

Bearing
selection

Products
Series

AISI
440C

AISI
304

AISI
630

Pure
Titanium

Ceramic

Heat
Resistance

Grease
Free

Low
Torque

Solid
Grease

Set
Screw

Alignment
Function

Flange
Unit

Guide
Wheel

6800
6900

SS5200
5200

5800

Customization

Examples
of Use

SS Series AISI 440C Stainless Steel Bearings



Corrosion
resistance



High-speed
rotation



High-load
environment



Transportation



General



AISI 440C stainless steel bearings
have resistance to rust, corrosion,
and high temperatures.

The 6800, 6900, 6000, 6200
and 6300 ranges are
available from stock.

Features

- Usable in environments of higher temperatures than SAE 52100 chrome bearing steel

Specifications	Temperature
ZZ Type	−40 to 150 °C / −40 to 302 °F
2RS Type	−30 to 110 °C / −22 to 230 °F
Open Type	Subject to lubrication

- Available with snap ring

Product Specifications

Standard Specifications	
Inner and Outer Rings	AISI 440C
Balls* ¹	AISI 440C
Retainer	AISI 304
Shield	AISI 304
Seal* ²	Nitrile rubber
Snap Ring	AISI 304
Lubricant* ³	Heat-resistant grease
ISO Tolerance Class	Normal

The following special specifications are also available.

*1 Ceramic balls (Silicon Nitride Si₃N₄)

*2 Fluorine rubber seal

*3 Heat- and chemical-resistant fluorine grease, food grade grease, and other special greases

*Other C3 or C4 radial clearance

Applications

Food processing machinery, cleaning equipment, carrier device in a watery environment, LCD and semiconductor manufacturing equipment, other equipment used in high temperature and humidity environments.

Corrosion Resistance

Chemicals	Conditions	Temperature	Material	
		°C/°F	AISI 440C	SAE 52100
Carbon Tetrachloride	dry / wet	normal	○	×
Acetone		normal	○	—
Naphtha		normal	○	—
Natural Water		normal	○	×
Sea Water		normal	△	×
Air		normal	○	△
Sea Breeze		normal	○	×
Water vapor		100°C/212°F	○	×
Chlorine gas	dry	normal	△	△
	wet	100°C/212°F	×	×
Hydrogen Sulfide Gas	dry		○	△
	wet		○	△
Sulfurous Acid Gas	dry		○	×
	wet		○	×
Carbonic Acid Gas			○	×
Hydrochloric Acid	75% solution		×	×
	50% solution	normal, boiling	×	×
	90% to 100% solution	normal	○	△
Sulfuric Acid	90% to 100% solution	boiling	×	×
	95% to 100% solution	normal	○	×
	95% to 100% solution	boiling	×	×
Nitric Acid			○	△
Hydrogen Peroxide			○	△
Acetic Acid			○	×

*○ No effects

△ Slightly affected

× Affected

— No data

*Results may differ from the data on the left depending on the environments and conditions.

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Grease Free

Low Torque

Solid Grease

Set Screw

Alignment Function

Flange Unit

Guide Wheel

6800
6900

SS5200
5200

5800

Customization

Examples of Use

Precautions

- AISI 440C stainless steel is magnetizable.
- AISI 440C stainless steel may corrode depending on the environments and conditions.

Composition of bearing number

SS

6000

ZZ

NR2

1

2

3

4

1

SS : Material AISI 440C

2

Basic number

3

Blank : Open

Z : Single steel plate shield

ZZ : Double steel plate shields

RS : Single contact rubber seal

2RS : Double contact rubber seals

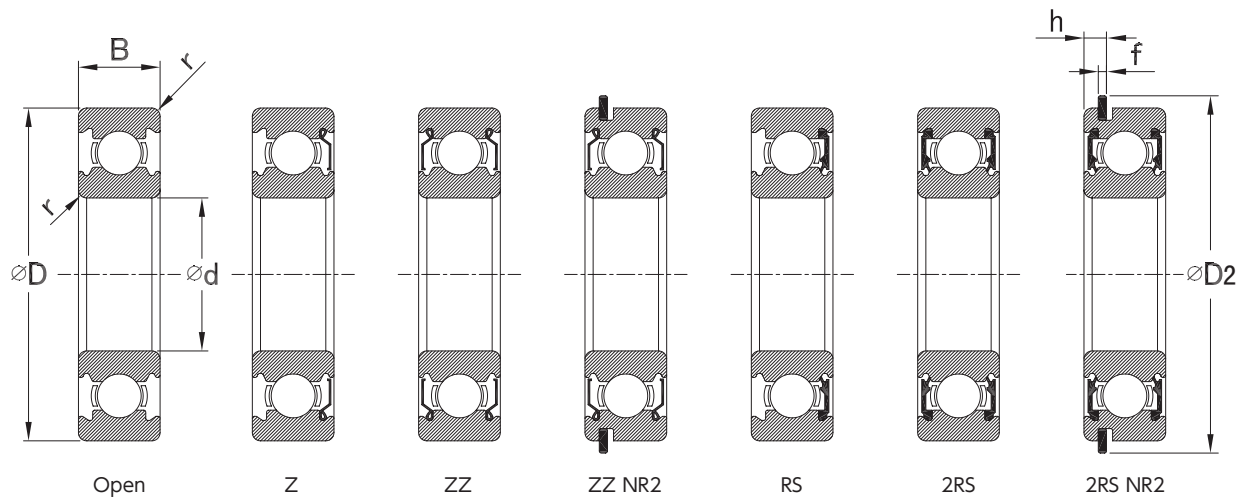
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Blank : No snap ring

