

CATALOG 2009

TENGEN BEARING COMPANY



DEEP GROOVE BALL BEARINGS
Catalog No. GB1200

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FOREWORD

We would like to thank you for your interest of our catalog 2009, after months of researches and preparations, we are proud to publish this catalog for all our valued customers. We promise we have contributed our best efforts ensuring the correctness, accuracy and completeness of information made available in this catalog. We sincerely hope this publish will help to fill your needs.

The main objective of this catalog is to act as a bearing handbook for bearings substitution from one brand to a product of China. We assure that bearings which are listed in this catalog are within the competitive edge of China market, which means that they are technically established, available in stocks or within the shortest possible delivery lead-time, and lowest requirement of minimum order. Bearing numbers that are not listed in this book might probably available too, please contact us for further information if your bearing numbers are not listed.

The reason why we design this catalog in a way of bearings interchangeability, having few main internationally renowned brands lined up for comparison, is intending to save our customers' hassles when they are looking for bearings substitutions in China. More brands of bearings' numbers will be added for comparison in future version of this catalog. We believe with information published in this book, in cooperation with our professional product consultation, we certainly are the Ease of Buying Solution for you to source from China.

Note:

Relevant information of bearings such as Basic Load Ratings, Speed Ratings, Factor, Bearings Weight and etc... published here are extracted from one manufacturers' catalog, these statistics may not be applicable for all brands of bearings, please use these information for reference purpose only.

ABOUT THE COMPANY

TENGEN Bearing Company is established by a group of people who possess vast experiences, professional knowledge of bearings, and bearings' industrial applications. Most of our managers and engineers have been in the bearings market for over 10 years and now closely tightened up with the Chinese market and being constantly updated about the local market information. This has consequently granted us the exclusive access to the rich market resources from around the China regions, and that enabling us the great advantages in aspect of both cost and quality of products.

Locally in China, we are not only dealing with Chinese bearings. We are also a reseller of most internationally renowned brands of bearings such as SKF, FAG, NSK, TIMKEN and etc... This provides us the capability and greater technical knowledge of bearings exchangeability in China market.

OUR MISSION

“We aim to be one of the most preferred Chinese bearings suppliers to all our customers and potential customers worldwide”

FREQUENTLY APPLIED TECHNICAL DATA OF BEARINGS

Bearings Tolerance Class
Bearings Tolerance Symbols
Tolerance Tables
Bearings Series Symbols
Bearings Supplementary Designations

BEARINGS TOLERANCES CLASSES

Types of Bearings		Tolerance Classes				
Deep Groove Ball Bearings		Normal	Class 6	Class 5	Class 4	Class 2
Angular Contact Ball Bearings		Normal	Class 6	Class 5	Class 4	Class 2
Self-aligning Ball Bearings		Normal	Class 6 equivalent	Class 5 equivalent	—	—
Cylindrical Roller Bearings		Normal	Class 6	Class 5	Class 4	Class 2
Solid Type Needle Roller Bearings		Normal	Class 6	Class 5	Class 4	—
Spherical Roller Bearings		Normal	Class 6 equivalent	Class 5 equivalent	—	—
Thrust Ball Bearings		Normal	Class 6	Class 5	Class 4	—
Spherical Thrust Roller Bearings		Normal	—	—	—	—
Metric-design Tapered Roller Bearings		Normal Class 6X	—	Class 5	Class 4	—
Inch-design Tapered Roller Bearings		ABMA CLASS 4	ABMA CLASS 2	ABMA CLASS 3	ABMA CLASS 0	ABMA CLASS 00
Equivalent standards						
GB/T 307.1 Chinese National Standard		Class 0	Class 6	Class 5	Class 4	Class 2
JIS B1514 Japanese Industrial Standard		Class 0	Class 6	Class 5	Class 4	Class 2
DIN 620 (Deutsches Institut für Normung) German Institute for Standardization		P0	P6	P5	P4	P2
ABMA American Bearing Manufacturers Association	Ball Bearings	ABEC 1	ABEC 3	ABEC 5 (CLASS 5P)	ABEC 7 (CLASS 7P)	ABEC 9 (CLASS 9P)
	Roller Bearings	RBEC 1	RBEC 3	RBEC 5	—	—
	Tapered Roller Bearings	CLASS 4	CLASS 2	CLASS 3	CLASS 0	CLASS 00

Note

1. The most common bearings produced in China are basically Normal Class, in accordance to JIS standard at class zero. (please refer to ISO 492/199/582/ABEC1/GB/T307.1 P0 for detailed requirements of bearings tolerance) You may also obtain detailed bearings tolerance statistics from manufacturers' catalog.
2. Bearings may be produced at Class 6 upon requested by customers for relatively rigid applications. Please contact our sales personnel for detailed information before placing an order.

BEARING TOLERANCES

Symbols of Boundary Dimension and Running Accuracy

d	<i>Nominal bearing bore diameter</i>
Δ_{ds}	<i>Deviation of single bore diameter</i>
Δ_{dmp}	<i>Deviation of mean bore diameter in a single plane</i>
V_{dp}	<i>Variation of mean bore diameter in a single plane</i>
V_{dmp}	<i>Variation of mean bore diameter</i>
B	<i>Nominal inner ring width</i>
Δ_{Bs}	<i>Deviation of single ring width</i>
V_{Bs}	<i>Variation of single ring width</i>
K_{ia}	<i>Radial runout of inner ring of assembled bearing</i>
S_d	<i>Runout of inner ring face to the bore</i>
S_{ia}	<i>Axial runout of end face to inner ring raceway of assembled bearing</i>
S_i / S_e	<i>Variation of washer thickness of (shaft / housing) locating washers</i>
T	<i>Nominal bearing height of a single direction axial bearing</i>
D	<i>Nominal bearing outer diameter</i>
Δ_{Ds}	<i>Deviation of single outer diameter</i>
Δ_{Dmp}	<i>Deviation of mean outer diameter in a single plane</i>
V_{Dp}	<i>Variation of single outer diameter in a single plane</i>
V_{Dmp}	<i>Variation of mean outer diameter</i>
C	<i>Nominal outer ring width</i>
Δ_{Cs}	<i>Deviation of single outer ring width</i>
V_{Cs}	<i>Variation of outer ring width</i>
K_{ea}	<i>Radial runout of outer ring of assembled bearing</i>
S_D	<i>Runout of outer ring outside surface generatrix to the face</i>
S_{ea}	<i>Axial runout of end face to outer ring raceway of assembled bearing</i>

Tolerance Tables (Part 1)

<i>d</i> (mm)		Δ_{dmp} Deviation of Mean Bore Diameter										<i>units</i> : μm	
		Normal		Class 6		Class 5		Class 4		Class 2			
Over	Incl.	High	Low	High	Low	High	Low	High	Low	High	Low		
0.6	2.5	0	-8	0	-7	0	-5	0	-4	0	-2.5		
2.5	10	0	-8	0	-7	0	-5	0	-4	0	-2.5		
10	18	0	-8	0	-7	0	-5	0	-4	0	-2.5		
18	30	0	-10	0	-8	0	-6	0	-5	0	-2.5		
30	50	0	-12	0	-10	0	-8	0	-6	0	-2.5		
50	80	0	-15	0	-12	0	-9	0	-7	0	-4		
80	120	0	-20	0	-15	0	-10	0	-8	0	-5		
120	150	0	-25	0	-18	0	-13	0	-10	0	-7		
150	180	0	-25	0	-18	0	-13	0	-10	0	-7		
180	250	0	-30	0	-22	0	-15	0	-12	0	-8		
250	315	0	-35	0	-25	0	-18	-	-	-	-		
315	400	0	-40	0	-30	0	-23	-	-	-	-		
400	500	0	-45	0	-35	-	-	-	-	-	-		
500	630	0	-50	0	-40	-	-	-	-	-	-		
630	800	0	-75	-	-	-	-	-	-	-	-		
800	1,000	0	-100	-	-	-	-	-	-	-	-		
1,000	1,250	0	-125	-	-	-	-	-	-	-	-		
1,250	1,600	0	-160	-	-	-	-	-	-	-	-		
1,600	2,000	0	-200	-	-	-	-	-	-	-	-		

<i>d</i> (mm)		V_{dmp} Variation of Mean Bore Diameter					Δ_{Bs} (or Δ_{Cs}) Deviation of Single (Outer) Ring Width												<i>units</i> : μm	
		Normal	Class 6	Class 5	Class 4	Class 2	Single Bearing						Combined Bearings							
							Normal Class 6		Class 5 Class 4		Class 2		Normal Class 6		Class 5 Class 4		Class 2			
Over	Incl.	Max	Max	Max	Max	Max	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
0.6	2.5	6	5	3	2	1.5	0	-40	0	-40	0	-40	-	-	0	-250	0	-250	0	-250
2.5	10	6	5	3	2	1.5	0	-120	0	-40	0	-40	0	-250	0	-250	0	-250	0	-250
10	18	6	5	3	2	1.5	0	-120	0	-80	0	-80	0	-250	0	-250	0	-250	0	-250
18	30	8	6	3	2.5	1.5	0	-120	0	-120	0	-120	0	-250	0	-250	0	-250	0	-250
30	50	9	8	4	3	1.5	0	-120	0	-120	0	-120	0	-250	0	-250	0	-250	0	-250
50	80	11	9	5	3.5	2	0	-150	0	-150	0	-150	0	-380	0	-250	0	-250	0	-250
80	120	15	11	5	4	2.5	0	-200	0	-200	0	-380	0	-380	0	-380	0	-380	0	-380
120	150	19	14	7	5	3.5	0	-250	0	-250	0	-250	0	-500	0	-380	0	-380	0	-380
150	180	19	14	7	5	3.5	0	-250	0	-250	0	-250	0	-500	0	-380	0	-380	0	-380
180	250	23	17	8	6	4	0	-300	0	-300	0	-300	0	-500	0	-500	0	-500	0	-500
250	315	26	19	9	-	-	0	-350	0	-350	-	-	0	-500	0	-500	-	-	-	-
315	400	30	23	12	-	-	0	-400	0	-400	-	-	0	-630	0	-630	-	-	-	-
400	500	34	26	-	-	-	0	-450	-	-	-	-	-	-	-	-	-	-	-	-
500	630	38	30	-	-	-	0	-500	-	-	-	-	-	-	-	-	-	-	-	-
630	800	-	-	-	-	-	0	-750	-	-	-	-	-	-	-	-	-	-	-	-
800	1,000	-	-	-	-	-	0	-1,000	-	-	-	-	-	-	-	-	-	-	-	-
1,000	1,250	-	-	-	-	-	0	-1,250	-	-	-	-	-	-	-	-	-	-	-	-
1,250	1,600	-	-	-	-	-	0	-1,600	-	-	-	-	-	-	-	-	-	-	-	-
1,600	2,000	-	-	-	-	-	0	-2,000	-	-	-	-	-	-	-	-	-	-	-	-

Tolerance Tables (Part 2)

<i>units : μm</i>		K_{ia} Radial runout of inner ring of assembled bearing					S_d Runout of inner ring face to the bore			S_{ia} Axial runout of end face to inner ring raceway of assembled bearing		
		Class 0	Class 6	Class 5	Class 4	Class 2	Class 5	Class 4	Class 2	Class 5	Class 4	Class 2
<i>d</i> (mm)		Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
Over	Incl	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
0.6	2.5	10	5	4	2.5	1.5	7	3	1.5	7	3	1.5
2.5	10	10	6	4	2.5	1.5	7	3	1.5	7	3	1.5
10	18	10	7	4	2.5	1.5	7	3	1.5	7	3	1.5
18	30	13	8	4	3	2.5	8	4	1.5	8	4	2.5
30	50	15	10	5	4	2.5	8	4	1.5	8	4	2.5
50	80	20	10	5	4	2.5	8	5	1.5	8	5	2.5
80	120	25	13	6	5	2.5	9	5	2.5	9	5	2.5
120	150	30	18	8	6	2.5	10	6	2.5	10	7	2.5
150	180	30	18	8	6	5	10	6	4	10	7	5
180	250	40	20	10	8	5	11	7	5	13	8	5
250	315	50	25	13	-	-	13	-	-	15	-	-
315	400	60	30	15	-	-	15	-	-	20	-	-
400	500	65	35	-	-	-	-	-	-	-	-	-
500	630	70	40	-	-	-	-	-	-	-	-	-
630	800	80	-	-	-	-	-	-	-	-	-	-
800	1,000	90	-	-	-	-	-	-	-	-	-	-
1,000	1,250	100	-	-	-	-	-	-	-	-	-	-
1,250	1,600	120	-	-	-	-	-	-	-	-	-	-
1,600	2,000	140	-	-	-	-	-	-	-	-	-	-

<i>D</i> (mm)		Δ_{Dmp} Deviation of mean outer diameter in a single plane										<i>units : μm</i>	
		Normal		Class 6		Class 5		Class 4		Class 2			
		High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
2.5	Incl. 6	0	-8	0	-7	0	-5	0	-4	0	-2.5	-2.5	
6	18	0	-8	0	-7	0	-5	0	-4	0	-2.5	-2.5	
18	30	0	-9	0	-8	0	-6	0	-5	0	-4	-4	
30	50	0	-11	0	-9	0	-7	0	-6	0	-4	-4	
50	80	0	-13	0	-11	0	-9	0	-7	0	-4	-4	
80	120	0	-15	0	-13	0	-10	0	-8	0	-5	-5	
120	150	0	-18	0	-15	0	-11	0	-9	0	-5	-5	
150	180	0	-25	0	-18	0	-13	0	-10	0	-7	-7	
180	250	0	-30	0	-20	0	-15	0	-11	0	-8	-8	
250	315	0	-35	0	-25	0	-18	0	-13	0	-8	-8	
315	400	0	-40	0	-28	0	-20	0	-15	0	-10	-10	
400	500	0	-45	0	-33	0	-23	-	-	-	-	-	
500	630	0	-50	0	-38	0	-28	-	-	-	-	-	
630	800	0	-75	0	-45	0	-35	-	-	-	-	-	
800	1,000	0	-100	0	-60	-	-	-	-	-	-	-	
1,000	1,250	0	-125	-	-	-	-	-	-	-	-	-	
1,250	1,600	0	-160	-	-	-	-	-	-	-	-	-	
1,600	2,000	0	-200	-	-	-	-	-	-	-	-	-	
2,000	2,500	0	-250	-	-	-	-	-	-	-	-	-	

Tolerance Tables (Part 3)

<i>units : μm</i>		Δ_{Dmp}					K_{ea}					S_D		
		Deviation of mean outer diameter in a single plane					Radial runout of outer ring of assembled bearing					Runout of outer ring outside surface generatrix to the face		
		D (mm)		Normal	Class 6	Class 5	Class 4	Class 2	Normal	Class 6	Class 5	Class 4	Class 2	Class 5
Over	Incl.	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
2.5	6	6	5	3	2	1.5	15	8	5	3	1.5	8	4	1.5
6	18	6	5	3	2	1.5	15	8	5	3	1.5	8	4	1.5
18	30	7	6	3	2.5	2	15	9	6	4	2.5	8	4	1.5
30	50	8	7	4	3	2	20	10	7	5	2.5	8	4	1.5
50	80	10	8	5	3.5	2	25	13	8	5	4	8	4	1.5
80	120	11	10	5	4	2.5	35	18	10	6	5	9	5	2.5
120	150	14	11	6	5	2.5	40	20	11	7	5	10	5	2.5
150	180	19	14	7	5	3.5	45	23	13	8	5	10	5	2.5
180	250	23	15	8	6	4	50	25	15	10	7	11	7	4
250	315	26	19	9	7	4	60	30	18	11	7	13	8	5
315	400	30	21	10	8	5	70	35	20	13	8	13	10	7
400	500	34	25	12	-	-	80	40	23	-	-	15	-	-
500	630	38	29	14	-	-	100	50	25	-	-	18	-	-
630	800	55	34	18	-	-	120	60	30	-	-	20	-	-
800	1,000	75	45	-	-	-	140	75	-	-	-	-	-	-
1,000	1,250	-	-	-	-	-	160	-	-	-	-	-	-	-
1,250	1,600	-	-	-	-	-	190	-	-	-	-	-	-	-
1,600	2,000	-	-	-	-	-	220	-	-	-	-	-	-	-
2,000	2,500	-	-	-	-	-	250	-	-	-	-	-	-	-

<i>units : μm</i>		S_{ea}			V_{Cs}		
		Axial runout of end face to outer ring raceway of assembled bearing			Variation of outer ring width		
		D (mm)		Class 5	Class 4	Class 2	Class 5
Over	Incl.	Max	Max	Max	Max	Max	Max
2.5	6	8	5	1.5	5	2.5	1.5
6	18	8	5	1.5	5	2.5	1.5
18	30	8	5	2.5	5	2.5	1.5
30	50	8	5	2.5	5	2.5	1.5
50	80	10	5	4	6	3	1.5
80	120	11	6	5	8	4	2.5
120	150	13	7	5	8	5	2.5
150	180	14	8	5	8	5	2.5
180	250	15	10	7	10	7	4
250	315	18	10	7	11	7	5
315	400	20	13	8	13	8	7
400	500	23	-	-	15	-	-
500	630	25	-	-	18	-	-
630	800	30	-	-	20	-	-
800	1,000	-	-	-	-	-	-
1,000	1,250	-	-	-	-	-	-
1,250	1,600	-	-	-	-	-	-
1,600	2,000	-	-	-	-	-	-
2,000	2,500	-	-	-	-	-	-

BEARINGS SERIES SYMBOLS

Types of Bearings	Bearing Series Symbols	Symbols Type	Dimension Symbols		Types of Bearings	Bearing Series Symbols	Symbols Type	Dimension Symbols		
			Width or Height Symbols	Symbols				Width or Height Symbols	Symbols	
Single-Row Deep Groove Ball Bearings	68	6	(1)	8	Single-Row Cylindrical Roller Bearings	NU10	NU	1	0	
	69	6	(1)	9		NU2	NU	(0)	2	
	60	6	(1)	0		NU22	NU	2	2	
	62	6	(0)	2		NU3	NU	(0)	3	
	63	6	(0)	3		NU23	NU	2	3	
Single Row Angular Contact Ball Bearings	79	7	(1)	9		NU4	NU	(0)	4	
	70	7	(1)	0		NJ2	NJ	(0)	2	
	72	7	(0)	2		NJ22	NJ	2	2	
	73	7	(0)	3		NJ3	NJ	(0)	3	
Self-Aligning Ball Bearings	12	1	(0)	2		NJ23	NJ	2	3	
	13	1	(0)	3		NJ4	NJ	(0)	4	
	22	(1)	2	2		NUP2	NUP	(0)	2	
	23	(1)	2	3		NUP22	NUP	2	2	
Spherical Roller Bearings	230	2	3	0		NUP3	NUP	(0)	3	
	231	2	3	1		NUP23	NUP	2	3	
	222	2	2	2		NUP4	NUP	(0)	4	
	232	2	3	2		N10	N	1	0	
	213(1)	2	0	3		N2	N	(0)	2	
	223	2	2	3		N3	N	(0)	3	
Thrust Ball Bearings	511	5	1	1		N4	N	(0)	4	
	512	5	1	2		NF2	NF	(0)	2	
	513	5	1	3		NF3	NF	(0)	3	
	514	5	1	4		NF4	NF	(0)	4	
	522	5	2	2		Double Row Cylindrical Roller Bearing	NNU49	NNU	4	9
	523	5	2	3			NN30	NNU	3	0
	524	5	2	4	Thrust Spherical Roller Bearings	292	2	9	2	
Taper Roller Bearings	329	3	2	9		293	2	9	3	
	320	3	2	0		294	2	9	4	
	330	3	3	0	Needle Roller Bearings	NA48	N/A	4	8	
	331	3	3	1		NA49	N/A	4	9	
	302	3	0	2		NA59	N/A	5	9	
	322	3	2	2		NA69	N/A	6	9	
	332	3	3	2	Note Numbers in "()" are normally omitted from the bearing numbers.					
	303	3	0	3						
	323	3	2	3						

BEARINGS SUPPLEMENTARY DESIGNATIONS

Frequently Used Suffixes of Bearing Numbers

Attribute	Supplementary Designation			
	Local	SKF	FAG	NSK
Contact Angle Symbol				
Standard contact angle of 30°	A			A
Standard contact angle of 25°	A5	ACD	E	A5
Standard contact angle of 40°	B	B	B	B
Standard contact angle of 15°	C	CD	C	C
Contact angle about 20° (only applied to Tapered Roller Bearings)	C			C
Contact angle about 28° (only applied to Tapered Roller Bearings)	D			D
Internal Design Symbol				
Internal design differs from standard	A	A	A	A
Smaller diameter of outer ring raceway, contact angle, and outer ring width of tapered roller bearings conform to ISO 355	J	X/Q	X	J
Material Symbol				
Case-hardened steel used in rings, rolling elements	G			G
Stainless steel used in rings, rolling elements	H		Z	H
Cage Symbol				
Machined brass cage	M	M	M	M
Synthetic resin cage	T	TN9	TV	T
Pressed steel cage	W	F	F	W
Without cage	V	V	V	V
External Features – Seals, Shields Symbol				
Shield on one side only	Z / ZS	Z	ZR	Z / ZS
Shield on both sides	ZZ / ZZS	2Z	2ZR	ZZ / ZZS
Contact rubber seal on one side only	D / DU	RS	RSR	D / DU
Contact rubber shield on both sides	DD / DDU	2RS	2RSR	DD / DDU
Non-contact rubber seal on one side only	V	RZ		V
Non-contact rubber seal on both sides	VV	2RZ		VV
Rings Design Symbol				
Tapered bore of inner ring (Taper 1:12)	K	K	K	K
Tapered bore of inner ring (Taper 1:30)	K30	K30	K30	K30
Notch or lubricating groove ring	E	E	E	E
Lubricating groove in outside surface and holes in outer ring	E4	E	S	E4
Snap ring groove in outer ring	N	N	N	N
Snap ring groove with snap ring in outer ring	NR	NR	NR	NR
Bearing Arrangement Symbol				
Back to back arrangement	DB	DB	UA	DB
Face to face arrangement	DF	DF	UO	DF
Tandem arrangement	DT	DT	UL	DT
Internal Clearance Symbol				
Clearance less than C2	C1	C1	C1	C1
Clearance less than CN	C2	C2	C2	C2
CN Clearance	CN	C0	C0	CN
Clearance greater than CN	C3	C3	C3	C3
Clearance greater than C3	C4	C4	C4	C4
Clearance greater than C4	C5	C5	C5	C5
Tolerance Class Symbol				
ISO normal (P0 is usually omitted from the bearing numbers)	P0	P0	P0	P0
ISO Class 6	P6	P6	P6	P6
ISO Class 5	P5	P5	P5	P5
ISO Class 4	P4	P4	P4	P4
ISO Class 2	P2			P2
Special Specification Symbol				
Working temperature lower than 150°C	X26	S0	S0	X26
Working temperature lower than 200°C	X28	S1	S1	X28
Working temperature lower than 250°C	X29	S2	S2	X29
Dimensional stabilizing treatment working temperature lower than 200°C	S11	S1	S1	S11

COMPETITIVE PRODUCTS & PRODUCTS GALLERY

COMPETITIVE PRODUCTS LIST

Below listed products are technically established, available in stock or within the shortest possible delivery lead-time, and lowest requirement of minimum order. Please contact us if you are looking for something out of the list.

