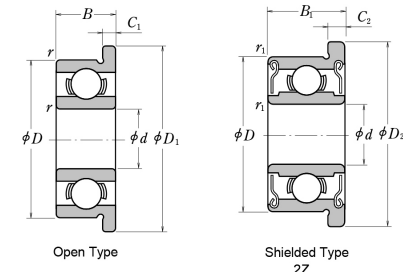
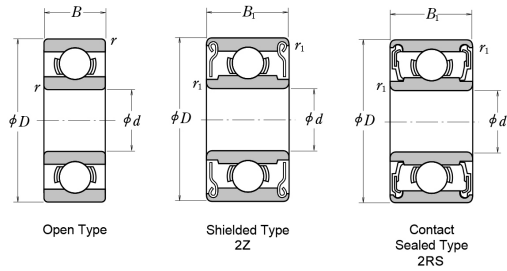


Miniature Ball Bearings:

Miniature Ball Bearings are small bearings with balls as their rolling elements. A typical miniature deep-groove ball bearing is designed for high-speed operation with Space constrains.

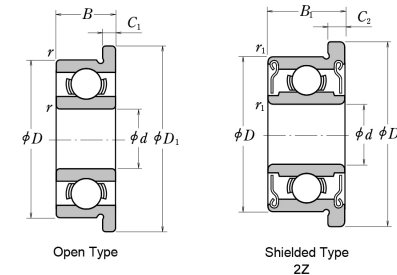
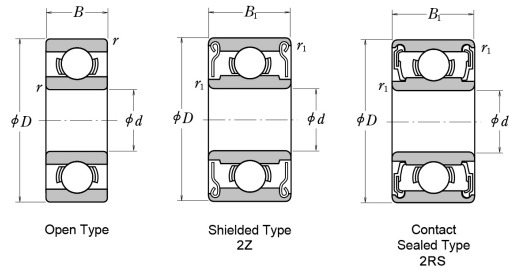


Suffix and Corresponding Description For Miniature Ball Bearings	
Suffix	Description of Suffix
2Z	Shield on Both Sides
2RS	Contact Rubber Seal on Both Side
W	Stainless Steel
F	Flange on the Outer Ring
WF	Stainless Steel with Flange
C1	Radial Internal Clearance C1 (Clearance lesser than C2)
C2	Radial Internal Clearance C2 (Clearance lesser than CN)
No Symbol	(CN) Normal Internal Clearance
C3	Radial Internal Clearance C3 (Clearance Larger than Normal)
C4	Radial Internal Clearance C4 (Clearance Larger than C3)
No Symbol	Steel Cage
No Symbol	ISO Normal
P6	ISO Class 6
P5	ISO Class 5
P4	ISO Class 4
P2	ISO Class 2



