

CATÁLOGO KOYO

SECCIÓN TÉCNICA Y DESIGNACIONES

Tough on Friction, Kind to Earth
KIB - 2013

—— Value & Technology

1. CATÁLOGO – SECCIÓN TÉCNICA.

CONTENIDO COMPLETO.

SERIES, DIMENSIONES
Y TOLERANCIAS.

MATERIALES Y PRODUCCIÓN.

DISEÑOS.

2. DESIGNACIONES y NOMENCLATURA.

DESIGNACIÓN ISO, ABMA.

PREFIJOS/SUFIJOS KOYO.

EQUIVALENCIAS COMPETENCIA.

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Supplementary tables

Koyo

Ball & Roller Bearings



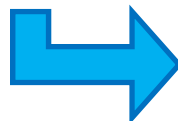
JTEKT

GAMA, TIPOS, SERIES Y DISEÑOS:

- ❖ Resumen por Tipo: pg. A4 – A13.
- ❖ Comparativa cualidades: pg. A-18-19.
- ❖ Series rodamientos Radiales: pg. A-17.
- ❖ Series Todos: pg. A49 (A-17).

TOLERANCIAS:

- ❖ Comparativa Tolerancias: [pg. A-53.](#)



Bearing type			Applied standards	Applied tolerance class					
Deep groove ball bearing			JIS B 1514-1	Class 0	—	Class 6	Class 5	Class 4	Class 2
Angular contact ball bearing				Class 0	—	Class 6	Class 5	Class 4	Class 2
Self-aligning ball bearing				Class 0	—	—	—	—	—
Cylindrical roller bearing				Class 0	—	Class 6	Class 5	Class 4	Class 2
Needle roller bearing (machined ring type)			JIS B 1536-1	Class 0	—	—	—	—	—
Tapered roller bearing	Metric series (single-row)	JIS B 1514-1	Class 0	Class 6X	(Class 6)	Class 5	Class 4	Class 2	
	Metric series (double or four-row)	BAS 1002	Class 0	—	—	—	—	—	
	Inch series	ANSI/ABMA	Class 4	—	Class 2	Class 3	Class 0	Class 00	
	Metric series (J-series)		Class PK	—	Class PN	Class PC	Class PB	—	
Spherical roller bearing			JIS B 1514-1	Class 0	—	—	—	—	
Thrust ball bearing			JIS B 1514-2	Class 0	—	Class 6	Class 5	Class 4	—
Spherical thrust roller bearing				Class 0	—	—	—	—	—
Precision ball screw support bearing			JTEKT standards	—	—	—	Class P5Z	Class P4Z	—
Double direction angular contact thrust ball bearing				—	—	—	Equivalent to class 5	Equivalent to class 4	—
(Reference) Class comparison	ISO	Radial bearing	ISO 492	Normal Class	Class 6X	Class 6	Class 5	Class 4	Class 2
		Thrust bearing	ISO 199	Normal Class	—	Class 6	Class 5	Class 4	—
	DIN BS NF	Radial and thrust bearings	DIN 620 BS 6107 NF E 22-335	Normal Class	Class 6X	Class 6	Class 5	Class 4	Class 2
	ANSI ABMA	Radial bearing	ABMA std. 20	ABEC 1 RBEC 1	—	ABEC 3 RBEC 3	ABEC 5 RBEC 5	ABEC 7 —	ABEC 9 —
		Instrument ball bearing	ABMA std. 12	—	—	Class 3P	Class 5P Class 5T	Class 7P Class 7T	Class 9P
		Tapered roller bearing	ABMA std. 19	Class 4 Class K	—	Class 2 Class N	Class 3 Class C	Class 0 Class B	Class 00 Class A

(Reference) Standards and organizations concerned with bearings

JIS : Japanese Industrial Standard
BAS : The Japan Bearing Industrial Association Standard
ISO : International Organization for Standardization
ANSI : American National Standards Institute, Inc.
ABMA : American Bearing Manufactures Association
DIN : Deutsches Institut für Normung
BS : British Standards Institution
NF : Association Francaise de Normalisation

