



BALAJI ENGINEERING WORKS

COUPLINGS
LINEAR GUIDEWAYS
PRECISION LOCKNUTS
PRECISION BALLSCREWS
BALLSCREW SUPPORT UNITS



COMPANY PROFILE

Our unparalleled technical capabilities and over 18 years experience manufacturing world-class ball screws makes Balaji Engineering Works the right choice for all of your ball screw repair and refurbishment needs. Choosing us guarantees you the highest quality repair at a competitive price. As India's largest ball screw repair/replace facility, we have the expertise you are looking for. With our state-of-the-art Drake CNC Thread Grinders and NX Version 8 modeling software, we can perform even the most complex repair or engineer the perfect upgrade for your requirements. We provide on-site engineering services, and has over 11,000 ball screw assembly drawings on file, no other competitor is even close. Whether it's an emergency repair or manufacturing complex aerospace assembly, we are ready to service you, as we have since 2006.

We offer with our standard Ground Ballscrew through reverse engineering and manufacturing a complete replacement, and of course the popular quick fix option. Our skilled technicians will disassemble, clean and inspect the incoming assembly. We will determine the cause of failure and provide this information along with our quotation. Any evidence of misalignment, excessive heat or overloading in your machine will be noted. Where most other competitors would prefer to simply sell you a new ballscrew, we have the skill level on 2 shifts and machine capabilities to perform even the most difficult and complex regrind repairs. We complete all work efficiently and with a fair price.



Ball screw nut turning



Ball Screw Threading



Ball Screw Whirling



Ball Screw Threading, Grinding

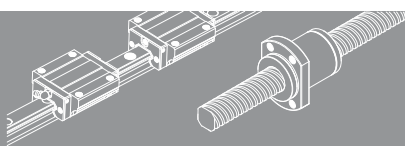


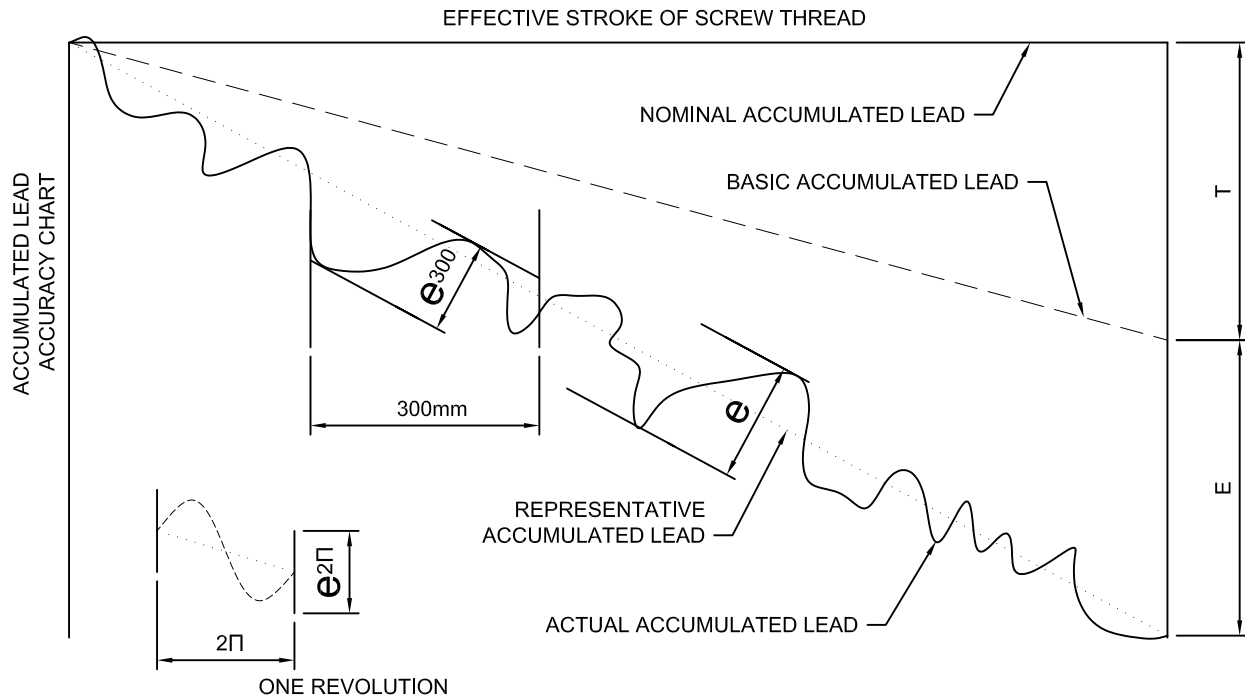
Ball Screw Checking



Ball Screw Grinding

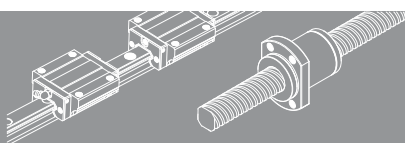
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Defination

$T \pm E$	REPRESENTATIVE ACCUMULATED LEAD	THIS IS THE STRAIGHT LINE REPRESENT THE ACTUAL ACCUMULATED LEAD DERIVED By MIN SQUARE ROOT METHOD FROM THE ACTUAL LASER MEASURED DATUM
a	ACTUAL ACCUMULATED LEAD	THIS IS THE ACTUAL LEAD ERROR RECORD MEASURED BY LASER.
T	BASIC ACCUMULATED LEAD (T)	WITHIN EFFECTIVE STROKE OF SCREW THREAD DESIGNER SHOULD CONSIDER THE HEAT GENERATION, THE ELASTIC DEFORMATION DURING ROTATION IN ADVANCE. MONDIFY THE NOMINAL ACCUMULATED LEAD, PASS THE MODIFICATION VALUE (T) TO THE BALLSCREW MAKER. THE EXPERIMENTAL, T VALUE (mm/m) CNC LATHE X AXIS (-0.10 -0.20) CNC MACHINING X Y AXIS (-0.10~-0.20) Z AXIS (-0.10~-0.15) CENTER Z AXIS (-0.15~-0.25)
E	REPRESENTATIVE ACCUMULATED LEAD ERROR (E)	THE ALLOWABLE TOLERANCE BETWEEN REPRESENTATIVE ACCUMULATED LEAD AND BASIC ACCUMULATED LEAD.
e	LEAD VARIATION (e)	THE MAX VARIATION WITHIN THE EFFECTIVE STROKE OF SCREW THREAD.
e_{300}	300mm VARIATION $\langle e_{300} \rangle$	THE MAX LEAD VARIATION OF RANDOM 300mm WITHIN EFFECTIVE STROKE.
$e_{2\pi}$	SINGLE PITCH VARIATION $\langle e_{2\pi} \rangle$	THE MAX LEAD VARIATION OF RANDOM ONE REVOLUTION



