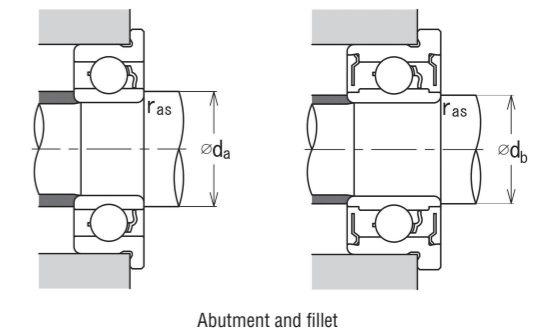
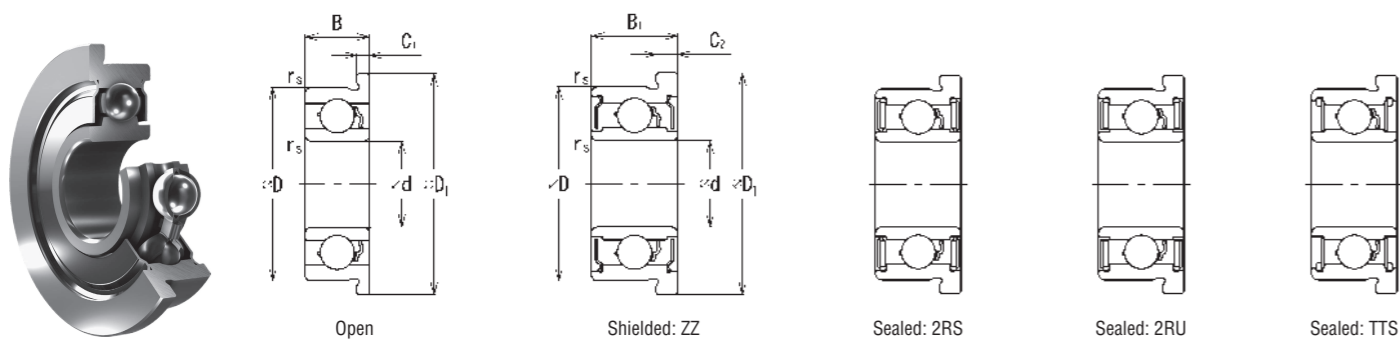


# Flanged extra-miniature/miniature/small bearings [SUJ2]



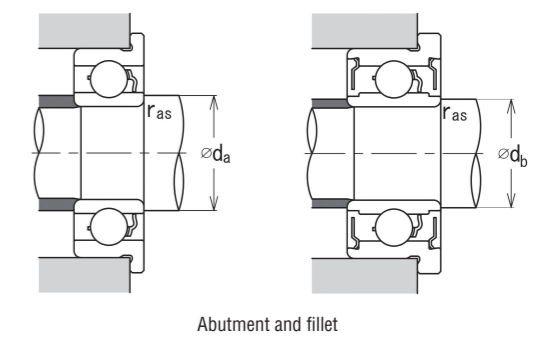
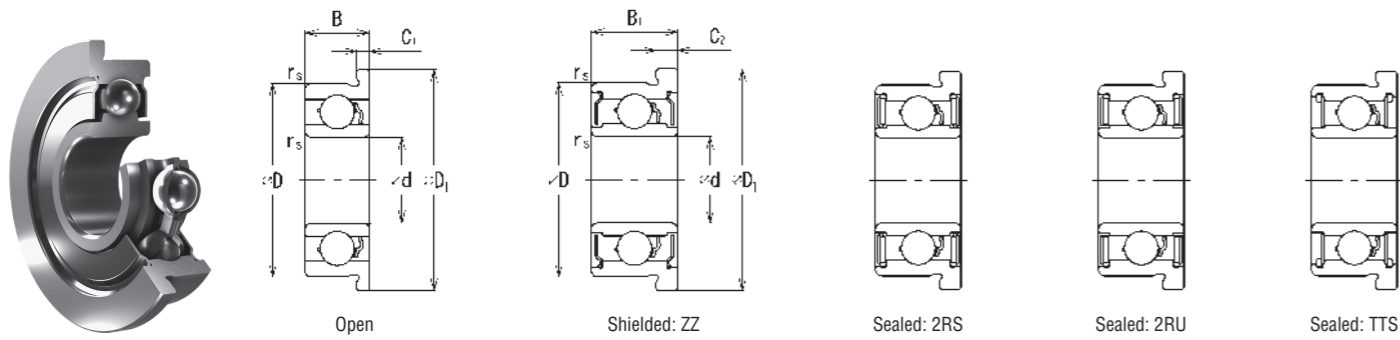
Dimension

