

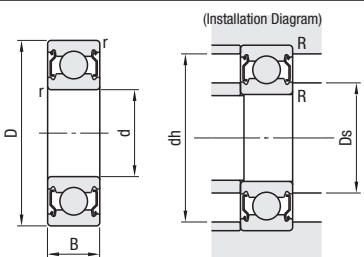
Ball Bearings for Special Environment - EN 1.4301 Equiv. / Non-Grease, Non-Oil

EN 1.4301 Equiv. Ball Bearings
(Water Resistant, Heat Resistant)



RoHS10

SUB6 ZZ
SUB6 ZZ



Operating Temperature: -40 ~ +150°C
EN 1.4301 Equiv. may be slightly magnetized after machining.

Component	Material
Inner/Outer Rings, Shield, Retainer, Ball	EN 1.4301 Equiv.

Part Number	d	Tolerance	D	Tolerance	B	Tolerance	r (min)	Basic Load Rating			Allowable Rotational Speed rpm (Reference)	Relative Dimensions				Mass (g) (Reference)	Unit Price
								Cr (Dynamic) N	Cor (Static) N			Ds (min)	Ds (max)	dh (max)	R (max)		
SUB626ZZ	6		19		6		0.3	52	32	2100	8	10	17		8.2		
SUB608ZZ	8		22		7		0.3	66	41	2000	10	11.5	20		12		
SUB628ZZ	10		26	-0.03	8		0.3	67	42	1900	12	12	22		18		
SUB6000ZZ	10		26		8		0.3	91	59	1800	12	13.5	24		19		
SUB6200ZZ	12		30		9		0.6	102	72		14	16	26	0.6	32		
SUB6001ZZ	12	+0.05	28		8		0.3			1500	16	17	28	0.3	21		
SUB6201ZZ	12	0	32		10	-0.12	0.6	136	92		17	19	30		37		
SUB6002ZZ	15		35		11		0.3	112	85	1300	19	21	33		30		
SUB6202ZZ	15		35		10		0.6	153	113		20	31			46		
SUB6003ZZ	17		40	-0.035	12		0.3	120	98	1200	21	22	36		41		
SUB6203ZZ	17		42		12		0.6	192	144	1100	24	25	38		66		
SUB6004ZZ	20		47		14		1.0	188	152	1000	25	27	42	1.0	68		
SUB6204ZZ	20		47		14		1.0	256	200	900	25	27	42	1.0	105		

kgf=Nx0.101972

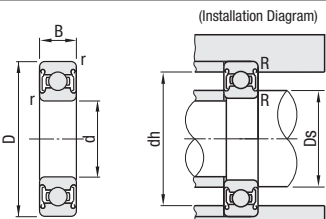
Non-Grease, Non-Oil Ball Bearings



Clean Type
SE6 ZZPR
SE600 ZZPR
SE620 ZZPR

Vacuum
3NC600 ZZST

Highly Corrosion Resistant
3NC600 ZZMD



Bearing Accuracy JIS B 1514 Class 0
Bearing Internal Clearance C3
Operating Temperature -100~+200°C
Operating Vacuum Level 10⁻⁵ Pa

Type	Inner and Outer Ring	Shield	Rolling Element	Retainer
SE ZZPR	EN 1.4125 Equiv. (Special Fluoro-Macromolecule Coating)	60HRC	EN 1.4125 Equiv. (Special Fluoro-Macromolecule Coating)	EN 1.4301 Equiv. (Special Fluoro-Macromolecule Coating)
3NC ZZST	EN 1.4125 Equiv.	40HRC	Ceramics (Silicon Nitride)	Fluororesin
3NC ZZMD	EN 1.4542 Equiv.	40HRC		

For details on the tolerance and allowable values of inner and outer rings, see P.2243