MATERIALES: pág. A-122 – A,124

ANILLOS, ELEMENTOS RODANTES:

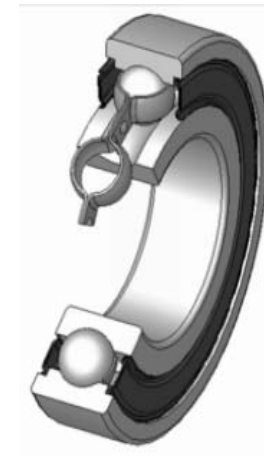
- ❖ Acero de rodamiento templado (Alto carbono).
- ❖ Acero Cementado (Alta capacidad mecánica).
- ❖ Aceros y Tratamientos Térmicos especiales.



JAULA:

- ❖ Acero estampado y mecanizado.
- ❖ Bronce mecanizado.
- ❖ Moldes inyectados.

Nylon, Resinas, Polímeros, etc.



FABRICACIÓN PROPIA:

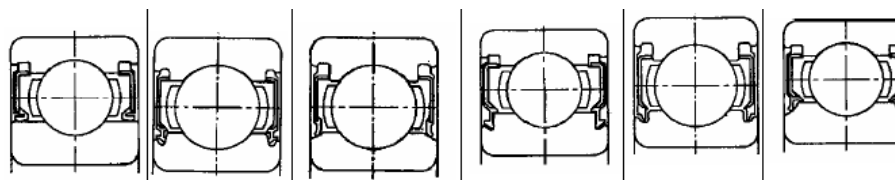
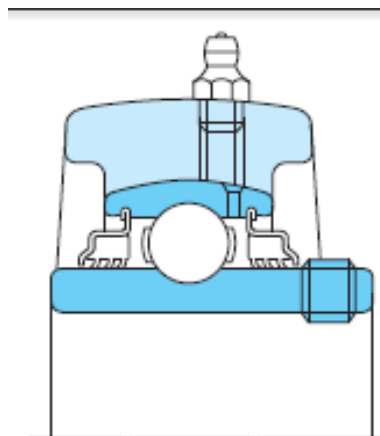
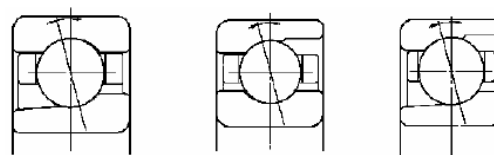
- ❖ Todos los componentes.



AMPLIA VARIEDAD DE DISEÑOS PARA CADA TIPO DE RODAMIENTO:

>>> CONSULTAR DISPONIBILIDAD DEL DISEÑO CON RCK <<<

- ❖ BOLAS.
- ❖ CÓNICOS.
- ❖ CASQUILLOS Y CORONAS.
- ❖ LEVAS Y RODILLOS
- ❖ AGUJAS.
- ❖ SOPORTES.
- ❖ ESFÉRICOS Y CILÍNDRICOS.



45T type		Spacer with oil hole (groove) between cups
		Spacer with no oil hole between cups
		No spacer between cups
46T type		Spacer with no oil hole between cones
		Spacer with oil hole (groove) between cones
		No spacer between cones