Variation per 300mm of Thread Length and per Turn of the Screw Shaft

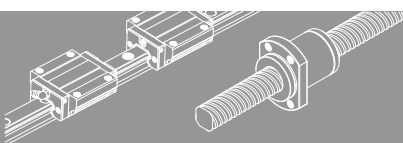
Unit : μm

Accuracy	C0	C1	C2	C3	C4	C5
e_{300}	3.5	5	7	8	12	18
$e_{2\pi}$	2.5	4	5	6	7	8

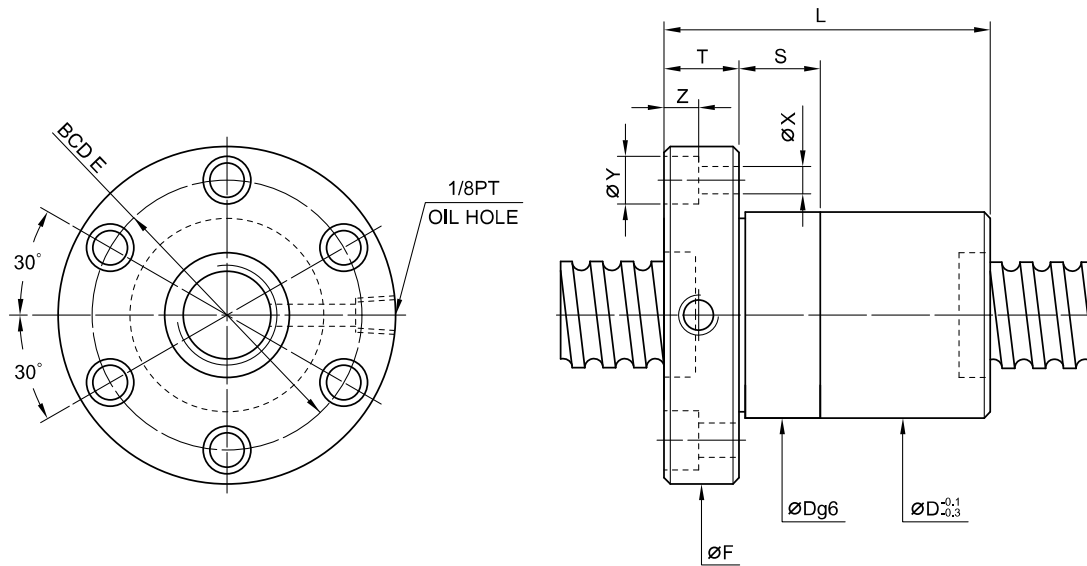
Lead Accuracy of Screw Shaft

Unit : μm

Accuracy		C0		C1		C2		C3		C4		C5	
item Thread Length over to (incl.)		+E	e	+E	e	+E	e	+E	e	+E	e	+E	e
		-	315	4	3.5	6	5	8	7	12	8	16	12
315	400	5	3.5	7	5	9	7	13	10	18	14	25	20
400	500	6	4	8	5	10	7	15	10	20	14	27	20
500	630	6	4	9	6	11	8	16	12	22	16	30	23
630	800	7	5	10	7	13	9	18	13	25	18	35	25
800	1000	8	6	11	8	15	10	21	15	29	20	40	27
1000	1250	9	6	13	9	18	11	24	16	34	22	46	30
1250	1600	11	7	15	10	21	13	29	18	40	25	54	35
1600	2000			18	11	25	15	35	21	48	29	65	40
2000	2500			22	13	30	18	41	24	57	34	77	46
2500	3150			26	15	36	21	50	29	69	40	93	54
3150	4000			30	18	44	25	60	35	85	48	115	65
4000	5000					52	30	72	41	76	49	140	77
5000	6300					65	36	90	50	100	60	170	93
6300	8000							110	60	125	75	210	115

