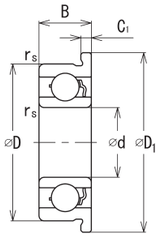
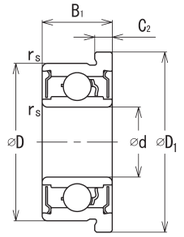
Flanged extra-miniature/miniature/small bearings【SUJ2】

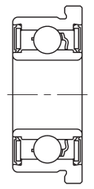




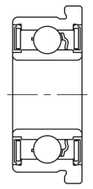
Open



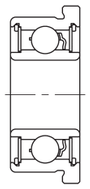
Shielded: ZZ



Sealed: 2RS

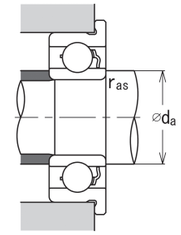


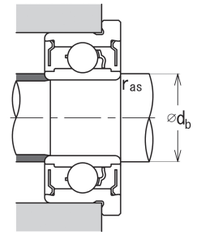
Sealed: 2RU



Sealed: TTS

Bore diameter d		Outer diameter D		Width				Flange outer diameter				Flange width				Chamfer $r_{s\,(min)}$	
				Open B		Shielded, Sealed B_1		Open D_1		Shielded, Sealed D_2		Open C_1		Shielded, Sealed C_2			
mm	inch	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	—	—	0.10	0.0039
		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
6	0.2362	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





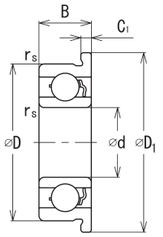
Abutment and fillet

Bearing number					Load rating		Limiting speed(3)		Cage type(4)	Ball		Abutment and fillet dimensions					Mass (Ref.)	
												Open		Shielded, Sealed				
Open	2 Shields(2)	2 Seals(2)			Cr	Cor	Grease	Oil		Size	Qty.	$d_{a\,(min)}$	$d_{a\,(max)}$	$d_{b\,(min)}$	$d_{b\,(max)}$	$r_{as\,(max)}$	Open	2 Shields
		2RS	2RU	TTS	N		min^{-1}			mm	pcs.	mm		mm		mm	g	
—	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(1)	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(1)	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(1)	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(1)	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(1)	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	—	—	TTS	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(1)	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(1)	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(1)	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(1)	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(1)	F635ZZ	2RS	—	—	2 340	889	38 000	45 000	J	3.500	6	7.00	8.40	7.00	8.40	0.30	8.68	9.20
MF106	—	—	—	—	497	219	54 000	64 000	W	1.200	10	6.90	6.90	—	—	0.15	0.66	—
—	MF106ZZ	—	—	—	497	218	55 000	64 000	W	1.200	10	—	—	6.80	6.90	0.10	—	0.78
MF126	MF126ZZ	2RS	—	—	716	293	50 000	59 000	J	1.588	8	7.30	7.60	7.10	7.10	0.20	1.35	1.77
F686	F686ZZ	2RS	2RU	—	1 080	438	48 000	56 000	J	2.000	8	7.20	7.90	7.20	7.30	0.15	2.17	2.86
F696(1)	F696ZZ	2RS	2RU	—	1 340	517	46 000	54 000	J	2.381	7	7.30	7.40	7.30	7.40	0.20	3.98	4.28
F606(1)	F606ZZ	2RS	2RU	—	2 260	838	42 000	49 000	J	3.500	6	7.70	8.10	7.70	8.10	0.30	5.97	6.47

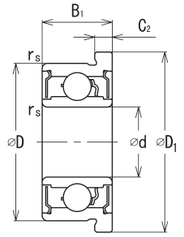
(1) Open bearings have shield/seal grooves.
(2) Single-shielded/single-sealed bearings are also available; suffix Z, RS, RU or TS.
(shielded/sealed at flanged side unless otherwise requested)
(3) Applicable only for open, single Z, ZZ, single RU and 2RU types in inner ring rotating conditions.
Limiting 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.