Deep Groove Ball Bearings

- Single Row Deep Groove Ball Bearings
- Double Row Deep Groove Ball Bearings

Angular Contact Ball Bearings

- Single Row Angular Contact Ball Bearings
- Double Row Angular Contact Ball Bearings
- Four Point Contact Ball Bearings

Self-Aligning Ball Bearings

Spherical Roller Bearings

Thrust Ball Bearings

- Single Direction Thrust Ball Bearings
- Double Direction Thrust Ball Bearings

Thrust Spherical Roller Bearings

Cylindrical Roller Bearings

- Single Row Cylindrical Roller Bearings
- Double Row Cylindrical Roller Bearings
- Full Complement Type Cylindrical Roller Bearings
 - Full Complement Type Single Row Cylindrical Roller Bearings
 - Full Complement Type Double Row Cylindrical Roller Bearings

Tapered Roller Bearings

- Single Row Tapered Roller Bearings
- Double Row Tapered Roller Bearings

Needle Roller Bearings

- Needle Rollers & Cage Assemblies
- Drawn Cup Needle Roller Bearings
- Solid Needle Roller Bearings
- Cam Rollers
- Cam Followers

High Precision Bearings

- High Precision Angular Contact Ball Bearings
- Single Row High Precision Cylindrical Roller Bearings
- Double Row High Precision Cylindrical Roller Bearings

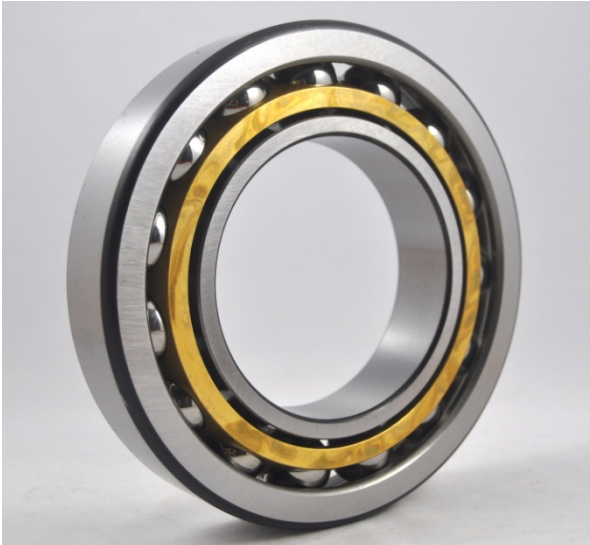
Bearing Units

- Pillow Type Units
 - UCP Series
 - UKT Series
- Square Four Bolt Flange Type Units
 - UCF Series
 - UKF Series
- Oval Flange Type Units
 - UCFL Series
 - UKFL Series
- Round Flange Cartridge Type Units
 - UCFC Series
 - UKFC Series
- Take Up Type Units
 - UCT Series
 - UKT Series
- Ball Bearing Inserts
 - UC, SB, SU Series
 - NA Series
 - ER, RB Series

PRODUCTS GALLERY



DEEP GROOVE BALL BEARINGS



ANGULAR CONTACT BALL BEARINGS



SELF-ALIGNING BALL BEARINGS



SPHERICAL ROLLER BEARINGS



THRUST BALL BEARINGS



THRUST SPHERICAL ROLLER BEARINGS



CYLINDRICAL ROLLER BEARINGS



TAPERED ROLLER BEARINGS



NEEDLE ROLLER BEARINGS



HIGH PRECISION BEARINGS



BEARING UNITS

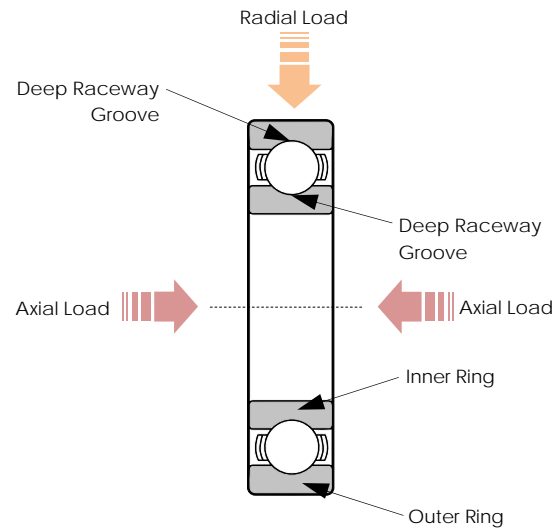
BEARING TABLES

DEEP GROOVE BALL BEARINGS

Deep groove ball bearings are the most common type of rolling bearings and they are widely used in variety of applications, they are consequently available in many executions and sizes. Deep groove ball bearings are generally divided into 2 main types, i.e. Single row and double row.

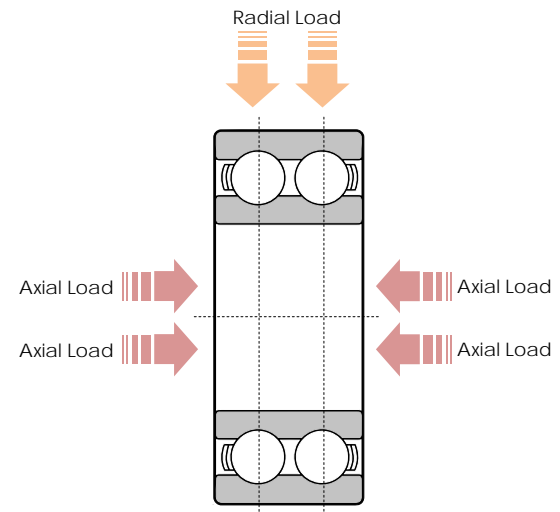
Single Row Deep Groove Ball Bearings

Single row deep groove ball bearings are considerably flexible in applications. They are designed to be simple, and suitable for very high speed operations, and yet required minimum level of maintenance. The balls roll in the deep raceway groove, with a great conformity between the rolling elements and the raceway has enabled it to accommodate axial loads in both directions even at high speeds, in additional to radial loads.



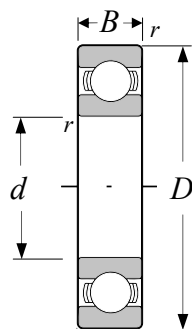
Double Row Deep Groove Ball Bearings

The design of double row deep groove ball bearings is in correspondence to single row deep groove ball bearings. Similarly, there is high conformity between the rolling elements and the raceway, the balls roll at the deep and constant raceway groove, accommodating high axial loads in both directions. Double row deep groove ball bearings are very suitable where situation a single row deep groove ball bearing's carrying capacity is inadequate. With its' similar bore and outer diameter, double row deep groove ball bearings are slightly wider than single row bearings, but having greater capability to accommodate higher loads.

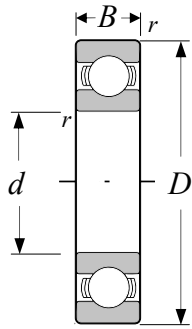


DEEP GROOVE BALL BEARINGS Single Row

Table 1
Bore Diameter 3mm - 7mm



Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
3	10	4	0.54	0.18	130000	80000	0.0015	623	623	623	623
3	10	4	0.54	0.18	-	40000	0.0015	623 DDU	623 2RS1	623 2RSR	623 DDU
3	10	4	0.54	0.18	130000	63000	0.0015	623 ZZ	623 ZZ	623 ZZ	623 ZZ
3	10	4	0.54	0.18	-	40000	0.0015	623 DU	623 RS1	623 RSR	623 DU
3	10	4	0.54	0.18	130000	80000	0.0015	623 Z	623 Z	623 Z	623 Z
4	9	2.5	0.54	0.18	140000	85000	0.0007	618/4	618/4	618/4	618/4
4	9	3.5	0.54	0.18	140000	70000	0.001	628/4 ZZ	628/4 ZZ	628/4 ZZ	628/4 ZZ
4	9	4	0.54	0.18	140000	70000	0.0013	638/4 ZZ	638/4 ZZ	638/4 ZZ	638/4 ZZ
4	11	4	0.715	0.232	130000	80000	0.0017	619/4	619/4	619/4	619/4
4	11	4	0.715	0.232	130000	63000	0.0017	619/4 ZZ	619/4 ZZ	619/4 ZZ	619/4 ZZ
4	12	4	0.806	0.28	120000	75000	0.0021	604	604	604	604
4	12	4	0.806	0.28	120000	60000	0.0021	604 ZZ	604 ZZ	604 ZZ	604 ZZ
4	12	4	0.806	0.28	120000	60000	0.0021	604 Z	604 Z	604 Z	604 Z
4	13	5	0.936	0.29	110000	67000	0.0031	624	624	624	624
4	13	5	0.936	0.29	110000	53000	0.0031	624 ZZ	624 ZZ	624 ZZ	624 ZZ
4	13	5	0.936	0.29	110000	67000	0.0031	624 Z	624 Z	624 Z	624 Z
4	16	5	1.11	0.38	95000	60000	0.0054	634	634	634	634
4	16	5	1.11	0.38	-	28000	0.0054	634 DDU	634 2RS1	634 2RSR	634 DDU
4	16	5	1.11	0.38	95000	48000	0.0054	634 ZZ	634 ZZ	634 ZZ	634 ZZ
4	16	5	1.11	0.38	-	28000	0.0054	634 DU	634 RS1	634 RSR	634 DU
4	16	5	1.11	0.38	95000	60000	0.0054	634 V	634 RZ	634 RSD	634 V
4	16	5	1.11	0.38	95000	60000	0.0054	634 Z	634 Z	634 Z	634 Z
5	11	3	0.637	0.255	120000	75000	0.0012	618/5	618/5	618/5	618/5
5	11	4	0.637	0.255	120000	60000	0.0014	628/5 ZZ	628/5 ZZ	628/5 ZZ	628/5 ZZ
5	11	5	0.637	0.255	120000	60000	0.0016	638/5 ZZ	638/5 ZZ	638/5 ZZ	638/5 ZZ
5	13	4	0.884	0.34	110000	67000	0.0025	619/5	619/5	619/5	619/5
5	13	4	0.884	0.34	110000	53000	0.0025	619/5 ZZ	619/5 ZZ	619/5 ZZ	619/5 ZZ
5	16	5	1.14	0.38	95000	60000	0.005	625	625	625	625
5	16	5	1.14	0.38	95000	48000	0.005	625 ZZ	625 ZZ	625 ZZ	625 ZZ
5	16	5	1.14	0.38	95000	60000	0.005	625 Z	625 Z	625 Z	625 Z
5	19	6	2.34	0.95	80000	50000	0.009	635	635	635	635
5	19	6	2.34	0.95	-	24000	0.009	635 DDU	635 2RS1	635 2RSR	635 DDU
5	19	6	2.34	0.95	80000	40000	0.009	635 ZZ	635 ZZ	635 ZZ	635 ZZ
5	19	6	2.34	0.95	-	24000	0.009	635 DU	635 RS1	635 RSR	635 DU
5	19	6	2.34	0.95	80000	50000	0.009	635 V	635 RZ	635 RSD	635 V
5	19	6	2.34	0.95	80000	50000	0.009	635 Z	635 Z	635 Z	635 Z
6	13	3.5	0.884	0.345	110000	67000	0.002	618/6	618/6	618/6	618/6
6	13	5	0.884	0.345	110000	53000	0.0026	628/6 ZZ	628/6 ZZ	628/6 ZZ	628/6 ZZ
6	15	5	1.24	0.475	100000	63000	0.0039	619/6	619/6	619/6	619/6
6	15	5	1.24	0.475	100000	50000	0.0039	619/6 ZZ	619/6 ZZ	619/6 ZZ	619/6 ZZ
6	19	6	2.34	0.95	80000	50000	0.0084	626	626	626	626
6	19	6	2.34	0.95	-	24000	0.0084	626 DDU	626 2RSH	626 2RSR	626 DDU
6	19	6	2.34	0.95	80000	40000	0.0084	626 VV	626 2RSL	626 2RSD	626 VV
6	19	6	2.34	0.95	80000	40000	0.0084	626 ZZ	626 ZZ	626 ZZ	626 ZZ
6	19	6	2.34	0.95	-	24000	0.0084	626 DU	626 RSH	626 RSR	626 DU
6	19	6	2.34	0.95	80000	50000	0.0084	626 V	626 RSL	626 RSD	626 V
6	19	6	2.34	0.95	80000	50000	0.0084	626 Z	626 Z	626 Z	626 Z
7	14	3.5	0.956	0.4	100000	63000	0.0022	618/7	618/7	618/7	618/7
7	14	5	0.956	0.4	100000	50000	0.0031	628/7 ZZ	628/7 ZZ	628/7 ZZ	628/7 ZZ
7	17	5	1.48	0.56	90000	56000	0.0049	619/7	619/7	619/7	619/7



DEEP GROOVE BALL BEARINGS

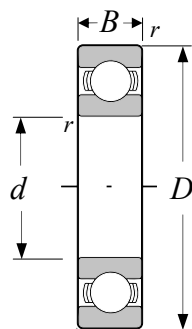
Single Row

Table 2
Bore Diameter 7mm - 9mm

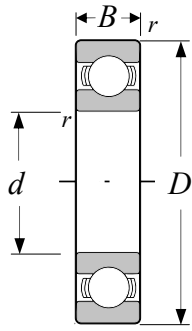
Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
7	17	5	1.48	0.56	90000	45000	0.0049	619/7 ZZ	619/7 ZZ	619/7 ZZ	619/7 ZZ
7	19	6	2.34	0.95	85000	53000	0.0075	607	607	607	607
7	19	6	2.34	0.95	-	24000	0.0075	607 DDU	607 2RSH	607 2RSR	607 DDU
7	19	6	2.34	0.95	85000	43000	0.0075	607 VV	607 2RSL	607 2RSD	607 VV
7	19	6	2.34	0.95	85000	43000	0.0075	607 ZZ	607 ZZ	607 ZZ	607 ZZ
7	19	6	2.34	0.95	-	24000	0.0075	607 DU	607 RSH	607 RSR	607 DU
7	19	6	2.34	0.95	85000	53000	0.0075	607 V	607 RSL	607 RSD	607 V
7	19	6	2.34	0.95	85000	53000	0.0075	607 Z	607 Z	607 Z	607 Z
7	22	7	3.45	1.37	70000	45000	0.013	627	627	627	627
7	22	7	3.45	1.37	-	22000	0.012	627 DDU	627 2RSH	627 2RSR	627 DDU
7	22	7	3.45	1.37	70000	36000	0.012	627 VV	627 2RSL	627 2RSD	627 VV
7	22	7	3.45	1.37	70000	36000	0.013	627 ZZ	627 ZZ	627 ZZ	627 ZZ
7	22	7	3.45	1.37	-	22000	0.012	627 DU	627 RSH	627 RSR	627 DU
7	22	7	3.45	1.37	70000	45000	0.012	627 V	627 RSL	627 RSD	627 V
7	22	7	3.45	1.37	70000	45000	0.013	627 Z	627 Z	627 Z	627 Z
8	16	4	1.33	0.57	90000	56000	0.003	618/8	618/8	618/8	618/8
8	16	5	1.33	0.57	-	26000	0.0036	628/8 DDU	628/8 2RS1	628/8 2RSR	628/8 DDU
8	16	5	1.33	0.57	90000	45000	0.0036	628/8 ZZ	628/8 ZZ	628/8 ZZ	628/8 ZZ
8	16	6	1.33	0.57	90000	45000	0.0043	638/8 ZZ	638/8 ZZ	638/8 ZZ	638/8 ZZ
8	19	6	2.34	0.95	85000	43000	0.0072	607/8 ZZ	607/8 ZZ	607/8 ZZ	607/8 ZZ
8	19	6	2.34	0.95	85000	53000	0.0072	607/8 Z	607/8 Z	607/8 Z	607/8 Z
8	19	6	1.9	0.735	80000	50000	0.0071	619/8	619/8	619/8	619/8
8	19	6	1.9	0.735	-	24000	0.0071	619/8 DDU	619/8 2RS1	619/8 2RSR	619/8 DDU
8	19	6	1.9	0.735	80000	40000	0.0071	619/8 ZZ	619/8 ZZ	619/8 ZZ	619/8 ZZ
8	22	7	3.45	1.37	75000	48000	0.012	608	608	608	608
8	22	7	3.45	1.37	-	22000	0.012	608 DDU	608 2RSH	608 2RSR	608 DDU
8	22	7	3.45	1.37	75000	38000	0.012	608 VV	608 2RSL	608 2RSD	608 VV
8	22	7	3.45	1.37	75000	38000	0.012	608 ZZ	608 ZZ	608 ZZ	608 ZZ
8	22	7	3.45	1.37	75000	38000	0.012	608 ZZMC3	608 ZZ/C3WT	608 ZZ/C3	608 ZZMC3
8	22	7	3.45	1.37	-	22000	0.012	608 DU	608 RSH	608 RSR	608 DU
8	22	7	3.45	1.37	75000	48000	0.012	608 V	608 RSL	608 RSD	608 V
8	22	7	3.45	1.37	75000	48000	0.012	608 Z	608 Z	608 Z	608 Z
8	22	11	3.45	1.37	-	22000	0.016	630/8 DDU	630/8 2RS1	630/8 2RSR	630/8 DDU
8	24	8	3.9	1.66	63000	40000	0.017	628	628	628	628
8	24	8	3.9	1.66	-	19000	0.017	628 DDU	628 2RS1	628 2RSR	628 DDU
8	24	8	3.9	1.66	63000	32000	0.017	628 ZZ	628 ZZ	628 ZZ	628 ZZ
8	24	8	3.9	1.66	-	19000	0.017	628 DU	628 RS1	628 RSR	628 DU
8	24	8	3.9	1.66	63000	40000	0.017	628 V	628 RZ	628 RSD	628 V
8	24	8	3.9	1.66	63000	40000	0.017	628 Z	628 Z	628 Z	628 Z
8	28	9	4.62	1.96	60000	38000	0.03	638 V	638 RZ	638 RSD	638 V
9	17	4	1.43	0.64	85000	53000	0.0034	618/9	618/9	618/9	618/9
9	17	5	1.43	0.64	-	24000	0.0043	628/9 DDU	628/9 2RS1	628/9 2RSR	628/9 DDU
9	17	5	1.43	0.64	85000	43000	0.0043	628/9 ZZ	628/9 ZZ	628/9 ZZ	628/9 ZZ
9	17	5	1.43	0.64	85000	53000	0.0043	628/9 Z	628/9 Z	628/9 Z	628/9 Z
9	20	6	2.08	0.865	80000	48000	0.0076	619/9	619/9	619/9	619/9
9	20	6	2.08	0.865	80000	38000	0.0076	619/9 ZZ	619/9 ZZ	619/9 ZZ	619/9 ZZ
9	24	7	3.9	1.66	70000	43000	0.014	609	609	609	609
9	24	7	3.9	1.66	-	19000	0.014	609 DDU	609 2RSH	609 2RSR	609 DDU
9	24	7	3.9	1.66	70000	34000	0.014	609 VV	609 2RSL	609 2RSD	609 VV
9	24	7	3.9	1.66	70000	34000	0.014	609 ZZ	609 ZZ	609 ZZ	609 ZZ