NR2 : Stainless steel snap ring

Table of Dimensions

Bearing Numbers	d	D	B	r min.	Basic Load Ratings		Limiting Speed (min ⁻¹)			Size of Snap Ring			Mass
					C _r	C _{or}	Grease		Oil	D2 max.	f max.	h max.	
	mm	mm	mm	mm	N	N	Open-Z·ZZ	RS·2RS	Open-Z	mm	mm	mm	g
SS 6800	10	19	5	0.3	2120	985	34000	24000	41000	—	—	—	5
SS 6900	10	22	6	0.3	2700	1270	31000	22000	38000	24.8	0.70	1.75	9
SS 6000	10	26	8	0.3	4600	1970	28000	22000	33000	28.8	0.84	2.19	18
SS 6200	10	30	9	0.6	5100	2390	24000	18000	29000	34.7	1.12	3.18	31
SS 6300	10	35	11	0.6	8100	3450	22000	18000	27000	39.7	1.12	3.18	52
SS 6801	12	21	5	0.3	1920	1040	30000	20000	36000	—	—	—	6
SS 6901	12	24	6	0.3	2890	1460	28000	19000	33000	26.8	0.70	1.75	10
SS 6001	12	28	8	0.3	5100	2390	24000	18000	29000	30.8	0.85	2.20	20
SS 6201	12	32	10	0.6	6800	3050	23000	17000	27000	36.7	1.12	3.18	36
SS 6301	12	37	12	1.0	9700	4200	20000	17000	24000	41.3	1.12	3.18	59
SS 6802	15	24	5	0.3	2080	1260	26000	17000	31000	—	—	—	7
SS 6902	15	28	7	0.3	4300	2250	23000	16000	28000	30.8	0.85	2.15	16
SS 6002	15	32	9	0.3	5600	2840	21000	15000	26000	36.7	1.12	3.18	30
SS 6202	15	35	11	0.6	7650	3750	20000	14000	24000	39.7	1.12	3.18	45
SS 6302	15	42	13	1.0	11400	5450	17000	13000	20000	46.3	1.12	3.18	81
SS 6803	17	26	5	0.3	2630	1570	23000	15000	28000	—	—	—	7
SS 6903	17	30	7	0.3	4600	2550	21000	14000	26000	32.8	0.85	2.15	17
SS 6003	17	35	10	0.3	6000	3250	19000	14000	23000	39.7	1.12	3.18	39
SS 6203	17	40	12	0.6	9600	4800	17000	13000	21000	44.6	1.12	3.18	63
SS 6303	17	47	14	1.0	13600	6600	15000	12000	18000	52.7	1.12	3.58	110
SS 6804	20	32	7	0.3	4000	2460	20000	13000	24000	—	—	—	17
SS 6904	20	37	9	0.3	6400	3700	18000	12000	21000	39.8	0.85	2.55	36
SS 6004	20	42	12	0.6	9400	5050	16000	12000	19000	46.3	1.12	3.18	65
SS 6204	20	47	14	1.0	12800	6650	14000	11000	17000	52.7	1.12	3.58	101
SS 6304	20	52	15	1.1	15900	7850	14000	11000	17000	57.9	1.12	3.58	142
SS 6805	25	37	7	0.3	4300	2940	16000	10000	20000	—	—	—	21
SS 6905	25	42	9	0.3	7000	4550	15000	9700	18000	44.8	0.85	2.55	42
SS 6005	25	47	12	0.6	10100	5850	14000	9600	17000	52.7	1.12	3.18	77
SS 6205	25	52	15	1.0	14000	7900	13000	8800	15000	57.9	1.12	3.58	127
SS 6305	25	62	17	1.1	20600	11200	11000	8100	13000	67.7	1.70	4.98	225
SS 6806	30	42	7	0.3	4550	3400	14000	8800	17000	—	—	—	24
SS 6906	30	47	9	0.3	7250	5000	13000	8500	16000	49.8	0.85	2.55	49
SS 6006	30	55	13	1.0	13200	8300	12000	8100	14000	60.7	1.12	3.20	114
SS 6206	30	62	16	1.0	19500	11300	11000	7500	13000	67.7	1.70	4.98	192
SS 6306	30	72	19	1.1	26700	15000	9600	6900	12000	78.6	1.70	4.98	342
SS 6807	35	47	7	0.3	4750	3800	12000	7600	15000	—	—	—	27
SS 6907	35	55	10	0.6	10400	7200	11000	7300	13000	—	—	—	74
SS 6007	35	62	14	1.0	16000	10300	10000	6900	12000	67.7	1.70	3.78	148
SS 6207	35	72	17	1.1	25700	15400	9200	6400	11000	78.6	1.70	4.98	276
SS 6307	35	80	21	1.5	33300	19100	8600	6200	10000	—	—	—	446