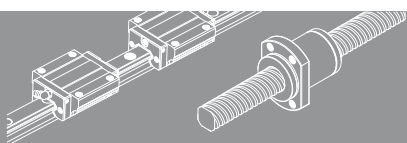


F S I TYPE

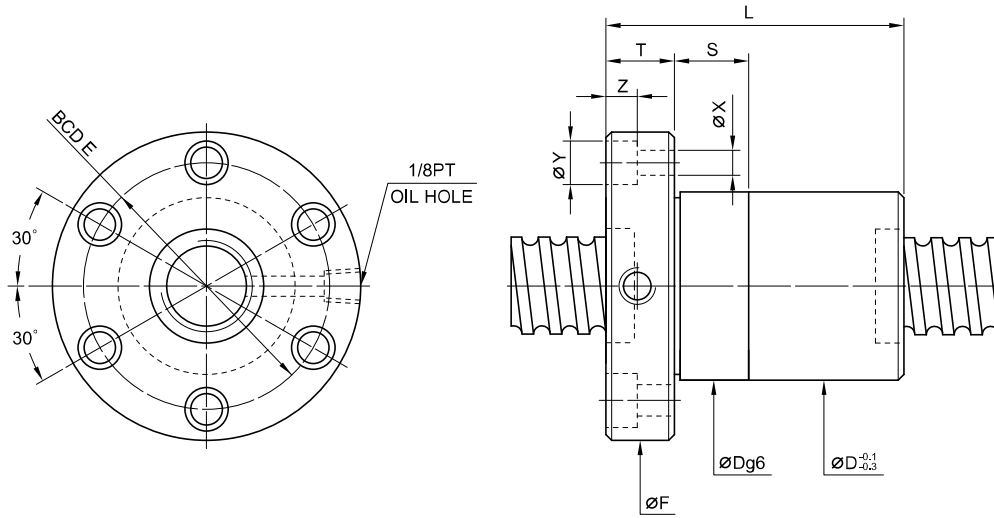


Model	Size		Ball Dia.	Circuits	Stiffness kgf / μm K	Dynamic Load 1×10^6 revs C (kgf)	Static Load Co (kgf)	Nut		Flange			Bolt			Fit		
	Nominal Dia.	Lead						D	L	F	T	BCD-E	X	Y	Z		S	
32-5T3	32	5	3.175	3	33	1117	3081	44	48	46	74	12	60	6.6	11	6.5	12	
32-5T4				4	42	1431	4108	44	48	53	74	12	60	6.6	11	6.5	12	
32-5T6				6	63	2027	6162	44	48	66	74	12	60	6.6	11	6.5	12	
32-6T3		6	3.969	3.969	3	33	1446	3620	45	50	51	76	12	62	6.6	11	6.5	12
32-6T4					4	43	1852	4826	45	50	61	76	12	62	6.6	11	6.5	12
32-6T6					6	65	2625	7239	45	50	75	76	12	62	6.6	11	6.5	12
32-8T3		8	4.763	4.763	3	35	1810	4227	47	52	63	78	16	64	6.6	11	6.5	12
32-8T4					4	47	2317	5635	47	52	74	78	16	64	6.6	11	6.5	12
32-10T3		10	6.350	6.350	3	35	2539	5327	51	56	72	82	16	68	6.6	11	6.5	12
32-10T4	4				48	3252	7102	51	56	83	82	16	68	6.6	11	6.5	12	
40-5T4	40	5	3.175	4	50	1599	5280	51	54	53	80	16	66	6.6	11	6.5	12	
40-5T6				6	74	2265	7919	51	54	66	80	16	66	6.6	11	6.5	12	
40-5,08T6		5.08	3.175	6	74	2265	7919	53	56	65	90	15	72	9	14	8.5	15	
40-6T4		6	3.969	3.969	4	50	2136	6420	53	56	65	88	16	72	9	14	8.5	15
40-6T6					6	74	3028	9630	53	56	79	88	16	72	9	14	8.5	15
40-8T4		8	4.763	4.763	4	52	2132	6421	55	60	78	92	16	75	9	14	8.5	15
40-8T6					6	76	3021	9632	55	60	99	92	16	75	9	14	8.5	15
40-10T3		10	6.350	6.350	3	40	2959	7069	60	65	76	96	16	80	9	14	8.5	15
40-10T4					4	51	3789	9426	60	65	87	96	16	80	9	14	8.5	15
50-5T4	50	5	3.175	4	62	1757	6745	62	65	57	96	16	80	9	14	8.5	15	
50-5T6				6	91	2490	10117	62	65	70	96	16	80	9	14	8.5	15	
50-6T4		6	3.969	3.969	4	62	2388	8250	64	68	65	100	16	84	9	14	8.5	15
50-6T6					6	93	3384	12375	64	68	79	100	16	84	9	14	8.5	15
50-8T4		8	4.763	4.763	4	62	2998	9578	65	70	78	102	16	85	9	14	8.5	15
50-8T6					6	92	4249	14367	65	70	99	102	16	85	9	14	8.5	15
50-10T3		10	6.350	6.350	3	50	3397	9256	69	74	78	114	18	92	11	17.5	11	20
50-10T4					4	63	4350	12341	69	74	89	114	18	92	11	17.5	11	20
50-10T6					6	94	6165	18511	69	74	112	114	18	92	11	17.5	11	20
50-12T3	12	7.938	7.938	3	50	4420	11047	73	78	90	118	18	96	11	17.5	11	20	
50-12T4				4	63	5660	14730	73	78	103	118	18	96	11	17.5	11	20	
50-20T4	20	9.525	9.525	4	80	9327	23955	75	78	186	129	28	105	14	20	13	30	

Remark : Stiffness values listed above are derived from theoretical formula to the elastic deformation between balltrack and balls while axial load is 30% of dynamic load rating.

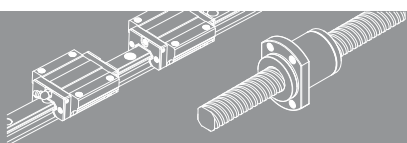


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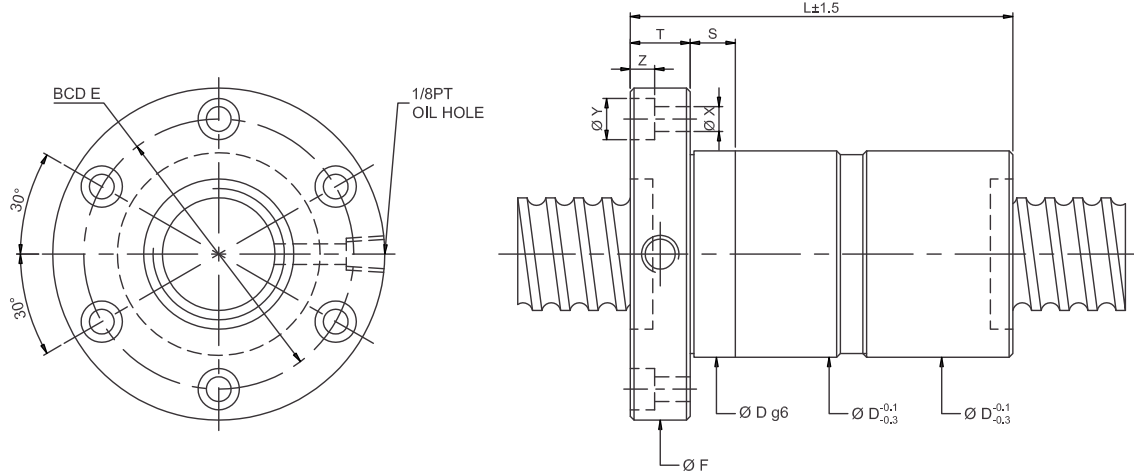
Model	Size		Ball Dia.	Circuits	Stiffness kgf / μm K	Dynamic Load 1×10^6 revs C (kgf)	Static Load Co (kgf)	Nut			Flange			Bolt			Fit				
	Nominal Dia.	Lead						D	L	F	T	BCD-E	X	Y	Z	S					
63-6T4	63	6	3.969	4	75	2614	10542	78	80	66	119	18	98	11	17.5	11	20				
63-6T6				6	113	3704	15813	78	80	81	119	18	98	11	17.5	11	20				
63-8T4		8	4.763	4	77	3395	12541	79	82	80	122	18	100	11	17.5	11	20				
63-8T6				6	114	4812	18811	79	82	101	122	18	100	11	17.5	11	20				
63-10T4		10	6.350	6.350	4	79	4860	15858	82	88	91	134	20	110	14	20	13	20			
63-10T6					6	115	6887	23786	82	88	114	134	20	110	14	20	13	20			
63-12T4			12	7.938	7.938	4	78	6479	19293	86	92	105	138	20	114	14	20	13	20		
63-12T6						6	113	9182	28939	86	92	133	138	20	114	14	20	13	20		
80-10T4	80	10	6.350	4	96	5559	21118	99	105	91	152	20	127	14	20	13	20				
80-10T6				6	140	7879	31677	99	105	114	152	20	127	14	20	13	20				
80-12T4		12	7.938	7.938	4	97	7430	25681	103	110	109	170	24	138	18	26	17.5	25			
80-12T6					6	141	10530	38521	103	110	137	170	24	138	18	26	17.5	25			
80-16T3		16	9.525	9.525	3	95	9663	31622	108	115	118	174	24	143	18	26	17.5	25			
80-16T4					4	130	12375	42162	108	115	136	174	24	143	18	26	17.5	25			
80-20T3					20	9.525	9.525	3	95	9663	31622	108	115	138	174	24	143	18	26	17.5	25
80-20T4								4	125	12375	42162	108	115	161	174	24	143	18	26	17.5	25
100-12T4	100	12	7.938	4	105	8306	33001	123	130	109	190	24	158	18	26	17.5	25				
100-12T6				6	175	11772	49502	123	130	137	190	24	158	18	26	17.5	25				
100-16T4		16	9.525	9.525	4	107	13569	53161	125	135	136	194	24	163	18	26	17.5	30			
100-16T6					6	140	19230	79741	125	135	173	194	24	163	18	26	17.5	30			
100-20T4		20	9.525	9.525	4	155	13569	53161	125	135	161	194	24	163	18	26	17.5	30			