DEEP GROOVE BALL BEARINGS Single Row

Table 3
Bore Diameter 9mm - 12mm



Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
9	24	7	3.9	1.66	-	19000	0.014	609 DU	609 RSH	609 RSR	609 DU
9	24	7	3.9	1.66	70000	43000	0.014	609 V	609 RSL	609 RSD	609 V
9	24	7	3.9	1.66	70000	43000	0.014	609 Z	609 Z	609 Z	609 Z
9	26	8	4.75	1.96	60000	38000	0.02	629	629	629	629
9	26	8	4.75	1.96	-	19000	0.02	629 DDU	629 2RSH	629 2RSR	629 DDU
9	26	8	4.75	1.96	60000	30000	0.02	629 VV	629 2RSL	629 2RSD	629 VV
9	26	8	4.75	1.96	60000	30000	0.02	629 ZZ	629 ZZ	629 ZZ	629 ZZ
9	26	8	4.75	1.96	-	19000	0.02	629 DU	629 RSH	629 RSR	629 DU
9	26	8	4.75	1.96	60000	38000	0.02	629 V	629 RSL	629 RSD	629 V
9	26	8	4.75	1.96	60000	38000	0.02	629 Z	629 Z	629 Z	629 Z
10	19	5	1.38	0.585	80000	48000	0.0055	61800	61800	61800	61800
10	19	5	1.38	0.585	-	22000	0.0055	61800 DDU	61800 2RS1	61800 2RSR	61800 DDU
10	19	5	1.38	0.585	80000	38000	0.0055	61800 ZZ	61800 ZZ	61800 ZZ	61800 ZZ
10	22	6	2.08	0.85	75000	45000	0.01	61900	61900	61900	61900
10	22	6	2.08	0.85	-	20000	0.01	61900 DDU	61900 2RS1	61900 2RSR	61900 DDU
10	22	6	2.08	0.85	75000	36000	0.01	61900 ZZ	61900 ZZ	61900 ZZ	61900 ZZ
10	26	8	4.75	1.96	67000	40000	0.019	6000	6000	6000	6000
10	26	8	4.75	1.96	-	19000	0.019	6000 DDU	6000 2RSH	6000 2RSR	6000 DDU
10	26	8	4.75	1.96	67000	34000	0.019	6000 VV	6000 2RSL	6000 2RSD	6000 VV
10	26	8	4.75	1.96	67000	34000	0.019	6000 ZZ	6000 ZZ	6000 ZZ	6000 ZZ
10	26	8	4.75	1.96	-	19000	0.019	6000 DU	6000 RSH	6000 RSR	6000 DU
10	26	8	4.75	1.96	67000	40000	0.019	6000 V	6000 RSL	6000 RSD	6000 V
10	26	8	4.75	1.96	67000	40000	0.019	6000 Z	6000 Z	6000 Z	6000 Z
10	26	12	4.62	1.96	-	19000	0.025	63000 DDU	63000 2RS1	63000 2RSR	63000 DDU
10	28	8	4.62	1.96	63000	40000	0.022	16100	16100	16100	16100
10	28	8	4.62	1.96	63000	32000	0.022	16100 ZZ	16100 ZZ	16100 ZZ	16100 ZZ
10	30	9	5.4	2.36	56000	34000	0.032	6200	6200	6200	6200
10	30	9	5.4	2.36	-	17000	0.032	6200 DDU	6200 2RSH	6200 2RSR	6200 DDU
10	30	9	5.4	2.36	56000	28000	0.032	6200 VV	6200 2RSL	6200 2RSD	6200 VV
10	30	9	5.4	2.36	56000	28000	0.032	6200 ZZ	6200 ZZ	6200 ZZ	6200 ZZ
10	30	9	5.4	2.36	-	17000	0.032	6200 DU	6200 RSH	6200 RSR	6200 DU
10	30	9	5.4	2.36	56000	34000	0.032	6200 V	6200 RSL	6200 RSD	6200 V
10	30	9	5.4	2.36	56000	34000	0.032	6200 Z	6200 Z	6200 Z	6200 Z
10	30	14	5.07	2.36	-	17000	0.04	62200 DDU	62200 2RS1	62200 2RSR	62200 DDU
10	35	11	8.52	3.4	50000	32000	0.053	6300	6300	6300	6300
10	35	11	8.52	3.4	-	15000	0.053	6300 DDU	6300 2RSH	6300 2RSR	6300 DDU
10	35	11	8.52	3.4	50000	26000	0.053	6300 VV	6300 2RSL	6300 2RSD	6300 VV
10	35	11	8.52	3.4	50000	26000	0.053	6300 ZZ	6300 ZZ	6300 ZZ	6300 ZZ
10	35	11	8.52	3.4	-	15000	0.053	6300 DU	6300 RSH	6300 RSR	6300 DU
10	35	11	8.52	3.4	50000	32000	0.053	6300 V	6300 RSL	6300 RSD	6300 V
10	35	11	8.52	3.4	50000	32000	0.053	6300 Z	6300 Z	6300 Z	6300 Z
10	35	17	8.06	3.4	-	15000	0.06	62300 DDU	62300 2RS1	62300 2RSR	62300 DDU
12	21	5	1.43	0.67	70000	43000	0.0063	61801	61801	61801	61801
12	21	5	1.43	0.67	-	20000	0.0063	61801 DDU	61801 2RS1	61801 2RSR	61801 DDU
12	21	5	1.43	0.67	70000	36000	0.0063	61801 ZZ	61801 ZZ	61801 ZZ	61801 ZZ
12	24	6	2.25	0.98	67000	40000	0.011	61901	61901	61901	61901
12	24	6	2.25	0.98	-	19000	0.011	61901 DDU	61901 2RS1	61901 2RSR	61901 DDU
12	24	6	2.25	0.98	67000	32000	0.011	61901 ZZ	61901 ZZ	61901 ZZ	61901 ZZ
12	28	8	5.4	2.36	60000	38000	0.022	6001	6001	6001	6001
12	28	8	5.4	2.36	-	17000	0.022	6001 DDU	6001 2RSH	6001 2RSR	6001 DDU



DEEP GROOVE BALL BEARINGS

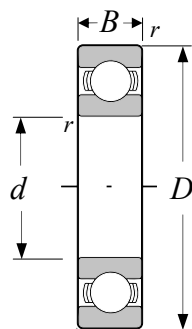
Single Row

Table 4
Bore Diameter 12mm - 15mm

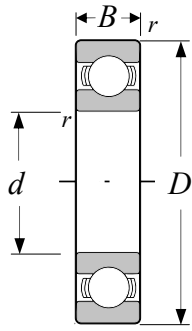
Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
12	28	8	5.4	2.36	60000	30000	0.022	6001 VV	6001 2RSL	6001 2RSD	6001 VV
12	28	8	5.4	2.36	60000	30000	0.022	6001 ZZ	6001 2Z	6001 2Z	6001 ZZ
12	28	8	5.4	2.36	-	17000	0.022	6001 DU	6001 RSH	6001 RSR	6001 DU
12	28	8	5.4	2.36	60000	38000	0.022	6001 V	6001 RSL	6001 RSD	6001 V
12	28	8	5.4	2.36	60000	38000	0.022	6001 Z	6001 Z	6001 Z	6001 Z
12	28	12	5.07	2.36	-	17000	0.029	63001 DDU	63001 2RS1	63001 2RSR	63001 DDU
12	30	8	5.07	2.36	56000	34000	0.023	16101	16101	16101	16101
12	30	8	5.07	2.36	-	16000	0.023	16101 DDU	16101 2RS1	16101 2RSR	16101 DDU
12	30	8	5.07	2.36	56000	28000	0.023	16101 ZZ	16101 2Z	16101 2Z	16101 ZZ
12	32	10	7.28	3.1	50000	32000	0.037	6201	6201	6201	6201
12	32	10	7.28	3.1	-	15000	0.037	6201 DDU	6201 2RSH	6201 2RSR	6201 DDU
12	32	10	7.28	3.1	50000	26000	0.037	6201 VV	6201 2RSL	6201 2RSD	6201 VV
12	32	10	7.28	3.1	50000	26000	0.037	6201 ZZ	6201 2Z	6201 2Z	6201 ZZ
12	32	10	7.28	3.1	-	15000	0.037	6201 DU	6201 RSH	6201 RSR	6201 DU
12	32	10	7.28	3.1	50000	32000	0.037	6201 V	6201 RSL	6201 RSD	6201 V
12	32	10	7.28	3.1	50000	32000	0.037	6201 Z	6201 Z	6201 Z	6201 Z
12	32	14	6.89	3.1	-	15000	0.045	62201 DDU	62201 2RS1	62201 2RSR	62201 DDU
12	37	12	10.1	4.15	45000	28000	0.06	6301	6301	6301	6301
12	37	12	10.1	4.15	-	14000	0.06	6301 DDU	6301 2RSH	6301 2RSR	6301 DDU
12	37	12	10.1	4.15	45000	22000	0.06	6301 VV	6301 2RSL	6301 2RSD	6301 VV
12	37	12	10.1	4.15	45000	22000	0.06	6301 ZZ	6301 2Z	6301 2Z	6301 ZZ
12	37	12	10.1	4.15	-	14000	0.06	6301 DU	6301 RSH	6301 RSR	6301 DU
12	37	12	10.1	4.15	45000	28000	0.06	6301 V	6301 RSL	6301 RSD	6301 V
12	37	12	10.1	4.15	45000	28000	0.06	6301 Z	6301 Z	6301 Z	6301 Z
12	37	17	9.75	4.15	-	14000	0.07	62301 DDU	62301 2RS1	62301 2RSR	62301 DDU
15	24	5	1.56	0.8	60000	38000	0.0074	61802	61802	61802	61802
15	24	5	1.56	0.8	-	17000	0.0074	61802 DDU	61802 2RS1	61802 2RSR	61802 DDU
15	24	5	1.56	0.8	60000	30000	0.0074	61802 ZZ	61802 2Z	61802 2Z	61802 ZZ
15	28	7	4.36	2.24	56000	34000	0.016	61902	61902	61902	61902
15	28	7	4.36	2.24	-	16000	0.016	61902 DDU	61902 2RS1	61902 2RSR	61902 DDU
15	28	7	4.36	2.24	56000	28000	0.016	61902 ZZ	61902 2Z	61902 2Z	61902 ZZ
15	32	8	5.85	2.85	50000	32000	0.025	16002	16002	16002	16002
15	32	8	5.85	2.85	50000	26000	0.025	16002 ZZ	16002 2Z	16002 2Z	16002 ZZ
15	32	8	5.85	2.85	50000	32000	0.025	16002 Z	16002 Z	16002 Z	16002 Z
15	32	9	5.85	2.85	50000	32000	0.03	6002	6002	6002	6002
15	32	9	5.85	2.85	-	14000	0.03	6002 DDU	6002 2RSH	6002 2RSR	6002 DDU
15	32	9	5.85	2.85	50000	26000	0.03	6002 VV	6002 2RSL	6002 2RSD	6002 VV
15	32	9	5.85	2.85	50000	26000	0.03	6002 ZZ	6002 2Z	6002 2Z	6002 ZZ
15	32	9	5.85	2.85	-	14000	0.03	6002 DU	6002 RSH	6002 RSR	6002 DU
15	32	9	5.85	2.85	50000	32000	0.03	6002 V	6002 RSL	6002 RSD	6002 V
15	32	9	5.85	2.85	50000	32000	0.03	6002 Z	6002 Z	6002 Z	6002 Z
15	32	13	5.59	2.85	-	14000	0.039	63002 DDU	63002 2RS1	63002 2RSR	63002 DDU
15	35	11	8.06	3.75	43000	28000	0.045	6202	6202	6202	6202
15	35	11	8.06	3.75	-	13000	0.045	6202 DDU	6202 2RSH	6202 2RSR	6202 DDU
15	35	11	8.06	3.75	43000	22000	0.045	6202 VV	6202 2RSL	6202 2RSD	6202 VV
15	35	11	8.06	3.75	43000	22000	0.045	6202 ZZ	6202 2Z	6202 2Z	6202 ZZ
15	35	11	8.06	3.75	-	13000	0.045	6202 DU	6202 RSH	6202 RSR	6202 DU
15	35	11	8.06	3.75	43000	28000	0.045	6202 V	6202 RSL	6202 RSD	6202 V
15	35	11	8.06	3.75	43000	28000	0.045	6202 Z	6202 Z	6202 Z	6202 Z
15	35	14	7.8	3.75	-	13000	0.054	62202 DDU	62202 2RS1	62202 2RSR	62202 DDU

DEEP GROOVE BALL BEARINGS Single Row

Table 5
Bore Diameter 15mm - 20mm



Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
15	42	13	11.9	5.4	38000	24000	0.082	6302	6302	6302	6302
15	42	13	11.9	5.4	-	12000	0.082	6302 DDU	6302 2RSH	6302 2RSR	6302 DDU
15	42	13	11.9	5.4	38000	19000	0.082	6302 VV	6302 2RSL	6302 2RSD	6302 VV
15	42	13	11.9	5.4	38000	19000	0.082	6302 ZZ	6302 ZZ	6302 ZZ	6302 ZZ
15	42	13	11.9	5.4	-	12000	0.082	6302 DU	6302 RSH	6302 RSR	6302 DU
15	42	13	11.9	5.4	38000	24000	0.082	6302 V	6302 RSL	6302 RSD	6302 V
15	42	13	11.9	5.4	38000	24000	0.082	6302 Z	6302 Z	6302 Z	6302 Z
15	42	17	11.4	5.4	-	12000	0.11	62302 DDU	62302 2RS1	62302 2RSR	62302 DDU
17	26	5	1.68	0.93	56000	34000	0.0082	61803	61803	61803	61803
17	26	5	1.68	0.93	-	16000	0.0082	61803 DDU	61803 2RS1	61803 2RSR	61803 DDU
17	26	5	1.68	0.93	56000	28000	0.0082	61803 ZZ	61803 ZZ	61803 ZZ	61803 ZZ
17	30	7	4.62	2.55	50000	32000	0.018	61903	61903	61903	61903
17	30	7	4.62	2.55	-	14000	0.018	61903 DDU	61903 2RS1	61903 2RSR	61903 DDU
17	30	7	4.62	2.55	50000	26000	0.018	61903 ZZ	61903 ZZ	61903 ZZ	61903 ZZ
17	35	8	6.37	3.25	45000	28000	0.032	16003	16003	16003	16003
17	35	8	6.37	3.25	45000	22000	0.032	16003 ZZ	16003 ZZ	16003 ZZ	16003 ZZ
17	35	10	6.37	3.25	45000	28000	0.039	6003	6003	6003	6003
17	35	10	6.37	3.25	-	13000	0.039	6003 DDU	6003 2RSH	6003 2RSR	6003 DDU
17	35	10	6.37	3.25	45000	22000	0.039	6003 VV	6003 2RSL	6003 2RSD	6003 VV
17	35	10	6.37	3.25	45000	22000	0.039	6003 ZZ	6003 ZZ	6003 ZZ	6003 ZZ
17	35	10	6.37	3.25	-	13000	0.039	6003 DU	6003 RSH	6003 RSR	6003 DU
17	35	10	6.37	3.25	45000	28000	0.039	6003 V	6003 RSL	6003 RSD	6003 V
17	35	10	6.37	3.25	45000	28000	0.039	6003 Z	6003 Z	6003 Z	6003 Z
17	35	14	6.05	3.25	-	13000	0.052	63003 DDU	63003 2RS1	63003 2RSR	63003 DDU
17	40	9	9.56	4.75	38000	24000	0.048	98203	98203	98203	98203
17	40	12	9.95	4.75	38000	24000	0.065	6203	6203	6203	6203
17	40	12	9.95	4.75	-	12000	0.065	6203 DDU	6203 2RSH	6203 2RSR	6203 DDU
17	40	12	9.95	4.75	38000	19000	0.065	6203 VV	6203 2RSL	6203 2RSD	6203 VV
17	40	12	9.95	4.75	38000	19000	0.065	6203 ZZ	6203 ZZ	6203 ZZ	6203 ZZ
17	40	12	9.95	4.75	-	12000	0.065	6203 DU	6203 RSH	6203 RSR	6203 DU
17	40	12	9.95	4.75	38000	24000	0.065	6203 V	6203 RSL	6203 RSD	6203 V
17	40	12	9.95	4.75	38000	24000	0.065	6203 Z	6203 Z	6203 Z	6203 Z
17	40	16	9.56	4.75	-	12000	0.083	62203 DDU	62203 2RS1	62203 2RSR	62203 DDU
17	47	14	14.3	6.55	34000	22000	0.12	6303	6303	6303	6303
17	47	14	14.3	6.55	-	11000	0.12	6303 DDU	6303 2RSH	6303 2RSR	6303 DDU
17	47	14	14.3	6.55	34000	17000	0.12	6303 VV	6303 2RSL	6303 2RSD	6303 VV
17	47	14	14.3	6.55	34000	17000	0.12	6303 ZZ	6303 ZZ	6303 ZZ	6303 ZZ
17	47	14	14.3	6.55	-	11000	0.12	6303 DU	6303 RSH	6303 RSR	6303 DU
17	47	14	14.3	6.55	34000	22000	0.12	6303 V	6303 RSL	6303 RSD	6303 V
17	47	14	14.3	6.55	34000	22000	0.12	6303 Z	6303 Z	6303 Z	6303 Z
17	47	19	13.5	6.55	-	11000	0.15	62303 DDU	62303 2RS1	62303 2RSR	62303 DDU
17	62	17	22.9	10.8	28000	18000	0.27	6403	6403	6403	6403
20	32	7	4.03	2.32	45000	28000	0.018	61804	61804	61804	61804
20	32	7	4.03	2.32	-	13000	0.018	61804 DDU	61804 2RS1	61804 2RSR	61804 DDU
20	37	9	6.37	3.65	43000	26000	0.038	61904	61904	61904	61904
20	37	9	6.37	3.65	-	12000	0.038	61904 DDU	61904 2RS1	61904 2RSR	61904 DDU
20	42	8	7.28	4.05	38000	24000	0.05	16004	16004	16004	16004
20	42	9	7.93	4.5	38000	24000	0.051	98204 M	98204 Y	98204 M	98204 M
20	42	12	9.95	5	38000	24000	0.069	6004	6004	6004	6004
20	42	12	9.95	5	-	11000	0.069	6004 DDU	6004 2RSH	6004 2RSR	6004 DDU



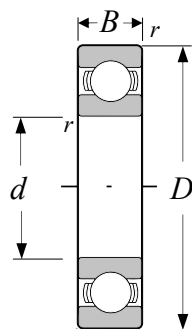
DEEP GROOVE BALL BEARINGS
Single Row

Table 6
Bore Diameter 20mm - 25mm

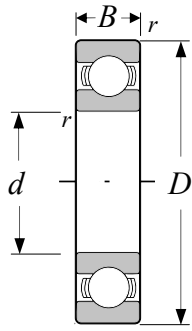
Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
20	42	12	9.95	5	38000	19000	0.069	6004 VV	6004 2RSL	6004 2RSD	6004 VV
20	42	12	9.95	5	38000	19000	0.069	6004 ZZ	6004 2Z	6004 2Z	6004 ZZ
20	42	12	9.95	5	-	11000	0.069	6004 DU	6004 RSH	6004 RSR	6004 DU
20	42	12	9.95	5	38000	24000	0.069	6004 V	6004 RSL	6004 RSD	6004 V
20	42	12	9.95	5	38000	24000	0.069	6004 Z	6004 Z	6004 Z	6004 Z
20	42	16	9.36	5	-	11000	0.086	63004 DDU	63004 2RS1	63004 2RSR	63004 DDU
20	47	14	13.5	6.55	32000	20000	0.11	6204	6204	6204	6204
20	47	14	13.5	6.55	-	10000	0.11	6204 DDU	6204 2RSH	6204 2RSR	6204 DDU
20	47	14	13.5	6.55	32000	17000	0.11	6204 VV	6204 2RSL	6204 2RSD	6204 VV
20	47	14	13.5	6.55	32000	17000	0.11	6204 ZZ	6204 2Z	6204 2Z	6204 ZZ
20	47	14	13.5	6.55	-	10000	0.11	6204 DU	6204 RSH	6204 RSR	6204 DU
20	47	14	13.5	6.55	32000	20000	0.11	6204 V	6204 RSL	6204 RSD	6204 V
20	47	14	13.5	6.55	32000	20000	0.11	6204 Z	6204 Z	6204 Z	6204 Z
20	47	18	12.7	6.55	-	10000	0.13	62204 DDU	62204 2RS1	62204 2RSR	62204 DDU
20	52	15	16.8	7.8	30000	19000	0.14	6304	6304	6304	6304
20	52	15	16.8	7.8	-	9500	0.14	6304 DDU	6304 2RSH	6304 2RSR	6304 DDU
20	52	15	16.8	7.8	30000	15000	0.14	6304 VV	6304 2RSL	6304 2RSD	6304 VV
20	52	15	16.8	7.8	30000	15000	0.14	6304 ZZ	6304 2Z	6304 2Z	6304 ZZ
20	52	15	16.8	7.8	-	9500	0.14	6304 DU	6304 RSH	6304 RSR	6304 DU
20	52	15	16.8	7.8	30000	19000	0.14	6304 V	6304 RSL	6304 RSD	6304 V
20	52	15	16.8	7.8	30000	19000	0.14	6304 Z	6304 Z	6304 Z	6304 Z
20	52	21	15.9	7.8	-	9500	0.2	62304 DDU	62304 2RS1	62304 2RSR	62304 DDU
20	72	19	30.7	15	24000	15000	0.4	6404	6404	6404	6404
22	50	14	14	7.65	30000	19000	0.12	62/22	62/22	62/22	62/22
22	50	14	14	7.65	-	9000	0.12	62/22 DDU	62/22 2RS1	62/22 2RSR	62/22 DDU
22	56	16	18.6	9.3	28000	18000	0.18	63/22	63/22	63/22	63/22
25	37	7	4.36	2.6	38000	24000	0.022	61805	61805	61805	61805
25	37	7	4.36	2.6	-	11000	0.022	61805 DDU	61805 2RS1	61805 2RSR	61805 DDU
25	42	9	7.02	4.3	36000	22000	0.045	61905	61905	61905	61905
25	42	9	7.02	4.3	-	10000	0.045	61905 DDU	61905 2RS1	61905 2RSR	61905 DDU
25	47	8	8.06	4.75	32000	20000	0.06	16005	16005	16005	16005
25	47	12	11.9	6.55	32000	20000	0.08	6005	6005	6005	6005
25	47	12	11.9	6.55	-	9500	0.08	6005 DDU	6005 2RSH	6005 2RSR	6005 DDU
25	47	12	11.9	6.55	32000	16000	0.08	6005 VV	6005 2RSL	6005 2RSD	6005 VV
25	47	12	11.9	6.55	32000	16000	0.08	6005 ZZ	6005 2Z	6005 2Z	6005 ZZ
25	47	12	11.9	6.55	-	9500	0.08	6005 DU	6005 RSH	6005 RSR	6005 DU
25	47	12	11.9	6.55	32000	20000	0.08	6005 V	6005 RSL	6005 RSD	6005 V
25	47	12	11.9	6.55	32000	20000	0.08	6005 Z	6005 Z	6005 Z	6005 Z
25	47	16	11.2	6.55	-	9500	0.1	63005 DDU	63005 2RS1	63005 2RSR	63005 DDU
25	52	9	10.6	6.55	28000	18000	0.078	98205	98205	98205	98205
25	52	15	14.8	7.8	28000	18000	0.13	6205	6205	6205	6205
25	52	15	14.8	7.8	-	8500	0.13	6205 DDU	6205 2RSH	6205 2RSR	6205 DDU
25	52	15	14.8	7.8	28000	14000	0.13	6205 VV	6205 2RSL	6205 2RSD	6205 VV
25	52	15	14.8	7.8	28000	14000	0.13	6205 ZZ	6205 2Z	6205 2Z	6205 ZZ
25	52	15	14.8	7.8	-	8500	0.13	6205 DU	6205 RSH	6205 RSR	6205 DU
25	52	15	14.8	7.8	28000	18000	0.13	6205 V	6205 RSL	6205 RSD	6205 V
25	52	15	14.8	7.8	28000	18000	0.13	6205 Z	6205 Z	6205 Z	6205 Z
25	52	18	14	7.8	-	8500	0.15	62205 DDU	62205 2RS1	62205 2RSR	62205 DDU
25	62	17	23.4	11.6	24000	16000	0.23	6305	6305	6305	6305
25	62	17	23.4	11.6	-	7500	0.23	6305 DDU	6305 2RS1	6305 2RSR	6305 DDU