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

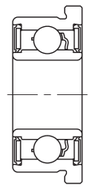




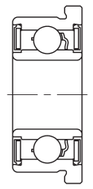
Open



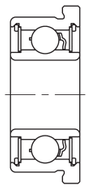
Shielded: ZZ



Sealed: 2RS

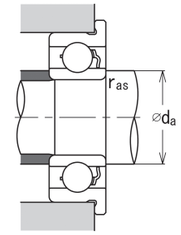


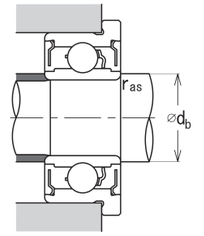
Sealed: 2RU



Sealed: TTS

Bore diameter d		Outer diameter D		Width				Flange outer diameter				Flange width				Chamfer $r_{s\,(min)}$	
				Open B		Shielded, Sealed B_1		Open D_1		Shielded, Sealed D_2		Open C_1		Shielded, Sealed C_2			
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	0.748	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
		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
8	0.3150	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
		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
9	0.3543	17	0.6693	—	—	5	0.1969	—	—	19	0.748	—	—	1.1	0.0433	0.20	0.0079
		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	1.063	1.5	0.0591	1.5	0.0591	0.30	0.0118





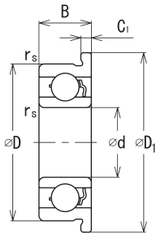
Abutment and fillet

Bearing number					Load rating		Limiting speed(3)		Cage type(4)	Ball		Abutment and fillet dimensions					Mass (Ref.)	
												Open		Shielded, Sealed				
Open	2 Shields(2)	2 Seals(2)			Cr	Cor	Grease	Oil		Size	Qty.	$d_{a\,(min)}$	$d_{a\,(max)}$	$d_{b\,(min)}$	$d_{b\,(max)}$	$r_{as\,(max)}$	Open	2 Shields
		2RS	2RU	TTS	N		min^{-1}			mm	pcs.	mm				mm	g	
F626(1)	**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	**MF117ZZS**	—	—	—	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(1)	**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(1)	**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(1)	**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(1)	**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(1)	**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(1)	**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(1)	**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

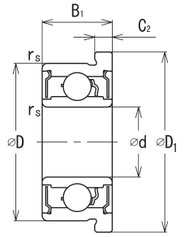
(1) Open bearings have shield/seal grooves.
(2) Single-shielded/single-sealed bearings are also available; suffix Z, RS, RU or TS.
(shielded/sealed at flanged side unless otherwise requested)
(3) Applicable only for open, single Z, ZZ, single RU and 2RU types in inner ring rotating conditions.
Limiting 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.