Remark : Stiffness values listed above are derived from theoretical formula to the elastic deformation between balltrack and balls while axial load is 30% of dynamic load rating.



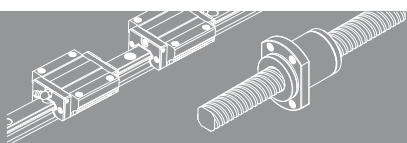
PRECISION GROUND BALL SCREW

F D I TYPE



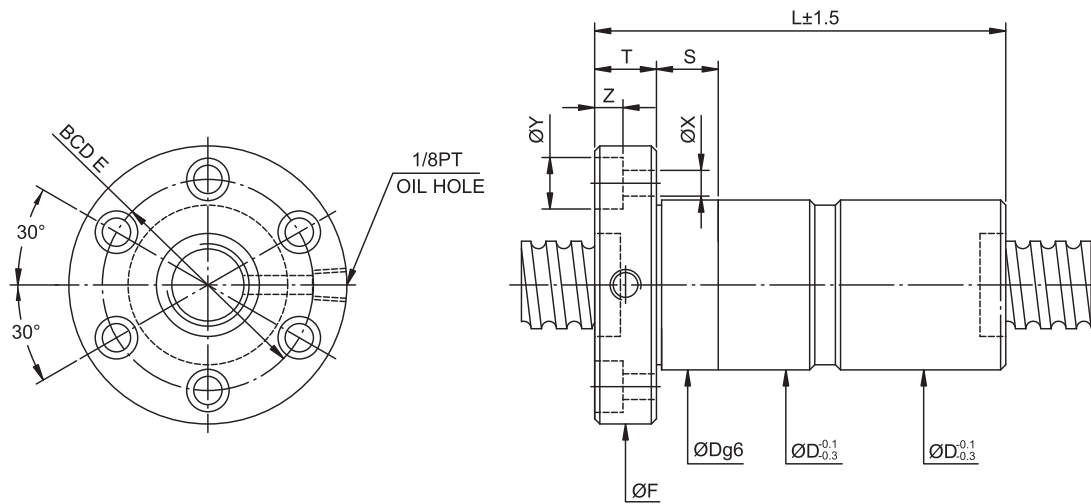
Model	Size		Ball Dia.	Circuits	Stiffness kgf/mm K	Dynamic Load 1x10 ⁶ revs C (kgf)	Static Load Co(kgf)	Nut		Flange			Bolt			Fit	
	Nominal Dia.	Lead						D	L	F	T	BCD-E	X	Y	Z	S	
16-5T3	16	5	3.175	3	20	731	1331	28	30	78	54	12	41	5.5	9.5	5.5	24
16-5T4				4	23	936	1775	28	30	90	54	12	41	5.5	9.5	5.5	24
20-5T3	3			39	852	1767	32	34	78	57	12	45	5.5	9.5	5.5	24	
20-5T4	4			54	1091	2356	32	34	92	57	12	45	5.5	9.5	5.5	24	
20-6T3				3	39	1091	2081	34	36	89	60	12	48	5.5	9.5	5.5	24
20-6T4				4	54	1398	2774	34	36	109	60	12	48	5.5	9.5	5.5	24
25-2.5T5	25	2.5	2.000	5	66	716	2117	35	40	87	65	10	51	6.6	11	6.5	24
25-5T3		5	3.175	3	55	977	2314	37	40	78	64	12	52	5.5	9.5	5.5	24
25 5T4				4	73	1252	3085	37	40	96	64	12	52	5.5	9.5	5.5	24
25 6T3		6	3.969	3	56	1272	2762	38	42	89	65	12	53	5.5	9.5	5.5	24
25-6T4				4	75	1628	3682	38	42	109	65	12	53	5.5	9.5	5.5	24
25 10T3		10	4.763	3	49	1643	3265	47	51	140	74	15	60	6.6	11	6.5	24
28-5T5	28	5	3.175	5	86	1619	4404	45	50	110	74	12	62	5.5	9.5	5.5	24
28-10T4		10	4.763	4	70	2199	4969	45	50	150	74	12	61	6.6	11	6.5	24
32-2.5T6	32	2.5	2.000	6	97	928	3339	45	51	106	74	12	62	5.5	9.5	5.5	24
32-5T3		5	3.175	3	64	1117	3081	44	48	78	74	12	60	6.6	11	6.5	24
32-5T4				4	82	1431	4108	44	48	96	74	12	60	6.6	11	6.5	24
32-5T6				6	121	2027	6162	44	48	118	74	12	60	6.6	11	6.5	24
32-5 08 T4		5.08		4	82	1430	4108	44	48	96	74	12	60	6.6	11	6.5	24
32 6T3		6	3.969	3	65	1446	3620	45	50	89	76	12	62	6.6	11	6.5	24
32-6T4				4	84	1852	4826	45	50	109	76	12	62	6.6	11	6.5	24
32-6T6				6	125	2625	7239	45	50	137	76	12	62	6.6	11	6.5	24
32-8T3		8	4.763	3	68	1810	4227	47	52	110	78	16	64	6.6	11	6.5	24
32-8T4				4	82	2317	5635	47	52	136	78	16	64	6.6	11	6.5	24
32-10T3		10	6.350	3	68	2539	5327	51	56	129	82	16	68	6.6	11	6.5	24
32-10T4				4	82	3252	7102	51	56	155	82	16	68	6.6	11	6.5	24
40-5T4	40	5	3.175	4	99	1599	5280	51	54	96	80	16	66	6.6	11	6.5	24
40-5T6				6	146	2265	7919	51	54	122	80	16	66	6.6	11	6.5	24
40-6T4		6	3.969	4	100	2136	6420	53	56	113	88	16	72	9	14	8.5	30
40-6T6				6	148	3028	9630	53	56	141	88	16	72	9	14	8.5	30
40-8T4		8	4.763	4	102	2728	7596	55	60	136	92	16	75	9	14	8.5	30
40-8T6				6	150	3866	11394	55	60	178	92	16	75	9	14	8.5	30
40 10T3		10	6.350	3	76	2959	7069	60	65	133	96	16	80	9	14	8.5	30
40-10T4				4	101	3789	9426	60	65	155	96	16	80	9	14	8.5	30
40-10T5				5	119	4590	1178	60	65	192	96	16	80	9	14	8.5	30
40-12T3				12		3	73	2958	7069	58	60	160	96	18	80	9	14
40-12T4		4	101			3789	9425	58	60	186	96	18	80	9	14	8.5	30