DEEP GROOVE BALL BEARINGS Single Row

Table 7
Bore Diameter 25mm - 35mm



Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
25	62	17	23.4	11.6	24000	13000	0.23	6305 ZZ	6305 2Z	6305 2Z	6305 ZZ
25	62	17	23.4	11.6	-	7500	0.23	6305 DU	6305 RS1	6305 RSR	6305 DU
25	62	17	23.4	11.6	24000	16000	0.23	6305 V	6305 RZ	6305 RSD	6305 V
25	62	17	23.4	11.6	24000	16000	0.23	6305 Z	6305 Z	6305 Z	6305 Z
25	62	24	22.5	11.6	-	7500	0.32	62305 DDU	62305 2RS1	62305 2RSR	62305 DDU
25	80	21	35.8	19.3	20000	13000	0.53	6405	6405	6405	6405
28	58	16	16.8	9.5	26000	16000	0.18	62/28	62/28	62/28	62/28
28	68	18	25.1	13.7	22000	14000	0.29	63/28	63/28	63/28	63/28
30	42	7	4.49	2.9	32000	20000	0.027	61806	61806	61806	61806
30	42	7	4.49	2.9	-	9500	0.027	61806 DDU	61806 2RS1	61806 2RSR	61806 DDU
30	47	9	7.28	4.55	30000	19000	0.051	61906	61906	61906	61906
30	47	9	7.28	4.55	-	8500	0.051	61906 DDU	61906 2RS1	61906 2RSR	61906 DDU
30	55	9	11.9	7.35	28000	17000	0.085	16006	16006	16006	16006
30	55	13	13.8	8.3	28000	17000	0.12	6006	6006	6006	6006
30	55	13	13.8	8.3	-	8000	0.12	6006 DDU	6006 2RS1	6006 2RSR	6006 DDU
30	55	13	13.8	8.3	28000	14000	0.12	6006 ZZ	6006 2Z	6006 2Z	6006 ZZ
30	55	13	13.8	8.3	-	8000	0.12	6006 DU	6006 RS1	6006 RSR	6006 DU
30	55	13	13.8	8.3	28000	17000	0.12	6006 V	6006 RZ	6006 RSD	6006 V
30	55	13	13.8	8.3	28000	17000	0.12	6006 Z	6006 Z	6006 Z	6006 Z
30	55	19	13.3	8.3	-	8000	0.16	63006 DDU	63006 2RS1	63006 2RSR	63006 DDU
30	62	16	20.3	11.2	24000	15000	0.2	6206	6206	6206	6206
30	62	16	20.3	11.2	-	7500	0.2	6206 DDU	6206 2RS1	6206 2RSR	6206 DDU
30	62	16	20.3	11.2	24000	12000	0.2	6206 ZZ	6206 2Z	6206 2Z	6206 ZZ
30	62	16	20.3	11.2	-	7500	0.2	6206 DU	6206 RS1	6206 RSR	6206 DU
30	62	16	20.3	11.2	24000	15000	0.2	6206 V	6206 RZ	6206 RSD	6206 V
30	62	16	20.3	11.2	24000	15000	0.2	6206 Z	6206 Z	6206 Z	6206 Z
30	62	20	19.5	11.2	-	7500	0.24	62206 DDU	62206 2RS1	62206 2RSR	62206 DDU
30	72	19	29.6	16	20000	13000	0.35	6306	6306	6306	6306
30	72	19	29.6	16	-	6300	0.35	6306 DDU	6306 2RS1	6306 2RSR	6306 DDU
30	72	19	29.6	16	20000	11000	0.35	6306 ZZ	6306 2Z	6306 2Z	6306 ZZ
30	72	19	29.6	16	-	6300	0.35	6306 DU	6306 RS1	6306 RSR	6306 DU
30	72	19	29.6	16	20000	13000	0.35	6306 V	6306 RZ	6306 RSD	6306 V
30	72	19	29.6	16	20000	13000	0.35	6306 Z	6306 Z	6306 Z	6306 Z
30	72	27	28.1	16	-	6300	0.48	62306 DDU	62306 2RS1	62306 2RSR	62306 DDU
30	90	23	43.6	23.6	18000	11000	0.74	6406	6406	6406	6406
35	47	7	4.75	3.2	28000	18000	0.03	61807	61807	61807	61807
35	47	7	4.75	3.2	-	8000	0.03	61807 DDU	61807 2RS1	61807 2RSR	61807 DDU
35	55	10	9.56	6.8	26000	16000	0.08	61907	61907	61907	61907
35	55	10	9.56	6.8	-	7500	0.08	61907 DDU	61907 2RS1	61907 2RSR	61907 DDU
35	62	9	13	8.15	24000	15000	0.11	16007	16007	16007	16007
35	62	14	16.8	10.2	24000	15000	0.16	6007	6007	6007	6007
35	62	14	16.8	10.2	-	7000	0.16	6007 DDU	6007 2RS1	6007 2RSR	6007 DDU
35	62	14	16.8	10.2	24000	12000	0.16	6007 ZZ	6007 2Z	6007 2Z	6007 ZZ
35	62	14	16.8	10.2	-	7000	0.16	6007 DU	6007 RS1	6007 RSR	6007 DU
35	62	14	16.8	10.2	24000	15000	0.16	6007 V	6007 RZ	6007 RSD	6007 V
35	62	14	16.8	10.2	24000	15000	0.16	6007 Z	6007 Z	6007 Z	6007 Z
35	62	20	15.9	10.2	-	7000	0.21	63007 DDU	63007 2RS1	63007 2RSR	63007 DDU
35	72	17	27	15.3	20000	13000	0.29	6207	6207	6207	6207
35	72	17	27	15.3	-	6300	0.29	6207 DDU	6207 2RS1	6207 2RSR	6207 DDU
35	72	17	27	15.3	20000	10000	0.29	6207 ZZ	6207 2Z	6207 2Z	6207 ZZ



DEEP GROOVE BALL BEARINGS

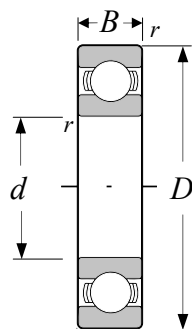
Single Row

Table 8
Bore Diameter 35mm - 45mm

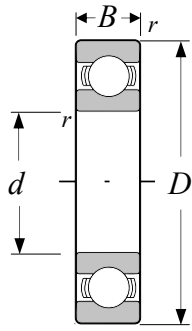
Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
35	72	17	27	15.3	-	6300	0.29	6207 DU	6207 RS1	6207 RSR	6207 DU
35	72	17	27	15.3	20000	13000	0.29	6207 Z	6207 Z	6207 Z	6207 Z
35	72	23	25.5	15.3	-	6300	0.37	62207 DDU	62207 2RS1	62207 2RSR	62207 DDU
35	80	21	35.1	19	19000	12000	0.46	6307	6307	6307	6307
35	80	21	35.1	19	-	6000	0.46	6307 DDU	6307 2RS1	6307 2RSR	6307 DDU
35	80	21	35.1	19	19000	9500	0.46	6307 ZZ	6307 2Z	6307 2Z	6307 ZZ
35	80	21	35.1	19	-	6000	0.46	6307 DU	6307 RS1	6307 RSR	6307 DU
35	80	21	35.1	19	19000	12000	0.46	6307 Z	6307 Z	6307 Z	6307 Z
35	80	31	33.2	19	-	6000	0.66	62307 DDU	62307 2RS1	62307 2RSR	62307 DDU
35	100	25	55.3	31	16000	10000	0.95	6407	6407	6407	6407
40	52	7	4.94	3.45	26000	16000	0.034	61808	61808	61808	61808
40	52	7	4.94	3.45	-	7500	0.034	61808 DDU	61808 2RS1	61808 2RSR	61808 DDU
40	62	12	13.8	10	24000	14000	0.12	61908	61908	61908	61908
40	62	12	13.8	10	-	6700	0.12	61908 DDU	61908 2RS1	61908 2RSR	61908 DDU
40	68	9	13.8	9.15	22000	14000	0.13	16008	16008	16008	16008
40	68	15	17.8	11.6	22000	14000	0.19	6008	6008	6008	6008
40	68	15	17.8	11.6	-	6300	0.19	6008 DDU	6008 2RS1	6008 2RSR	6008 DDU
40	68	15	17.8	11.6	22000	11000	0.19	6008 ZZ	6008 2Z	6008 2Z	6008 ZZ
40	68	15	17.8	11.6	-	6300	0.19	6008 DU	6008 RS1	6008 RSR	6008 DU
40	68	15	17.8	11.6	22000	14000	0.19	6008 V	6008 RZ	6008 RSD	6008 V
40	68	15	17.8	11.6	22000	14000	0.19	6008 Z	6008 Z	6008 Z	6008 Z
40	68	21	16.8	11.6	-	6300	0.26	63008 DDU	63008 2RS1	63008 2RSR	63008 DDU
40	80	18	32.5	19	18000	11000	0.37	6208	6208	6208	6208
40	80	18	32.5	19	-	5600	0.37	6208 DDU	6208 2RS1	6208 2RSR	6208 DDU
40	80	18	32.5	19	18000	9000	0.37	6208 ZZ	6208 2Z	6208 2Z	6208 ZZ
40	80	18	32.5	19	-	5600	0.37	6208 DU	6208 RS1	6208 RSR	6208 DU
40	80	18	32.5	19	18000	11000	0.37	6208 V	6208 RZ	6208 RSD	6208 V
40	80	18	32.5	19	18000	11000	0.37	6208 Z	6208 Z	6208 Z	6208 Z
40	80	23	30.7	19	-	5600	0.44	62208 DDU	62208 2RS1	62208 2RSR	62208 DDU
40	90	23	42.3	24	17000	11000	0.63	6308	6308	6308	6308
40	90	23	42.3	24	-	5000	0.63	6308 DDU	6308 2RS1	6308 2RSR	6308 DDU
40	90	23	42.3	24	17000	8500	0.63	6308 ZZ	6308 2Z	6308 2Z	6308 ZZ
40	90	23	42.3	24	-	5000	0.63	6308 DU	6308 RS1	6308 RSR	6308 DU
40	90	23	42.3	24	17000	11000	0.63	6308 V	6308 RZ	6308 RSD	6308 V
40	90	23	42.3	24	17000	11000	0.63	6308 Z	6308 Z	6308 Z	6308 Z
40	90	33	41	24	-	5000	0.89	62308 DDU	62308 2RS1	62308 2RSR	62308 DDU
40	110	27	63.7	36.5	14000	9000	1.25	6408	6408	6408	6408
45	58	7	6.63	6.1	22000	14000	0.04	61809	61809	61809	61809
45	58	7	6.63	6.1	-	6700	0.04	61809 DDU	61809 2RS1	61809 2RSR	61809 DDU
45	68	12	14	10.8	20000	13000	0.14	61909	61909	61909	61909
45	68	12	14	10.8	-	6000	0.14	61909 DDU	61909 2RS1	61909 2RSR	61909 DDU
45	75	10	16.5	10.8	20000	12000	0.17	16009	16009	16009	16009
45	75	16	22.1	14.6	20000	12000	0.25	6009	6009	6009	6009
45	75	16	22.1	14.6	-	5600	0.25	6009 DDU	6009 2RS1	6009 2RSR	6009 DDU
45	75	16	22.1	14.6	20000	10000	0.25	6009 ZZ	6009 2Z	6009 2Z	6009 ZZ
45	75	16	22.1	14.6	-	5600	0.25	6009 DU	6009 RS1	6009 RSR	6009 DU
45	75	16	22.1	14.6	20000	12000	0.25	6009 Z	6009 Z	6009 Z	6009 Z
45	75	23	20.8	14.6	-	5600	0.34	63009 DDU	63009 2RS1	63009 2RSR	63009 DDU
45	85	19	35.1	21.6	17000	11000	0.41	6209	6209	6209	6209
45	85	19	35.1	21.6	-	5000	0.41	6209 DDU	6209 2RS1	6209 2RSR	6209 DDU

DEEP GROOVE BALL BEARINGS Single Row

Table 9
Bore Diameter 45mm - 55mm



Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
45	85	19	35.1	21.6	17000	8500	0.41	6209 ZZ	6209 2Z	6209 2Z	6209 ZZ
45	85	19	35.1	21.6	-	5000	0.41	6209 DU	6209 RS1	6209 RSR	6209 DU
45	85	19	35.1	21.6	17000	11000	0.41	6209 Z	6209 Z	6209 Z	6209 Z
45	85	23	33.2	21.6	-	5000	0.48	62209 DDU	62209 2RS1	62209 2RSR	62209 DDU
45	100	25	55.3	31.5	15000	9500	0.83	6309	6309	6309	6309
45	100	25	55.3	31.5	-	4500	0.83	6309 DDU	6309 2RS1	6309 2RSR	6309 DDU
45	100	25	55.3	31.5	15000	7500	0.83	6309 ZZ	6309 2Z	6309 2Z	6309 ZZ
45	100	25	55.3	31.5	-	4500	0.83	6309 DU	6309 RS1	6309 RSR	6309 DU
45	100	25	55.3	31.5	15000	9500	0.83	6309 Z	6309 Z	6309 Z	6309 Z
45	100	36	52.7	31.5	-	4500	1.15	62309 DDU	62309 2RS1	62309 2RSR	62309 DDU
45	120	29	76.1	45	13000	8500	1.55	6409	6409	6409	6409
50	65	7	6.76	6.8	20000	13000	0.052	61810	61810	61810	61810
50	65	7	6.76	6.8	-	6000	0.052	61810 DDU	61810 2RS1	61810 2RSR	61810 DDU
50	72	12	14.6	11.8	19000	12000	0.14	61910	61910	61910	61910
50	72	12	14.6	11.8	-	5600	0.14	61910 DDU	61910 2RS1	61910 2RSR	61910 DDU
50	80	10	16.8	11.4	18000	11000	0.18	16010	16010	16010	16010
50	80	16	22.9	16	18000	11000	0.26	6010	6010	6010	6010
50	80	16	22.9	16	-	5000	0.26	6010 DDU	6010 2RS1	6010 2RSR	6010 DDU
50	80	16	22.9	16	18000	9000	0.26	6010 ZZ	6010 2Z	6010 2Z	6010 ZZ
50	80	16	22.9	16	-	5000	0.26	6010 DU	6010 RS1	6010 RSR	6010 DU
50	80	16	22.9	16	18000	11000	0.26	6010 V	6010 RZ	6010 RSD	6010 V
50	80	16	22.9	16	18000	11000	0.26	6010 Z	6010 Z	6010 Z	6010 Z
50	80	23	21.6	16	-	5000	0.37	63010 DDU	63010 2RS1	63010 2RSR	63010 DDU
50	90	20	37.1	23.2	15000	10000	0.46	6210	6210	6210	6210
50	90	20	37.1	23.2	-	4800	0.46	6210 DDU	6210 2RS1	6210 2RSR	6210 DDU
50	90	20	37.1	23.2	15000	8000	0.46	6210 ZZ	6210 2Z	6210 2Z	6210 ZZ
50	90	20	37.1	23.2	-	4800	0.46	6210 DU	6210 RS1	6210 RSR	6210 DU
50	90	20	37.1	23.2	15000	10000	0.46	6210 V	6210 RZ	6210 RSD	6210 V
50	90	20	37.1	23.2	15000	10000	0.46	6210 Z	6210 Z	6210 Z	6210 Z
50	90	23	35.1	23.2	-	4800	0.52	62210 DDU	62210 2RS1	62210 2RSR	62210 DDU
50	110	27	65	38	13000	8500	1.05	6310	6310	6310	6310
50	110	27	65	38	-	4300	1.05	6310 DDU	6310 2RS1	6310 2RSR	6310 DDU
50	110	27	65	38	13000	6700	1.05	6310 ZZ	6310 2Z	6310 2Z	6310 ZZ
50	110	27	65	38	-	4300	1.05	6310 DU	6310 RS1	6310 RSR	6310 DU
50	110	27	65	38	13000	8500	1.05	6310 Z	6310 Z	6310 Z	6310 Z
50	110	40	61.8	38	-	4300	1.55	62310 DDU	62310 2RS1	62310 2RSR	62310 DDU
50	130	31	87.1	52	12000	7500	1.9	6410	6410	6410	6410
55	72	9	9.04	8.8	19000	12000	0.083	61811	61811	61811	61811
55	72	9	9.04	8.8	-	5300	0.083	61811 DDU	61811 2RS1	61811 2RSR	61811 DDU
55	80	13	16.5	14	17000	11000	0.19	61911	61911	61911	61911
55	80	13	16.5	14	-	5000	0.19	61911 DDU	61911 2RS1	61911 2RSR	61911 DDU
55	90	11	20.3	14	16000	10000	0.26	16011	16011	16011	16011
55	90	18	29.6	21.2	16000	10000	0.39	6011	6011	6011	6011
55	90	18	29.6	21.2	-	4500	0.39	6011 DDU	6011 2RS1	6011 2RSR	6011 DDU
55	90	18	29.6	21.2	16000	8000	0.39	6011 ZZ	6011 2Z	6011 2Z	6011 ZZ
55	90	18	29.6	21.2	-	4500	0.39	6011 DU	6011 RS1	6011 RSR	6011 DU
55	90	18	29.6	21.2	16000	10000	0.39	6011 Z	6011 Z	6011 Z	6011 Z
55	100	21	46.2	29	14000	9000	0.61	6211	6211	6211	6211
55	100	21	46.2	29	-	4300	0.61	6211 DDU	6211 2RS1	6211 2RSR	6211 DDU
55	100	21	46.2	29	14000	7000	0.61	6211 ZZ	6211 2Z	6211 2Z	6211 ZZ



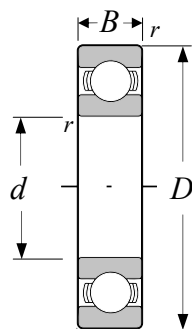
DEEP GROOVE BALL BEARINGS
Single Row

Table 10
Bore Diameter 55mm - 65mm

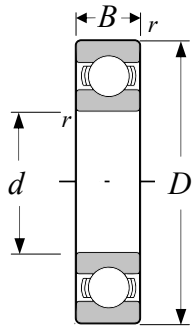
Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
55	100	21	46.2	29	-	4300	0.61	6211 DU	6211 RS1	6211 RSR	6211 DU
55	100	21	46.2	29	14000	9000	0.61	6211 Z	6211 Z	6211 Z	6211 Z
55	100	25	43.6	29	-	4300	0.7	62211 DDU	62211 2RS1	62211 2RSR	62211 DDU
55	120	29	74.1	45	12000	8000	1.35	6311	6311	6311	6311
55	120	29	74.1	45	-	3800	1.35	6311 DDU	6311 2RS1	6311 2RSR	6311 DDU
55	120	29	74.1	45	12000	6300	1.35	6311 ZZ	6311 2Z	6311 2Z	6311 ZZ
55	120	29	74.1	45	-	3800	1.35	6311 DU	6311 RS1	6311 RSR	6311 DU
55	120	29	74.1	45	12000	8000	1.35	6311 Z	6311 Z	6311 Z	6311 Z
55	120	43	71.5	45	-	3800	1.95	62311 DDU	62311 2RS1	62311 2RSR	62311 DDU
55	140	33	99.5	62	11000	7000	2.3	6411	6411	6411	6411
60	78	10	11.9	11.4	17000	11000	0.11	61812	61812	61812	61812
60	78	10	11.9	11.4	-	4800	0.11	61812 DDU	61812 2RS1	61812 2RSR	61812 DDU
60	85	13	16.5	14.3	16000	10000	0.2	61912	61912	61912	61912
60	85	13	16.5	14.3	-	4500	0.2	61912 DDU	61912 2RS1	61912 2RSR	61912 DDU
60	95	11	20.8	15	15000	9500	0.28	16012	16012	16012	16012
60	95	18	30.7	23.2	15000	9500	0.42	6012	6012	6012	6012
60	95	18	30.7	23.2	-	4300	0.42	6012 DDU	6012 2RS1	6012 2RSR	6012 DDU
60	95	18	30.7	23.2	15000	7500	0.42	6012 ZZ	6012 2Z	6012 2Z	6012 ZZ
60	95	18	30.7	23.2	-	4300	0.42	6012 DU	6012 RS1	6012 RSR	6012 DU
60	95	18	30.7	23.2	15000	9500	0.42	6012 V	6012 RZ	6012 RSD	6012 V
60	95	18	30.7	23.2	15000	9500	0.42	6012 Z	6012 Z	6012 Z	6012 Z
60	110	22	55.3	36	13000	8000	0.78	6212	6212	6212	6212
60	110	22	55.3	36	-	4000	0.78	6212 DDU	6212 2RS1	6212 2RSR	6212 DDU
60	110	22	55.3	36	13000	6300	0.78	6212 ZZ	6212 2Z	6212 2Z	6212 ZZ
60	110	22	55.3	36	-	4000	0.78	6212 DU	6212 RS1	6212 RSR	6212 DU
60	110	22	55.3	36	13000	8000	0.78	6212 Z	6212 Z	6212 Z	6212 Z
60	110	28	52.7	36	-	4000	0.97	62212 DDU	62212 2RS1	62212 2RSR	62212 DDU
60	130	31	85.2	52	11000	7000	1.7	6312	6312	6312	6312
60	130	31	85.2	52	-	3400	1.7	6312 DDU	6312 2RS1	6312 2RSR	6312 DDU
60	130	31	85.2	52	11000	5600	1.7	6312 ZZ	6312 2Z	6312 2Z	6312 ZZ
60	130	31	85.2	52	-	3400	1.7	6312 DU	6312 RS1	6312 RSR	6312 DU
60	130	31	85.2	52	11000	7000	1.7	6312 Z	6312 Z	6312 Z	6312 Z
60	130	46	81.9	52	-	3400	2.5	62312 DDU	62312 2RS1	62312 2RSR	62312 DDU
60	150	35	108	69.5	10000	6300	2.75	6412	6412	6412	6412
65	85	10	12.4	12.7	16000	10000	0.13	61813	61813	61813	61813
65	85	10	12.4	12.7	-	4500	0.13	61813 DDU	61813 2RS1	61813 2RSR	61813 DDU
65	90	13	17.4	16	15000	9500	0.22	61913	61913	61913	61913
65	90	13	17.4	16	-	4300	0.22	61913 DDU	61913 2RS1	61913 2RSR	61913 DDU
65	100	11	22.5	16.6	14000	9000	0.3	16013	16013	16013	16013
65	100	18	31.9	25	14000	9000	0.44	6013	6013	6013	6013
65	100	18	31.9	25	-	4000	0.44	6013 DDU	6013 2RS1	6013 2RSR	6013 DDU
65	100	18	31.9	25	14000	7000	0.44	6013 ZZ	6013 2Z	6013 2Z	6013 ZZ
65	100	18	31.9	25	-	4000	0.44	6013 DU	6013 RS1	6013 RSR	6013 DU
65	100	18	31.9	25	14000	9000	0.44	6013 Z	6013 Z	6013 Z	6013 Z
65	120	23	58.5	40.5	12000	7500	0.99	6213	6213	6213	6213
65	120	23	58.5	40.5	-	3600	0.99	6213 DDU	6213 2RS1	6213 2RSR	6213 DDU
65	120	23	58.5	40.5	12000	6000	0.99	6213 ZZ	6213 2Z	6213 2Z	6213 ZZ
65	120	23	58.5	40.5	-	3600	0.99	6213 DU	6213 RS1	6213 RSR	6213 DU
65	120	23	58.5	40.5	12000	7500	0.99	6213 Z	6213 Z	6213 Z	6213 Z
65	120	31	55.9	40.5	-	3600	1.25	62213 DDU	62213 2RS1	62213 2RSR	62213 DDU