Flanged extra-miniature/miniature/small bearings【Stainless-steel】

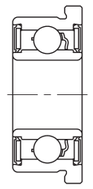




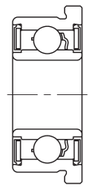
Open



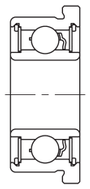
Shielded: ZZ



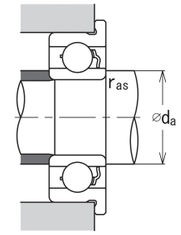
Sealed: 2RS

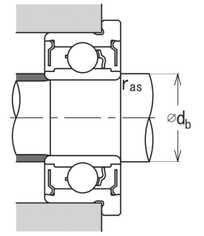


Sealed: 2RU



Sealed: TTS





Abutment and fillet

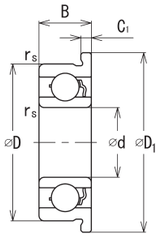
Bore diameter d		Outer diameter D		Width				Flange outer diameter				Flange width				Chamfer $r_{s\,(min)}$	
				Open B		Shielded, Sealed B_1		Open D_1		Shielded, Sealed D_2		Open C_1		Shielded, Sealed C_2			
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
1	0.0394	3	0.1181	1	0.0394	—	—	3.8	0.1496	—	—	0.3	0.0118	—	—	0.05	0.002
		4	0.1575	1.6	0.063	—	—	5	0.1969	—	—	0.5	0.0197	—	—	0.10	0.0039
1.5	0.0591	4	0.1575	1.2	0.0472	2	0.0787	5	0.1969	5	0.1969	0.4	0.0157	0.6	0.0236	0.05	0.002
		5	0.1969	2	0.0787	2.6	0.1024	6.5	0.2559	6.5	0.2559	0.6	0.0236	0.8	0.0315	0.15	0.0059
		6	0.2362	—	—	3	0.1181	—	—	7.5	0.2953	—	—	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	0.0787	2.5	0.0984	6.2	0.2441	6.2	0.2441	0.6	0.0236	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	—	—	3	0.1181	—	—	7.5	0.2953	—	—	0.8	0.0315	0.15	0.0059
		6	0.2362	2.5	0.0984	—	—	7.2	0.2835	—	—	0.6	0.0236	—	—	0.15	0.0059
		7	0.2756	—	—	3	0.1181	—	—	8.2	0.3228	—	—	0.6	0.0236	0.15	0.0059
		7	0.2756	—	—	3.5	0.1378	—	—	8.5	0.3346	—	—	0.9	0.0354	0.15	0.0059
2.5	0.0984	6	0.2362	1.8	0.0709	2.6	0.1024	7.1	0.2795	7.1	0.2795	0.5	0.0197	0.8	0.0315	0.08	0.0031
		7	0.2756	—	—	3.5	0.1378	—	—	8.5	0.3346	—	—	0.9	0.0354	0.15	0.0059
		8	0.3150	2.8	0.1102	4	0.1575	9.5	0.3740	9.5	0.374	0.7	0.0276	0.9	0.0354	0.15	0.0059
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	2.5	0.0984	—	—	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
		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	2.5	0.0984	—	—	10.2	0.4016	—	—	0.6	0.0236	—	—	0.20	0.0079
		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	—	—	0.10	0.0039
		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