Remark : Stiffness values listed above are derived from theoretical formula to the elastic deformation between balltrack and balls while preload is 10% of dynamic load rating and axial load is applied.



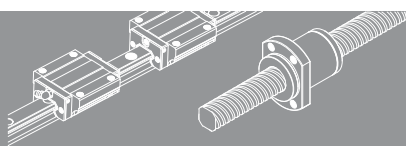
PRECISION GROUND BALL SCREW

F D I TYPE



Model	Size		Ball Dia.	PCD	RD	Circuits	Stiffness kgf / μm K	Dynamic Load 1×10^6 revs C (kgf)	Static Load Co (kgf)	Nut			Flange			Bolt			Fit		
	Nominal Dia.	Lead								D	L	F	T	BCD-E	X	Y	Z	S			
45-10T4	45	10	7.144	46.6	39.299	4	108	4683	11930	68	70	160	110	18	90	11	17.5	11	30		
45-12T3		12	6.350	46.4	39.91	3	80	3115	7952	68	70	183	110	16	90	11	17.5	11	30		
45-16T3		16	7.144	46.6	39.299	3	82	3656	8947	68	70	183	110	16	90	11	17.5	11	30		
50-5T4	50	5	3.175	50.6	47.324	4	121	1757	6745	62	65	96	96	16	80	9	14	8.5	30		
50-5T6				6	177	2490	10117	62	65	122	96	16	80	9	14	8.5	30				
50-6T4		6	3.969	50.8	46.744	4	123	2388	8250	64	68	113	100	16	84	9	14	8.5	30		
50-6T6				6	179	3384	12375	64	68	147	100	16	84	9	14	8.5	30				
50-8T4		8	4.763	51	46.132	4	122	2998	9578	65	70	136	102	16	85	9	14	8.5	30		
50-8T6				6	178	4249	14367	65	70	178	102	16	85	9	14	8.5	30				
50-10T3		10	6.350	51.4	44.91	3	95	3397	9256	69	74	135	114	18	92	11	17.5	11	40		
50-10T4				4	124	4350	12341	69	74	157	114	18	92	11	17.5	11	40				
50-10T6				6	184	6165	18511	69	74	203	114	18	92	11	17.5	11	40				
50-12T3				12	7.938	51.8	43.688	3	94	4420	11047	73	78	158	118	18	96	11	17.5	11	40
50-12T4		4	124			5660	14730	73	78	184	118	18	96	11	17.5	11	40				
63-6T4		63	6	3.969	63.8	59.744	4	148	2674	10542	78	80	115	119	18	98	11	17.5	11	40	
63-6T6	6				220	3704	15813	78	80	143	119	18	98	11	17.5	11	40				
63-8T4	8		4.763	64	59.132	4	152	3395	12541	79	82	138	122	18	100	11	17.5	11	40		
63-8T6				6	222	4812	18811	79	82	180	122	18	100	11	17.5	11	40				
63-10T4	10		6.350	64.4	57.91	4	158	4860	15858	82	88	159	134	20	110	14	20	13	40		
63-10T6				6	228	6887	23786	82	88	205	134	20	110	14	20	13	40				
63-12T4	12		7.938	64.8	56.688	4	152	6479	19293	86	92	186	138	20	114	14	20	13	40		
63-12T6				6	224	9182	28939	86	92	242	138	20	114	14	20	13	40				
80-10T4	80		10	6.350	81.4	74.91	4	190	5559	21118	99	105	172	152	20	127	14	20	13	40	
80-10T6					6	277	7879	31677	99	105	214	152	20	127	14	20	13	40			
80-12T4			12	7.938	81.8	73.688	4	192	7430	25681	103	110	190	170	24	138	18	26	17.5	50	
80-12T6					6	280	10530	38521	103	110	246	170	24	138	18	26	17.5	50			
80-16T3		16	9.525	82.2	72.466	3	188	9663	31622	108	115	208	174	24	143	18	26	17.5	50		
80-16T4				4	254	12375	42162	108	115	244	174	24	143	18	26	17.5	50				
80-20T3				20	9.525	82.2	72.466	3	189	9663	31622	108	115	250	174	24	143	18	26	17.5	50
80-20T4						4	248	12375	42162	108	115	296	174	24	143	18	26	17.5	50		
100-12T4		100	12	7.938	101.8	93.688	4	206	8306	33001	123	130	190	190	24	158	18	26	17.5	50	
100-12T6					6	343	11772	49502	123	130	246	190	24	158	18	26	17.5	50			
100-16T4			16	9.525	102.2	92.466	4	212	13569	53161	135	135	244	194	24	163	18	26	17.5	60	
100-16T6					6	276	19230	79741	135	135	318	194	24	163	18	26	17.5	60			
100-20T4	20		300	13569	53161	135	135	296	194	24	316	18	26	17.5	60						

