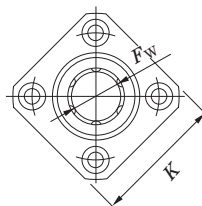
d 6 ~ 50 mm



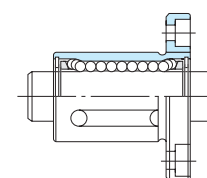
SDMF, SDMK



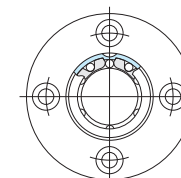
Round-flanged



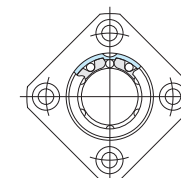
Square-flanged



SDMF...MG
SDMK...MG (Synthetic resin)



Round-flanged

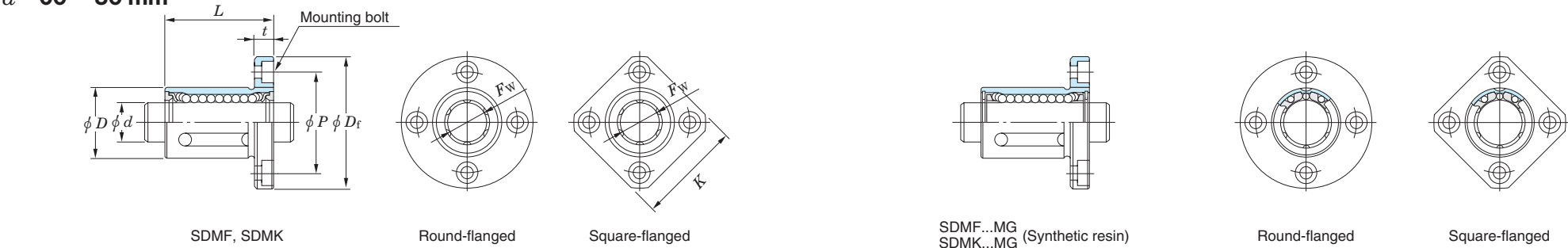


Square-flanged

Shaft dia. (mm) d	Dimensions (mm)							Bolt size	Bearing No.			No. of ball rows	Basic load ratings (N)		(Refer.) Mass (g) Round-flanged type
	F_w	D	L	D_f	K	t	P		Round-flanged type	Square-flanged type			C_r	C_{0r}	
6	6	12	19	28	22	5	20	M3	SDMF6	SDMK6		3	108	186	23
	6	12	19	28	22	5	20	M3	SDMF6MG	SDMK6MG		4	108	186	22
8	8	15	24	32	25	5	24	M3	SDMF8	SDMK8		3	122	223	35
	8	15	24	32	25	5	24	M3	SDMF8MG	SDMK8MG		4	134	255	34
10	10	19	29	40	30	6	29	M4	SDMF10	SDMK10		4	259	424	65
	10	19	29	40	30	6	29	M4	SDMF10MG	SDMK10MG		4	259	424	61
12	12	21	30	42	32	6	32	M4	SDMF12	SDMK12		4	260	431	72
	12	21	30	42	32	6	32	M4	SDMF12MG	SDMK12MG		4	260	431	68
13	13	23	32	43	34	6	33	M4	SDMF13	SDMK13		4	289	506	83
	13	23	32	43	34	6	33	M4	SDMF13MG	SDMK13MG		4	289	506	77
16	16	28	37	48	37	6	38	M4	SDMF16	SDMK16		4	480	766	120
	16	28	37	48	37	6	38	M4	SDMF16MG	SDMK16MG		4	480	766	110
20	20	32	42	54	42	8	43	M5	SDMF20	SDMK20		5	590	1 010	170
	20	32	42	54	42	8	43	M5	SDMF20MG	SDMK20MG		5	590	1 010	160
25	25	40	59	62	50	8	51	M5	SDMF25	SDMK25		5	1 130	2 030	290
	25	40	59	62	50	8	51	M5	SDMF25MG	SDMK25MG		5	1 130	2 030	270
30	30	45	64	74	58	10	60	M6	SDMF30	SDMK30		6	1 470	2 770	440
	30	45	64	74	58	10	60	M6	SDMF30MG	SDMK30MG		6	1 470	2 770	410
35	35	52	70	82	64	10	67	M6	SDMF35	SDMK35		6	1 580	3 070	610
	35	52	70	82	64	10	67	M6	SDMF35MG	SDMK35MG		6	1 580	3 070	560
40	40	60	80	96	75	13	78	M8	SDMF40	SDMK40		6	2 180	4 010	1 000
	40	60	80	96	75	13	78	M8	SDMF40MG	SDMK40MG		6	2 180	4 010	930
50	50	80	100	116	92	13	98	M8	SDMF50	SDMK50		6	4 420	7 150	2 000

