

# FAG Deep Groove Ball Bearings 6203.2RSR.M.P63.S1.L12

Series			Grease Codes
60	Extra Light		Consult Grease Code Chart
62	Light		
63	Medium		
64	Heavy		
Bore Diamete	er		
00	10 mm	Heat Treat	Code
01	12 mm	SO	For Operating temp. up to 300°F
02	15 mm	(No Suffix)	
03	17 mm	S1	For operating temp. up to 392°F (200 °C
04 –96	Bore Reference x 5 (mm)	S2	For operating temp. up to 482 °F (250 °C
$_{/500} \rightarrow$	$500 \text{ mm} \rightarrow$	S3 S4	For operating temp. up to 572 °F (300 °C For operating temp. up to 662 °F (350 °C
Sealing & Sh	ielding		I TO BO I I I COL
No Suffix	Open Bearing		
RSR	Standard Rubber Seal (Contact)		
2RSR	2 Standard Rubber Seals (Contact)		
RSD	Standard Rubber Seals (Non-Contact)		
2RSD	2 Standard Rubber Seals (Non-		
21000	Contact)		
HSR	Hycar Seal (Contact)	Precision Cl	ass
2HSR	2 Hycar Seals (Contact)	ISO	ABEC
HSD	Hycar Seals (Non-Contact)	PN (No Suffi	ix) 1 Standard
2HSD	2 Hycar Seals (Non-Contact)	P6	3 Better than PN
VSR	Viton Seal (Contact)	P5	5 Better than P6
2VSR	2 Viton Seals (Contact)		
VSD	Viton Seals (Non Contact)		
	2 Viton Seals (Non Contact)		
2 V SD 7D	2 Viton Seals (Non Contact)		
	2 Motol Shields		
ZZR	2 Metal Shields	Radial Clear	ance Class
Cage Design		C2	Smaller than CN Clearance
J	Standard Pressed Steel Cage	CN	Normal Clearance
JN	Riveted Standard Pressed Steel Cage	C3	Greater than CN Clearance
TNH	Polyamide, Snap-Type	C4	Greater than C3 Clearance
М	Machined Brass	C5	Greater than C4 Clearance
TVH	Polyamide, Glass Fiber Reinforced	R30.50	Special Radial Clearance
- • ••	Snap-Type		(30 to 50 Microns)
Y	Pressed Brass		
Cage Type			
No Suffix	Ball Guided		
А	Outer Ring Guided		
В	Inner Ring Guided		



# FAG Angular Contact Ball Bearings <u>7203B.TVP.P5.UA</u>

Г

Series	
718	
719	
70	
72	
73	
Bore Diameter	
00	10 mm
01	12 mm
02	15 mm
03	17 mm
04 - 96	Bore Reference x 5 (mm)
$/500 \rightarrow$	$500 \text{ mm} \rightarrow$

#### **Internal Bearing Design**

Suffix	Series	Contact Angle
No Suffix	718	30°
	719	30°
	70 (Bore 1	00 mm) 20°
	70 (Bore > 1	00 mm) 30°
В	72	$40^{\circ}$
	73	$40^{\circ}$
	74	$40^{\circ}$

Cage Design	
TVP	Glass Fiber Reinforced Polyamide
MP	Machined Brass
YP	Pressed Brass

### Cage GuidanceNo SuffixBall Guided

А	Outer Ring Guided
В	Inner Ring Guided

Universal De	sign for Paired Mounting
No Suffix	Paired Mounting NOT Possible
UA	Small Axial Clearance when Paired Un-
Mounted in a	n "X" or "O" Arrangement
UO	Zero Clearance when Paired Un-Mounted in
	an "X" or "O" Arrangement
UL	Light Preload when Paired Un-Mounted in
	an "X" or "O" Arrangement
UM	Medium Preload when Paired Un-Mounted
	in an "X" or "O" Arrangement
US	Heavy Preload when Paired Un-Mounted in
	an "X" or "O" Arrangement
UA50.100	Special Un-Mounted Axial Clearance for a
	Universal Design Bearing Pair.
	(50 to 100 Microns)

#### Precision Class

No Suffix	Normal (PN) Tolerance
No Suffix	Universal Design - Normal (PN)
	Tolerance with P5 Bore Diameter &
	Special width tolerance
P6	Better than PN Tolerance
P6	Universal Design – Better than PN
	Tolerance with P5 Bore Diameter &
	Special width tolerance
P5	Better than P6
P5	Universal Design 0 Better than P6
	Tolerance with Special width tolerance



