



## AISI 630 Stainless Steel Ball Bearings



AISI 630 stainless steel is excellent in corrosion resistance and can be hardened by heat treatment. AISI 630 stainless steel ball bearings can offer longer operation life under various corrosive environments with the excellent corrosion resistance and hardness.

### Features

1. Corrosion resistance superior to AISI 440C stainless steel ball bearings
2. Can be used for heavy-load and high-rotation applications for which AISI 304 stainless steel ball bearings would be unsuitable.
3. Available for various types of applications with its heat- and chemical-resistant fluorine grease pre-packed as standard lubricant
4. Hybrid type with silicon nitride ceramic balls
5. Different properties due to the material used



		AISI 630	AISI 304	AISI 440C
Specific Gravity		7.80	7.93	7.80
Tensile Strength	N/mm <sup>2</sup>	1379	520~600	1900~2000
Elongation	%	14	45~60	---
Elastic Modulus	N/mm <sup>2</sup>	196000	193000	203000
Hardness	HV	434	170	700
	HRC	44.0	3.0	60.1
Magnetism		Magnetic	Non Magnetic	Magnetic

### Applications

LCD and semiconductor manufacturing equipment  
Film manufacturing equipment  
Metal plating equipment  
Other equipment used in acid or alkaline environment

## Product Specifications

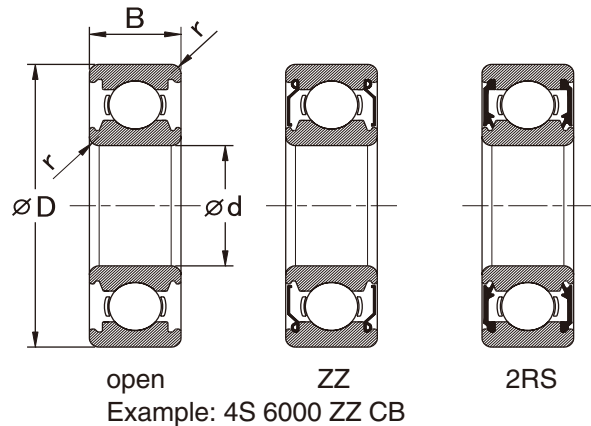
### ●Standard Specifications

Inner and Outer Rings	AISI 630
Ball	Ceramic Balls (Silicon Nitride Si <sub>3</sub> N <sub>4</sub> )
Retainer	AISI 304
Shield	AISI 304
Seal *1	Nitrile Rubber (NBR)
Lubricant *2	Fluorinated Grease
Precision Grade	JIS0

Products with specifications differing from the above are also available.

\*1 Also available with fluorine rubber seals.

\*2 Other special grease also available.



### ●Dimensions

	Bore		O.D.		Width		Chamfer		Dynamic Load		Static Load		Limiting Speed (min <sup>-1</sup> )		
	d	D	B	r min.	Cr		Cor		Grease		Oil				
	mm	mm	mm	mm	N	kgf	N	kgf	open/ZZ	2RS	open				
4S 6000 CB	10	26	8	0.3	1410	144	610	62	8400	8400	10000				
4S 6200 CB	10	30	9	0.6	1590	162	740	75	7300	7300	8800				
4S 6001 CB	12	28	8	0.3	1590	162	740	75	7300	7300	8800				
4S 6201 CB	12	32	10	0.6	2110	215	940	96	6800	6800	8200				
4S 6002 CB	15	32	9	0.3	1730	177	880	90	6400	6400	7700				
4S 6202 CB	15	35	11	0.6	2370	241	1150	118	5900	5900	7100				
4S 6003 CB	17	35	10	0.3	1860	190	1010	103	5800	5800	6900				
4S 6203 CB	17	40	12	0.6	2970	300	1480	151	5200	5200	6200				
4S 6004 CB	20	42	12	0.6	2910	297	1570	160	4800	4800	5700				
4S 6204 CB	20	47	14	1.0	4000	405	2060	210	4300	4300	5200				
4S 6005 CB	25	47	12	0.6	3100	320	1810	185	4200	4200	5000				
4S 6205 CB	25	52	15	1.0	4350	445	2440	249	3800	3800	4600				
4S 6006 CB	30	55	13	1.0	4100	420	2570	262	3500	3500	4200				
4S 6206 CB	30	62	16	1.0	6050	615	3500	360	3200	3200	3900				

Note: The above load ratings are provided for reference only.

AISI 630 stainless steel ball bearings are by nature unusable in the high and middle speed applications or under the load that AISI 440C stainless steel ball bearings can carry.

### ●Corrosion Resistances

Materials	Conditions	Corrosion Weight Loss (mm/year)								
		Sulfuric Acid			Hydrochloric Acid		Nitric Acid	Acetic Acid	Phosphoric Acid	
		5% 35°C	1% 80°C	2% 80°C	0.5% 35°C	1% boiling	66% boiling	33% boiling	20% boiling	70% boiling
SUS 630	Aging Heat Treatment	0.1	<0.1	0.2	<0.1	0.9	0.7	1.5	<0.1	3.0
SUS 304	Solution Heat Treatment	<0.1	0.6	2.0	0.2	0.4	0.2	<0.1	<0.1	1.0

Note that results may differ from the data listed, depending on the environment and conditions under which the bearings are used.

**SMT**

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