DEEP GROOVE BALL BEARINGS Single Row

Table 11
Bore Diameter 65mm - 75mm



Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	C	C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
65	140	33	97.5	60	10000	6700	2.1	6313	6313	6313	6313
65	140	33	97.5	60	-	3200	2.1	6313 DDU	6313 2RS1	6313 2RSR	6313 DDU
65	140	33	97.5	60	10000	5300	2.1	6313 ZZ	6313 2Z	6313 2Z	6313 ZZ
65	140	33	97.5	60	-	3200	2.1	6313 DU	6313 RS1	6313 RSR	6313 DU
65	140	33	97.5	60	10000	6700	2.1	6313 Z	6313 Z	6313 Z	6313 Z
65	140	48	92.3	60	-	3200	3	62313 DDU	62313 2RS1	62313 2RSR	62313 DDU
65	160	37	119	78	9500	6000	3.3	6413	6413	6413	6413
70	90	10	12.4	13.2	15000	9000	0.14	61814	61814	61814	61814
70	90	10	12.4	13.2	-	4300	0.14	61814 DDU	61814 2RS1	61814 2RSR	61814 DDU
70	100	16	23.8	21.2	14000	8500	0.35	61914	61914	61914	61914
70	100	16	23.8	21.2	-	4000	0.35	61914 DDU	61914 2RS1	61914 2RSR	61914 DDU
70	110	13	29.1	25	13000	8000	0.43	16014	16014	16014	16014
70	110	20	39.7	31	13000	8000	0.6	6014	6014	6014	6014
70	110	20	39.7	31	-	3600	0.6	6014 DDU	6014 2RS1	6014 2RSR	6014 DDU
70	110	20	39.7	31	13000	6300	0.6	6014 ZZ	6014 2Z	6014 2Z	6014 ZZ
70	110	20	39.7	31	-	3600	0.6	6014 DU	6014 RS1	6014 RSR	6014 DU
70	110	20	39.7	31	13000	8000	0.6	6014 Z	6014 Z	6014 Z	6014 Z
70	125	24	63.7	45	11000	7000	1.05	6214	6214	6214	6214
70	125	24	63.7	45	-	3400	1.1	6214 DDU	6214 2RS1	6214 2RSR	6214 DDU
70	125	24	63.7	45	11000	5600	1.1	6214 ZZ	6214 2Z	6214 2Z	6214 ZZ
70	125	24	63.7	45	-	3400	1.1	6214 DU	6214 RS1	6214 RSR	6214 DU
70	125	24	63.7	45	11000	7000	1.1	6214 Z	6214 Z	6214 Z	6214 Z
70	125	31	60.5	45	-	3400	1.3	62214 DDU	62214 2RS1	62214 2RSR	62214 DDU
70	150	35	111	68	9500	6300	2.5	6314	6314	6314	6314
70	150	35	111	68	-	3000	2.5	6314 DDU	6314 2RS1	6314 2RSR	6314 DDU
70	150	35	111	68	9500	5000	2.5	6314 ZZ	6314 2Z	6314 2Z	6314 ZZ
70	150	35	111	68	-	3000	2.5	6314 DU	6314 RS1	6314 RSR	6314 DU
70	150	35	111	68	9500	6300	2.5	6314 Z	6314 Z	6314 Z	6314 Z
70	150	51	104	68	-	3000	3.55	62314 DDU	62314 2RS1	62314 2RSR	62314 DDU
70	180	42	143	104	8500	5300	4.85	6414	6414	6414	6414
75	95	10	12.7	14.3	14000	8500	0.15	61815	61815	61815	61815
75	95	10	12.7	14.3	-	4000	0.15	61815 DDU	61815 2RS1	61815 2RSR	61815 DDU
75	105	16	24.2	19.3	13000	8000	0.37	61915	61915	61915	61915
75	105	16	24.2	19.3	-	3600	0.37	61915 DDU	61915 2RS1	61915 2RSR	61915 DDU
75	110	12	28.6	27	13000	8000	0.38	16115	16115	16115	16115
75	115	13	30.2	27	12000	7500	0.46	16015	16015	16015	16015
75	115	20	41.6	33.5	12000	7500	0.64	6015	6015	6015	6015
75	115	20	41.6	33.5	-	3400	0.64	6015 DDU	6015 2RS1	6015 2RSR	6015 DDU
75	115	20	41.6	33.5	12000	6000	0.64	6015 ZZ	6015 2Z	6015 2Z	6015 ZZ
75	115	20	41.6	33.5	-	3400	0.64	6015 DU	6015 RS1	6015 RSR	6015 DU
75	115	20	41.6	33.5	12000	7500	0.64	6015 V	6015 RZ	6015 RSD	6015 V
75	115	20	41.6	33.5	12000	7500	0.64	6015 Z	6015 Z	6015 Z	6015 Z
75	130	25	68.9	49	10000	6700	1.2	6215	6215	6215	6215
75	130	25	68.9	49	-	3200	1.2	6215 DDU	6215 2RS1	6215 2RSR	6215 DDU
75	130	25	68.9	49	10000	5300	1.2	6215 ZZ	6215 2Z	6215 2Z	6215 ZZ
75	130	25	68.9	49	-	3200	1.2	6215 DU	6215 RS1	6215 RSR	6215 DU
75	130	25	68.9	49	10000	6700	1.2	6215 Z	6215 Z	6215 Z	6215 Z
75	160	37	119	76.5	9000	5600	3	6315	6315	6315	6315
75	160	37	119	76.5	-	2800	3	6315 DDU	6315 2RS1	6315 2RSR	6315 DDU
75	160	37	119	76.5	9000	4500	3	6315 ZZ	6315 2Z	6315 2Z	6315 ZZ



DEEP GROOVE BALL BEARINGS

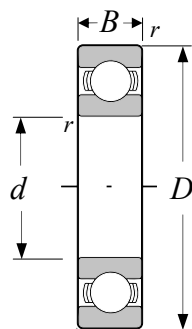
Single Row

Table 12
Bore Diameter 75mm - 90mm

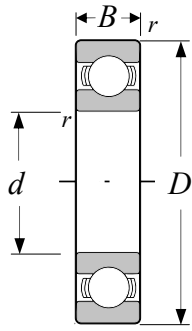
Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
75	160	37	119	76.5	-	2800	3	6315 DU	6315 RS1	6315 RSR	6315 DU
75	160	37	119	76.5	9000	5600	3	6315 Z	6315 Z	6315 Z	6315 Z
75	190	45	153	114	8000	5000	6.8	6415	6415	6415	6415
80	100	10	13	15	13000	8000	0.15	61816	61816	61816	61816
80	100	10	13	15	-	3600	0.15	61816 DDU	61816 2RS1	61816 2RSR	61816 DDU
80	110	16	25.1	20.4	12000	7500	0.4	61916	61916	61916	61916
80	110	16	25.1	20.4	-	3400	0.4	61916 DDU	61916 2RS1	61916 2RSR	61916 DDU
80	125	14	35.1	31.5	11000	7000	0.6	16016	16016	16016	16016
80	125	22	49.4	40	11000	7000	0.85	6016	6016	6016	6016
80	125	22	49.4	40	-	3200	0.85	6016 DDU	6016 2RS1	6016 2RSR	6016 DDU
80	125	22	49.4	40	11000	5600	0.85	6016 ZZ	6016 ZZ	6016 ZZ	6016 ZZ
80	125	22	49.4	40	-	3200	0.85	6016 DU	6016 RS1	6016 RSR	6016 DU
80	125	22	49.4	40	11000	7000	0.85	6016 Z	6016 Z	6016 Z	6016 Z
80	140	26	72.8	55	9500	6000	1.4	6216	6216	6216	6216
80	140	26	72.8	55	-	3000	1.4	6216 DDU	6216 2RS1	6216 2RSR	6216 DDU
80	140	26	72.8	55	9500	4800	1.4	6216 ZZ	6216 ZZ	6216 ZZ	6216 ZZ
80	140	26	72.8	55	-	3000	1.4	6216 DU	6216 RS1	6216 RSR	6216 DU
80	140	26	72.8	55	9500	6000	1.4	6216 Z	6216 Z	6216 Z	6216 Z
80	170	39	130	86.5	8500	5300	3.6	6316	6316	6316	6316
80	170	39	130	86.5	-	2600	3.6	6316 DDU	6316 2RS1	6316 2RSR	6316 DDU
80	170	39	130	86.5	8500	4300	3.6	6316 ZZ	6316 ZZ	6316 ZZ	6316 ZZ
80	170	39	130	86.5	-	2600	3.6	6316 DU	6316 RS1	6316 RSR	6316 DU
80	170	39	130	86.5	8500	5300	3.6	6316 Z	6316 Z	6316 Z	6316 Z
80	200	48	163	125	7500	4800	8	6416	6416	6416	6416
85	110	13	19.5	20.8	12000	7500	0.27	61817	61817	61817	61817
85	110	13	19.5	20.8	-	3400	0.27	61817 DDU	61817 2RS1	61817 2RSR	61817 DDU
85	120	18	31.9	30	11000	7000	0.55	61917	61917	61917	61917
85	130	14	35.8	33.5	11000	6700	0.63	16017	16017	16017	16017
85	130	22	52	43	11000	6700	0.89	6017	6017	6017	6017
85	130	22	52	43	-	3000	0.89	6017 DDU	6017 2RS1	6017 2RSR	6017 DDU
85	130	22	52	43	11000	5300	0.89	6017 ZZ	6017 ZZ	6017 ZZ	6017 ZZ
85	130	22	52	43	-	3000	0.89	6017 DU	6017 RS1	6017 RSR	6017 DU
85	130	22	52	43	11000	6700	0.89	6017 Z	6017 Z	6017 Z	6017 Z
85	150	28	87.1	64	9000	5600	1.8	6217	6217	6217	6217
85	150	28	87.1	64	-	2800	1.8	6217 DDU	6217 2RS1	6217 2RSR	6217 DDU
85	150	28	87.1	64	9000	4500	1.8	6217 ZZ	6217 ZZ	6217 ZZ	6217 ZZ
85	150	28	87.1	64	-	2800	1.8	6217 DU	6217 RS1	6217 RSR	6217 DU
85	150	28	87.1	64	9000	5600	1.8	6217 Z	6217 Z	6217 Z	6217 Z
85	180	41	140	96.5	8000	5000	4.25	6317	6317	6317	6317
85	180	41	140	96.5	-	2400	4.25	6317 DDU	6317 2RS1	6317 2RSR	6317 DDU
85	180	41	140	96.5	8000	4000	4.25	6317 ZZ	6317 ZZ	6317 ZZ	6317 ZZ
85	180	41	140	96.5	-	2400	4.25	6317 DU	6317 RS1	6317 RSR	6317 DU
85	180	41	140	96.5	8000	5000	4.25	6317 Z	6317 Z	6317 Z	6317 Z
85	210	52	174	137	7000	4500	9.5	6417	6417	6417	6417
90	115	13	19.5	22	11000	7000	0.28	61818	61818	61818	61818
90	115	13	19.5	22	-	3200	0.28	61818 DDU	61818 2RS1	61818 2RSR	61818 DDU
90	125	18	33.2	31.5	11000	6700	0.59	61918	61918	61918	61918
90	140	16	43.6	39	10000	6300	0.85	16018	16018	16018	16018
90	140	24	60.5	50	10000	6300	1.15	6018	6018	6018	6018
90	140	24	60.5	50	-	2800	1.15	6018 DDU	6018 2RS1	6018 2RSR	6018 DDU

DEEP GROOVE BALL BEARINGS Single Row

Table 13
Bore Diameter 90mm - 100mm



Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
90	140	24	60.5	50	10000	5000	1.15	6018 ZZ	6018 2Z	6018 2Z	6018 ZZ
90	140	24	60.5	50	-	2800	1.15	6018 DU	6018 RS1	6018 RSR	6018 DU
90	140	24	60.5	50	10000	6300	1.15	6018 Z	6018 Z	6018 Z	6018 Z
90	160	30	101	73.5	8500	5300	2.15	6218	6218	6218	6218
90	160	30	101	73.5	-	2600	2.15	6218 DDU	6218 2RS1	6218 2RSR	6218 DDU
90	160	30	101	73.5	8500	4300	2.15	6218 ZZ	6218 2Z	6218 2Z	6218 ZZ
90	160	30	101	73.5	-	2600	2.15	6218 DU	6218 RS1	6218 RSR	6218 DU
90	160	30	101	73.5	8500	5300	2.15	6218 Z	6218 Z	6218 Z	6218 Z
90	190	43	151	108	7500	4800	4.9	6318	6318	6318	6318
90	190	43	151	108	-	2400	4.9	6318 DDU	6318 2RS1	6318 2RSR	6318 DDU
90	190	43	151	108	7500	3800	4.9	6318 ZZ	6318 2Z	6318 2Z	6318 ZZ
90	190	43	151	108	-	2400	4.9	6318 DU	6318 RS1	6318 RSR	6318 DU
90	190	43	151	108	7500	4800	4.9	6318 Z	6318 Z	6318 Z	6318 Z
90	225	54	186	150	6700	4300	11.5	6418	6418	6418	6418
95	120	13	19.9	22.8	11000	6700	0.3	61819	61819	61819	61819
95	120	13	19.9	22.8	-	3000	0.3	61819 DDU	61819 2RS1	61819 2RSR	61819 DDU
95	130	18	33.8	33.5	10000	6300	0.61	61919	61919	61919	61919
95	130	18	33.8	33.5	-	3000	0.61	61919 DDU	61919 2RS1	61919 2RSR	61919 DDU
95	145	16	44.8	41.5	9500	6000	0.89	16019	16019	16019	16019
95	145	24	63.7	54	9500	6000	1.2	6019	6019	6019	6019
95	145	24	63.7	54	-	2800	1.2	6019 DDU	6019 2RS1	6019 2RSR	6019 DDU
95	145	24	63.7	54	9500	4800	1.2	6019 ZZ	6019 2Z	6019 2Z	6019 ZZ
95	145	24	63.7	54	-	2800	1.2	6019 DU	6019 RS1	6019 RSR	6019 DU
95	145	24	63.7	54	9500	6000	1.2	6019 Z	6019 Z	6019 Z	6019 Z
95	170	32	114	81.5	8000	5000	2.6	6219	6219	6219	6219
95	170	32	114	81.5	-	2400	2.6	6219 DDU	6219 2RS1	6219 2RSR	6219 DDU
95	170	32	114	81.5	8000	4000	2.6	6219 ZZ	6219 2Z	6219 2Z	6219 ZZ
95	170	32	114	81.5	-	2400	2.6	6219 DU	6219 RS1	6219 RSR	6219 DU
95	170	32	114	81.5	8000	5000	2.6	6219 Z	6219 Z	6219 Z	6219 Z
95	200	45	159	118	7000	4500	5.65	6319	6319	6319	6319
95	200	45	159	118	-	2200	5.65	6319 DDU	6319 2RS1	6319 2RSR	6319 DDU
95	200	45	159	118	7000	3600	5.65	6319 ZZ	6319 2Z	6319 2Z	6319 ZZ
95	200	45	159	118	-	2200	5.65	6319 DU	6319 RS1	6319 RSR	6319 DU
95	200	45	159	118	7000	4500	5.65	6319 Z	6319 Z	6319 Z	6319 Z
100	125	13	19.9	24	10000	6300	0.31	61820	61820	61820	61820
100	125	13	19.9	24	-	3000	0.31	61820 DDU	61820 2RS1	61820 2RSR	61820 DDU
100	140	20	42.3	41	9500	6000	0.83	61920	61920	61920	61920
100	150	16	46.2	44	9500	5600	0.91	16020	16020	16020	16020
100	150	24	63.7	54	9500	5600	1.25	6020	6020	6020	6020
100	150	24	63.7	54	-	2600	1.25	6020 DDU	6020 2RS1	6020 2RSR	6020 DDU
100	150	24	63.7	54	9500	4500	1.25	6020 ZZ	6020 2Z	6020 2Z	6020 ZZ
100	150	24	63.7	54	-	2600	1.25	6020 DU	6020 RS1	6020 RSR	6020 DU
100	150	24	63.7	54	9500	5600	1.25	6020 Z	6020 Z	6020 Z	6020 Z
100	180	34	127	93	7500	4800	3.15	6220	6220	6220	6220
100	180	34	127	93	-	2400	3.15	6220 DDU	6220 2RS1	6220 2RSR	6220 DDU
100	180	34	127	93	7500	3800	3.15	6220 ZZ	6220 2Z	6220 2Z	6220 ZZ
100	180	34	127	93	-	2400	3.15	6220 DU	6220 RS1	6220 RSR	6220 DU
100	180	34	127	93	7500	4800	3.15	6220 Z	6220 Z	6220 Z	6220 Z
100	215	47	174	140	6700	4300	7	6320	6320	6320	6320
100	215	47	174	140	6700	3400	7	6320 ZZ	6320 2Z	6320 2Z	6320 ZZ