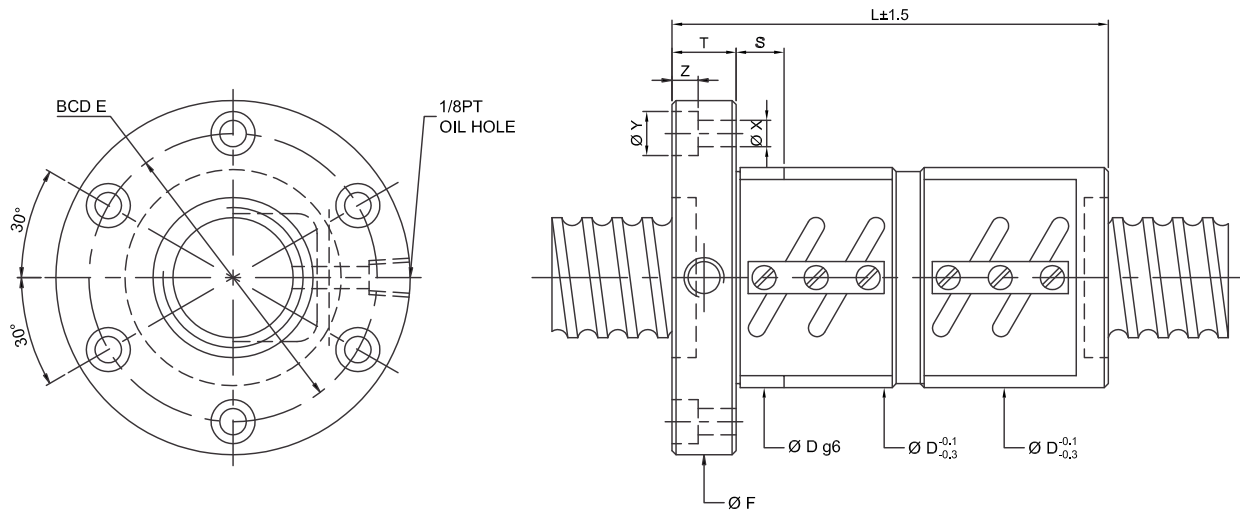
Remark : Stiffness values listed above are derived from theoretical formula while preload is 10% of dynamic load rating.



PRECISION GROUND BALL SCREW

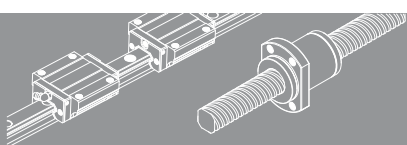


F D W TYPE



Model	Size		Ball Dia	Circuits	Stiffness kgf/ μm K	Dynamic Load 1 X1 0 ⁶ revs C (kgf)	Static Load co(kgf)	Nut		Flange			Bolt			Fit			
	Nominal Dia.	Lead						D	L	F	T	BC D-E	X	Y	Z		S		
16-5B2	16	5	3.175	2.5x2	65	1385	2799	40	110	64	12	51	5.5	9.5	5.5	24			
16-5131				2.5x1	32	763	1400	40	80	64	12	51	5.5	9.5	5.5	24			
16-501				3.5x1	46	1013	1946	40	90	64	12	51	5.5	9.5	5.5	24			
20-581	20	6	3.969	2.5x1	38	837	1733	44	80	68	12	55	5.5	9.5	5.5	24			
20-5132				2.5x2	76	1519	3465	44	110	68	12	55	5.5	9.5	5.5	24			
20-681				2.5x1	40	1139	2187	48	92	72	12	59	5.5	9.5	5.5	24			
20-6C1	25	5	3.175	3.5x1	55	1512	3041	48	104	72	12	59	5.5	9.5	5.5	24			
25-5A2				1.5x2	54	1092	2622	50	102	73	11	61	5.5	9.5	5.5	24			
25-5B1				2.5x1	46	939	2209	50	80	74	12	62	5.5	9.5	5.5	24			
25-5B2	6	3,969	3.175	2.5x2	90	1704	4417	50	110	74	12	62	5.5	9.5	5.5	24			
25-501				3.5x1	68	1252	3085	50	90	74	12	62	5.5	9.5	5.5	24			
25-692				2.5x2	94	2304	5524	56	128	82	12	69	6.6	11	6.5	24			
25-6C1	10	4.763	4.763	3.5x1	66	1690	3844	56	104	82	12	69	6.6	11	6.5	24			
25-10131				2.5x1	48	1592	3237	60	122	86	16	73	6.6	11	6.5	24			
28-5B1				28	5	3,175	2.5x1	51	984	2466	55	80	85	12	69	6.6	11	6.5	24
28-5B2	2.5x2	98	1785				4932	55	110	85	12	69	6.6	11	6.5	24			
28-6A2	1.5x2	59	1150				2960	55	110	85	12	69	6.6	11	6.5	24			
28-6B2	6	3.969	3.175	2.5x2	98	1776	4980	55	123	85	12	69	6.6	11	6.5	24			
32-4B2				32	4	2.381	2.5x2	91	1071	3582	54	93	81	12	67	6.6	11	6.5	24
32-581							5	3.175	2,5x1	55	1039	2833	58	80	84	12	71	6.6	11
32-5B2	2.5x2	109	1886						5666	58	110	84	12	71	6.6	11	6.5	24	
32-5C1	3.5x1	76	1388	3967	58	90			84	12	71	6.6	11	6.5	24				
32-6131	6	3.969	3.175	2.5x1	57	1409	3510	62	92	88	12	75	6.6	11	6.5	24			
32-6B2				2.5x2	112	2556	7020	62	128	88	12	75	6.6	11	6.5	24			
32-6C1				3.5x1	78	1888	4936	62	104	88	12	75	6.6	11	6.5	24			
32-8A2	8	4.763	4.763	1.5x2	70	2082	5151	66	135	100	15	82	9	14	8.5	30			
32-8B1				2.5x1	58	1810	4227	66	110	100	16	82	9	14	8.5	30			
32-8B2				2.5x2	115	3284	8453	66	158	100	16	82	9	14	8.5	30			
32-8B3	10	6.350	4.763	2.5x3	168	4653	12678	74	205	108	16	90	9	14	8.5	30			
32-8C1				3.5x1	82	2428	5948	66	126	100	16	82	9	14	8.5	30			
32-10A2				1.5x2	72	3051	6612	74	167	108	15	90	9	14	8.5	30			
32-10B1	12	6.350	4.763	2.5x1	58	2651	5600	74	122	108	16	90	9	14	8.5	30			
32-10B2				2.5x2	118	4810	11199	74	182	108	16	90	9	14	8.5	30			
32-10C1				3.5x1	86	3519	7785	74	142	108	16	90	9	14	8.5	30			
32-12B1	32-12C1	12	6.350	2.5x1	62	2602	5510	74	153	108	18	90	9	14	8.5	30			
32-12B2				2.5x2	118	4810	11199	74	232	108	16	90	9	14	8.5	30			
32-12C1				3.5x1	84	3518	7784	74	166	108	16	90	9	14	8.5	30			