### FAG Double-Row Angular Contact Ball Bearings

### 3207B.2RSR.TVH.P53.L12

Series		
32	Light	
33	Medium series	
Bore Diameter		
00	10 mm	
01	12 mm	
02	15 mm	
03	17 mm	
04 - 96	Bore Reference	
	x 5 (mm)	
$/500 \rightarrow$	$500 \text{ mm} \rightarrow$	
Internal Design		
No Suffix	Max type 35 contact angle	
С	Max type 30 contact angle	
	Domestic Production	
В	Conrad type 25 contact angle	
BC	Conrad type 25 contact angle	
	Domestic Production	
DA	Split inner ring 45 contact	
	angle	
Seals & Shields		
RSR	1 Rubber Seal (Contact)	
2RSR	2 Rubber Seals (Contact)	
ZR	1 Metal Shield	
2ZR	2 Metal Shields	

#### Grease

See Deep Groove Ball Bearings except L943 L943 Anti-Corrosion Slush Preservative

#### Axial Internal Clearance

C2	Less than Normal
No Suffix	Normal (CN)
C3	Larger than Normal
C4	Larger than C3
A50.100	Special Axial Clearance
	(50 to 100 Microns)

#### Precision Class

ISO	AB	EC
No	1	Standard
Suffix		Precision (PN)
P6	3	Better than standard
		Precision
P5	5	Better than P6
		Precision

Cage Design	
TVH	Glass Fiber Reinforced
	Polyamide
JH	Stamped Steel
М	Machined Brass

### FAG

# **FAG Spindle Bearings**

## B7008CB.T.P4S.DUL

Туре	
B	Standard OR relieved IR
	symmetrical
HCB	Standard OR relieved IR
	symmetrical, ceramic balls
HS	High speed Small ball
	bearing, double relieved
HSS	High speed ball bearing sealed
HC	High speed ball bearing,
	ceramic balls
HCS	High speed ball bearing,
	ceramic balls, sealed
Series	
719	Light Series
70	Medium Series
72	Heavy Series
D	
Bore Diame	
00	10 mm
01	12 mm
02	15 mm
03	1 / mm
04	$4^{+}5 = 20 \text{ mm}$
Contact Ar	ngle
С	15 Degree
Е	25 Degree
CB	
	15 Degree, made in
	15 Degree, made in US (standard for B
	15 Degree, made in US (standard for B type series)
EB	<ul><li>15 Degree, made in</li><li>US (standard for B</li><li>type series)</li><li>25 Degree, made in</li></ul>
EB	<ul> <li>15 Degree, made in</li> <li>US (standard for B</li> <li>type series)</li> <li>25 Degree, made in</li> <li>USA (standard for B</li> </ul>

	Standar	d Preloads
	L	Light
	М	Medium
	Н	Heavy
Bearing Set	ts	
U	Single b	earing universal,
	available	e as a special
	order for	r USA made product
DU	Duplex	set, universal,
	standard	for USA made
	product	
TU	Triplex	set, universal,
	non-star	idard can be ordered
QU	Quadrup	olex set, universal,
	non- sta	ndard can be ordered
PU	Pentaple	ex set, universal,
	non- sta	ndard can be ordered
DB	Duplex	set, back to back,
	non- sta	ndard can be ordered
DT	Duplex	set, tandem, non-
	standard	can be ordered
TBT	Triplex	set, tandem back to
	back, no	n-standard can
ordered		
QBC	Quadrup	olex set, double
	tandem,	back to back, non-
	standard	can be ordered
Provision		
	ΕΛC to	Jerance better
1 -10	than sta	and ISO P4
	ulali sta	
Casa		
Cage		



### **Ball Screw Support Bearings**





Note: These bearings are made to P4 precision only Contact angle is 60 deg



# FAG Double-Row Self-Aligning Ball Bearings 2208K.2RS.TV.C3.L12

	<u>220</u>	<u>)8K.</u>	<u>2RS.1</u>	<u>[V.C:</u>	<u>3.L12</u>	
Series 12 L	ight				G	rease Code
22 L	ight Wide					
13 N	Iedium					
23 N	Iedium Wide					
					Radial Inter	rnal Clearance
					C2	Less than normal
Bore Dia	meter				No Suffix	Norman (CN)
00	10 mm	-			C3	Larger than normal
01	12 mm				C4	Larger than C3
02	15 mm				R30.50	Special radial clearance
03	17 mm					30 to 50 microns
04 – 96B	ore Reference (mm)					
/500→	$500 \text{ mm} \rightarrow$					
					Cage Desig	gn
Bore De	sign			H	No suffix	Stamped Steel
No Suffi	x Cylindrical Bore	J			М	Machined Brass
K	Tapered Bore (1:12)	)			F	Machined Steel
	,				TV	Polyamide
Seals						

RS 1 Rubber Seal (contact)

2RS 2 Rubber Seals (contact)



### **FAG Thrust Ball Bearings**





## **FAG Cylindrical Roller Bearings**

### NU2336EX.M1.C4

#### **Bearing Design**

- NU 1 Row, No Lips I.R., 2 Lips O.R.
- NJ 1 Row, 1 Lip I.R., 2 Lips O.R.
- NUP 1 Row, 1 Lip + Separable Lip I.R. 2 Lip O.R.
- N 1 Row, 2 Lips I.R., No Lips O.R.
- NJ + HJ 1 Row, 1 Lip + Angle Ring I.R. 2 Lips O.R.