Boundary Dimensions										Basic Load Rating		Limiting Speed		
(mm)										(KN)		(rpm)		
d	D	D ₁	D ₂	B	B ₁	C ₁	C ₂	r	r ₁	Cr	Cor	Grease		Oil
								(min)	(min)			Open Type (2Z)	(2RS)	
2	7	8.5	8.5	2.8	3.5	0.7	0.9	0.15	0.15	0.39	0.13	76000	-	79000
2	5	6.1	6.1	1.5	2.3	0.5	0.6	0.1	0.1	0.19	0.06	98000	-	110000
2	6	7.5	7.5	2.3	3	0.6	0.8	0.15	0.1	0.33	0.1	86000	-	100000
2.5	6	7.1	7.1	1.8	2.6	0.5	0.8	0.1	0.1	0.19	0.06	75000	-	89000
2.5	7	8.5	8.5	2.5	3.5	0.7	0.9	0.15	0.15	0.31	0.11	66000	-	79000
3	10	11.5	11.5	4	4	1	1	0.15	0.15	0.64	0.23	52000	44000	63000
3	13	15	15	5	5	1	1	0.2	0.2	1.3	0.49	44000	-	54000
3	9	10.5	10.5	3	5	0.7	1	0.15	0.15	0.43	0.16	60000	-	72000
3	7	8.1	8.1	2	3	0.5	0.8	0.15	0.15	0.31	0.11	66000	-	79000
3	8	9.5	9.5	3	4	0.7	0.9	0.15	0.15	0.55	0.17	64000	-	76000
4	12	13.5	13.5	4	4	1	1	0.2	0.2	0.97	0.36	53000	-	63000
4	13	15	15	5	5	1	1	0.2	0.2	1.3	0.49	44000	39000	54000
4	16	18	18	5	5	1	1	0.3	0.3	1.75	0.67	40000	-	49000
4	11	12.5	12.5	4	4	1	1	0.15	0.15	0.96	0.35	54000	44000	65000
4	9	10.3	10.3	2.5	4	0.6	1	0.15	0.15	0.64	0.23	59000	-	70000
5	14	16	16	5	5	1	1	0.2	0.2	1.3	0.49	50000	-	60000
5	16	18	18	5	5	1	1	0.3	0.3	1.75	0.67	40000	33000	49000
5	19	22	22	6	6	1.5	1.5	0.3	0.3	2.6	1.05	35000	27000	43000
5	13	15	15	4	4	1	1	0.2	0.2	1.3	0.49	50000	42000	60000
5	11	12.5	12.5	3	5	0.8	1	0.15	0.15	0.97	0.36	53000	-	63000
6	17	19	19	6	6	1.2	1.2	0.3	0.3	2.2	0.83	43000	-	51000
6	19	22	22	6	6	1.5	1.5	0.3	0.3	2.6	1.05	35000	27000	43000
6	22	25	25	7	7	1.5	1.5	0.3	0.3	3.3	1.35	31000	23000	37000
6	15	17	17	5	5	1.2	1.2	0.2	0.2	1.75	0.67	45000	32000	54000
6	13	15	15	3.5	5	1	1.1	0.15	0.15	1.1	0.44	48000	36000	57000
7	19	22	22	6	6	1.5	1.5	0.3	0.3	2.6	1.05	40000	27000	47000
7	22	25	25	7	7	1.5	1.5	0.3	0.3	3.3	1.35	31000	23000	37000
7	26	29	29	9	9	2	2	0.3	0.3	4.55	1.95	26000	-	32000
7	17	19	19	5	5	1.2	1.2	0.3	0.3	1.6	0.71	42000	28000	50000
7	14	16	16	3.5	5	1	1.1	0.15	0.15	1.15	0.51	45000	-	54000

Bearing Designation					Shoulder Dimensions				Mass
Open Type	With Metal shield	With contacting rubber seals	Flange Open Type	Flange With Metal Shield	(mm)				(g)
					d _a	D _a	r _a	r _b	Approx
					(min)	(max)	(max)	(max)	
602	W602 2Z	-	F602	WF602 2Z	3.2	5.8	0.15	0.15	0.5
682	W682 2Z	-	F682	WF682 2Z	2.8	4.4	0.1	0.1	0.1
692	W692 2Z	-	F692	WF692 2Z	3.2	4.8	0.15	0.1	0.2
68/2.5	W68/2.5 2Z	-	F68/2.5	WF68/2.5 2Z	3.3	5.2	0.1	0.1	0.2
69/2.5	W69/2.5 2Z	-	F69/2.5	WF69/2.5 2Z	3.7	5.8	0.15	0.15	0.4
623	623 2Z	623 2RS	F623	F623 2Z	4.2	8.8	0.15	0.15	1.6
633	633 2Z	-	F633	F633 2Z	4.6	11.4	0.2	0.2	3
603	W603 2Z	-	F603	WF603 2Z	4.2	7.8	0.15	0.15	0.9
683	W683 2Z	-	F683	WF683 2Z	4.2	5.8	0.1	0.1	0.3
693	W693 2Z	-	F693	WF693 2Z	4.2	6.8	0.15	0.15	0.6
604	604 2Z	-	F604	F604 2Z	5.6	10.4	0.2	0.2	2.1
624	624 2Z	624 2RS	F624	F624 2Z	5.6	11.4	0.2	0.2	2.9
634	634 2Z	-	F634	-	6	14	0.3	0.3	5.3
694	694 2Z	694 2RS	F694	F694 2Z	5.2	9.8	0.15	0.15	1.8
684	W684 2Z	-	F684	WF684 2Z	5.2	7.8	0.1	0.1	0.6
605	605 2Z	-	F605	F605 2Z	6.6	12.4	0.2	0.2	3.5
625	625 2Z	625 2RS	F625	F625 2Z	7	14	0.3	0.3	5
635	635 2Z	635 2RS	F635	F635 2Z	7	17	0.3	0.3	8.5
695	695 2Z	695 2RS	F695	F695 2Z	6.6	11.4	0.2	0.2	2.2
685	W685 2Z	-	F685	WF685 2Z	6.2	9.8	0.15	0.15	0.1
606	606 2Z	-	F606	F606 2Z	8	15	0.3	0.3	5.8
626	626 2Z	626 2RS	F626	F626 2Z	8	17	0.3	0.3	8.1
636	636 2Z	636 2RS	F636	F636 2Z	8	20	0.3	0.3	13
696	696 2Z	696 2RS	F696	F696 2Z	7.6	13.4	0.2	0.2	3.9
686	W686 2Z	W686 2RS	F686	WF686 2Z	7.2	11.8	0.15	0.15	1.8
607	607 2Z	607 2RS	F607	F607 2Z	9	17	0.3	0.3	7.6
627	627 2Z	627 2RS	F627	F627 2Z	9	20	0.3	0.3	13
637	637 2Z	-	F637	F637 2Z	9	24	0.3	0.3	24
697	697 2Z	697 2RS	F697	F697 2Z	9	15	0.3	0.3	5.3
687	W687 2Z	-	F687	WF687 2Z	8.2	12.8	0.15	0.15	2