Flanged extra-miniature/miniature/small bearings [SUJ2]

Bore diameter d	Outer diameter D	Width						Flange outer diameter				Flange width				Chamfer r <sub>s</sub> (min)	
		Open B		Shielded, Sealed B <sub>1</sub>		Open D <sub>1</sub>		Shielded, Sealed D <sub>2</sub>		Open C <sub>1</sub>		Shielded, Sealed C <sub>2</sub>					
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
1.5	0.0591	5	0.1969	—	—	2.6	0.1024	—	—	6.5	0.2559	—	—	0.8	0.0315	0.15	0.0059
2	0.0787	5	0.1969	1.5	0.0591	2.3	0.0906	6.1	0.2402	6.1	0.2402	0.5	0.0197	0.6	0.0236	0.08	0.0031
		5	0.1969	—	—	2.5	0.0984	—	—	6.2	0.2441	—	—	0.6	0.0236	0.10	0.0039
		6	0.2362	2.3	0.0906	3	0.1181	7.5	0.2953	7.5	0.2953	0.6	0.0236	0.8	0.0315	0.15	0.0059
		6	0.2362	—	—	2.5	0.0984	—	—	7.2	0.2835	—	—	0.6	0.0236	0.10	0.0039
2.5	0.0984	6	0.2362	—	—	2.6	0.1024	—	—	7.1	0.2795	—	—	0.8	0.0315	0.08	0.0031
3	0.1181	6	0.2362	2	0.0787	2.5	0.0984	7.2	0.2835	7.2	0.2835	0.6	0.0236	0.6	0.0236	0.10	0.0039
		7	0.2756	2	0.0787	3	0.1181	8.1	0.3189	8.1	0.3189	0.5	0.0197	0.8	0.0315	0.10	0.0039
		8	0.3150	—	—	3	0.1181	—	—	9.2	0.3622	—	—	0.6	0.0236	0.10	0.0039
		8	0.3150	3	0.1181	4	0.1575	9.5	0.3740	9.5	0.374	0.7	0.0276	0.9	0.0354	0.15	0.0059
		9	0.3543	—	—	4	0.1575	—	—	10.6	0.4173	—	—	0.8	0.0315	0.15	0.0059
		9	0.3543	3	0.1181	5	0.1969	10.5	0.4134	10.5	0.4134	0.7	0.0276	1.0	0.0394	0.15	0.0059
		10	0.3937	4	0.1575	4	0.1575	11.5	0.4528	11.5	0.4528	1.0	0.0394	1.0	0.0394	0.15	0.0059
		4	0.1575	7	0.2756	2	0.0787	—	—	8.2	0.3228	—	—	0.6	0.0236	—	—
7	0.2756	—		—	2.5	0.0984	—	—	8.2	0.3228	—	—	0.6	0.0236	0.10	0.0039	
8	0.3150	2		0.0787	—	—	9.2	0.3622	—	—	0.6	0.0236	—	—	0.15	0.0059	
8	0.3150	—		—	3	0.1181	—	—	9.2	0.3622	—	—	0.6	0.0236	0.10	0.0039	
9	0.3543	2.5		0.0984	4	0.1575	10.3	0.4055	10.3	0.4055	0.6	0.0236	1.0	0.0394	0.10	0.0039	
