

4. Bearing Number Codes

Rolling bearing part numbers indicate bearing type, dimensions, tolerances, internal construction, and other related specifications. Bearing numbers are comprised of a "basic number" followed by "supplementary codes." The makeup and order of bearing numbers is shown in Table 4.1 (Number and code arrangement for deep groove and miniature ball bearings), Table 4.6 (for angular contact ball bearings), and Table 4.7 (for needle roller bearings).

The basic number indicates general information about a

bearing, such as its fundamental type, boundary dimensions, series number, bore diameter code and contact angle. These coded series are shown in Table 4.4 and Table 4.3 respectively.

The supplementary codes derive from prefixes and suffixes which indicate a bearing's tolerances, internal clearances, and related specifications. These two codes are shown in Table 4.4 and Table 4.5.

Table 4.1 Number and code arrangement for deep groove and miniature ball bearings

Number and code arrangement			
Supple- mentary	Special application code		
	Material/heat treatment code		
Basic number	Dimen- sion	Design code	
		Dimensiona	Width/height series code
			Diameter series code
Bore diameter number			
Supple- mentary	Internal modification code		
	Cage codes		
	Seal/shield code		
	Ring configuration code		
	Duplex arrangement code		
	Tolerance code		
	Lubrication code		

TS2- 6 2 05 ZZ C3 P5

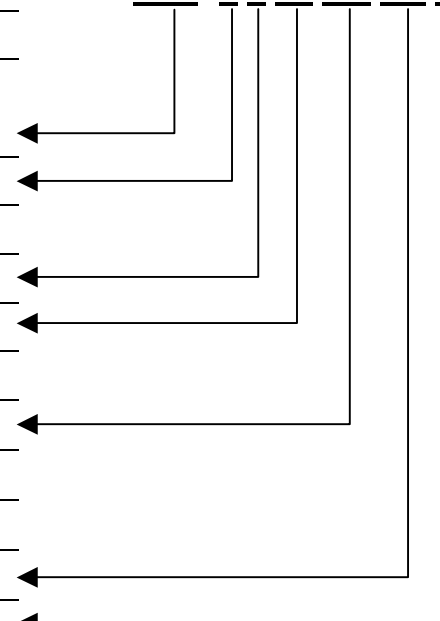


Table 4.4 Supplementary prefix code

code	Definition
F-	Stainless steel bearings
TS2-	Dimension stabilized bearings for high temperature use (to 160° C)
TS3-	Dimension stabilized bearings for high temperature use (to 200° C)
TS4-	Dimension stabilized bearings for high temperature use (to 250° C)
TM-	Special heat treated long-life bearings
CS-	Special heat treated long-life bearings
ES-	Special heat treated and material extra long-life bearings
EC-	Expansion compensating bearings
AC-	Creep preventing bearings

Table 4.3 Bearing series symbol

Bearing series	Type symbol	Dimensions series		Bearing type
		width series	diameter series	
68	6	(1)	8	Single row deep groove ball bearings
69		(1)	9	
60		(1)	0	
62		(0)	2	
63		(0)	3	
64		(0)	4	

Note: Please consult TPI concerning bearing series codes, and supplementary prefix/suffix codes not listed in the above table.

Table 4.4 Bore diameter number

Bore diameter number	Bore diameter d mm	Remark
/0.6	0.6	Slash (/) before bore diameter number
/1.5	1.5	
/2.5	2.5	
1	1	Bore diameter expressed in single digits without code
9	9	
00	10	_____
01	12	
02	15	
03	17	
/22	22	Slash (/) before bore diameter number
/28	28	
/32	32	
04	20	Bore diameter number in double digits after dividing bore diameter by 5
05	25	
06	30	
07	35	
08	40	
09	45	
10	50	