Bearing number					Load rating		Limiting speed(3)		Cage type(4)	Ball		Abutment and fillet dimensions					Mass (Ref.)	
		2 Seals(2)										Open		Shielded, Sealed				
Open	2 Shields(2)	2RS	2RU	TTS	Cr	Cor	Grease	Oil		Size	Qty.	$d_{a\,(min)}$	$d_{a\,(max)}$	$d_{b\,(min)}$	$d_{b\,(max)}$	$r_{as\,(max)}$	Open	2 Shields
					N		min^{-1}			mm	pcs.	mm		mm		mm	g	
F681H	—	—	—	—	81	20	117 000	139 000	W	0.600	6	1.40	1.50	—	—	0.05	0.04	—
F691H	—	—	—	—	120	29	105 000	124 000	W	0.800	5	1.80	1.90	—	—	0.10	0.12	—
F681XH	**F681XHZZ**	—	—	—	96	27	105 000	124 000	W	0.600	7	1.90	2.10	1.90	2.10	0.05	0.09	0.13
F691XH	**F691XHZZ**	—	—	—	202	55	94 000	111 000	W	1.000	6	2.40	2.40	2.40	2.40	0.15	0.23	0.29
—	**F601XHZZ**	—	—	—	281	79	86 000	101 000	W	1.200	6	—	—	2.70	2.90	0.15	—	0.46
F682H	**F682HZZ**	—	—	—	144	40	94 000	111 000	W	0.800	6	2.50	2.60	2.50	2.60	0.08	0.16	0.22
SMF52	**SMF52ZZ**	—	—	—	144	40	94 000	111 000	W	0.800	6	2.60	2.60	2.60	2.60	0.10	0.21	0.23
F692H	**F692HZZ**	—	—	—	281	79	86 000	101 000	W	1.200	6	2.90	2.90	2.90	2.90	0.15	0.35	0.43
—	—	—	—	**TTS**	281	79	86 000	95 000	J	1.200	6	—	—	2.90	2.90	0.15	—	0.43
SMF62	—	—	—	—	281	79	86 000	101 000	W	1.200	6	2.90	2.90	—	—	0.15	0.35	—
—	**SMF72ZZS**	—	—	—	328	102	76 000	90 000	W	1.200	7	—	—	3.00	3.10	0.15	—	0.57
—	**F602HZZS**	—	—	—	328	102	76 000	90 000	W	1.200	7	—	—	3.00	3.10	0.15	—	0.69
F682XH	**F682XHZZ**	—	—	—	177	58	81 000	96 000	W	0.800	8	3.10	3.60	3.10	3.60	0.08	0.26	0.37
—	**F692XHZZS**	—	—	—	328	102	76 000	90 000	W	1.200	7	—	—	3.70	3.80	0.15	—	0.68
F602XH	**F602XHZZ**	—	—	—	469	140	72 000	85 000	W	1.588	6	3.70	4.00	3.70	4.00	0.15	0.74	0.98
SMF63	**SMF63ZZ**	—	—	—	177	58	81 000	96 000	W	0.800	8	3.60	3.60	3.60	3.60	0.10	0.26	0.30
F683H	**F683HZZ**	**2RS**	—	—	265	90	74 000	88 000	W	1.000	8	3.80	4.20	3.70	3.80	0.10	0.37	0.51
SMF83	—	—	—	—	336	112	67 000	79 000	J	1.200	7	4.20	4.90	—	—	0.15	0.62	—
—	**SMF83ZZ**	—	—	—	336	112	67 000	79 000	J	1.200	7	—	—	4.20	4.90	0.10	—	0.70
F693H	**F693HZZ**	**2RS**	—	—	475	143	70 000	82 000	J	1.588	6	3.90	4.30	3.90	4.30	0.15	0.70	0.90
SMF93	—	—	—	—	486	150	66 000	78 000	W	1.588	6	4.60	4.80	—	—	0.20	0.78	—
—	**SMF93ZZ**	—	—	—	486	150	66 000	78 000	W	1.588	6	—	—	3.90	4.30	0.15	—	1.22
F603H	**F603HZZ**	—	—	—	486	150	66 000	78 000	W	1.588	6	4.20	4.80	3.90	4.30	0.15	0.96	1.50
F623H(1)	**F623HZZ**	**2RS**	**2RU**	—	538	175	66 000	78 000	J	1.588	7	3.90	4.30	3.90	4.30	0.15	1.66	1.74
SMF74	—	—	—	—	265	92	70 000	82 000	W	1.000	8	4.60	4.70	—	—	0.10	0.28	—
—	**SMF74ZZ**	—	—	—	217	86	71 000	83 000	W	0.800	11	—	—	4.60	4.70	0.10	—	0.36
SMF84	—	—	—	—	336	112	67 000	79 000	J	1.200	7	4.90	4.90	—	—	0.15	0.43	—
—	**SMF84ZZ**	—	—	—	336	112	67 000	79 000	J	1.200	7	—	—	4.80	4.90	0.10	—	0.57
F684H	**F684HZZ**	**2RS**	—	—	545	181	63 000	75 000	W	1.588	7	4.80	5.10	4.80	5.10	0.10	0.70	1.07
SMF104	**SMF104ZZ**	**2RS**	**2RU**	—	604	216	59 000	70 000	J	1.588	8	5.60	5.80	5.60	5.80	0.20	1.08	1.45
F694H(1)	**F694HZZ**	**2RS**	—	—	815	277	57 000	67 000	J	2.000	7	5.20	5.50	5.20	5.50	0.15	1.67	1.79
F604H(1)	**F604HZZ**	**2RS**	—	—	815	277	57 000	67 000	J	2.000	7	5.30	5.50	5.30	5.50	0.20	2.22	2.34
F624H(1)	**F624HZZ**	**2RS**	**2RU**	—	1 110	388	51 000	60 000	J	2.381	7	5.60	5.90	5.60	5.90	0.20	3.11	3.28
F634H(1)	**F634HZZ**	**2RS**	—	—	1 140	414	46 000	54 000	J	2.381	7	6.00	6.60	6.00	6.60	0.30	5.22	5.56
SMF85	—	—	—	—	263	97	62 000	74 000	W	1.000	8	5.60	5.70	—	—	0.10	0.32	—
—	**SMF85ZZ**	—	—	—	185	73	63 000	75 000	W	0.800	9	—	—	5.60	5.70	0.10	—	0.42
SMF95	**SMF95ZZ**	—	—	**TTS**	367	134	60 000	71 000	W	1.200	8	5.90	5.90	5.90	5.90	0.15	0.57	0.64
SMF105	**SMF105ZZ**	**2RS**	—	—	367	134	60 000	71 000	W	1.200	8	5.90	5.90	5.90	5.90	0.15	1.01	1.37
SMF115(1)	**SMF115ZZ**	**2RS**	—	—	609	226	54 000	64 000	J	1.588	8	6.20	6.70	6.20	6.70	0.15	1.59	1.69

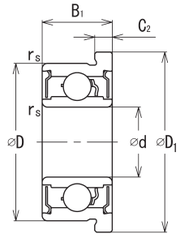
(1) Open bearings have shield/seal grooves.
(2) Single-shielded/single-sealed bearings are also available; suffix Z, RS, RU or TS.
(shielded/sealed at flanged side unless otherwise requested)
(3) Applicable only for open, single Z, ZZ, single RU and 2RU types in inner ring rotating conditions.
Limiting 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.