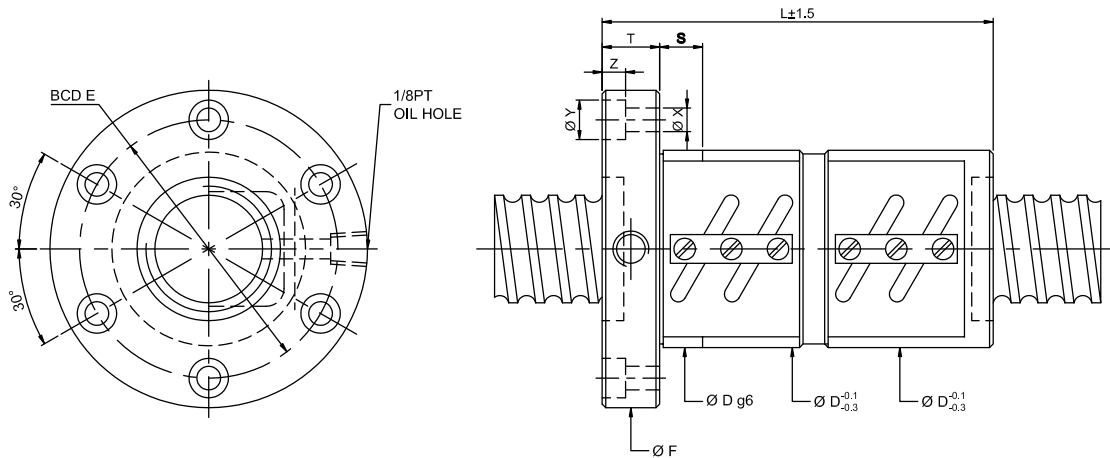
Remark : Stiffness values listed above are derived from theoretical formula to the elastic deformation between balltrack and balls while preload is 10% of dynamic load rating and axial load is applied.



PRECISION GROUND BALL SCREW

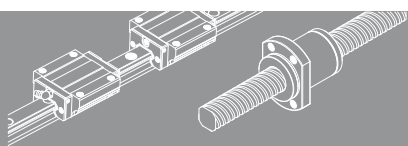


F D W TYPE



	Size		Ball Dia.	Circuits	Stiffness kgf / μ m	Dynamic Load 1×10^6 revs C (kgf)	Static Load Co (kgf)	Nut		Flange			Bolt			Fit		
	Nominal Dia.	Lead						D	L	F	T	BCD-E	X	Y	Z		S	
36-6B1	36	6	3.969	2.5x1	62	1486	3969	65	92	100	12	82	6.6	11	6.5	24		
86-6B2				25x2	121	2696	7937	65	128	100	12	82	6.6	11	6.5	24		
36-12A2		12	4.763	1.5x2	80	2557	6693	70	155	108	15	90	9	14	8.5	30		
36-12B1				2.5x1	67	2812	6334	75	126	120	16	98	11	17.5	11	30		
36-10B2		10	6.350	2.5x2	132	5105	12669	75	184	120	18	98	11	17.5	11	30		
36-12B2				2.5x2	130	5105	12668	75	206	120	18	98	11	17.5	11	30		
36-8A2		8	4.763	1.5x2	77	2217	5669	70	135	108	15	90	9	14	8.5	30		
36-8B2				2.5x2	126	3489	9606	70	158	108	15	90	a	14	8.5	30		
40-5B1	40	5	3.175	2.5x1	65	1141	3567	68	84	102	16	84	9	14	8.5	30		
40-5B2				2.5x2	132	2071	7134	68	114	102	16	84	9	14	8.5	30		
40-6B2		6	3.969	2.5x2	136	2817	8855	70	132	104	16	86	9	14	8.5	30		
40-8B1				8	4.763	2.5x1	69	2003	5302	74	110	108	16	90	9	14	8.5	30
40-8B2		2.5x2	137			3634	10603	74	158	108	16	90	9	14	8.5	30		
40-8B3		2.5x3	200			5150	15904	74	210	108	15	90	9	14	8.5	30		
40-8C1		10	6.350	3.5x1	96	2679	7438	74	126	108	16	90	9	14	8.5	30		
40-10A2				1.5x2	87	3418	8398	82	170	124	18	102	11	17.5	11	30		
40-10B1					2.5x1	72	2959	7069	84	132	125	18	104	11	17.5	11	30	
40-10B2					2.5x2	145	5370	14138	84	192	125	18	104	11	17.5	11	30	
40-10C1				12	7.44	3.5x1	102	3932	9841	84	152	125	18	104	11	17.5	11	30
40-12A2						1.5x2	88	4006	9404	86	160	128	18	106	11	17.5	11	30
40-12B1						25x1	70	3425	7837	86	153	128	18	106	11	17.5	11	40
40-12B2						2.5x2	141	6217	15674	86	225	128	18	106	11	17.5	11	40
40-12C1		16	7.44	3.5x1	103	4637	11146	86	179	128	18	106	11	17.5	11	30		
40-16A2				1.5x2	83	4007	9405	86	214	128	18	106	11	17.5	11	40		
40-16B1				2.5x1	72	3425	7837	86	182	128	18	106	11	17.5	11	40		
40-16B2				2.5x2	143	6216	15674	86	272	128	22	106	11	17.5	11	30		
45-10B1		45	10	6.350	2.5x1	76	3111	7953	88	134	132	18	110	11	17.5	11	30	
45-10B2					2.5x2	156	5655	15905	88	194	132	18	110	11	17.5	11	30	
45-12B2	12		7.938	2.5x2	162	7627	19799	96	230	142	22	117	13	20	13	40		
45-16B2				16	7.144	2.5x2	158	6636	17895	90	278	132	18	110	11	17.5	11	30
50-5A2	50	5	3.175	1.5x2	96	1447	5382	80	107	114	16	96	9	14	8.5	30		
50-5A3				1.5x3	143	2051	8072	80	127	114	16	96	9	14	8.5	30		
50-6B2		6	3.969	2.5x2	161	3093	11149	84	134	118	16	100	9	14	8.5	30		
50-6B3				2.5x3	235	4384	16723	84	170	118	16	100	9	14	8.5	30		
50-8B1		8	4.763	2.5x1	81	2206	6705	87	112	128	18	107	11	17.5	11	30		
50-8B2				2.5x2	165	4004	13409	87	160	128	18	107	11	17.5	11	30		
50-8B3				2.5x3	244	5674	20114	87	208	128	18	107	11	17.5	11	30		
50-101B1				10	6.350	2.5x1	88	3245	8918	93	133	135	18	113	11	17.5	11	30