Table 4.4 Supplementary suffix number

Code		Explanation
Cage	L1	Machined brass cage
	F1	Machined steel cage
	G1	Machined brass cage, rivetless
	G2	Pin-type steel cage
	J	Pressed steel cage
	T1	Phenolic cage
	T2	Plastic cage, nylon or teflon
Seal or shield	LLB	Synthetic rubber seal (non-contact type)
	LLU	Synthetic rubber seal (contact type)
	LLH	Synthetic rubber seal (low torque type)
	ZZ	Shield
	ZZA	Removable shield
Ring configuration	N	Snap ring groove on outer ring, but without snap ring
	NR	Snap ring on outer ring
	D	Bearings with oil holes
Internal clearance	C2	Radial internal clearance less than Normal
	(CN)	Normal radial internal clearance, but not shown in nominal numbers
	C3	Radial internal clearance less than Normal
	C4	Radial internal clearance less than C3
	CM	Radial internal clearance for electric motor bearings
	NA	Non-interchangeable clearance (shown after clearance code)
	/GL	Light preload
	/GN	Normal preload
	/GM	Medium preload
	/GH	Heavy preload
Tolerance standard	P6	JIS standard Class 6
	P5	JIS standard Class 5
	P4	JIS standard Class 4
	P2	JIS standard Class 2
Lubrication	/2AS	Shell Alvania S2 grease
	/5C	Caltex RPM SRI 2 grease
	/3E	ESSO Beacon 325 grease
	/5K	MULTEMP SRL grease

Table 4.6 Number and code arrangement for angular contact ball bearings(ACBB)

5S-7014C T1 DB G /GL P4

Code		Explanation
Basic Numbers	Ball material	5S- Si ₃ N ₄ Ceramic balls
		blank SUJ2
	Ring material	F- SUS440C
		blank SUJ2
	Bearing series	7 Standard type ACBB
		HSE High Speed Type ACBB
		BST Thrust ACBB
Diameter series	9	
	0	
	2	
Bore diameter number	8	
	: 20	
Contact angle code	C 15°	
	AD 25°	
	(A) 30°, may not shown in code	
	B 40°	
Cage	T1 Phenolic cage	
	blank Nylon cage	
Matching code	DB Back to back(double-row)	
	DF Face to face(double-row)	
	DT Tandem(double-row)	
	DBT Tandem and back to back (triple-row)	
	DTBT Tandem and back to back(quad-row)	
Flush grinding	G Flush ground type	
	blank Without flush ground	
Supplementary suffix code	/GL Light preload	
	/GN Normal preload	
	/GM Medium preload	
	/Gxx Special preload	
	/CSxx Special clearance	
Tolerance standard	P5 JIS standard Class 5	
	P4 JIS standard Class 4	
	P4X JIS standard Class 4、 special bore and outside diameter tolerance	
	P42 JIS standard Class 4 (dimensional)、 JIS standard Class 2 (running accuracy)	
	P2 JIS standard Class 2	

Table 4.7 Number and code arrangement for needle roller bearings

K 28×32×17 S V1

code		Explanation	
Supplementary prefix code		8Q	Bearings with cage assemblies treated by soft-nitriding
Basic number	Series code	K, KJ, KMJ, PCJ, PK, KBK	Needle roller and cage assemblies bearing
		HK, HMK, BK	Drawn-cup needle roller bearing
	Dimension code	Bore diameter	
		Outside diameter	
Width			
Suffix supplemental code	Cage assemblies code	S	Welded cage
	Seal, shield code	L	With the synthetic rubber seal on one side(contact type)
		LL	With the synthetic rubber seal on both side(contact type)
	Lubricant code	/2AS	ALVANIA S2
		/3AS	ALVANIA S3
		/5K	Multemp SRL
		/LPO3	Heat hardening type grease
	Tolerance standard	P6	JIS standard Class 6
		P5	JIS standard Class 5
		P4	JIS standard Class 4
PX1~PXn		Special dimension tolerance	
Special code	V1~Vn	Special specifications, requirements	