#### Series

- 10 Extra Light
- 2 Light
- 22 Light Wide
- 3 Medium
- 23 Medium Wide
- 4 Heavy

#### **Bore Diameter**

00	10 mm
01	12 mm
02	15 mm
03	17 mm
04 - 96	Bore Reference x 5 (mm)
$/500 \rightarrow$	$500 \text{ mm} \rightarrow$

#### **Internal Bearing Design**

No Suf	fix Standard Capacity
E	High (extra) Capacity
EX	High (extra) Capacity
	Internal Design per DIN5412

#### **Radial Internal Clearance**

C2	Less than normal
No Suffix	Normal (CN)
C3	Larger than normal
C4	Larger than C3
R80.100	Special Radial
	Clearance

(80 to 100 microns)

#### **Cage Design**

В

Mach	nined Steel	
Stam	ped Steel	
Stam	ped Steel ("E" Design)	
Mach	ined Brass	
Mach	Machined Brass ("P" Design)	
Glass Fiber Reinforced		
Polya	amide	
~		
Guida	nce	
ffix	Roller Guided	
	Out Ring Guided	
	Mach Stam Stam Mach Mach Glass Polya <u>Guida</u> ffix	

Inner Ring Guided



#### FAG Single-Row Cylindrical Roller **Bearings** N1026K.M1.SP.C2 **Bearing Design Radial Internal Clearance** 1 Row, 2 Lips I.R., Ν No Suffix C1NA (less than C2) No Lips O.R. C2 Less than Normal (CN) C3 Larger than CN R25.35 **Special Radial Clearance** (25 to 35 Microns) Series 10 19 **Precision Class** SP **Special Precision Bore Diameter** 06 - 96Bore Reference x 5 (mm) $/500 \rightarrow$ $500 \text{ mm} \rightarrow$ **Cage Design** M1 **Machined Brass** F1 Machined Steel **Bore Design Cage Guidance** Cylindrical Bore No Suffix No Suffix **Roller Guided** Κ **Tapered Bore** Outer Ring Guided А (1:12)Inner Ring Guided В



### FAG Double-Row Cylindrical Roller Bearings <u>NNU3026ASK.M.SP.C2</u>

Pooring Dogige			Dadial I	tomal Cleanance
Bearing Design				
INN 2 ROW	3  Lips I.K. No Lips O.R.			Less than Normal (CN)
NNU 2 ROW	1 Ling Concepts Lips U.R.		No Sum	(C1NA(20, 8, 40)  Series)
NNUP 2 ROW	1 Lip + Separable Lip I.K			(CINA(30.&49 Series
3 Lips	U.K.			or "UP" Precision Class)
Series			C3	Larger than CN
30			R25.35	Special Radial Clearance
40				(25 to 30 Microns)
41				, , , , , , , , , , , , , , , , , , ,
48			Precision Cl	ass
49			No Suffix	Normal (PN) Tolerance
Bore Diamet	ter		P6	Better than PN Tolerance
04 - 96	Bore Reference x 5 (mm)		P5	Better than P6 Tolerance
/500→	$500 \text{ mm} \rightarrow$		P4	Better than P5 Tolerance
			SP	Special Precision
Internal Rea	aring Desigr		UP	Ultra Precision
A	Internal C			
			Cage Design	
			М	Machined Brass
Lubrication	Hole Featu		F	Machined Steel
S	Lubricatic			
	Note: Indicated for all Bear	ings		
	regardless of O.D. dimensio	'n	Cage Guidan	ce
			No Suffix	Roller Guided
<b>Bore Desig</b>	n		А	Outer Ring Guided
No Suffix	Cylindrical Bore		В	Inner Ring Guided
Κ	Tapered Bore (1:12)			



### FAG Cylindrical Roller Thrust Bearings

	<u>8112</u>	26LPB.P	<u>5</u>
Series		Precisi	ion Class
810		No Suf	fix Normal (PN) Tolerance
811		P6	Better than PN Tolerance
812		P5	Better than P6 Tolerance
813			
814		Cage Desig	n
		J	Stamped Steel
		TVP	Glass Fiber Reinforced Polyamide
		M	2 pc. Machined Brass
Bore Diam	eter	MP	1 pc. Machined Brass
00	10	F	2 pc. Machined Steel
01	12	FP	1 pc. Machined Steel
02	15	L	2 pc. Light Metal Alloy
03	17	LP	1 pc. Light Metal Alloy
04 - 96	Bore Reference x 5 (mm)		
/500	500 mm	Cage Guid	lance
		No Suffix	Roller Guided
		Α	Housing Guided
		В	Shaft Guided
		Cage Luh	rication Slots
		S	Lubrication slots in
		2	Cage Guidance Surface
			-