10	0.3937	3		0.1181	4	0.1575	11.2	0.4409	11.6	0.4567	0.6	0.0236	0.8	0.0315	0.20	0.0079	
11	0.4331	4		0.1575	4	0.1575	12.5	0.4921	12.5	0.4921	1.0	0.0394	1.0	0.0394	0.15	0.0059	
12	0.4724	4		0.1575	4	0.1575	13.5	0.5315	13.5	0.5315	1.0	0.0394	1.0	0.0394	0.20	0.0079	
13	0.5118	5	0.1969	5	0.1969	15	0.5906	15	0.5906	1.0	0.0394	1.0	0.0394	0.20	0.0079		
16	0.6299	5	0.1969	5	0.1969	18	0.7087	18	0.7087	1.0	0.0394	1.0	0.0394	0.30	0.0118		
5	0.1969	8	0.3150	2	0.0787	—	—	9.2	0.3622	—	—	0.6	0.0236	—	—	0.10	0.0039
		8	0.3150	—	—	2.5	0.0984	—	—	9.2	0.3622	—	—	0.6	0.0236	0.10	0.0039
		9	0.3543	2.5	0.0984	3	0.1181	10.2	0.4016	10.2	0.4016	0.6	0.0236	0.6	0.0236	0.15	0.0059
		10	0.3937	3	0.1181	4	0.1575	11.2	0.4409	11.6	0.4567	0.6	0.0236	0.8	0.0315	0.15	0.0059
		11	0.4331	4	0.1575	4	0.1575	12.6	0.4961	12.6	0.4961	0.8	0.0315	0.8	0.0315	0.15	0.0059
		11	0.4331	3	0.1181	5	0.1969	12.5	0.4921	12.5	0.4921	0.8	0.0315	1.0	0.0394	0.15	0.0059
		13	0.5118	4	0.1575	4	0.1575	15	0.5906	15	0.5906	1.0	0.0394	1.0	0.0394	0.20	0.0079
		14	0.5512	5	0.1969	5	0.1969	16	0.6299	16	0.6299	1.0	0.0394	1.0	0.0394	0.20	0.0079
16	0.6299	5	0.1969	5	0.1969	18	0.7087	18	0.7087	1.0	0.0394	1.0	0.0394	0.30	0.0118		
19	0.7480	6	0.2362	6	0.2362	22	0.8661	22	0.8661	1.5	0.0591	1.5	0.0591	0.30	0.0118		
6	0.2362	10	0.3937	2.5	0.0984	—	—	11.2	0.4409	—	—	0.6	0.0236	—	—	0.15	0.0059
		10	0.3937	—	—	3	0.1181	—	—	11.2	0.4409	—	—	0.6	0.0236	0.10	0.0039
		12	0.4724	3	0.1181	4	0.1575	13.2	0.5197	13.6	0.5354	0.6	0.0236	0.8	0.0315	0.20	0.0079
		13	0.5118	3.5	0.1378	5	0.1969	15	0.5906	15	0.5906	1.0	0.0394	1.1	0.0433	0.15	0.0059
15	0.5906	5	0.1969	5	0.1969	17	0.6693	17	0.6693	1.2	0.0472	1.2	0.0472	0.20	0.0079		
17	0.6693	6	0.2362	6	0.2362	19	0.7480	19	0.748	1.2	0.0472	1.2	0.0472	0.30	0.0118		