Flanged extra-miniature/miniature/small bearings【Stainless-steel】

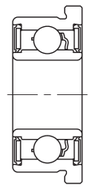




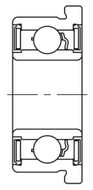
Open



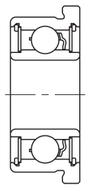
Shielded: ZZ



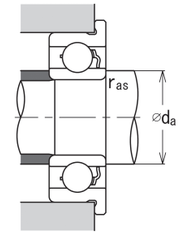
Sealed: 2RS

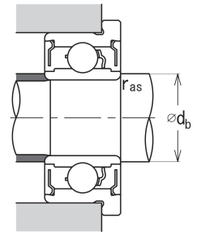


Sealed: 2RU



Sealed: TTS





Abutment and fillet

Bore diameter d		Outer diameter D		Width				Flange outer diameter				Flange width				Chamfer $r_{s\,(min)}$	
				Open B		Shielded, Sealed B_1		Open D_1		Shielded, Sealed D_2		Open C_1		Shielded, Sealed C_2			
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
5	0.1969	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
		10	0.3937	3	0.1181	3	0.1181	11.2	0.4409	11.2	0.4409	0.6	0.0236	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
		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	3	0.1181	—	—	14.2	0.5591	—	—	0.6	0.0236	—	—	0.20	0.0079
		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	0.748	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
		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
8	0.3150	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
		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
9	0.3543	17	0.6693	4	0.1575	5	0.1969	19	0.7480	19	0.748	1.0	0.0394	1.1	0.0433	0.20	0.0079
		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	1.063	1.5	0.0591	1.5	0.0591	0.30	0.0118