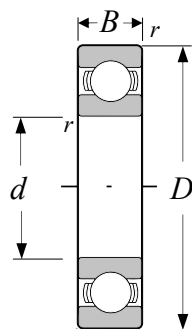
DEEP GROOVE BALL BEARINGS
Single Row

Table 14
Bore Diameter 100mm - 130mm

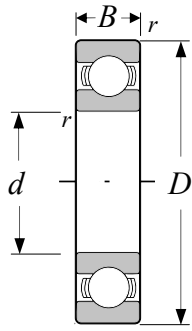
Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
100	215	47	174	140	6700	4300	7	6320 Z	6320 Z	6320 Z	6320 Z
105	130	13	20.8	19.6	10000	6300	0.32	61821	61821	61821	61821
105	130	13	20.8	19.6	-	2800	0.32	61821 DDU	61821 2RS1	61821 2RSR	61821 DDU
105	145	20	44.2	44	9500	5600	0.87	61921	61921	61921	61921
105	160	18	54	51	8500	5300	1.2	16021	16021	16021	16021
105	160	26	76.1	65.5	8500	5300	1.6	6021	6021	6021	6021
105	160	26	76.1	65.5	-	2400	1.6	6021 DDU	6021 2RS1	6021 2RSR	6021 DDU
105	160	26	76.1	65.5	8500	4300	1.6	6021 ZZ	6021 ZZ	6021 ZZ	6021 ZZ
105	160	26	76.1	65.5	-	2400	1.6	6021 DU	6021 RS1	6021 RSR	6021 DU
105	160	26	76.1	65.5	8500	5300	1.6	6021 Z	6021 Z	6021 Z	6021 Z
105	190	36	140	104	7000	4500	3.7	6221	6221	6221	6221
105	190	36	140	104	-	2200	3.7	6221 DDU	6221 2RS1	6221 2RSR	6221 DDU
105	190	36	140	104	7000	3600	3.7	6221 ZZ	6221 ZZ	6221 ZZ	6221 ZZ
105	190	36	140	104	-	2200	3.7	6221 DU	6221 RS1	6221 RSR	6221 DU
105	190	36	140	104	7000	4500	3.7	6221 Z	6221 Z	6221 Z	6221 Z
105	225	49	182	153	6300	4000	8.25	6321	6321	6321	6321
105	225	49	182	153	6300	3200	8.25	6321 ZZ	6321 ZZ	6321 ZZ	6321 ZZ
105	225	49	182	153	6300	4000	8.25	6321 Z	6321 Z	6321 Z	6321 Z
110	140	16	28.1	26	9500	5600	0.6	61822	61822	61822	61822
110	140	16	28.1	26	-	2600	0.6	61822 DDU	61822 2RS1	61822 2RSR	61822 DDU
110	150	20	43.6	45	9000	5600	0.9	61922	61922	61922	61922
110	170	19	60.2	57	8000	5000	1.45	16022	16022	16022	16022
110	170	28	85.2	73.5	8000	5000	1.95	6022	6022	6022	6022
110	170	28	85.2	73.5	-	2400	1.95	6022 DDU	6022 2RS1	6022 2RSR	6022 DDU
110	170	28	85.2	73.5	8000	4000	1.95	6022 ZZ	6022 ZZ	6022 ZZ	6022 ZZ
110	170	28	85.2	73.5	-	2400	1.95	6022 DU	6022 RS1	6022 RSR	6022 DU
110	170	28	85.2	73.5	8000	5000	1.95	6022 Z	6022 Z	6022 Z	6022 Z
110	200	38	151	118	6700	4300	4.35	6222	6222	6222	6222
110	200	38	151	118	6700	3400	4.35	6222 ZZ	6222 ZZ	6222 ZZ	6222 ZZ
110	200	38	151	118	6700	4300	4.35	6222 Z	6222 Z	6222 Z	6222 Z
110	240	50	203	180	6000	3800	9.55	6322	6322	6322	6322
120	150	16	29.1	28	8500	5300	0.65	61824	61824	61824	61824
120	150	16	29.1	28	-	2400	0.65	61824 DDU	61824 2RS1	61824 2RSR	61824 DDU
120	165	22	55.3	57	8000	5000	1.2	61924	61924	61924	61924
120	180	19	63.7	64	7500	4800	1.6	16024	16024	16024	16024
120	180	28	88.4	80	7500	4800	2.05	6024	6024	6024	6024
120	180	28	88.4	80	-	2200	2.05	6024 DDU	6024 2RS1	6024 2RSR	6024 DDU
120	180	28	88.4	80	7500	3800	2.05	6024 ZZ	6024 ZZ	6024 ZZ	6024 ZZ
120	180	28	88.4	80	-	2200	2.05	6024 DU	6024 RS1	6024 RSR	6024 DU
120	180	28	88.4	80	7500	4800	2.05	6024 Z	6024 Z	6024 Z	6024 Z
120	215	40	146	118	6300	4000	5.15	6224	6224	6224	6224
120	215	40	146	118	6300	3200	5.15	6224 ZZ	6224 ZZ	6224 ZZ	6224 ZZ
120	215	40	146	118	6300	4000	5.15	6224 Z	6224 Z	6224 Z	6224 Z
120	260	55	208	186	5600	3400	12.5	6324	6324	6324	6324
130	165	18	37.7	43	8000	4800	0.93	61826	61826	61826	61826
130	165	18	37.7	43	-	2200	0.93	61826 DDU	61826 2RS1	61826 2RSR	61826 DDU
130	180	24	65	67	7500	4500	1.85	61926	61926	61926	61926
130	200	22	83.2	81.5	7000	4300	2.35	16026	16026	16026	16026
130	200	33	112	100	7000	4300	3.15	6026	6026	6026	6026
130	200	33	112	100	-	2000	3.15	6026 DDU	6026 2RS1	6026 2RSR	6026 DDU

DEEP GROOVE BALL BEARINGS Single Row

Table 15
Bore Diameter 130mm - 180mm



Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
130	200	33	112	100	7000	3400	3.15	6026 ZZ	6026 2Z	6026 2Z	6026 ZZ
130	200	33	112	100	-	2000	3.15	6026 DU	6026 RS1	6026 RSR	6026 DU
130	200	33	112	100	7000	4300	3.15	6026 Z	6026 Z	6026 Z	6026 Z
130	230	40	156	132	5600	3600	5.8	6226	6226	6226	6226
130	230	40	156	132	5600	3000	5.8	6226 ZZ	6226 2Z	6226 2Z	6226 ZZ
130	230	40	156	132	5600	3600	5.8	6226 Z	6226 Z	6226 Z	6226 Z
130	280	58	229	216	5000	4500	17.5	6326 M	6326 M	6326 M	6326 M
140	175	18	39	46.5	7500	4500	0.99	61828	61828	61828	61828
140	175	18	39	46.5	-	2000	0.99	61828 DDU	61828 2RS1	61828 2RSR	61828 DDU
140	190	24	66.3	72	7000	5600	1.7	61928 M	61928 MA	61928 M	61928 M
140	210	22	80.6	86.5	6700	4000	2.5	16028	16028	16028	16028
140	210	33	111	108	6700	4000	3.35	6028	6028	6028	6028
140	210	33	111	108	-	1800	3.35	6028 DDU	6028 2RS1	6028 2RSR	6028 DDU
140	210	33	111	108	6700	3200	3.35	6028 ZZ	6028 2Z	6028 2Z	6028 ZZ
140	210	33	111	108	-	1800	3.35	6028 DU	6028 RS1	6028 RSR	6028 DU
140	210	33	111	108	6700	4000	3.35	6028 Z	6028 Z	6028 Z	6028 Z
140	250	42	165	150	5300	3400	7.45	6228	6228	6228	6228
140	300	62	251	245	4800	4300	22	6328 M	6328 M	6328 M	6328 M
150	190	20	48.8	61	6700	4300	1.4	61830	61830	61830	61830
150	210	28	88.4	93	6300	5300	3.05	61930 M	61930 MA	61930 M	61930 M
150	225	24	92.2	98	6000	3800	3.15	16030	16030	16030	16030
150	225	35	125	125	6000	3800	4.8	6030	6030	6030	6030
150	225	35	125	125	-	1700	4.8	6030 DDU	6030 2RS1	6030 2RSR	6030 DDU
150	225	35	125	125	6000	3000	4.8	6030 ZZ	6030 2Z	6030 2Z	6030 ZZ
150	225	35	125	125	-	1700	4.8	6030 DU	6030 RS1	6030 RSR	6030 DU
150	225	35	125	125	6000	3800	4.8	6030 Z	6030 Z	6030 Z	6030 Z
150	270	45	174	166	5000	3200	9.4	6230	6230	6230	6230
150	320	65	276	285	4300	4000	26	6330 M	6330 M	6330 M	6330 M
160	200	20	49.4	64	6300	4000	1.45	61832	61832	61832	61832
160	220	28	92.3	98	6000	5000	3.25	61932 M	61932 MA	61932 M	61932 M
160	240	25	99.5	108	5600	3600	3.7	16032	16032	16032	16032
160	240	38	143	143	5600	3600	5.9	6032	6032	6032	6032
160	240	38	143	143	5600	4800	5.9	6032 M	6032 M	6032 M	6032 M
160	240	38	143	143	-	1600	5.9	6032 DDU	6032 2RS1	6032 2RSR	6032 DDU
160	240	38	143	143	5600	2800	5.9	6032 ZZ	6032 2Z	6032 2Z	6032 ZZ
160	240	38	143	143	-	1600	5.9	6032 DU	6032 RS1	6032 RSR	6032 DU
160	240	38	143	143	5600	3600	5.9	6032 Z	6032 Z	6032 Z	6032 Z
160	290	48	186	186	4500	3000	14.5	6232	6232	6232	6232
160	340	68	276	285	4000	3800	29	6332 M	6332 M	6332 M	6332 M
170	215	22	61.8	78	6000	3600	1.9	61834	61834	61834	61834
170	230	28	93.6	106	5600	4800	3.4	61934 M	61934 MA	61934 M	61934 M
170	260	28	119	129	5300	3200	5	16034	16034	16034	16034
170	260	42	168	173	5300	4300	7.9	6034 M	6034 M	6034 M	6034 M
170	310	52	212	224	4300	3800	17.5	6234 M	6234 M	6234 M	6234 M
170	360	72	312	340	3800	3400	34.5	6334 M	6334 M	6334 M	6334 M
180	225	22	62.4	81.5	5600	3400	2	61836	61836	61836	61836
180	250	33	119	134	5300	4300	5.05	61936 M	61936 MA	61936 M	61936 M
180	280	31	138	146	4800	4000	6.6	16036	16036	16036	16036
180	280	46	190	200	4800	4000	10.5	6036 M	6036 M	6036 M	6036 M
180	320	52	229	240	4000	3600	18.5	6236 M	6236 M	6236 M	6236 M



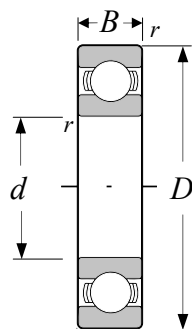
DEEP GROOVE BALL BEARINGS
Single Row

Table 16
Bore Diameter 180mm - 340mm

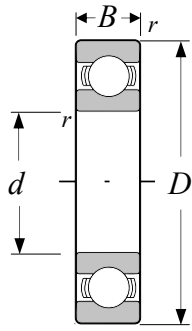
Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
180	380	75	351	405	3600	3200	42.5	6336 M	6336 M	6336 M	6336 M
190	240	24	76.1	98	5300	3200	2.6	61838	61838	61838	61838
190	260	33	117	134	5000	4300	5.25	61938 M	61938 MA	61938 M	61938 M
190	290	31	148	166	4800	3000	7.9	16038	16038	16038	16038
190	290	46	195	216	4800	3800	11	6038 M	6038 M	6038 M	6038 M
190	340	55	255	280	3800	3400	23	6238 M	6238 M	6238 M	6238 M
190	400	78	371	430	3400	3000	49	6338 M	6338 M	6338 M	6338 M
200	250	24	76.1	102	5000	3200	2.7	61840	61840	61840	61840
200	280	38	148	166	4800	3800	7.4	61940 M	61940 MA	61940 M	61940 M
200	310	34	168	190	4300	2800	8.85	16040	16040	16040	16040
200	310	51	216	245	4300	3600	14	6040 M	6040 M	6040 M	6040 M
200	360	58	270	310	3600	3200	28	6240 M	6240 M	6240 M	6240 M
220	270	24	78	110	4500	2800	3	61844	61844	61844	61844
220	300	38	151	180	4300	3600	8	61944 M	61944 MA	61944 M	61944 M
220	340	37	174	204	4000	2400	11.5	16044	16044	16044	16044
220	340	56	247	290	4000	3200	18.5	6044 M	6044 M	6044 M	6044 M
220	400	65	296	365	3200	3000	37	6244 M	6244 M	6244 M	6244 M
220	460	88	410	520	3000	2600	72.5	6344 M	6344 M	6344 M	6344 M
240	300	28	108	150	4000	2600	4.5	61848	61848	61848	61848
240	320	38	159	200	4000	3200	8.6	61948 M	61948 MA	61948 M	61948 M
240	360	37	178	220	3600	3000	14.5	16048 M	16048 MA	16048 M	16048 M
240	360	56	255	315	3600	3000	19.5	6048 M	6048 M	6048 M	6048 M
240	440	72	358	465	3000	2600	51	6248 M	6248 M	6248 M	6248 M
240	500	95	442	585	2600	2400	92.5	6348 M	6348 M	6348 M	6348 M
260	320	28	111	163	3800	2400	4.8	61852	61852	61852	61852
260	360	46	212	270	3600	3000	14.5	61952 M	61952 MA	61952 M	61952 M
260	400	44	238	310	3200	2800	21.5	16052 M	16052 MA	16052 M	16052 M
260	400	65	291	375	3200	2800	29.5	6052 M	6052 M	6052 M	6052 M
260	480	80	390	530	2600	2400	65.5	6252 M	6252 M	6252 M	6252 M
260	540	102	507	710	2400	2200	115	6352 M	6352 M	6352 M	6352 M
280	350	33	138	200	3400	2200	7.4	61856	61856	61856	61856
280	350	33	138	200	3400	2800	8	61856 M	61856 MA	61856 M	61856 M
280	380	46	216	285	3200	2800	15	61956 M	61956 MA	61956 M	61956 M
280	420	44	242	335	3000	2600	23	16056 M	16056 MA	16056 M	16056 M
280	420	65	302	405	3000	2600	31	6056 M	6056 M	6056 M	6056 M
280	500	80	423	600	2600	2200	71	6256 M	6256 M	6256 M	6256 M
280	580	108	572	850	2200	2000	140	6356 M	6356 M	6356 M	6356 M
300	380	38	172	245	3200	2600	10.5	61860 M	61860 MA	61860 M	61860 M
300	420	56	270	375	3000	2400	24.5	61960 M	61960 MA	61960 M	61960 M
300	460	50	286	405	2800	2400	32	16060 M	16060 MA	16060 M	16060 M
300	460	74	358	500	2800	2400	44	6060 M	6060 M	6060 M	6060 M
300	540	85	462	670	2400	2000	88.5	6260 M	6260 M	6260 M	6260 M
320	400	38	172	255	3000	2400	11	61864 M	61864 MA	61864 M	61864 M
320	440	37	216	310	2800	2400	16	60964 M	60964 MA	60964 M	60964 M
320	440	56	276	400	2800	2400	25.5	61964 M	61964 MA	61964 M	61964 M
320	480	50	281	405	2600	2200	34	16064 M	16064 MA	16064 M	16064 M
320	480	74	371	540	2600	2200	46	6064 M	6064 M	6064 M	6064 M
320	580	92	527	800	2200	1900	110	6264 M	6264 MA	6264 M	6264 M
340	420	38	178	275	2800	2400	11.5	61868 M	61868 MA	61868 M	61868 M
340	460	56	281	425	2600	2200	26.5	61968 M	61968 MA	61968 M	61968 M

DEEP GROOVE BALL BEARINGS Single Row

Table 17
Bore Diameter 340mm - 630mm



Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
340	520	57	345	520	2400	2000	45	16068 M	16068 MA	16068 M	16068 M
340	520	82	423	640	2400	2200	62	6068 M	6068 M	6068 M	6068 M
340	620	92	559	900	2000	1800	110	6268 M	6268 MA	6268 M	6268 M
360	440	25	121	212	2600	2200	6.5	60872 M	60872 MA	60872 M	60872 M
360	440	38	182	285	2600	2200	12	61872 M	61872 MA	61872 M	61872 M
360	480	56	291	450	2600	2200	28	61972 M	61972 MA	61972 M	61972 M
360	540	57	351	550	2400	1900	49	16072 M	16072 MA	16072 M	16072 M
360	540	82	462	735	2400	1900	64.5	6072 M	6072 M	6072 M	6072 M
380	480	46	242	390	2400	2000	20	61876 M	61876 MA	61876 M	61876 M
380	520	65	338	540	2400	1900	40	61976 M	61976 MA	61976 M	61976 M
380	560	57	377	620	2200	1800	51	16076 M	16076 MA	16076 M	16076 M
380	560	82	462	750	2200	1800	67.5	6076 M	6076 M	6076 M	6076 M
400	500	31	163	280	2400	1900	15.5	60880 M	60880 MA	60880 M	60880 M
400	500	46	247	405	2400	1900	20.5	61880 M	61880 MA	61880 M	61880 M
400	540	44	265	440	2200	1800	27.5	60980 M	60980 M	60980 M	60980 M
400	540	65	345	570	2200	1800	41.5	61980 M	61980 MA	61980 M	61980 M
400	600	90	520	865	2000	1700	87.5	6080 M	6080 M	6080 M	6080 M
420	520	46	251	425	2200	1800	21.5	61884 M	61884 MA	61884 M	61884 M
420	560	65	351	600	2200	1800	43	61984 M	61984 MA	61984 M	61984 M
420	620	90	507	880	2000	1600	91.5	6084 M	6084 M	6084 M	6084 M
440	540	31	159	290	2200	1800	16.5	60888 M	60888 MA	60888 M	60888 M
440	540	46	255	440	2200	1800	22.5	61888 M	61888 MA	61888 M	61888 M
440	600	50	312	550	2000	1600	40	60988 M	60988 MB	60988 M	60988 M
440	600	74	410	720	2000	1600	60.5	61988 M	61988 MA	61988 M	61988 M
440	650	94	553	965	1900	1500	105	6088 M	6088 M	6088 M	6088 M
460	580	56	319	570	2000	1600	35	61892 M	61892 MA	61892 M	61892 M
460	620	74	423	750	1900	1600	62.5	61992 M	61992 MA	61992 M	61992 M
460	680	100	582	1060	1800	1500	120	6092 M	6092 MB	6092 M	6092 M
460	680	100	582	1060	1800	1500	120	6092 M	6092 N1MB	6092 M	6092 M
480	600	56	325	600	1900	1600	36.5	61896 M	61896 MA	61896 M	61896 M
480	650	78	449	815	1800	1500	74	61996 M	61996 MA	61996 M	61996 M
480	700	100	618	1140	1700	1400	125	6096 M	6096 MB	6096 M	6096 M
480	700	100	618	1140	1700	1400	125	6096 M	6096 N1MB	6096 M	6096 M
500	620	37	229	440	1800	1500	20	608/500 M	608/500 MA	608/500 M	608/500 M
500	620	56	332	620	1800	1500	40.5	618/500 M	618/500 MA	618/500 M	618/500 M
500	670	78	462	865	1700	1400	77	619/500 M	619/500 MA	619/500 M	619/500 M
500	720	100	605	1140	1600	1300	135	60/500 M	60/500 N1MAS	60/500 M	60/500 M
530	650	56	332	655	1700	1400	39.5	618/530 M	618/530 MA	618/530 M	618/530 M
530	710	57	423	815	1600	1300	61	609/530 M	609/530 MA	609/530 M	609/530 M
530	710	82	488	930	1600	1300	90.5	619/530 M	619/530 MA	619/530 M	619/530 M
530	780	112	650	1270	1500	1200	185	60/530 M	60/530 N1MAS	60/530 M	60/530 M
560	680	37	229	465	1600	1300	30.5	608/560 M	608/560 MA	608/560 M	608/560 M
560	680	56	345	695	1600	1300	42	618/560 M	618/560 MA	618/560 M	618/560 M
560	750	85	494	980	1500	1200	105	619/560 M	619/560 MA	619/560 M	619/560 M
560	820	115	663	1470	1400	1200	210	60/560 M	60/560 N1MAS	60/560 M	60/560 M
600	730	42	265	550	1500	1200	40	608/600 M	608/600 MA	608/600 M	608/600 M
600	730	60	364	765	1500	1200	52	618/600 M	618/600 MA	618/600 M	618/600 M
600	800	90	585	1220	1400	1100	125	619/600 M	619/600 MA	619/600 M	619/600 M
600	870	118	728	1500	1300	1100	230	60/600 M	60/600 MA	60/600 M	60/600 M
630	780	48	364	765	1400	1100	41	608/630 M	608/630 MA	608/630 M	608/630 M



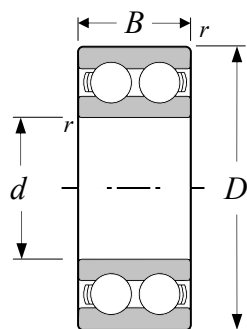
DEEP GROOVE BALL BEARINGS
Single Row

Table 18
Bore Diameter 630mm - 1700mm

Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic C	Static C ₀	Ref. Speed	Limiting Speed		Local	SKF	FAG	NSK
mm			kN		r/min		kg				
630	780	69	442	965	1400	1100	73	618/630 M	618/630 MA	618/630 M	618/630 M
630	850	71	488	1060	1300	1100	110	609/630 M	609/630 MB	609/630 M	609/630 M
630	850	100	624	1340	1300	1100	160	619/630 M	619/630 N1MA	619/630 M	619/630 M
630	920	128	819	1760	1200	1000	285	60/630 M	60/630 N1MBS	60/630 M	60/630 M
670	820	69	442	1000	1300	1100	83.5	618/670 M	618/670 MA	618/670 M	618/670 M
670	900	73	553	1220	1200	1000	145	609/670 M	609/670 MA	609/670 M	609/670 M
670	900	103	676	1500	1200	1000	185	619/670 M	619/670 MA	619/670 M	619/670 M
670	980	136	904	2040	1100	900	345	60/670 M	60/670 N1MAS	60/670 M	60/670 M
710	870	74	475	1100	1200	1000	93.5	618/710 M	618/710 MA	618/710 M	618/710 M
710	950	78	559	1290	1100	900	150	609/710 M	609/710 MA	609/710 M	609/710 M
710	950	106	663	1500	1100	900	220	619/710 M	619/710 MA	619/710 M	619/710 M
710	1030	140	956	2200	1000	850	375	60/710 M	60/710 MA	60/710 M	60/710 M
750	920	78	527	1250	1100	900	110	618/750 M	618/750 MA	618/750 M	618/750 M
750	1000	112	761	1800	1000	850	255	619/750 M	619/750 MA	619/750 M	619/750 M
750	1090	150	995	2360	950	800	485	60/750 M	60/750 MA	60/750 M	60/750 M
800	980	57	403	1000	1000	850	100	608/800 M	608/800 MA	608/800 M	608/800 M
800	980	82	559	1370	1000	850	130	618/800 M	618/800 MA	618/800 M	618/800 M
800	1060	115	832	2040	950	800	275	619/800 M	619/800 MA	619/800 M	619/800 M
800	1150	155	1010	2550	900	750	535	60/800 M	60/800 N1MAS	60/800 M	60/800 M
850	1030	57	397	1020	950	750	75	608/850 M	608/850 MB	608/850 M	608/850 M
850	1030	82	559	1430	950	750	140	618/850 M	618/850 MA	618/850 M	618/850 M
850	1120	118	832	2160	850	750	310	619/850 M	619/850 MA	619/850 M	619/850 M
850	1220	165	1120	2900	800	670	630	60/850 M	60/850 MB	60/850 M	60/850 M
900	1090	85	618	1600	850	700	160	618/900 M	618/900 MA	618/900 M	618/900 M
900	1180	122	852	2280	800	670	350	619/900 M	619/900 MB	619/900 M	619/900 M
900	1280	170	1140	3100	750	630	720	60/900 M	60/900 MB	60/900 M	60/900 M
950	1150	90	637	1730	800	670	190	618/950 M	618/950 MA	618/950 M	618/950 M
950	1250	132	1010	2800	750	630	390	619/950 M	619/950 MB	619/950 M	619/950 M
950	1360	180	1170	3250	700	560	860	60/950 M	60/950 MB	60/950 M	60/950 M
1000	1220	71	553	1560	750	600	175	608/1000 M	608/1000 MB	608/1000 M	608/1000 M
1000	1220	100	637	1800	750	600	245	618/1000 M	618/1000 MA	618/1000 M	618/1000 M
1000	1320	103	819	2360	700	560	410	609/1000 M	609/1000 MB	609/1000 M	609/1000 M
1000	1320	140	1010	2800	700	560	515	619/1000 M	619/1000 MB	619/1000 M	619/1000 M
1000	1420	185	1350	3900	630	530	930	60/1000 M	60/1000 MB	60/1000 M	60/1000 M
1060	1280	100	728	2120	670	560	260	618/1060 M	618/1060 MA	618/1060 M	618/1060 M
1060	1400	150	1010	3000	630	530	620	619/1060 M	619/1060 MB	619/1060 M	619/1060 M
1060	1500	195	1350	3900	600	500	1080	60/1060 M	60/1060 MB	60/1060 M	60/1060 M
1120	1360	106	741	2200	630	530	315	618/1120 M	618/1120 MA	618/1120 M	618/1120 M
1120	1460	150	1040	3100	600	480	650	619/1120 M	619/1120 MB	619/1120 M	619/1120 M
1120	1580	200	1460	4400	530	450	1250	60/1120 M	60/1120 MB	60/1120 M	60/1120 M
1180	1420	106	761	2360	560	480	330	618/1180 M	618/1180 MB	618/1180 M	618/1180 M
1180	1540	160	1140	3600	220	280	775	619/1180 M	619/1180 MB	619/1180 M	619/1180 M
1250	1500	112	852	2750	530	430	385	618/1250 M	618/1250 MB	618/1250 M	618/1250 M
1320	1600	122	956	3150	480	400	500	618/1320 M	618/1320 MA	618/1320 M	618/1320 M
1320	1720	128	1210	4050	450	360	830	609/1320 M	609/1320 MB	609/1320 M	609/1320 M
1400	1700	132	1120	4000	430	360	615	618/1400 M	618/1400 MA	618/1400 M	618/1400 M
1400	1820	185	1590	5500	400	340	1250	619/1400 M	619/1400 MB	619/1400 M	619/1400 M
1500	1950	195	1720	6100	380	320	1500	619/1500 M	619/1500 MB	619/1500 M	619/1500 M
1600	1950	155	1270	4800	320	280	965	618/1600 M	618/1600 MB	618/1600 M	618/1600 M
1600	2060	200	1860	6950	300	260	1650	619/1600 M	619/1600 MB	619/1600 M	619/1600 M
1700	2060	160	1270	4900	300	240	1100	618/1700 M	618/1700 MB	618/1700 M	618/1700 M
1700	2180	212	1990	7650	280	220	1950	619/1700 M	619/1700 MB	619/1700 M	619/1700 M