Part Number			d	D	B	r (min)	Allowable Radial Load N		Allowable Rotational Speed rpm (Reference)	Relative Dimensions				Mass (g)					Unit Price				
Clean Type	Vacuum	Highly Corrosion Resistant					SE2 Type	3NC Type		DS	dH	R	SE	ZZPR	3NC	ZZST	3NC	ZZMD	SE	ZZPR	3NC	ZZST	3NC
SE624ZZPR	-	-	4	13	5	0.2	40	-	1000	5.6	6.9	11.4	0.2	2.93	-	-	-	-	-	-			
SE626ZZPR	-	-	6	19	6	0.3	80	-		8	10.6	17		7.90	-	-	-	-	-	-			
SE608ZZPR	-	-	8	22	7	0.3	100	-		10	12.4	20	0.3	11.81	-	-	-	-	-	-			
SE6000ZZPR	3NC6000ZZST	3NC6000ZZMD	10	26	8	0.3	135	35		12	13	24		19	16	17							
SE6200ZZPR	-	-	10	30	9	0.6	155	50	860	14	15	26	0.6	32	-	-	-	-	-	-			
SE6001ZZPR	3NC6001ZZST	3NC6001ZZMD	12	28	8	0.3	155	40	830	16	16.5	28	0.3	20	17	18							
SE6201ZZPR	-	-	12	32	10	0.6	205	70	770	16	16.5	28	0.6	36	-	-	-	-	-	-			
SE6002ZZPR	3NC6002ZZST	3NC6002ZZMD	15	32	9	0.3	170	45	660	17	18.5	30	0.3	30	26	27							
SE6202ZZPR	-	-	15	35	11		230	75	610	19	19.5	31	0.6	44	38	-	-	-	-	-			
SE6004ZZPR	3NC6004ZZST	-	20	42	12	0.6	280	70	500	24	25	38	0.3	63	56	-	-	-	-	-			
SE6204ZZPR	-	-	20	47	14	1.0	385	130	450	25	26.5	42	0.6	105	92	-	-	-	-	-			

kgf=Nx0.101972

Priority is given to the life of solid lubricant (Fluororesin Retainer). Use within the allowable load range.

Allowable rotational speed is based on 1/2 of allowable load.

Ordering Example
SUB6000ZZ
3NC6000ZZST

Performance Comparison of Bearings for Special Environment

Part Number	Inner/Outer Rings	Shield	Rolling Element	Retainer	Low Dust Generation	Abrasion Resistance	Corrosion Resistance and Chemical Resistance							Heat Resistance	Vacuum	Insulation	Non-magnetic	Heavy Load	High Rotational Speed
							Hydrochloric Acid	Sulfuric Acid	Nitric Acid	Alkali	Solvent	Seawater	Water						
SE6 ZZPR	EN 1.4125 Equiv. Special Fluoro-Macromolecule Coating	EN 1.4301 Equiv.	EN 1.4125 Equiv. Special Fluoro-Macromolecule Coating	EN 1.4301 Equiv. Special Fluoro-Macromolecule Coating	○	×	×	×	×	×	×	×	×	(-100~200°C)	○	×	×	△	×
3NC6 ZZST	EN 1.4125 Equiv.	1.4301 Equiv.	Ceramics	Fluororesin	○	×	△	○	○	○	○	○	○	(-100~200°C)	○	○	×	×	×
3NC6 ZZMD	EN 1.4542 Equiv.	EN 1.4301 Equiv.	Ceramics	Fluororesin	○	×	○	○	○	○	○	○	○	(-100~200°C)	○	○	△	×	×
SUB6 ZZ	EN 1.4301 Equiv.	EN 1.4301 Equiv.	EN 1.4301 Equiv.	EN 1.4301 Equiv.	×	△	○	○	○	○	○	○	○	(-40~150°C)	×	×	○	×	×

The service life may be shortened drastically when used in conditions where the product is soaked in corrosive solution.

Well Suited Good Questionable Not Suitable

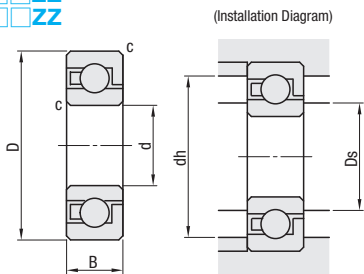
Plastic Ball Bearings

Plastic Ball Bearings
(Water Resistant, Nonmagnetic)



RoHS10

UKB6 ZZ
PTN6 ZZ
PKB6 ZZ



Type	Material	Operating Temp.
UKB6 ZZ	UHMW	Soda-lime Glass -50°C~+60°C
PTN6 ZZ	PTFE	-40°C~+150°C
PKB6 ZZ	PEEK	Alumina Ceramics -50°C~+180°C

