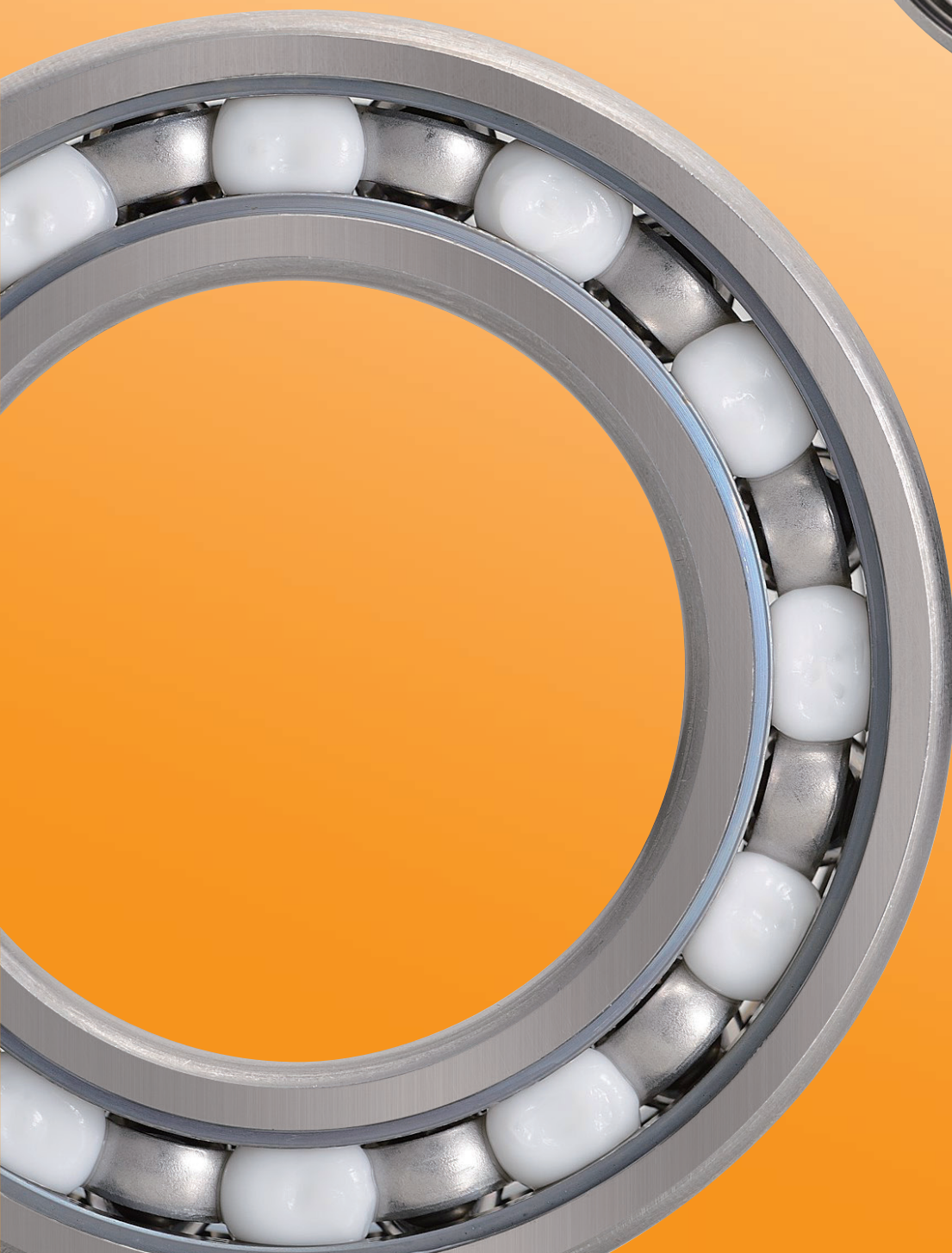


SMT

Heat-resistant Stainless Bearings

Heat-resistant Hybrid Bearings



SMT

Heat-resistant Stainless Bearings

Heat-resistant bearing, made of AISI 440C stainless steel with heat-resistant fluorine grease, can be supplied with short delivery in small lot like even one piece.



● Heat-resistant Stainless Bearings up to 482°F

1. AISI 440C stainless steel has lower hardness decrease ratio and smaller dimension changes than SAE 52100 bearing steel in high temperature environment.
2. AISI 440C stainless steel is superior to SAE 52100 bearing steel in oxidation resistance in high temperature environment.
3. Filling heat-resistant fluorine grease enables lubrication in high temperature environment.