flanged type

d 60 ~ 80 mm



Shaft dia. (mm)	Dimensions (mm)							Bolt size	Bearing No.			No. of ball rows	Basic load ratings (N)		(Refer.) Mass	
	<i>d</i>	<i>F</i> _w	<i>D</i>	<i>L</i>	<i>D</i> _f	<i>K</i>	<i>t</i>		<i>P</i>	Round-flanged type			Square-flanged type	<i>C</i> _r	<i>C</i> _{0r}	Round-flanged type
60	60	90	110	134	106	18	112	M10	SDMF60	SDMK60		6	5 170	9 030	2 800	
80	80	120	140	164	136	18	142	M10	SDMF80	SDMK80		6	8 180	12 800	5 400	



Exsev&Ceramic bearing series

More and more bearings are being used in extreme special environments, such as in a vacuum, or in a clean, corrosive, or heated place. In some cases bearings are required to be insulated or antimagnetic.

Applications of bearings in such environments are increasing in the field of state-of-the-art technology, e.g. vacuum equipment, aerospace equipment and semi-conductor production facilities. Bearings made of conventional materials and lubricants can hardly meet these new needs.

JTEKT has succeeded in developing a series of bearings for use in extreme special environments, having started from the study of the very basics of materials and testing of their performance under various severe conditions.

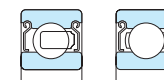
JTEKT has standardized the following bearings as the "Koyo **EXSEV** bearing series".

- Exsev bearings for use in a clean environment
Designed for use in a vacuum.
The friction surface of the bearing interior is coated with solid lubricant (or soft metal). Bearings pre-lubricated with special grease are also available.
- Exsev bearings for use in a vacuum environment
Produce insignificant contamination, provided with rolling elements and a cage made of self-lubricating materials. Optimal for use in environments which need to be clean.
- Ceramic bearings
Ceramic rings and rolling elements (silicon nitride Si_3N_4) ensure excellent performance in various extreme special environments.

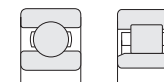
Exsev bearings for use in a vacuum environment



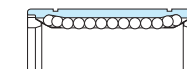
Exsev bearings for use in a clean environment



Ceramic bearings



Linear ball bearings for vacuum



For details, refer to JTEKT separate catalog "**EXSEV** bearings and Ceramic bearings for extreme special environments" (CAT. NO. BA004EN).



Bearings for machine tool spindles (for support of axial loading)

Matched pair angular contact ball bearing
(ACT type)



JTEKT supplies ACT type matched pair angular contact ball bearings which are used with machine tool spindles to support axial loading.

This type of bearing was developed to meet needs which have grown as machine tool spindle rotation has become faster and more accurate.

Several dimension series are available for selection according to operating conditions.

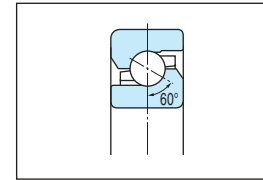


For details, refer to JTEKT separate catalog "Precision Ball & Roller Bearings" (CAT. NO. BA005EN).



Precision ball screw support bearings and bearing units

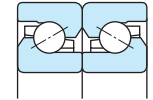
■ Support bearings were developed to support precision ball screw shafts. They have the same structure as angular contact thrust ball bearings with a contact angle of 60°.



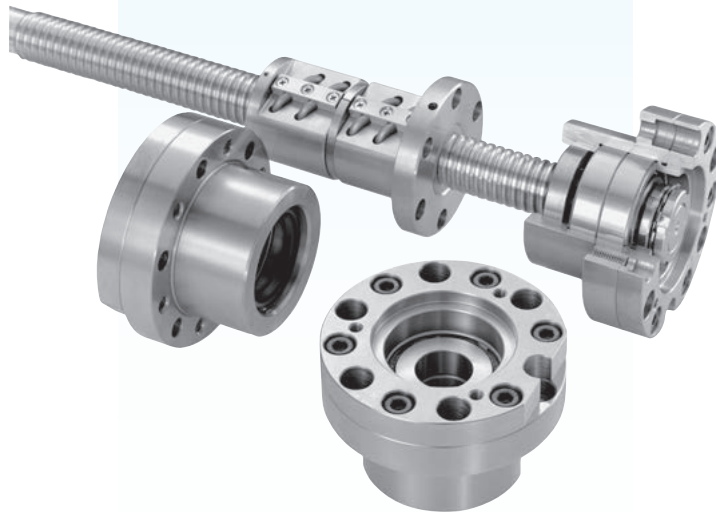
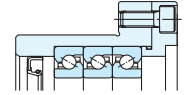
- Have a large axial load carrying capacity. Also able to carry a certain degree of radial load.
- Highly rigid in the axial direction.
- Starting torque is small.