NOMENCLATURA KOYO SEGÚN NORMA ISO

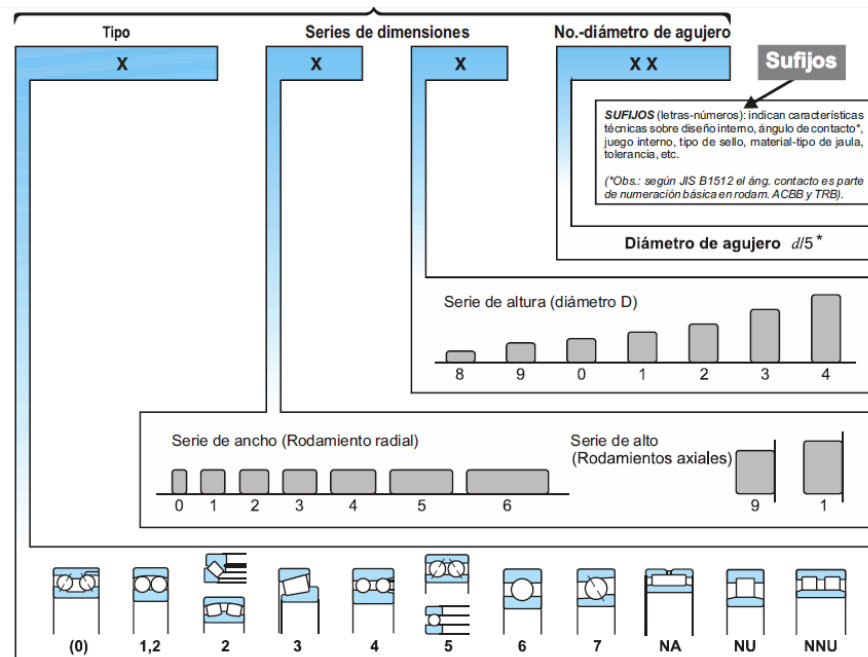
NOMENCLATURE

Ball Bearings

ISO

JIS

ABMA

[illegible]

Basic Type & Series

1200: Metric, Self-aligning Light Series
1300: Metric, Self-aligning Medium Series
3200: Metric, 32° Double Row Angular Contact Light Series
3300: Metric, 32° Double Row Angular Contact Medium Series
5200: Metric, 24° Double Row Angular Contact Light Series
5300: Metric, 24° Double Row Angular Contact Medium Series
6800: Metric, Single Row Ultra Light Series
6900: Metric, Single Row Extremely Light Series
6000: Metric, Single Row Extra Light Series
6200: Metric, Single Row Light Series
6300: Metric, Single Row Medium Series
6400: Metric, Single Row Heavy Series
3NC: Ceramic Rollins Elements

Internal Clearance

C1: Smaller than C2
C2: Smaller than Standard
No code: Standard
C3: Greater than Standard
C4: Greater than C3
CD2: Smaller than Standard (Double Row BB)
No code: Standard (Double Row BB)
CD3: Greater than Standard (Double Row BB)

Tolerance Code	
No Code:	ABEC 1 Precision
P6:	ABEC 3 Precision
P5:	ABEC 5 Precision

62 05 ZZ C3 FY P5 XM

Bore Size	
For bore series 04 and above, Bore Diameter = Bore Series X 5	
Bore Series	Bore Diameter
00:	10 mm
01:	12 mm
02:	15 mm
03:	17 mm
04:	20 mm
05:	25 mm
10:	50 mm
12:	60 mm
18:	90 mm