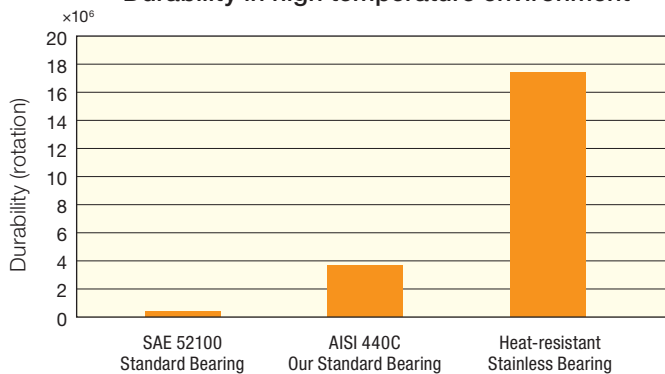
● Specifications

Inner and Outer Rings	AISI 440C
Balls	AISI 440C
Retainer	AISI 304
Shield	AISI 304
Seal	Fluorine rubber *1
Lubricant	Heat-resistant fluorine grease
Radial clearance	C4

*1 Sealed type available up to 392°F

● Performance

Durability in high temperature environment



◎ Test Conditions

Bearing : 6004
 Temperature : 482°F
 Radial load : 1000N
 Rotation speed : 2000min⁻¹

* The above performance values are our test results and are not guaranteed values.

● Application

Device around furnace, oven, heater, drying equipment, and other high temperature area.

SMT

Heat-resistant Hybrid Bearings



Longer lifetime, by incorporating ceramic ball,
than Heat-resistant Stainless Bearings

● Heat-resistant Hybrid Bearings up to 482°F

1. Hybrid type incorporating ceramic balls into outer and inner rings of AISI 440C stainless steel
2. Longer grease life, by lower heat generation with ceramic balls
3. Less running cost by longer lifetime
4. Material characteristics

● Specifications

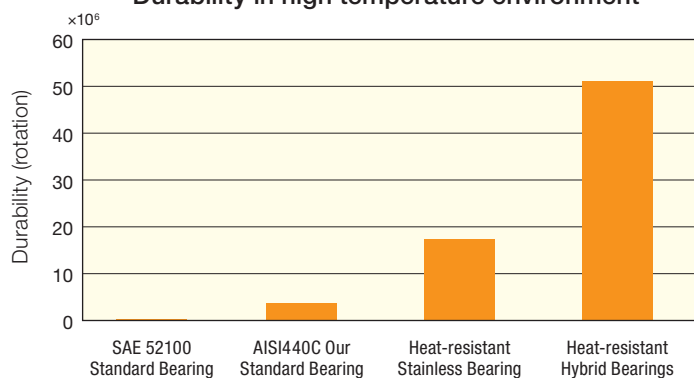
Inner and Outer Rings	AISI 440C
Balls	Silicon nitride (Si ₃ N ₄)
Retainer	AISI 304
Shield	AISI 304
Seal	Fluorine rubber *1
Lubricant	Heat-resistant fluorine grease
Radial clearance	C4

*1 Sealed type available up to 392°F

Items	Unit	Silicon nitride Si ₃ N ₄	Stainless steel AISI 440C	Bearing steel SAE 52100	Superiority of ceramic ball
Density	G/cm ³	3.2	7.8	7.8	Lowering centrifugal force of balls
Heat expansion coefficient	×10 ⁶ /°C	3.2	10.5	12.5	Small variation of internal clearance by temperature rise
Hardness	HV	1400	700	740	Excellent abrasion resistance
Young's modulus	GPa	320	200	210	Reducing friction by high rigidity
Heat resistance	°F	1472	752	356	Maintaining high load capacity in high temperature
Conductivity	—	No	Yes	Yes	Preventing electric corrosion

● Performance

Durability in high temperature environment



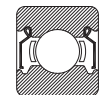
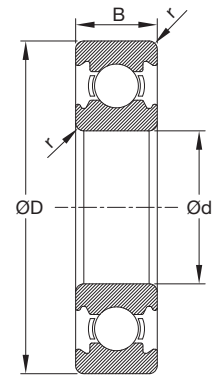
◎ Test Conditions

Bearing : 6004
 Temperature : 482°F
 Radial load : 1000N
 Rotation speed : 2000min⁻¹

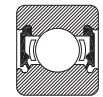
* The above performance values are our test results and are not guaranteed values.