Bearing Numbers	d	D	B	r min.	Basic Load Ratings		Limiting Speed (min ⁻¹)			Size of Snap Ring			Mass
					C _r	C _{or}	Grease		Oil	D2 max.	f max.	h max.	
					N	N	Open-Z-ZZ	RS-2RS	Open-Z	mm	mm	mm	
SS 6808	40	52	7	0.3	4950	4200	11000	6700	13000	—	—	—	30
SS 6908	40	62	12	0.6	13700	9900	9800	6400	12000	—	—	—	109
SS 6008	40	68	15	1.0	16800	11600	9200	6100	11000	74.6	1.70	4.19	186
SS 6208	40	80	18	1.1	29100	17900	8300	5700	10000	—	—	—	364
SS 6308	40	90	23	1.5	40700	24000	7700	5500	9200	—	—	—	616
SS 6909	45	68	12	0.6	14100	10900	8900	5700	11000	—	—	—	128
SS 6009	45	75	16	1.0	21000	15100	8300	5500	10000	—	—	—	237
SS 6209	45	85	19	1.1	32700	20500	7700	5300	9200	—	—	—	401
SS 6309	45	100	25	1.5	53000	32000	6800	4800	8200	—	—	—	811
SS 6910	50	72	12	0.6	14500	11700	8200	5200	9800	—	—	—	130
SS 6010	50	80	16	1.0	21800	16600	7600	5000	9200	—	—	—	254
SS 6210	50	90	20	1.1	35100	23200	7100	4800	8500	—	—	—	452
SS 6310	50	110	27	2.0	62000	38200	6100	4300	7300	—	—	—	1044
SS 6911	55	80	13	1.0	16600	14100	7400	4700	8900	—	—	—	184
SS 6011	55	90	18	1.1	28300	21300	6900	4500	8300	—	—	—	376
SS 6211	55	100	21	1.5	43400	29400	6300	4300	7600	—	—	—	584
SS 6311	55	120	29	2.0	71600	44800	5600	4000	6700	—	—	—	1336
SS 6912	60	85	13	1.0	20200	17300	6800	4400	8200	—	—	—	192
SS 6012	60	95	18	1.1	29400	23200	6500	4200	7700	—	—	—	405
SS 6212	60	110	22	1.5	52400	36100	5800	3900	6900	—	—	—	764
SS 6312	60	130	31	2.1	81800	52000	5200	3700	6300	—	—	—	1676
SS 6913	65	90	13	1.0	17400	16000	6500	4000	7700	—	—	—	209
SS 6013	65	100	18	1.1	30500	25200	6100	3900	7300	—	—	—	428
SS 6213	65	120	23	1.5	57200	40000	5400	3700	6500	—	—	—	975
SS 6914	70	100	16	1.0	23700	21100	5900	3700	7100	—	—	—	334
SS 6014	70	110	20	1.1	38000	30900	5600	3600	6700	—	—	—	596
SS 6214	70	125	24	1.5	62200	44000	5100	3500	6200	—	—	—	1049
SS 6915	75	105	16	1.0	24300	22600	5600	3500	6700	—	—	—	351
SS 6015	75	115	20	1.1	39500	33500	5300	3400	6300	—	—	—	622
SS 6916	80	110	16	1.0	25000	23900	5300	3300	6300	—	—	—	369
SS 6016	80	125	22	1.1	47700	39700	4900	3200	5900	—	—	—	833

Bearing selection

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AISI 304

AISI 630

Pure Titanium

Ceramic

Heat Resistance

Grease Free

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Solid Grease

Set Screw

Alignment Function

Flange Unit

Guide Wheel

6800
6900SS5200
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Examples of Use