## Tapered Roller Bearings In Metric Dimension

Numbering system per DIN / ISO720



Note: Series 320X,329,330,331,332 with bore diameters of up to 200 mm have the P6X tolerance as standard



### **FAG Barrel Roller Bearings**

	<u>20</u>	2 <u>22</u> 4	<u>K.MI</u>	<u>B.C3</u>	
Bearing Serie	S			Radial Inter	hal Clearance
202	Light			C2 No Suffix	Norman (CN)
203	Heavy			C3	Larger than normal
204	Ticav y			C3	Larger than C3
				R100.200	Special Radial Clearance 100 to 200 microns
Bore Diamet	er			Cage Desig	n
02	15 mm			No Suffix	(J) Stamped Steel
03	17 mm			Т	(TVP) Glass Fiber
04 - 64	Bore Reference x 5 (mm)				Reinforced Polyamide
				Μ	Machined Brass
Bore Design				Cage Guida	ince
No Suffix	Cylindrical Bore			No Suffix	Roller Guided
K	Tapered Bore (1:12)			В	Inner Ring Guided

#### PART SCHEMATIC



### FAG Double-Row Spherical Roller Bearings <u>22318EASK.M.C3</u>

239	Extremely light, wide
230	Extra light, wide
240	Extra light, extra wide
231	Extra light / light, wide
241	Extra light / light, extra wide
222	Light
232	Light, wide
213	Medium, narrow
223	Medium
233	Heavy

#### **Bore Diameter**

00	10 mm
01	12 mm
02	15 mm
03	17 mm
04 - 96	Bore Reference x 5 (mm)
$/ 500 \longrightarrow$	$500 \text{ mm} \rightarrow$

#### **Internal Bearing Design**

No Suffix	Standard Capacity
E	High (extra) Capacity
А	Internal Design Modification
В	Internal Design Modification

#### **Lubrication Hole Feature**

S	Lubrication C	Groove & Holes	, O.R.
(not indicated	for bearing	O.D. > 320 m	ım, or
"E" type steel	cage design)		
SY	Lubrication H	Ioles, O.R.	

#### **Radial Internal Clearance**

C2	Less than normal
No Suffix	Normal (CN)
C3	Lager than normal
C4	Larger than C3
R100.120	Special Radial
	Clearance

#### 100 – 120 microns

#### **Cage Design**

No Suffix	Stamped Steel
	("E" Design)
J	Stamped Steel
F	Machined Steel
L	Light Metal Alloy
Μ	Machined Brass
TVP	<b>Glass Fiber Reinforced</b>
	Polyamide
YP	Stamped Brass

#### Cage Guidance

No Suffix	Roller Guided
А	Outer Ring Guided
В	Inner Ring Guided

#### **Bore Design**

No Suffix	Cylindrical Bore
Κ	Tapered Bore (1:12)
K30	Tapered Bore (1:30)



### **Spherical Roller Thrust Bearings**





### FAG Screen Bearing Nomenclature (Brass Cage Bearings)

	<u>22322E</u>	ASK.I	<u>MA.T</u>	41A	
Bear	ing Series			Additiona	l Suffixes
223 233	Medium Heavy			T41A	Special Features for Vibratory Screen Bearings
			Cage (	Guidance	
<b>Bore</b> 08 –	44 Bore Reference x 5 (mm)		M	Mac	chined Brass
Interi	nal Rearing Design		Cage	Guidance	
No Su E A	iffix Standard Capacity High (Extra) Capacity Internal Design Modification	on	No Su A	ffix Rol Ou	ller Guided ter Ring Guided
Lubrica	tion Hole Feature		Bore D	Design	
S	Lubrication Groove & Holes, (not indicated for Bearing O.I 320 mm, or "E" – Type Steel Design)	O.R. D. > Cage	No Suf K	fix Cyli Tap	ndrical Bore ered Bore (1:12)



### FAG Screen Bearing Nomenclature (Steel Cage Bearings)

	22322	EDK.T4	1A	
Booring Sori	log		Addition	al Suffixes
223	Medium		T41A	Special Features for Vibratory Screen Bearings
Bore Diamet	ter		Bore Design	
08 – 30 Bor	re Reference x 5 (mm)		No Suffix	Cylindrical Bore
			К	Tapered Bore (1:12)
Internal Bea	aring Design			
E	High Extra Capacity			
Bearing Inn	er Ring Material			
No Suffix	AISI 521000 Steel (FAG "	W3"Specification	on)	
D	FAG "W4" Modified Steel	l)		

Note: The standard steel cage design ("JPA"- type) is not indicated in the bearing nomenclature