






CHEMICAL COMPOSITION OF BEARING MATERIALS

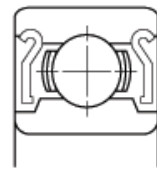
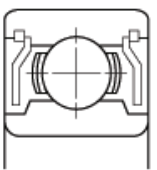
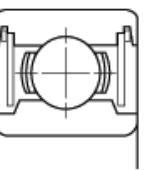
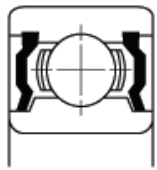
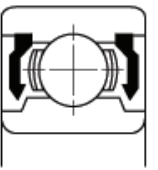
MATERIAL	SYMBOL	CHEMICAL COMPOSITION (Wt%)							EQUIVALENT	HARDNESS (HRC)
		C	Si	Mn	P	S	Cr	Mo		
HIGH CARBON CHROMIUM STEEL	SUJ2	0.95~1.10	0.15~0.35	≤0.50	≤0.025	≤0.025	1.30~1.60	≤0.08	SAE52100, 100Cr6, ASTM52100, BS535A99, 1.3505	60~64
STAINLESS STEEL	SUS440C	0.95~1.20	≤1.00	≤1.00	≤0.040	≤0.030	16.0~18.0	≤0.75	AISI440C, X102CrMo17, X105CrMo17, 1.4125, 1.3543	58~62
	KS440 (ACD34)	0.60~0.75	≤1.00	≤1.00	≤0.030	≤0.020	11.5~13.0	≤0.30	X65Cr13, 1.4037	58~62

Type and characteristics of cages, shields and seals

CAGES

				
W : ONE-PIECE STEEL CROWN TYPE	J : TWO-PIECES STEEL RIBBON TYPE	RJ : TWO-PIECES STEEL RIVET TYPE	TW : ONE-PIECE NYLON CROWN TYPE	V : FULL COMPLEMENT OF BALLS
The stainless steel pressed cage is inner ring guided. It shows excellent performance in low torque, low speed applications.	Consists of two mating steel pressings, the cover side and the finger side. Usually guided by the rolling elements and designed to reduce frictional torque.	The RJ type cage is suitable for larger bearings with a high load carrying capacity. The two pieces are riveted together and are strong enough to withstand higher levels of vibration and acceleration. The cage is guided by the balls and reduces frictional torque.	Moulded nylon cage. Reduces the fluctuation in running torque. Suitable for high speeds. Guided by the rolling elements. NYLON CAGE operating temperature range: from -30 to +120°C	This type of bearing has no cage but maximum possible number of balls. Due to the fact that the inner and outer ring have a filling slot, the axial load carrying capacity of this bearing type is low. This type of bearing is suitable for high radial load, low speed applications.

SHIELD , SEAL

				
ZZ : PRESSED STEEL SHIELD	ZS : STEEL SHIELD WITH SNAP RING	TTS : TEFLON SEAL WITH SNAP RING	2RS : CONTACT RUBBER SEAL	2RU : NON-CONTACT RUBBER SEAL
Non-contact shield pressed into outer ring. Very little grease leakage and low ingress of contaminants.	Non-contact shield retained in outer ring. Low ingress of contaminants. Mainly used for smaller or narrower bearings.	Teflon seal reinforced with glass fibre is retained in outer ring by snap ring. Low ingress of contaminants. Mainly used for smaller or narrower bearings. Seal can flex to accommodate internal pressure changes. TEFLON SEAL operating temperature range: from -100 to +260°C	Rubber seal fitted into outer ring. Light contact with inner ring, retains grease and prevents ingress of external contaminants. NBR SEAL operating temperature range: from -40 to +120°C FKM(VITON)SEAL operating temperature range: from -30 to +230°C	Non-contact rubber seal fitted into outer ring, still provides effective sealing. NBR SEAL operating temperature range: from -40 to +120°C FKM(VITON)SEAL operating temperature range: from -50 to +230°C