Part Number	Type	Bearing No.	d	Tolerance	D	Tolerance	B	Tolerance	c	Relative Dimensions			Allowable Load (kgf/1 pc.)			Allowable Rotational Speed (rpm) Values in () are those in underwater.			Mass (g) (Reference)			Unit Price		
										Ds (min)	Ds (max)	dh (max)	UKB	PTN	PKB	UKB	PTN	PKB	UKB	PTN	PKB	UKB	PTN	PKB
624ZZ	UKB Water Resistant, Nonmagnetic	4	4		13				0.3	5	6	12	0.29	-	-	1120(3140)	-	-	0.55	-	-	-	-	-
625ZZ		5	5		16		5			6	7.4	14	0.6	0.4	1.5	900(2540)	540	1800	0.9	1.9	1.3	-	-	-
605ZZ		6	6		14					7	6.8	13	0.4	-	-	1000(2800)	-	-	0.65	-	-	-	-	-
626ZZ		7	7		19					8	9	17	0.7	0.5	1.5	760(2140)	450	1500	1.5	3.1	2.0	-	-	-
606ZZ		8	8		17		6			9	8.4	16	0.7	-	-	830(2320)	-	-	1.2	-	-	-	-	-
696ZZ		9	9		15	+0.08	5			10	7.8	14	0.5	-	-	900(2540)	-	-	0.75	-	-	-	-	-
628ZZ		10	10		22	0	8			11	12	22	1.3	0.8	2.8	600(1670)	350	1200	3.2	6.7	4.4	-	-	-
608ZZ		11	11		24		9			12	10.7	20	1.3	-	-	630(1780)	-	-	2.4	-	-	-	-	-
698ZZ		12	12		19		6			13	10.6	18	0.6	-	-	700(1980)	-	-	1.3	-	-	-	-	-
6200ZZ		13	13		30		9			14	15.3	28	2.2	-	-	460(1300)	-	-	5.6	-	-	-	-	-
6000ZZ	PTN PTFE Heat Resistant, Chemical Resistant	14	14		26		8		±0.1	15	13.8	24	1.3	0.8	3.0	520(1470)	310	1000	3.5	7.7	5.1	-	-	-
6900ZZ		15	15		22		6			16	12.6	21	1.3	-	-	590(1670)	-	-	1.9	-	-	-	-	-
6201ZZ		16	16		32	+0.1	10			17	16.3	30	2.5	-	-	430(1210)	-	-	7	-	-	-	-	-
6001ZZ		17	17		28	+0.08	8			18	15.5	26	1.6	1	4.0	470(1330)	280	950	4	8.5	5.6	-	-	-
6901ZZ		18	18		24	0	6			19	14.8	21	1.2	-	-	530(1480)	-	-	1.9	-	-	-	-	-
6202ZZ		19	19		35	+0.1	11			20	19.4	33	3	-	-	380(1070)	-	-	8.8	-	-	-	-	-
6002ZZ		20	20		32	0	9			21	15.5	26	1.6	1	4.0	470(1330)	280	950	4	8.5	5.6	-	-	-
6902ZZ		21	21		28	+0.08	7			22	18.2	26	1.6	-	-	440(1240)	-	-	3	-	-	-	-	-
6203ZZ		22	22		40	+0.12	12			23	22.6	38	4	-	-	330(930)	-	-	12.8	-	-	-	-	-
6003ZZ		23	23		35	+0.1	10			24	21	33	3	1.8	6.5	360(1000)	220	730	7.3	14.2	9.4	-	-	-
6903ZZ	PKB PEEK Heat Resistant, Chemical Resistant	24	24		30	+0.08	7		±0.04	25	20	28	2	-	-	400(1130)	-	-	3.3	-	-	-	-	-
6204ZZ		25	25		47	+0.12	14			26	26.5	43	5	-	-	280(790)	-	-	20	-	-	-	-	-
6004ZZ		26	26		42	0	12			27	25	38	3.6	2.3	8.0	300(860)	180	610	12.6	24.6	16.2	-	-	-
6904ZZ		27	27		37	+0.1	9			28	23.6	35	3.3	-	-	330(930)	-	-	6.8	-	-	-	-	-

Note that sizes without Unit Price shown are not available.

The tolerance above is the dimension at standard temperature 24°C±1°C at the time of manufacture. The allowable values are for reference, not guaranteed.

Soda-lime glass may be broken when temperature changes rapidly. Exporting PKB6 ZZ (Material PEEK) requires export application to the Ministry of Economy, Trade and Industry.

Ordering Example
UKB600ZZ

Characteristic Values of Plastic Ball Bearing Material

Item	UHMW	PEEK	PTFE	Soda-lime Glass
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