Bearing number					Load rating		Limiting speed(3)		Cage type(4)	Ball		Abutment and fillet dimensions					Mass (Ref.)	
												Open		Shielded, Sealed				
Open	2 Shields(2)	2 Seals(2)			Cr	Cor	Grease	Oil		Size	Qty.	$d_{a\,(min)}$	$d_{a\,(max)}$	$d_{b\,(min)}$	$d_{b\,(max)}$	$r_{as\,(max)}$	Open	2 Shields
		2RS	2RU	TTS	N		min^{-1}			mm	pcs.	mm		mm		mm	g	
F685H	**F685HZZ**	**2RS**	—	—	609	226	54 000	64 000	J	1.588	8	6.20	6.70	5.90	6.10	0.15	1.33	2.01
F695H(1)	**F695HZZ**	**2RS**	—	—	916	344	50 000	59 000	J	2.000	8	6.30	6.50	6.30	6.50	0.20	2.44	2.59
F605H(1)	**F605HZZ**	**2RS**	—	—	1 130	405	48 000	56 000	J	2.381	7	6.60	6.80	6.60	6.80	0.20	3.47	3.74
F625H(1)	**F625HZZ**	**2RS**	—	—	1 470	536	44 000	52 000	J	2.778	7	7.00	7.40	7.00	7.40	0.30	4.88	5.21
F635H(1)	**F635HZZ**	**2RS**	—	—	1 990	711	38 000	45 000	J	3.500	6	7.00	8.40	7.00	8.40	0.30	8.57	9.10
SMF106	—	—	—	—	422	175	54 000	64 000	W	1.200	10	6.90	6.90	—	—	0.15	0.66	—
—	**SMF106ZZ**	—	—	—	423	174	55 000	64 000	W	1.200	10	—	—	6.80	6.90	0.10	—	0.77
F676H(1)	—	—	—	**TTS**	317	138	55 000	65 000	W	1.000	11	6.80	7.00	6.80	7.00	0.10	0.80	0.83
SMF126	**SMF126ZZ**	**2RS**	—	—	608	234	50 000	59 000	J	1.588	8	7.30	7.60	7.10	7.10	0.20	1.33	1.75
F686H	**F686HZZ**	**2RS**	**2RU**	**TTS**	920	350	48 000	56 000	J	2.000	8	7.20	7.90	7.20	7.30	0.15	2.15	2.83
F696H(1)	**F696HZZ**	**2RS**	**2RU**	—	1 140	414	46 000	54 000	J	2.381	7	7.30	7.40	7.30	7.40	0.20	3.93	4.23
F606H(1)	**F606HZZ**	**2RS**	**2RU**	—	1 920	670	42 000	49 000	J	3.500	6	7.70	8.10	7.70	8.10	0.30	5.90	6.40
F626H(1)	**F626HZZ**	**2RS**	**2RU**	—	1 990	711	38 000	45 000	J	3.500	6	8.00	8.40	8.00	8.40	0.30	8.22	8.74
SMF117	**SMF117ZZS**	—	—	—	388	161	50 000	59 000	W	1.200	9	7.90	7.90	7.90	7.90	0.15	0.69	0.83
SMF137	–	—	—	—	460	221	45 000	53 000	W	1.200	12	8.60	9.30	—	—	0.20	1.65	—
—	**SMF137ZZ**	—	—	—	460	221	45 000	53 000	W	1.200	12	—	—	8.20	8.90	0.15	—	2.18
F687H	**F687HZZ**	**2RS**	—	—	999	409	44 000	52 000	J	2.000	9	8.20	8.90	8.20	8.40	0.15	2.36	3.11
F697H(1)	**F697HZZ**	**2RS**	—	—	1 370	573	40 000	47 000	J	2.381	9	8.70	9.10	8.70	9.10	0.30	5.28	5.50
F607H(1)	**F607HZZ**	**2RS**	**2RU**	—	1 990	711	38 000	45 000	J	3.500	6	8.70	8.90	8.70	8.90	0.30	7.80	8.31
F627H(1)	**F627HZZ**	**2RS**	**2RU**	—	2 800	1 090	33 000	39 000	J	3.969	7	9.00	10.40	9.00	10.40	0.30	12.8	13.4
SMF128	—	—	—	—	462	220	46 000	54 000	W	1.200	12	9.00	9.00	—	—	0.15	0.79	—
—	**SMF128ZZ**	**2RS**	—	—	463	219	46 000	54 000	W	1.200	12	—	—	8.60	8.90	0.10	—	1.18
—	—	—	—	**TTS**	462	220	31 000	31 000	W	1.200	12	—	—	8.80	9.00	0.10	—	1.12
SMF148	–	—	—	—	696	309	42 000	50 000	J	1.588	10	9.60	9.80	—	—	0.20	1.99	—
—	**SMF148ZZ**	**2RS**	—	—	696	309	42 000	50 000	J	1.588	10	—	—	8.90	9.20	0.15	—	2.20
F688H	**F688HZZ**	**2RS**	**2RU**	**TTS**	1 070	472	40 000	47 000	J	2.000	10	9.60	10.40	9.50	9.60	0.20	3.52	4.20
F698H(1)	**F698HZZ**	**2RS**	**2RU**	—	1 900	729	37 000	44 000	J	3.175	7	9.70	9.70	9.70	9.70	0.30	7.25	7.76
F608H(1)	**F608HZZ**	**2RS**	**2RU**	—	2 800	1 090	33 000	39 000	J	3.969	7	10.00	10.40	10.00	10.40	0.30	12.1	12.8
F689H	**F689HZZ**	**2RS**	—	—	1 130	531	37 000	44 000	J	2.000	11	10.60	11.40	10.30	10.60	0.20	3.82	4.52
F699H(1)	**F699HZZ**	**2RS**	**2RU**	—	2 100	855	35 000	42 000	J	3.175	8	11.00	11.50	11.00	11.50	0.30	8.17	8.67
F609H(1)	**F609HZZ**	—	—	—	2 850	1 150	30 000	36 000	J	3.969	7	11.00	12.00	11.00	12.00	0.30	14.5	15.3

(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.