Boundary Dimensions												Basic Load Rating		Limiting Speed		Bearing Designation	Shoulder Dimensions				Mass			
(mm)												(KN)		(rpm)			(mm)				(g)			
d	D	D ₁	D ₂	B	B ₁	C ₁	C ₂	r	r ₁	Cr	Cor	Grease		Oil	Open Type		With Metal shield	With contacting rubber seals	Flange Open Type	Flange With Metal Shield	d _a	D _a	r _b	r _b
								(min)	(min)			Open Type (2Z)	(2RS)	Open Type (Z)						(min)	(max)	(max)	(max)	
8	22	25	25	7	7	1.5	1.5	0.3	0.3	3.3	1.35	34000	23000	41000	608	608 2Z	608 2RS	F608	F608 2Z	10	20	0.3	0.3	12
8	24	-	-	8	8	-	-	0.3	0.3	3.35	1.4	28000	22000	35000	628	628 2Z	628 2RS	-	-	10	22	0.3	0.3	18
8	28	-	-	9	9	-	-	0.3	0.3	4.55	1.95	26000	-	32000	638	638 2Z	-	-	-	10	26	0.3	0.3	29
8	19	22	22	6	6	1.5	1.5	0.3	0.3	2.25	0.91	39000	27000	46000	698	698 2Z	698 2RS	F698	F698 2Z	10	17	0.3	0.3	7.2
8	16	18	18	4	5	1	1.1	0.2	0.2	1.6	0.71	42000	28000	50000	688	W688 2Z	W688 2RS	F688	WF688 2Z	9.6	14.4	0.2	0.2	3.2
9	24	27	27	7	7	1.5	1.5	0.3	0.3	3.35	1.4	33000	22000	40000	609	609 2Z	609 2RS	F609	F609 2Z	11	22	0.3	0.3	15
9	26	-	-	8	8	-	-	0.6	0.6	4.55	2	27000	19000	33000	629	629 2Z	629 2RS	-	-	13	22	0.3	0.3	20
9	30	-	-	10	10	-	-	0.6	0.6	6	2.65	24000	-	29000	639	639 2Z	-	-	-	13	26	0.6	0.6	35
9	20	23	23	6	6	1.5	1.5	0.3	0.3	2.45	1.05	35000	25000	42000	699	699 2Z	699 2RS	F699	F699 2Z	11	18	0.3	0.3	7.5
9	17	19	19	4	5	1	1.1	0.2	0.2	1.35	0.66	39000	-	46000	689	W689 2Z	-	F689	WF689 2Z	10.6	15.4	0.2	0.2	3.5