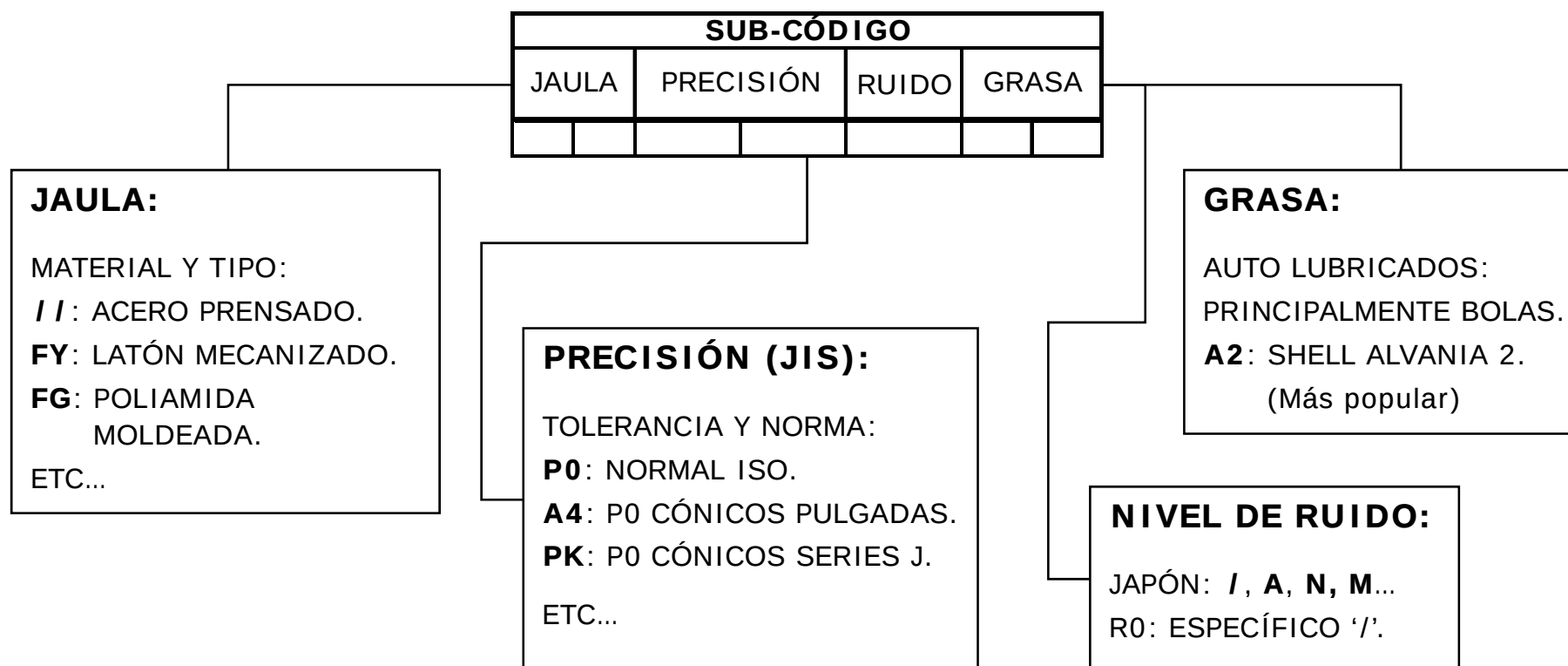
Retainer Codes
No Code: Pressed Steel Retainer
FY: Machined Brass Retainer
EG: Polyamide (Nylon) Retainer

Grease Code	Grease Trade Name	Operating Temperature Range
XM	Polyrex EM	-22° F to 338° F (-30 to 170 °C)
SR	Multemp SRL	-40° F to 266° F (-40 to 130 °C)
AR	Alvania #2	14° F to 212° F (-10 to 100 °C)
C2	Chevron SRI	32° F to 302° F (0 to 150 °C)

Shield / Seal Codes										
One Side	Both Sides	Description	Interchange							
Z	ZZ	Fixed Shield(s)	FAG	MRC	Nachi	NSK	NTN	SNR	SKF	Torrington
ZX	ZZX	Removable Shield(s)	Z/ZZ	F/FF	Z/ZZ	Z/ZZ	Z/ZZ	Z/ZZ	Z/ZZ	Fafnir
RU	2RU	Non-contact Seal(s)	RSD/2RSD	N/A	NKE/2NKE	V/VV	LB/LLB	N/A	RZ/2RZ	PL/PPL
RS	2RS	Contact Seal(s)	RS/2RS	Z/ZZ	NSL/2NSL	DU/DDU	LU/LLU	E/EE	RS/2RS	P/PP
RK	2RK	Dbl lip Contact Seal(s)	N/A	N/A	N/A	N/A	LC/LLC	E10/EE10	N/A	Y/YV
RD	2RD	Extremely Light Contact Seal(s)	N/A	N/A	NSE/2NSE	N/A	LH/LLH	N/A	N/A	V/VV
RDT	2RDT	Same as 2RD - for Large Size Ball Bearings	N/A	N/A	NSE/2NSE	N/A	LH/LLH	N/A	N/A	V/VV
NR	Snap Ring on Outer Ring O.D.		NR	G	NR	NR	NR	NR	NR	G