■ Support bearing units consist of the bearings described above and a precisely processed housing. Units with a precision ball screw are also available.

Support bearings



Support bearing units



For details, refer to JTEKT separate catalog "Precision Ball & Roller Bearings" (CAT. NO. BA005EN).

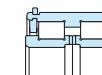


Full complement type cylindrical roller bearings for crane sheaves

Crane rope sheaves and running wheels which are operated at low or medium speed are generally equipped with full complement type cylindrical roller bearings because the operation of these machines involves heavy, impact loading.

These bearings are divided into shielded and open types. The shielded type is often used with the outer ring rotation.

Shielded type



Open type

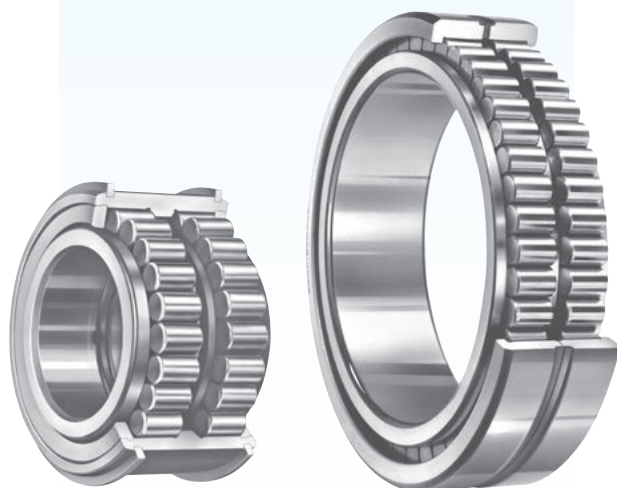


■ Shielded type

- The shielded type was developed for use with rope sheaves. It is shielded, non-separable and pre-lubricated with grease.
- Bearings with locating snap rings around the outer ring can be positioned and fit to sheaves with ease.
- The bearing surface is coated with phosphate for rust prevention.

■ Open type

- Open type bearings are further divided into those used on the fixed side and those used on the free side. The former carry axial load in both directions. The relative position of the latter's inner ring and outer ring can be adjusted by moving them along the axis.
- Open type bearings are separable because the outer ring divided into two annular pieces in a plane perpendicular to its axis. Triple-row and four-row bearings are available along with double-row types.



For details, refer to JTEKT separate catalog "Large size ball & roller bearings" (CAT. NO. BS008EN).

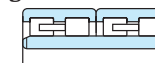


Rolling mill roll neck bearings

Rolling mill roll neck four-row cylindrical roller bearings and tapered roller bearings are designed to achieve the maximum load rating capacity in a limited space.

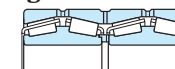
- Four-row cylindrical roller bearings
 - Suitable for high-speed rotation. Thin section designs are also available.
 - The inner ring raceway surface and the roll can be finished simultaneously after the inner ring is mounted on the roll neck. This feature is useful in improving rolling mill accuracy.
- Four-row tapered roller bearings
 - Suitable for low- and medium-speed rotation. Available in both metric and inch series.
 - The internal clearance is preadjusted, facilitating mounting.
 - More sealed type four-row tapered roller bearings are being used currently.

Four-row cylindrical roller bearings

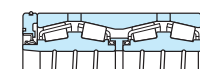


Cylindrical bore

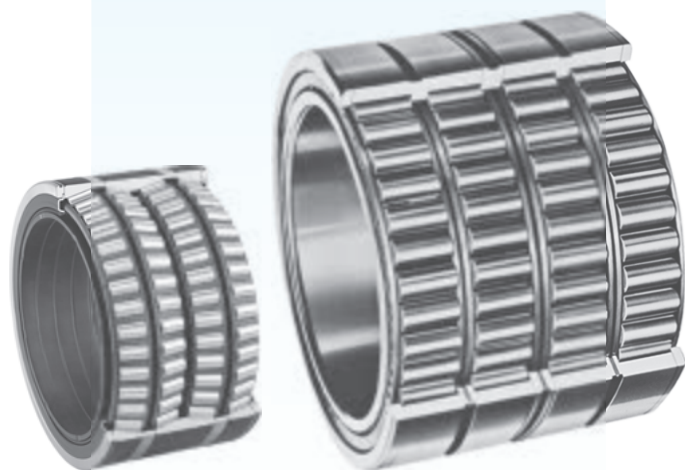
Four-row tapered roller bearings



Open type



Sealed type



For details, refer to JTEKT separate catalog "Roll neck bearings for rolling mill" (CAT. NO. BA001EN).