DEEP GROOVE BALL BEARINGS Double Row

Table 19
Bore Diameter 10mm - 100mm



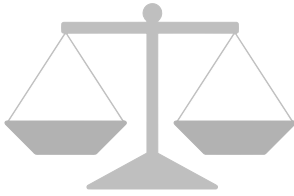
Principal Dimensions			Basic Load Ratings		Speed Ratings		Mass	Designations			
d	D	B	Dynamic	Static	Ref. Speed	Limiting Speed					
mm			C	C ₀	r/min		kg	Local	SKF	FAG	NSK
10	30	14	9.23	5.2	40000	22000	0.049	4200 BTNG	4200 ATN9	4200 B.TVH	4200 BTNG
12	32	14	10.6	6.2	36000	20000	0.053	4201 BTNG	4201 ATN9	4201 B.TVH	4201 BTNG
12	37	17	13	7.8	34000	18000	0.092	4301 BTNG	4301 ATN9	4301 B.TVH	4301 BTNG
15	35	14	11.9	7.5	32000	17000	0.059	4202 BTNG	4202 ATN9	4202 B.TVH	4202 BTNG
15	42	17	14.8	9.5	28000	15000	0.12	4302 BTNG	4302 ATN9	4302 B.TVH	4302 BTNG
17	40	16	14.8	9.5	28000	15000	0.09	4203 BTNG	4203 ATN9	4203 B.TVH	4203 BTNG
17	47	19	19.5	13.2	24000	13000	0.16	4303 BTNG	4303 ATN9	4303 B.TVH	4303 BTNG
20	47	18	17.8	12.5	24000	13000	0.14	4204 BTNG	4204 ATN9	4204 B.TVH	4204 BTNG
20	52	21	23.4	16	22000	12000	0.21	4304 BTNG	4304 ATN9	4304 B.TVH	4304 BTNG
25	52	18	19	14.6	20000	11000	0.16	4205 BTNG	4205 ATN9	4205 B.TVH	4205 BTNG
25	62	24	31.9	22.4	18000	10000	0.34	4305 BTNG	4305 ATN9	4305 B.TVH	4305 BTNG
30	62	20	26	20.8	17000	9500	0.26	4206 BTNG	4206 ATN9	4206 B.TVH	4206 BTNG
30	72	27	41	30	16000	8500	0.5	4306 BTNG	4306 ATN9	4306 B.TVH	4306 BTNG
35	72	23	35.1	28.5	15000	8000	0.4	4207 BTNG	4207 ATN9	4207 B.TVH	4207 BTNG
35	80	31	50.7	38	14000	7500	0.69	4307 BTNG	4307 ATN9	4307 B.TVH	4307 BTNG
40	80	23	37.1	32.5	13000	7000	0.5	4208 BTNG	4208 ATN9	4208 B.TVH	4208 BTNG
40	90	33	55.9	45	12000	6700	0.95	4308 BTNG	4308 ATN9	4308 B.TVH	4308 BTNG
45	85	23	39	36	12000	6700	0.54	4209 BTNG	4209 ATN9	4209 B.TVH	4209 BTNG
45	100	36	68.9	56	11000	6000	1.25	4309 BTNG	4309 ATN9	4309 B.TVH	4309 BTNG
50	90	23	41	40	11000	6000	0.58	4210 BTNG	4210 ATN9	4210 B.TVH	4210 BTNG
50	110	40	81.9	69.5	10000	5300	1.7	4310 BTNG	4310 ATN9	4310 B.TVH	4310 BTNG
55	100	25	44.9	44	10000	5600	0.8	4211 BTNG	4211 ATN9	4211 B.TVH	4211 BTNG
55	120	43	97.5	83	9000	5000	2.15	4311 BTNG	4311 ATN9	4311 B.TVH	4311 BTNG
60	110	28	57.2	55	9500	5300	1.1	4212 BTNG	4212 ATN9	4212 B.TVH	4212 BTNG
60	130	46	112	98	8500	4500	2.65	4312 BTNG	4312 ATN9	4312 B.TVH	4312 BTNG
65	120	31	67.6	67	8500	4800	1.45	4213 BTNG	4213 ATN9	4213 B.TVH	4213 BTNG
65	140	48	121	106	8000	4300	3.25	4313 BTNG	4313 ATN9	4313 B.TVH	4313 BTNG
70	125	31	70.2	73.5	8000	4300	1.5	4214 BTNG	4214 ATN9	4214 B.TVH	4214 BTNG
70	150	51	138	125	7000	3800	3.95	4314 BTNG	4314 ATN9	4314 B.TVH	4314 BTNG
75	130	31	72.8	80	7500	4000	1.6	4215 BTNG	4215 ATN9	4215 B.TVH	4215 BTNG
75	160	55	156	143	6700	3600	4.8	4315 BTNG	4315 ATN9	4315 B.TVH	4315 BTNG
80	140	33	80.6	90	7000	3800	2	4216 BTNG	4216 ATN9	4216 B.TVH	4216 BTNG
85	150	36	93.6	102	7000	3600	2.55	4217 BTNG	4217 ATN9	4217 B.TVH	4217 BTNG
90	160	40	112	122	6300	3400	3.2	4218 BTNG	4218 ATN9	4218 B.TVH	4218 BTNG
100	180	46	140	156	5600	3000	4.7	4220 BTNG	4220 ATN9	4220 B.TVH	4220 BTNG

APPENDICES CONTENTS

Conversion Tables, [N - kgf] [kg - lb] [inch - mm]

Tolerance Tables for Shaft Diameters

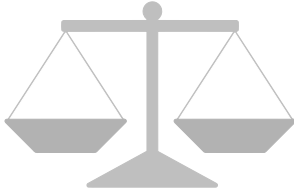
Tolerance Tables for Housing Bore Diameters



CONVERSION TABLE [N-kgf] [kg-lb]

<i>N</i>	-	<i>kgf</i>	<i>N</i>	-	<i>kgf</i>
9.8066	1	0.1020	500.14	51	5.2006
19.613	2	0.2039	509.95	52	5.3025
29.420	3	0.3059	519.75	53	5.4045
39.227	4	0.4079	529.56	54	5.5065
49.033	5	0.5099	539.37	55	5.6084
58.840	6	0.6118	549.17	56	5.7104
68.647	7	0.7138	558.98	57	5.8124
78.453	8	0.8158	568.79	58	5.9144
88.260	9	0.9177	578.59	59	6.0163
98.066	10	1.0197	588.40	60	6.1183
107.87	11	1.1217	598.21	61	6.2203
117.68	12	1.2237	608.01	62	6.3222
127.49	13	1.3256	617.82	63	6.4242
137.29	14	1.4276	627.63	64	6.5262
147.10	15	1.5296	637.43	65	6.6282
156.91	16	1.6315	647.24	66	6.7301
166.71	17	1.7335	657.05	67	6.8321
176.52	18	1.8355	666.85	68	6.9341
186.33	19	1.9375	676.66	69	7.0360
196.13	20	2.0394	686.47	70	7.1380
205.94	21	2.1414	696.27	71	7.2400
215.75	22	2.2434	706.08	72	7.3420
225.55	23	2.3453	715.89	73	7.4439
235.36	24	2.4473	725.69	74	7.5459
245.17	25	2.5493	735.50	75	7.6479
254.97	26	2.6513	745.31	76	7.7498
264.78	27	2.7532	755.11	77	7.8518
274.59	28	2.8552	764.92	78	7.9538
284.39	29	2.9572	774.73	79	8.0558
294.20	30	3.0591	784.53	80	8.1577
304.01	31	3.1611	794.34	81	8.2597
313.81	32	3.2631	804.15	82	8.3617
323.62	33	3.3651	813.95	83	8.4636
333.43	34	3.4670	823.76	84	8.5656
343.23	35	3.5690	833.57	85	8.6676
353.04	36	3.6710	843.37	86	8.7696
362.85	37	3.7729	853.18	87	8.8715
372.65	38	3.8749	862.99	88	8.9735
382.46	39	3.9769	872.79	89	9.0755
392.27	40	4.0789	882.60	90	9.1774
402.07	41	4.1808	892.41	91	9.2794
411.88	42	4.2828	902.21	92	9.3814
421.69	43	4.3848	912.02	93	9.4834
431.49	44	4.4868	921.83	94	9.5853
441.30	45	4.5887	931.63	95	9.6873
451.11	46	4.6907	941.44	96	9.7893
460.91	47	4.7927	951.25	97	9.8912
470.72	48	4.8946	961.05	98	9.9932
480.53	49	4.9966	970.86	99	10.095
490.33	50	5.0986	980.07	100	10.197

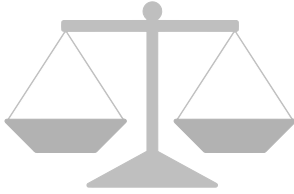
<i>kg</i>	-	<i>lb</i>	<i>kg</i>	-	<i>lb</i>
0.454	1	2.205	23.133	51	112.44
0.907	2	4.409	23.587	52	114.64
1.361	3	6.614	24.040	53	116.84
1.814	4	8.818	24.494	54	119.05
2.268	5	11.023	24.948	55	121.25
2.722	6	13.228	25.401	56	123.46
3.175	7	15.432	25.855	57	125.66
3.629	8	17.637	26.308	58	127.87
4.082	9	19.842	26.762	59	130.07
4.536	10	22.046	27.216	60	132.28
4.990	11	24.251	27.669	61	134.48
5.443	12	26.455	28.123	62	136.69
5.897	13	28.660	28.576	63	138.89
6.350	14	30.865	29.030	64	141.10
6.804	15	33.069	29.484	65	143.30
7.257	16	35.274	29.937	66	145.51
7.711	17	37.479	30.391	67	147.71
8.165	18	39.683	30.844	68	149.91
8.618	19	41.888	31.298	69	152.12
9.072	20	44.092	31.751	70	154.32
9.525	21	46.297	32.205	71	156.53
9.979	22	48.502	32.659	72	158.73
10.433	23	50.706	33.112	73	160.94
10.886	24	52.911	33.566	74	163.14
11.340	25	55.116	34.019	75	165.35
11.793	26	57.320	34.473	76	167.55
12.247	27	59.525	34.927	77	169.76
12.701	28	61.729	35.380	78	171.96
13.154	29	63.934	35.834	79	174.17
13.608	30	66.139	36.287	80	176.37
14.061	31	68.343	36.741	81	178.57
14.515	32	70.548	37.195	82	180.78
14.969	33	72.753	37.648	83	182.98
15.422	34	74.957	38.102	84	185.19
15.876	35	77.162	38.555	85	187.39
16.329	36	79.366	39.009	86	189.60
16.783	37	81.571	39.463	87	191.80
17.237	38	83.776	39.916	88	194.01
17.690	39	85.980	40.370	89	196.21
18.144	40	88.185	40.823	90	198.42
18.597	41	90.390	41.277	91	200.62
19.051	42	92.594	41.730	92	202.83
19.504	43	94.799	42.184	93	205.03
19.958	44	97.003	42.638	94	207.23
20.412	45	99.208	43.091	95	209.44
20.865	46	101.41	43.545	96	211.64
21.319	47	103.62	43.998	97	213.85
21.772	48	105.82	44.452	98	216.05
22.226	49	108.03	44.906	99	218.26
22.680	50	110.23	45.360	100	220.46



CONVERSION TABLE [Inch-mm]

Inch – mm
1” – 10”

Inch	Inches												
	Fraction	Decimal	0	1	2	3	4	5	6	7	8	9	10
0	0	0	25.4000	50.8000	76.2000	101.6000	127.0000	152.4000	177.8000	203.2000	228.6000	254.0000	
1/64	0.015625	0.3969	25.7969	51.1969	76.5969	101.9969	127.3969	152.7969	178.1969	203.5969	228.9969	254.3969	
1/32	0.03125	0.7938	26.1938	51.5938	76.9938	102.3938	127.7938	153.1938	178.5938	203.9938	229.3938	254.7938	
3/64	0.046875	1.1906	26.5906	51.9906	77.3906	102.7906	128.1906	153.5906	178.9906	204.3906	229.7906	255.1906	
1/16	0.0625	1.5875	26.9875	52.3875	77.7875	103.1875	128.5875	153.9875	179.3875	204.7875	230.1875	255.5875	
5/64	0.078125	1.9844	27.3844	52.7844	78.1844	103.5844	128.9844	154.3844	179.7844	205.1844	230.5844	255.9844	
3/32	0.09375	2.3812	27.7812	53.1812	78.5812	103.9812	129.3812	154.7812	180.1812	205.5812	230.9812	256.3812	
7/64	0.109375	2.7781	28.1781	53.5781	78.9781	104.3781	129.7781	155.1781	180.5781	205.9781	231.3781	256.7781	
1/8	0.125	3.1750	28.5750	53.9750	79.3750	104.7750	130.1750	155.5750	180.9750	206.3750	231.7750	257.1750	
9/64	0.140625	3.5719	28.9719	54.3719	79.7719	105.1719	130.5719	155.9719	181.3719	206.7719	232.1719	257.5719	
5/32	0.15625	3.9688	29.3688	54.7688	80.1688	105.5688	130.9688	156.3688	181.7688	207.1688	232.5688	257.9688	
11/64	0.171875	4.3656	29.7656	55.1656	80.5656	105.9656	131.3656	156.7656	182.1656	207.5656	232.9656	258.3656	
3/16	0.1875	4.7625	30.1625	55.5625	80.9625	106.3625	131.7625	157.1625	182.5625	207.9625	233.3625	258.7625	
13/64	0.203125	5.1594	30.5594	55.9594	81.3594	106.7594	132.1594	157.5594	182.9594	208.3594	233.7594	259.1594	
7/32	0.21875	5.5562	30.9562	56.3562	81.7562	107.1562	132.5562	157.9562	183.3562	208.7562	234.1562	259.5562	
15/64	0.234375	5.9531	31.3531	56.7531	82.1531	107.5531	132.9531	158.3531	183.7531	209.1531	234.5531	259.9531	
1/4	0.25	6.3500	31.7500	57.1500	82.5500	107.9500	133.3500	158.7500	184.1500	209.5500	234.9500	260.3500	
17/64	0.265625	6.7469	32.1469	57.5469	82.9469	108.3469	133.7469	159.1469	184.5469	209.9469	235.3469	260.7469	
9/32	0.28125	7.1438	32.5438	57.9438	83.3438	108.7438	134.1438	159.5438	184.9438	210.3438	235.7438	261.1438	
19/64	0.296875	7.5406	32.9406	58.3406	83.7406	109.1406	134.5406	159.9406	185.3406	210.7406	236.1406	261.5406	
5/16	0.3125	7.9375	33.3375	58.7375	84.1375	109.5375	134.9375	160.3375	185.7375	211.1375	236.5375	261.9375	
21/64	0.328125	8.3344	33.7344	59.1344	84.5344	109.9344	135.3344	160.7344	186.1344	211.5344	236.9344	262.3344	
11/32	0.34375	8.7312	34.1312	59.5312	84.9312	110.3312	135.7312	161.1312	186.5312	211.9312	237.3312	262.7312	
23/64	0.359375	9.1281	34.5281	59.9281	85.3281	110.7281	136.1281	161.5281	186.9281	212.3281	237.7281	263.1281	
3/8	0.375	9.5250	34.9250	60.3250	85.7250	111.1250	136.5250	161.9250	187.3250	212.7250	238.1250	263.5250	
25/64	0.390625	9.9219	35.3219	60.7219	86.1219	111.5219	136.9219	162.3219	187.7219	213.1219	238.5219	263.9219	
13/32	0.40625	10.3188	35.7188	61.1188	86.5188	111.9188	137.3188	162.7188	188.1188	213.5188	238.9188	264.3188	
27/64	0.421875	10.7156	36.1156	61.5156	86.9156	112.3156	137.7156	163.1156	188.5156	213.9156	239.3156	264.7156	
7/16	0.4375	11.1125	36.5125	61.9125	87.3125	112.7125	138.1125	163.5125	188.9125	214.3125	239.7125	265.1125	
29/64	0.453125	11.5094	36.9094	62.3094	87.7094	113.1094	138.5094	163.9094	189.3094	214.7094	240.1094	265.5094	
15/32	0.46875	11.9062	37.3062	62.7062	88.1062	113.5062	138.9062	164.3062	189.7062	215.1062	240.5062	265.9062	
31/64	0.484375	12.3031	37.7031	63.1031	88.5031	113.9031	139.3031	164.7031	190.1031	215.5031	240.9031	266.3031	
1/2	0.5	12.7000	38.1000	63.5000	88.9000	114.3000	139.7000	165.1000	190.5000	215.9000	241.3000	266.7000	
33/64	0.515625	13.0969	38.4969	63.8969	89.2969	114.6969	140.0969	165.4969	190.8969	216.2969	241.6969	267.0969	
17/32	0.53125	13.4938	38.8938	64.2938	89.6938	115.0938	140.4938	165.8938	191.2938	216.6938	242.0938	267.4938	
35/64	0.546875	13.8906	39.2906	64.6906	90.0906	115.4906	140.8906	166.2906	191.6906	217.0906	242.4906	267.8906	
9/16	0.5625	14.2875	39.6875	65.0875	90.4875	115.8875	141.2875	166.6875	192.0875	217.4875	242.8875	268.2875	
37/64	0.578125	14.6844	40.0844	65.4844	90.8844	116.2844	141.6844	167.0844	192.4844	217.8844	243.2844	268.6844	
19/32	0.59375	15.0812	40.4812	65.8812	91.2812	116.6812	142.0812	167.4812	192.8812	218.2812	243.6812	269.0812	
39/64	0.609375	15.4781	40.8781	66.2781	91.6781	117.0781	142.4781	167.8781	193.2781	218.6781	244.0781	269.4781	
5/8	0.625	15.8750	41.2750	66.6750	92.0750	117.4750	142.8750	168.2750	193.6750	219.0750	244.4750	269.8750	
41/64	0.640625	16.2719	41.6719	67.0719	92.4719	117.8719	143.2719	168.6719	194.0719	219.4719	244.8719	270.2719	
21/32	0.65625	16.6688	42.0688	67.4688	92.8688	118.2688	143.6688	169.0688	194.4688	219.8688	245.2688	270.6688	
43/64	0.671875	17.0656	42.4656	67.8656	93.2656	118.6656	144.0656	169.4656	194.8656	220.2656	245.6656	271.0656	
11/16	0.6875	17.4625	42.8625	68.2625	93.6625	119.0625	144.4625	169.8625	195.2625	220.6625	246.0625	271.4625	
45/64	0.703125	17.8594	43.2594	68.6594	94.0594	119.4594	144.8594	170.2594	195.6594	221.0594	246.4594	271.8594	
23/32	0.71875	18.2562	43.6562	69.0562	94.4562	119.8562	145.2562	170.6562	196.0562	221.4562	246.8562	272.2562	
47/64	0.734375	18.6531	44.0531	69.4531	94.8531	120.2531	145.6531	171.0531	196.4531	221.8531	247.2531	272.6531	
3/4	0.75	19.0500	44.4500	69.8500	95.2500	120.6500	146.0500	171.4500	196.8500	222.2500	247.6500	273.0500	
49/64	0.765625	19.4469	44.8469	70.2469	95.6469	121.0469	146.4469	171.8469	197.2469	222.6469	248.0469	273.4469	
25/32	0.78125	19.8438	45.2438	70.6438	96.0438	121.4438	146.8438	172.2438	197.6438	223.0438	248.4438	273.8438	
51/64	0.796875	20.2406	45.6406	71.0406	96.4406	121.8406	147.2406	172.6406	198.0406	223.4406	248.8406	274.2406	
13/16	0.8125	20.6375	46.0375	71.4375	96.8375	122.2375	147.6375	173.0375	198.4375	223.8375	249.2375	274.6375	
53/64	0.828125	21.0344	46.4344	71.8344	97.2344	122.6344	148.0344	173.4344	198.8344	224.2344	249.6344	275.0344	
27/32	0.84375	21.4312	46.8312	72.2312	97.6312	123.0312	148.4312	173.8312	199.2312	224.6312	250.0312	275.4312	
55/64	0.859375	21.8281	47.2281	72.6281	98.0281	123.4281	148.8281	174.2281	199.6281	225.0281	250.4281	275.8281	
7/8	0.875	22.2250	47.6250	73.0250	98.4250	123.8250	149.2250	174.6250	200.0250	225.4250	250.8250	276.2250	
57/64	0.890625	22.6219	48.0219	73.4219	98.8219	124.2219	149.6219	175.0219	200.4219	225.8219	251.2219	276.6219	
29/32	0.90625	23.0188	48.4188	73.8188	99.2188	124.6188	150.0188	175.4188	200.8188	226.2188	251.6188	277.0188	
59/64	0.921875	23.4156	48.8156	74.2156	99.6156	125.0156	150.4156	175.8156	201.2156	226.6156	252.0156	277.4156	
15/16	0.9375	23.8125	49.2125	74.6125	100.0125	125.4125	150.8125	176.2125	201.6125	227.012			