¿QUÉ INFORMACIÓN CONTIENE?:

- ❖ JAULA (2d).
- ❖ COMPONENTE (2d).
- ❖ PRECISIÓN (2d).
- ❖ GRASA (2d). Si aplica.
- ❖ NIVEL RUIDO (1d).
- ❖ EMBALAJE (1d). Estándares JTEKT, no siempre incluido.



INFORMACIÓN SOBRE DISEÑO Y CARACTERÍSTICAS ESPECIALES.

>> LISTADO DE PREFIJOS/SUFIJOS KOYO <<

SUFIJOS	SIGNIFICADO	EJEMPLO
ZS	Juegos internos no intercambiables. Partes intercambiables sólo entre rodamientos de un mismo lote.	NJ2208RZS
ZX	Escudo metálico removible en una cara del rodamiento.	6317ZX
ZXX	Escudo metálico removible en ambas caras del rodamiento.	6317ZZX
ZZ	Escudo metálico (sin contacto) en ambas caras del rodamiento.	M6312ZZ
-1	Diseño interno diferente del estándar.	695-1 ZZL
-2	Modificación del diseño anterior.	ACS0304-2
-4	Diseño interno diferente del estándar.	6204-4/4B
-5	Diseño interno diferente del estándar.	625-5
-9	Rodamiento con diseño de rodillos de forma especial (con forma de tonel).	HI-CAPTR0305C-9
-12	Diseño interno diferente del estándar.	6205-12
-16	Diseño interno diferente del estándar.	6205-16
-22	Diseño interno diferente del estándar.	HM801346-22/10-22
-3B	Rodamiento de rodillos cónicos, ancho no estándar.	30211RS-3B
-9T	Diseño especial de caja y tratamiento término para rodamiento de cigüeñal.	6203-9TC4
/1B	Ancho no estándar.	6202/1B2RDDCS11
/1D	Diámetro externo de dimensiones no estándares.	HI-CAPTR080702J/1D
/2D	Diámetro externo no estándar.	6206/2DNS-1
/4D	Diámetro externo no estándar.	6204-4/4B
/4B	Ancho no estándar.	HI-CAP32KB02/ILB
/YD4	En rodamiento para bomba de agua significa diámetro del eje 0.051 milímetro mayor que el estándar.	W6B136A/YD4L

CONOCER DESIGNACIONES EQUIVALENTES DE OTROS FABRICANTES.

>> LISTADO DE DESIGNACIONES KOYO VS COMPETIDORES <<

	Description	SKF	FAG	NSK	NTN	Koyo
General	Steel cage (pressed cage)	J	(omitted)	W	J	//
	Brass cage (machined cage)	M, MA, MB	M	M	L1, G1	FY
	Polyamide cage (moulded cage)	P, TN, TN9	TVH, TVP	T	T2	FG
	Pin type cage				G2	FP
	Outerring guided cage		MP1A			PA
	Full complement type (no cage)	V	V	V		V
	Tapered bore 1:12	K	K	K	K	K
	Tapered bore 1:30	K30	K30	K30	K30	K30
	Snap ring groove	N	N	N	N	N
	Snap ring groove + snap ring	NR		NR	NR	NR
	Reinforced type - high load capacity	E, EC	E, E1	E	E	R
	Stainless steel (x = part code)	W		h	F (prefix)	ST(x)
	Case carburized steel (x= part code)	HA(x)		g		H(x)
	Ceramic rolling elements	HC5			5S (prefix)	3NC (prefix)
	Aluminium oxide coating on outer ring	VL0241				-
	Aluminium oxide coating on outer ring	VL2071				-
	Solid oil filling	W64				SF (prefix)

FIN

¡GRACIAS!