Bearing number	Load rating Cr	Load rating Cor	Limiting speed <sup>(3)</sup>		Cage type <sup>(4)</sup>	Ball		Abutment and fillet dimensions				Mass (Ref.)						
			Grease	Oil		Size	Qty.	Open		Shielded, Sealed		r <sub>as</sub> (max)	Open	2 Shields				
								d <sub>a</sub> (min)	d <sub>a</sub> (max)	d <sub>b</sub> (min)	d <sub>b</sub> (max)							
—	F691XZZ	—	—	238	69	94 000	111 000	W	1.000	6	—	—	2.40	2.40	0.15	—	0.30	
F682	F682ZZ	—	—	169	50	94 000	111 000	W	0.800	6	2.50	2.60	2.50	2.60	0.08	0.16	0.22	
	MF52ZZ	—	—	169	50	94 000	111 000	W	0.800	6	—	—	2.60	2.60	0.10	—	0.24	
F692	F692ZZ	—	—	330	99	86 000	101 000	W	1.200	6	2.90	2.90	2.90	2.90	0.15	0.35	0.43	
	MF62ZZ	—	—	209	73	81 000	96 000	W	0.800	8	—	—	2.80	3.60	0.10	—	0.42	
—	F682XZZ	—	—	209	73	81 000	96 000	W	0.800	8	—	—	3.10	3.60	0.08	—	0.37	
MF63	MF63ZZ	—	—	209	73	81 000	96 000	W	0.800	8	3.60	3.60	3.60	3.60	0.10	0.27	0.31	
	F683	F683ZZ	2RS	—	311	112	74 000	88 000	W	1.000	8	3.80	4.20	3.70	3.80	0.10	0.37	0.52
—	MF83ZZ	—	—	395	140	67 000	79 000	J	1.200	7	—	—	4.20	4.90	0.10	—	0.71	
F693	F693ZZ	2RS	—	559	179	70 000	82 000	J	1.588	6	3.90	4.30	3.90	4.30	0.15	0.71	0.91	
	—	MF93ZZ	—	—	572	188	66 000	78 000	W	1.588	6	—	—	3.90	4.30	0.15	—	1.23
F603	F603ZZ	—	—	572	188	66 000	78 000	W	1.588	6	4.20	4.80	3.90	4.30	0.15	0.97	1.52	
F623 <sup>(1)</sup>	F623ZZ	2RS	2RU	—	633	218	66 000	78 000	J	1.588	7	3.90	4.30	3.90	4.30	0.15	1.68	1.76
MF74	—	—	—	312	115	70 000	82 000	W	1.000	8	4.60	4.70	—	—	0.10	0.28	—	
—	MF74ZZ	—	—	255	107	71 000	83 000	W	0.800	11	—	—	4.60	4.70	0.10	—	0.37	
MF84	—	—	—	395	140	67 000	79 000	J	1.200	7	4.90	4.90	—	—	0.15	0.43	—	
—	MF84ZZ	—	—	395	140	67 000	79 000	J	1.200	7	—	—	4.80	4.90	0.10	—	0.58	
F684	F684ZZ	2RS	—	641	226	63 000	75 000	W	1.588	7	4.80	5.10	4.80	5.10	0.10	0.71	1.09	
MF104	MF104ZZ	2RS	2RU	—	711	270	59 000	70 000	J	1.588	8	5.60	5.80	5.60	5.80	0.20	1.09	1.47
F694 <sup>(1)</sup>	F694ZZ	2RS	—	959	347	57 000	67 000	J	2.000	7	5.20	5.50	5.20	5.50	0.15	1.69	1.81	
F604 <sup>(1)</sup>	F604ZZ	2RS	—	959	347	57 000	67 000	J	2.000	7	5.30	5.50	5.30	5.50	0.20	2.25	2.37	
F624 <sup>(1)</sup>	F624ZZ	2RS	2RU	—	1 300	485	51 000	60 000	J	2.381	7	5.60	5.90	5.60	5.90	0.20	3.05	3.22
F634 <sup>(1)</sup>	F634ZZ	2RS	—	1 340	517	46 000	54 000	J	2.381	7	6.00	6.60	6.00	6.60	0.30	5.29	5.63	
MF85	—	—	—	309	121	62 000	74 000	W	1.000	8	5.60	5.70	—	—	0.10	0.33	—	
—	MF85ZZ	—	—	218	91	63 000	75 000	W	0.800	9	—	—	5.60	5.70	0.10	—	0.42	
MF95	MF95ZZ	—	—	432	168	60 000	71 000	W	1.200	8	5.90	5.90	5.90	5.90	0.15	0.58	0.65	
MF105	MF105ZZ	2RS	—	432	168	60 000	71 000	W	1.200	8	5.90	5.90	5.90	5.90	0.15	1.03	1.38	
MF115 <sup>(1)</sup>	MF115ZZ	2RS	—	716	283	54 000	64 000	J	1.588	8	6.20	6.70	6.20	6.70	0.15	1.61	1.71	
F685	F685ZZ	2RS	—	716	283	54 000	64 000	J	1.588	8	6.20	6.70	5.90	6.10	0.15	1.34	2.03	
F695 <sup>(1)</sup>	F695ZZ	2RS	—	1 080	430	50 000	59 000	J	2.000	8	6.30	6.50	6.30	6.50	0.20	2.47	2.62	
F605 <sup>(1)</sup>	F605ZZ	2RS	—	1 330	507	48 000	56 000	J	2.381	7	6.60	6.80	6.60	6.80	0.20	3.52	3.79	
F625 <sup>(1)</sup>	F625ZZ	2RS	2RU	—	1 730	670	44 000	52 000	J	2.778	7	7.00	7.40	7.00	7.40	0.30	4.71	4.94
F635 <sup>(1)</sup>	F635ZZ	2RS	—	2														