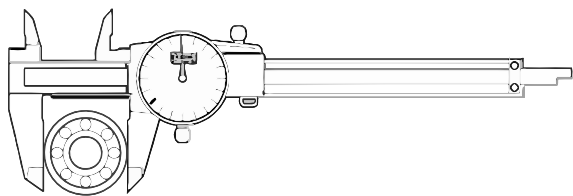
CONVERSION TABLE

Inch – mm
1” – 40”

<i>Inch</i>		<i>Inches</i>									
<i>Fraction</i>	<i>Decimal</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>15</i>	<i>16</i>	<i>17</i>	<i>18</i>	<i>19</i>	<i>20</i>
		<i>mm</i>									
0	0.0000	279.400	304.800	330.200	355.600	381.000	406.400	431.800	457.200	482.600	508.000
1 / 16	0.0625	280.988	306.388	331.788	357.188	382.588	407.988	433.388	458.788	484.188	509.588
1 / 8	0.1250	282.575	307.975	333.375	358.775	384.175	409.575	434.975	460.375	485.775	511.175
3 / 16	0.1875	284.162	309.562	334.962	360.362	385.762	411.162	436.562	461.962	487.362	512.762
1 / 4	0.2500	285.750	311.150	336.550	361.950	387.350	412.750	438.150	463.550	488.950	514.350
5 / 16	0.3125	287.338	312.738	338.138	363.538	388.938	414.338	439.738	465.138	490.538	515.938
3 / 8	0.3750	288.925	314.325	339.725	365.125	390.525	415.925	441.325	466.725	492.125	517.525
7 / 16	0.4375	290.512	315.912	341.312	366.712	392.112	417.512	442.912	468.312	493.712	519.112
1 / 2	0.5000	292.100	317.500	342.900	368.300	393.700	419.100	444.500	469.900	495.300	520.700
9 / 16	0.5625	293.688	319.088	344.488	369.888	395.288	420.688	446.088	471.488	496.888	522.288
5 / 8	0.6250	295.275	320.675	346.075	371.475	396.875	422.275	447.675	473.075	498.475	523.875
11 / 16	0.6875	296.862	322.262	347.662	373.062	398.462	423.862	449.262	474.662	500.062	525.462
3 / 4	0.7500	298.450	323.850	349.250	374.650	400.050	425.450	450.850	476.250	501.650	527.050
13 / 16	0.8125	300.038	325.438	350.838	376.238	401.638	427.038	452.438	477.838	503.238	528.638
7 / 8	0.8750	301.625	327.025	352.425	377.825	403.225	428.625	454.025	479.425	504.825	530.225
15 / 16	0.9375	303.212	328.612	354.012	379.412	404.812	430.212	455.612	481.012	506.412	531.812

<i>Inch</i>		<i>Inches</i>									
<i>Fraction</i>	<i>Decimal</i>	<i>21</i>	<i>22</i>	<i>23</i>	<i>24</i>	<i>25</i>	<i>26</i>	<i>27</i>	<i>28</i>	<i>29</i>	<i>30</i>
		<i>mm</i>									
0	0.0000	533.400	558.800	584.200	609.600	635.000	660.400	685.800	711.200	736.600	762.000
1 / 16	0.0625	534.988	560.388	585.788	611.188	636.588	661.988	687.388	712.788	738.188	763.588
1 / 8	0.1250	536.575	561.975	587.375	612.775	638.175	663.575	688.975	714.375	739.775	765.175
3 / 16	0.1875	538.162	563.562	588.962	614.362	639.762	665.162	690.562	715.962	741.362	766.762
1 / 4	0.2500	539.750	565.150	590.550	615.950	641.350	666.750	692.150	717.550	742.950	768.350
5 / 16	0.3125	541.338	566.738	592.138	617.538	642.938	668.338	693.738	719.138	744.538	769.938
3 / 8	0.3750	542.925	568.325	593.725	619.125	644.525	669.925	695.325	720.725	746.125	771.525
7 / 16	0.4375	544.512	569.912	595.312	620.712	646.112	671.512	696.912	722.312	747.712	773.112
1 / 2	0.5000	546.100	571.500	596.900	622.300	647.700	673.100	698.500	723.900	749.300	774.700
9 / 16	0.5625	547.688	573.088	598.488	623.888	649.288	674.688	700.088	725.488	750.888	776.288
5 / 8	0.6250	549.275	574.675	600.075	625.475	650.875	676.275	701.675	727.075	752.475	777.875
11 / 16	0.6875	550.862	576.262	601.662	627.062	652.462	677.862	703.262	728.662	754.062	779.462
3 / 4	0.7500	552.450	577.850	603.250	628.650	654.050	679.450	704.850	730.250	755.650	781.050
13 / 16	0.8125	554.038	579.438	604.838	630.238	655.638	681.038	706.438	731.838	757.238	782.638
7 / 8	0.8750	555.625	581.025	606.425	631.825	657.225	682.625	708.025	733.425	758.825	784.225
15 / 16	0.9375	557.212	582.612	608.012	633.412	658.812	684.212	709.612	735.012	760.412	785.812

<i>Inch</i>		<i>Inches</i>									
<i>Fraction</i>	<i>Decimal</i>	<i>31</i>	<i>32</i>	<i>33</i>	<i>34</i>	<i>35</i>	<i>36</i>	<i>37</i>	<i>38</i>	<i>39</i>	<i>40</i>
		<i>mm</i>									
0	0.0000	787.400	812.800	838.200	863.600	889.000	914.400	939.800	965.200	990.600	1016.000
1 / 16	0.0625	788.988	814.388	839.788	865.188	890.588	915.988	941.388	966.788	992.188	1017.588
1 / 8	0.1250	790.575	815.975	841.375	866.775	892.175	917.575	942.975	968.375	993.775	1019.175
3 / 16	0.1875	792.162	817.562	842.962	868.362	893.762	919.162	944.562	969.962	995.362	1020.762
1 / 4	0.2500	793.750	819.150	844.550	869.950	895.350	920.750	946.150	971.550	996.950	1022.350
5 / 16	0.3125	795.338	820.738	846.138	871.538	896.938	922.338	947.738	973.138	998.538	1023.938
3 / 8	0.3750	796.925	822.325	847.725	873.125	898.525	923.925	949.325	974.725	1000.125	1025.525
7 / 16	0.4375	798.512	823.912	849.312	874.712	900.112	925.512	950.912	976.312	1001.712	1027.112
1 / 2	0.5000	800.100	825.500	850.900	876.300	901.700	927.100	952.500	977.900	1003.300	1028.700
9 / 16	0.5625	801.688	827.088	852.488	877.888	903.288	928.688	954.088	979.488	1004.888	1030.288
5 / 8	0.6250	803.275	828.675	854.075	879.475	904.875	930.275	955.675	981.075	1006.475	1031.875
11 / 16	0.6875	804.862	830.262	855.662	881.062	906.462	931.862	957.262	982.662	1008.062	1033.462
3 / 4	0.7500	806.450	831.850	857.250	882.650	908.050	933.450	958.850	984.250	1009.650	1035.050
13 / 16	0.8125	808.038	833.438	858.838	884.238	909.638	935.038	960.438	985.838	1011.238	1036.638
7 / 8	0.8750	809.625	835.025	860.425	885.825	911.225	936.625	962.025	987.425	1012.825	1038.225
15 / 16	0.9375	811.212	836.612	862.012	887.412	912.812	938.212	963.621	989.012	1014.412	1039.812

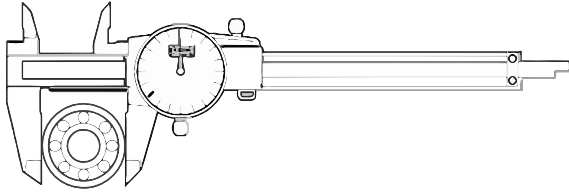


TOLERANCE TABLES

Tolerances for Shaft Diameters

units : μm

Diameter (mm)		Δ_{dmp}	d6	e6	f6	g5	g6	h5	h6	h7	h8	h9	h10	js5	js6	j5	j6	j7	k5	k6	k7	m5	m6	n6	p6
over	incl																								
3	6	0	-30	-20	-10	-4	-4	0	0	0	0	0	0	± 2.5	± 4.0	+3	+6	+8	+6	+9	+13	+9	+12	+16	+20
		-8	-38	-28	-18	-9	-12	-5	-8	-12	-18	-30	-48			-2	-2	-4	+1	+1	+1	+4	+4	+8	+12
6	10	0	-40	-25	-13	-5	-5	0	0	0	0	0	0	± 3.0	± 4.5	+4	+7	+10	+7	+10	+16	+12	+15	+19	+24
		-8	-49	-34	-22	-11	-14	-6	-9	-15	-22	-36	-58			-2	-2	-5	+1	+1	+1	+6	+6	+10	+15
10	18	0	-50	-32	-16	-6	-6	0	0	0	0	0	0	± 4.0	± 5.5	+5	+8	+12	+9	+12	+19	+15	+18	+23	+29
		-8	-61	-43	-27	-14	-17	-8	-11	-18	-27	-43	-70			-3	-3	-6	+1	+1	+1	+7	+7	+12	+18
18	30	0	-65	-40	-20	-7	-7	0	0	0	0	0	0	± 4.5	± 6.5	+5	+9	+13	+11	+15	+23	+17	+21	+28	+35
		-10	-78	-53	-33	-16	-20	-9	-13	-21	-33	-52	-84			-4	-4	-8	+2	+2	+2	+8	+8	+15	+22
30	50	0	-80	-50	-25	-9	-9	0	0	0	0	0	0	± 5.5	± 8.0	+6	+11	+15	+13	+18	+27	+20	+25	+33	+42
		-12	-96	-66	-41	-20	-25	-11	-16	-25	-39	-62	-100			-5	-5	-10	+2	+2	+2	+9	+9	+17	+26
50	80	0	-100	-60	-30	-10	-10	0	0	0	0	0	0	± 6.5	± 9.5	+6	+12	+18	+15	+21	+32	+24	+30	+39	+51
		-15	-119	-79	-49	-23	-29	-13	-19	-30	-46	-74	-120			-7	-7	-12	+2	+2	+2	+11	+11	+20	+32
80	120	0	-120	-72	-36	-12	-12	0	0	0	0	0	0	± 7.5	± 11.0	+6	+13	+20	+18	+25	+38	+28	+35	+45	+59
		-20	-142	-94	-58	-27	-34	-15	-22	-35	-54	-87	-140			-9	-9	-15	+3	+3	+3	+13	+13	+23	+37
120	180	0	-145	-85	-43	-14	-14	0	0	0	0	0	0	± 9.0	± 12.5	+7	+14	+22	+21	+28	+43	+33	+40	+52	+68
		-25	-170	-110	-68	-32	-39	-18	-25	-40	-63	-100	-160			-11	-11	-18	+3	+3	+3	+15	+15	+27	+43
180	250	0	-170	-100	-50	-15	-15	0	0	0	0	0	0	± 10.0	± 14.5	+7	+16	+25	+24	+33	+50	+37	+46	+60	+79
		-30	-199	-129	-79	-35	-44	-20	-29	-46	-72	-115	-185			-13	-13	-21	+4	+4	+4	+17	+17	+31	+50
250	315	0	-190	-110	-56	-17	-17	0	0	0	0	0	0	± 11.5	± 16.0	+7	± 16	± 26	+27	+36	+56	+43	+52	+66	+88
		-35	-222	-142	-88	-40	-49	-23	-32	-52	-81	-130	-210			-16			+4	+4	+4	+20	+20	+34	+56
315	400	0	-210	-125	-62	-18	-18	0	0	0	0	0	0	± 12.5	± 18.0	+7	± 18	+29	+29	+40	+61	+46	+57	+73	+98
		-40	-246	-161	-98	-43	-54	-25	-36	-57	-89	-140	-230			-18		-28	+4	+4	+4	+21	+21	+37	+62
400	500	0	-230	-135	-68	-20	-20	0	0	0	0	0	0	± 13.5	± 20.0	+7	± 20	+31	+32	+45	+68	+50	+63	+80	+108
		-45	-270	-175	-108	-47	-60	-27	-40	-63	-97	-155	-250			-20		-32	+5	+5	+5	+23	+23	+40	+68
500	630	0	-260	-145	-76	-	-22	-	0	0	0	0	0	-	± 22.0	-	-	-	-	+44	+70	-	+70	+88	+122
		-50	-304	-189	-120	-	-66	-	-44	-70	-110	-175	-280							0	0	-	+26	+44	+78
630	800	0	-290	-160	-80	-	-24	-	0	0	0	0	0	-	± 25.0	-	-	-	-	+50	+80	-	+80	+100	+138
		-75	-340	-210	-130	-	-74	-	-50	-80	-125	-200	-320							0	0	-	+30	+50	+88
800	1000	0	-320	-170	-86	-	-26	-	0	0	0	0	0	-	± 28.0	-	-	-	-	+56	+90	-	+90	+112	+156
		-100	-376	-226	-142	-	-82	-	-56	-90	-140	-230	-360							0	0	-	+34	+56	+100
1000	1250	0	-350	-195	-98	-	-28	-	0	0	0	0	0	-	± 33.0	-	-	-	-	+66	+105	-	+106	+132	+186
		-125	-416	-261	-164	-	-94	-	-66	-105	-165	-260	-420							0	0	-	+40	+66	+120
1250	1600	0	-390	-220	-110	-	-30	-	0	0	0	0	0	-	± 39.0	-	-	-	-	+78	+125	-	+126	+156	+218
		-160	-468	-298	-188	-	-108	-	-78	-125	-195	-310	-500							0	0	-	+48	+78	+140
1600	2000	0	-430	-240	-120	-	-32	-	0	0	0	0	0	-	± 46.0	-	-	-	-	+92	+150	-	+150	+184	+262
		-200	-522	-332	-212	-	-124	-	-92	-150	-230	-370	-600							0	0	-	+58	+92	+170



TOLERANCE TABLES
Tolerances for
Housing Bore Diameters

units : μm

Diameters (mm)		Δ_{Dmp}	E6	F6	F7	G6	G7	H6	H7	H8	J6	J7	JS6	JS7	K5	K6	K7	M5	M6	M7	N5	N6	N7	P6	P7
over	incl																								
10	18	0 -8	+43 +32	+27 +16	+34 +16	+17 +6	+24 +6	+11 0	+18 0	+27 0	+6 -5	+10 -8	± 5.5	± 9	+2 -6	+2 -9	+6 -12	-4 -12	-4 -15	0 -18	-9 -17	-9 -20	-5 -23	-15 -26	-11 -29
18	30	0 -9	+53 +40	+33 +20	+41 +20	+20 +7	+28 +7	+13 0	+21 0	+33 0	+8 -5	+12 -9	± 6.5	± 10.5	+1 -8	+2 -11	+6 -15	-5 -14	-4 -17	0 -21	-12 -21	-11 -24	-7 -28	-18 -31	-14 -35
30	50	0 -11	+66 +50	+41 +25	+50 +25	+25 +9	+34 +9	+16 0	+25 0	+39 0	+10 -6	+14 -11	± 8	± 12.5	+2 -9	+3 -13	+7 -18	-5 -16	-4 -20	0 -25	-13 -24	-12 -28	-8 -33	-21 -37	-17 -42
50	80	0 -13	+79 +60	+49 +30	+60 +30	+29 +10	+40 +10	+19 0	+30 0	+46 0	+13 -6	+18 -12	± 9.5	± 15	+3 -10	+4 -15	+9 -21	-6 -19	-5 -24	0 -30	-15 -28	-14 -33	-9 -39	-26 -45	-21 -51
80	120	0 -15	+94 +72	+58 +36	+71 +36	+34 +12	+47 +12	+22 0	+35 0	+54 0	+16 -6	+22 -13	± 11	± 17.5	+2 -13	+4 -18	+10 -25	-8 -23	-6 -28	0 -35	-18 -33	-16 -38	-10 -45	-30 -52	-24 -59
120	150	0 -18	+110 +85	+68 +43	+83 +43	+39 +14	+54 +14	+25 0	+40 0	+63 0	+18 -7	+26 -14	± 12.5	± 20	+3 -15	+4 -21	+12 -28	-9 -27	-8 -33	0 -40	-21 -39	-20 -45	-12 -52	-36 -61	-28 -68
150	180	0 -25	+110 +85	+68 +43	+83 +43	+39 +14	+54 +14	+25 0	+40 0	+63 0	+18 -7	+26 -14	± 12.5	± 20	+3 -15	+4 -21	+12 -28	-9 -27	-8 -33	0 -40	-21 -39	-20 -45	-12 -52	-36 -61	-28 -68
180	250	0 -30	+129 +100	+79 +50	+96 +50	+44 +15	+61 +15	+29 0	+46 0	+72 0	+22 -7	+30 -16	± 14.5	± 23	+2 -18	+5 -24	+13 -33	-11 -31	-8 -37	0 -46	-25 -45	-22 -51	-14 -60	-41 -70	-33 -79
250	315	0 -35	+142 +110	+88 +56	+108 +56	+49 +17	+69 +17	+32 0	+52 0	+81 0	+25 -7	+36 -16	± 16	± 26	+3 -20	+5 -27	+16 -36	-13 -36	-9 -41	0 -52	-27 -50	-25 -57	-14 -66	-47 -79	-36 -88
315	400	0 -40	+161 +125	+98 +62	+119 +62	+54 +18	+75 +18	+36 0	+57 0	+89 0	+29 -7	+39 -18	± 18	± 28.5	+3 -22	+7 -29	+17 -40	-14 -39	-10 -46	0 -57	-30 -62	-26 -73	-16 -87	-51 -98	-41 -98
400	500	0 -45	+175 +135	+108 +68	+131 +68	+60 +20	+83 +20	+40 0	+63 0	+97 0	+33 -7	+43 -20	± 20	± 31.5	+2 -25	+8 -32	+18 -45	-16 -43	-10 -50	0 -63	-33 -60	-27 -67	-17 -80	-55 -95	-45 -108
500	630	0 -50	+189 +145	+120 +76	+146 +76	+66 +22	+92 +22	+44 0	+70 0	+110 0	-	-	± 22	± 35	-	0 -44	0 -70	-	-26 -70	-26 -96	-	-44 -88	-44 -114	-78 -122	-78 -148
630	800	0 -75	+210 +160	+130 +80	+160 +80	+74 +24	+104 +24	+50 0	+80 0	+125 0	-	-	± 25	± 40	-	0 -50	0 -80	-	-30 -80	-30 -110	-	-50 -100	-50 -130	-88 -138	-88 -168
800	1000	0 -100	+226 +170	+142 +86	+176 +86	+82 +26	+116 +26	+56 0	+90 0	+140 0	-	-	± 28	± 45	-	0 -56	0 -90	-	-34 -90	-34 -124	-	-56 -112	-56 -146	-100 -156	-100 -190
1000	1250	0 -125	+261 +195	+164 +98	+203 +98	+94 +28	+133 +28	+66 0	+105 0	+165 0	-	-	± 33	± 52.5	-	0 -66	0 -105	-	-40 -106	-40 -145	-	-66 -132	-66 -171	-120 -186	-120 -225
1250	1600	0 -160	+298 +220	+188 +110	+235 +110	+108 +30	+155 +30	+78 0	+125 0	+195 0	-	-	± 39	± 62.5	-	0 -78	0 -125	-	-48 -126	-48 -173	-	-78 -156	-78 -203	-140 -218	-140 -265
1600	2000	0 -200	+332 +240	+212 +120	+270 +120	+124 +32	+182 +32	+92 0	+150 0	+230 0	-	-	± 46	± 75	-	0 -92	0 -150	-	-58 -150	-58 -208	-	-92 -184	-92 -242	-170 -262	-170 -320
2000	2500	0 -250	+370 +260	+240 +130	+305 +130	+144 +34	+209 +34	+110 0	+175 0	+280 0	-	-	± 55	± 87.5	-	0 -110	0 -175	-	-68 -178	-68 -243	-	-110 -220	-110 -285	-195 -305	-195 -370

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