Dimensions

Bearing No.	Bore	O.D.	Width	Chamfer	Allowable radial load	Allowable rotation
	d	D	B	r (min)		
	mm	mm	mm	mm	N	min ⁻¹
SS 6800	10	19	5	0.3	170	2000
SS 6900	10	22	6	0.3	215	2000
SS 6000	10	26	8	0.3	370	2000
SS 6200	10	30	9	0.6	410	2000
SS 6300	10	35	11	0.6	650	2000
SS 6801	12	21	5	0.3	155	2000
SS 6901	12	24	6	0.3	230	2000
SS 6001	12	28	8	0.3	410	2000
SS 6201	12	32	10	0.6	545	2000
SS 6301	12	37	12	1.0	775	2000
SS 6802	15	24	5	0.3	165	2000
SS 6902	15	28	7	0.3	345	2000
SS 6002	15	32	9	0.3	450	2000
SS 6202	15	35	11	0.6	610	2000
SS 6302	15	42	13	1.0	910	2000
SS 6803	17	26	5	0.3	210	2000
SS 6903	17	30	7	0.3	370	2000
SS 6003	17	35	10	0.3	480	2000
SS 6203	17	40	12	0.6	770	2000
SS 6303	17	47	14	1.0	1090	1880
SS 6804	20	32	7	0.3	320	2000
SS 6904	20	37	9	0.3	510	2000
SS 6004	20	42	12	0.6	750	2000
SS 6204	20	47	14	1.0	1020	1750
SS 6304	20	52	15	1.1	1270	1750
SS 6805	25	37	7	0.3	345	2000
SS 6905	25	42	9	0.3	560	1880
SS 6005	25	47	12	0.6	810	1750
SS 6205	25	52	15	1.0	1120	1630
SS 6305	25	62	17	1.1	1650	1380
SS 6806	30	42	7	0.3	365	1750
SS 6906	30	47	9	0.3	580	1630
SS 6006	30	55	13	1.0	1060	1500
SS 6206	30	62	16	1.0	1560	1380
SS 6306	30	72	19	1.1	2140	1200
SS 6807	35	47	7	0.3	380	1500
SS 6907	35	55	10	0.6	830	1380
SS 6007	35	62	14	1.0	1280	1250
SS 6207	35	72	17	1.1	2060	1150
SS 6307	35	80	21	1.5	2660	1080
SS 6808	40	52	7	0.3	395	1380
SS 6908	40	62	12	0.6	1100	1230
SS 6008	40	68	15	1.0	1340	1150
SS 6208	40	80	18	1.1	2330	1040
SS 6308	40	90	23	1.5	3250	960
SS 6909	45	68	12	0.6	1130	1110
SS 6009	45	75	16	1.0	1680	1040
SS 6209	45	85	19	1.1	2620	960
SS 6309	45	100	25	1.5	4250	850
SS 6910	50	72	12	0.6	1160	1030
SS 6010	50	80	16	1.0	1740	950
SS 6210	50	90	20	1.1	2810	890
SS 6310	50	110	27	2.0	4950	760
SS 6911	55	80	13	1.0	1330	930
SS 6011	55	90	18	1.1	2260	860
SS 6211	55	100	21	1.5	3470	790
SS 6311	55	120	29	2.0	5750	500
SS 6912	60	85	13	1.0	1620	850
SS 6012	60	95	18	1.1	2350	810
SS 6212	60	110	22	1.5	4200	730



Shielded
ZZ



Sealed
2RSV

Examples:

- Heat-resistant stainless bearings
SS 6800 ZZ C4 PA
- Heat-resistant hybrid bearings
SS 6800 2RSV CB C4 PA

Under high temperature environment, radial internal clearance decreases due to difference of materials used for shaft, i.e. linear expansion coefficient, which may interfere with the rotation of the bearing. Please consider the thermal expansion sufficiently and select fitting and material of the shaft. Please contact us for further information.

* Performance values and expressions described in this catalog are guidelines for selection and are not guaranteed values. Please note that specifications may be changed without prior notice to improve product performance.

SMT

Nankai Seiko Co., Ltd.

3-6-1, Techno Stage, Izumi, Osaka 594-1144, Japan.

TEL 0725-53-5563 FAX 0725-53-5576

URL <http://www.smtbearing.com>