# Flanged extra-miniature/miniature/small bearings [SUJ2]



Dimension

Flanged extra-miniature/miniature/small bearings [SUJ2]

Bore diameter d		Outer diameter D		Width				Flange outer diameter				Flange width				Chamfer r <sub>s</sub> (min)	
				Open B		Shielded, Sealed B <sub>1</sub>		Open D <sub>1</sub>		Shielded, Sealed D <sub>2</sub>		Open C <sub>1</sub>		Shielded, Sealed C <sub>2</sub>			
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
6	0.2362	19	0.7480	6	0.2362	6	0.2362	22	0.8661	22	0.8661	1.5	0.0591	1.5	0.0591	0.30	0.0118
7	0.2756	11	0.4331	2.5	0.0984	3	0.1181	12.2	0.4803	12.2	0.4803	0.6	0.0236	0.6	0.0236	0.15	0.0059
		13	0.5118	—	—	4	0.1575	—	—	14.6	0.5748	—	—	0.8	0.0315	0.15	0.0059
		14	0.5512	3.5	0.1378	5	0.1969	16	0.6299	16	0.6299	1.0	0.0394	1.1	0.0433	0.15	0.0059
		17	0.6693	5	0.1969	5	0.1969	19	0.7480	19	0.7480	1.2	0.0472	1.2	0.0472	0.30	0.0118
		19	0.7480	6	0.2362	6	0.2362	22	0.8661	22	0.8661	1.5	0.0591	1.5	0.0591	0.30	0.0118
8	0.3150	22	0.8661	7	0.2756	7	0.2756	25	0.9843	25	0.9843	1.5	0.0591	1.5	0.0591	0.30	0.0118
		12	0.4724	2.5	0.0984	—	—	13.2	0.5197	—	—	0.6	0.0236	—	—	0.15	0.0059
		12	0.4724	—	—	3.5	0.1378	—	—	13.6	0.5354	—	—	0.8	0.0315	0.10	0.0039
		12	0.4724	—	—	3.5	0.1378	—	—	13.6	0.5354	—	—	0.8	0.0315	0.10	0.0039
		14	0.5512	3.5	0.1378	—	—	15.6	0.6142	—	—	0.8	0.0315	—	—	0.20	0.0079
9	0.3543	14	0.5512	—	—	4	0.1575	—	—	15.6	0.6142	—	—	0.8	0.0315	0.15	0.0059
		16	0.6299	4	0.1575	5	0.1969	18	0.7087	18	0.7087	1.0	0.0394	1.1	0.0433	0.20	0.0079
		19	0.7480	6	0.2362	6	0.2362	22	0.8661	22	0.8661	1.5	0.0591	1.5	0.0591	0.30	0.0118
		22	0.8661	7	0.2756	7	0.2756	25	0.9843	25	0.9843	1.5	0.0591	1.5	0.0591	0.30	0.0118
		20	0.7874	6	0.2362	6	0.2362	23	0.9055	23	0.9055	1.5	0.0591	1.5	0.0591	0.30	0.0118
24	0.9449	7	0.2756	7	0.2756	27	1.0630	27	1.0630	1.5	0.0591	1.5	0.0591	0.30	0.0118		

Bearing number					Load rating		Limiting speed <sup>(3)</sup>		Cage type <sup>(4)</sup>	Ball		Abutment and fillet dimensions					Mass (Ref.)	
Open	2 Shields <sup>(2)</sup>		2 Seals <sup>(2)</sup>		Cr	Cor	Grease	Oil		Size	Qty.	Open		Shielded, Sealed		r <sub>as</sub> (max)	Open	2 Shields
	2RS	2RU	TTS	N	min <sup>-1</sup>	mm	pcs.	d <sub>a</sub> (min)				d <sub>a</sub> (max)	d <sub>b</sub> (min)	d <sub>b</sub> (max)	mm			
F626 <sup>(1)</sup>	F626ZZ	2RS	2RU	—	2 340	889	38 000	45 000	J	3.500	6	8.00	8.40	8.00	8.40	0.30	8.31	8.84
MF117	MF117ZZ	—	—	—	456	201	50 000	59 000	W	1.200	9	7.90	7.90	7.90	7.90	0.15	0.70	0.84
—	MF137ZZ	—	—	—	541	276	45 000	53 000	W	1.200	12	—	—	8.20	8.90	0.15	—	2.2
F687	F687ZZ	2RS	—	—	1 180	511	44 000	52 000	J	2.000	9	8.20	8.90	8.20	8.40	0.15	2.39	3.15
F697 <sup>(1)</sup>	F697ZZ	2RS	—	—	1 610	716	40 000	47 000	J	2.381	9	8.70	9.10	8.70	9.10	0.30	5.35	5.57
F607 <sup>(1)</sup>	F607ZZ	2RS	2RU	—	2 340	889	38 000	45 000	J	3.500	6	8.70	8.90	8.70	8.90	0.30	7.90	8.40
F627 <sup>(1)</sup>	F627ZZ	2RS	2RU	—	3 300	1 370	33 000	39 000	J	3.969	7	9.00	10.40	9.00	10.40	0.30	13.0	13.6
MF128	—	—	—	—	544	275	46 000	54 000	W	1.200	12	9.00	9.00	—	—	0.15	0.80	—
—	MF128ZZ	2RS	—	—	545	274	46 000	54 000	W	1.200	12	—	—	8.60	8.90	0.10	—	1.20
—	—	—	—	TTS	544	275	31 000	31 000	W	1.200	12	—	—	8.80	9.00	0.10	—	1.13
MF148	—	—	—	—	818	386	42 000	50 000	J	1.588	10	9.60	9.80	—	—	0.20	2.01	—
—	MF148ZZ	2RS	—	—	818	386	42 000	50 000	J	1.588	10	—	—	8.90	9.20	0.15	—	2.22
F688	F688ZZ	2RS	2RU	—	1 260	590	40 000	47 000	J	2.000	10	9.60	10.40	9.50	9.60	0.20	3.57	4.25
F698 <sup>(1)</sup>	F698ZZ	2RS	2RU	—	2 240	912	37 000	44 000	J	3.175	7	9.70	9.70	9.70	9.70	0.30	7.34	7.85
F608 <sup>(1)</sup>	F608ZZ	2RS	2RU	—	3 300	1 370	33 000	39 000	J	3.969	7	10.00	10.40	10.00	10.40	0.30	12.3	12.9
—	F689ZZ	2RS	—	—	1 330	664	37 000	44 000	J	2.000	11	—	—	10.30	10.60	0.20	—	4.58
F699 <sup>(1)</sup>	F699ZZ	2RS	2RU	—	2 470	1 070	35 000	42 000	J	3.175	8	10.60	11.50	10.60	11.50	0.20	8.27	8.77
F609 <sup>(1)</sup>	F609ZZ	2RS	2RU	—	3 350	1 430	30 000	36 000	J	3.969	7	11.00	12.00	11.00	12.00	0.30	14.7	15.5

(1) Open bearings have shield/seal grooves.  
 (2) Single-shielded/single-sealed bearings are also available; suffix Z, RS, RU or TS. (shielded/sealed at flanged side unless otherwise requested)  
 (3) Applicable only for open, single Z, ZZ, single RU and 2RU types in inner ring rotating conditions. Limiting speeds for the contact rubber seal(s) types can be lower than the above-mentioned values, so please check the detailed values per item on "products" section of our website.  
 (4) Some items are also available with the TW cage. Please contact us for details.