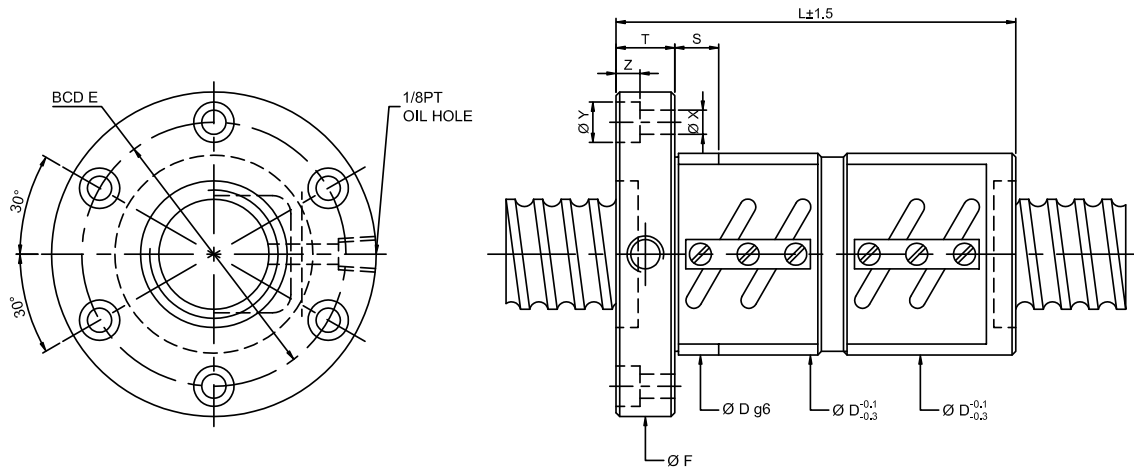
Remark : Stiffness values listed above are derived from theoretical formula to the elastic deformation between balltrack and balls while preload is 10% of dynamic load rating and axial load is applied.



PRECISION GROUND BALL SCREW

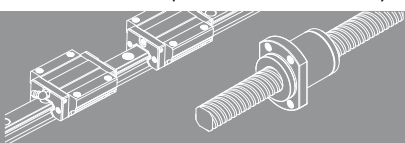


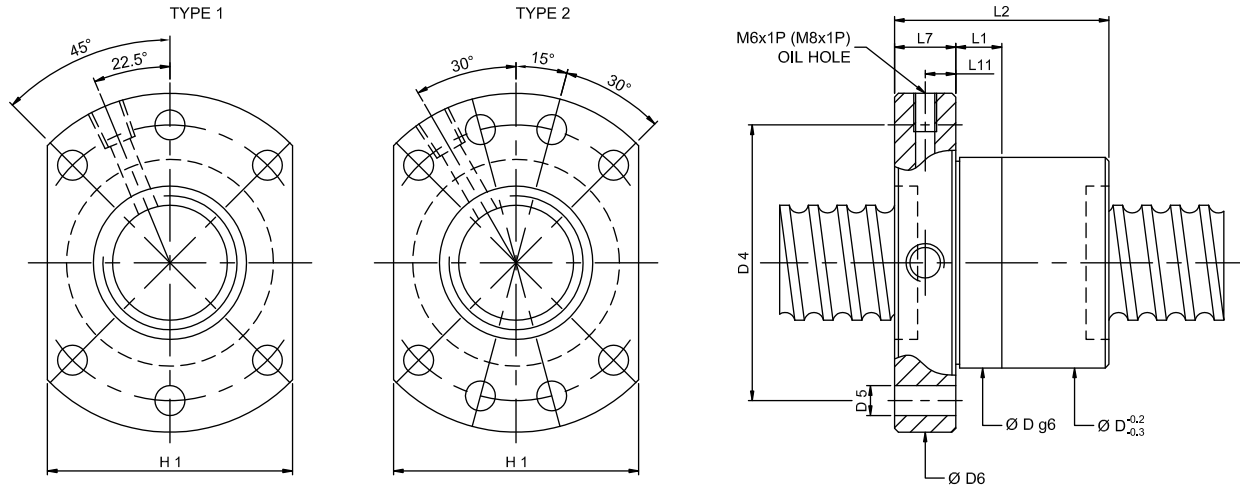
F D W TYPE



Model	Size		Ball Dia.	Circuits	Stiffness kgf / μm K	Dynamic Load 1×10^6 revs C (kgf)	Static Load Co (Kgf)	Nut		Flange			Bolt			Fit S		
	Nominal Dia.	Lead						D	L	F	T	BCD-E	X	Y	Z			
50-10B2	50	10	6.350	2.5x2	173	5923	17670	94	194	135	18	114	11	17.5	11	30		
50 10B3				2.5x3	255	8394	26505	94	254	135	18	114	11	17.5	11	30		
50 10C1				3.5x1	120	4393	12481	94	154	135	18	114	11	17.5	11	30		
50-12B1				12	7.938	2.5x1	90	4367	10918	100	159	146	22	122	14	20	13	40
50-12B2		2.5x2	178			8022	22094	102	232	150	22	125	13	20	13	40		
50-12C1		3.5x1	123			5875	15380	102	184	150	22	125	13	20	13	40		
50-16B2		16	7.938			2.5x2	174	7918	21837	100	280	146	22	122	14	20	13	40
50-20B1				2.5x1	90	4367	10918	100	227	146	28	122	14	20	13	40		
55-10C1	55	10	6.350	3.5x1	132	4562	13661	100	154	140	18	118	11	17.5	11	40		
55-12B2		12	7.938	2.5x2	185	8392	24390	105	232	154	22	127	13	20	13	40		
63-8A2	63	8	4.763	1.5x2	107	2826	10129	104	142	146	18	124	11	17.5	11	40		
63-8A3				1.5x3	154	4004	15193	104	174	146	18	124	11	17.5	11	40		
63-10B2		10	6.350	2.5x2	206	6533	22371	110	196	152	20	130	11	17.5	11	30		
63-10B3				2.5x3	305	9258	33556	110	256	152	20	130	11	17.5	11	30		
63-12B2		12	7.938	2.5x2	214	8943	28062	118	232	166	22	141	13	20	13	40		
63-16B2		16	9.525	2.5x2	280	14862	46009	124	296	172	22	147	13	20	13	40		
63-20B2				2.5x2	280	14862	46009	124	334	172	22	147	13	20	13	40		
70-10B2		70	10	6.350	2.5x2	228	6843	25011	124	196	170	20	145	13	20	13	40	
70-10B3	2.5x3				334	9698	37516	124	256	170	20	145	13	20	13	40		
70-12B2	12		7.938	2.5x2	236	9382	31275	130	232	178	22	152	13	20	13	40		
70-12B3				2.5x3	336	13296	46912	130	302	178	22	152	13	20	13	40		
70-20B2	20		9.525	2.5x2	300	15644	51502	130	325	186	28	158	18	26	17.5	60		
80-10B2				80	10	6.350	2.5x2	251	7202	28538	130	200	178	22	152	13	20	13
80-10B3	2.5x3	368	10207				42807	130	260	178	22	152	13	20	13	40		
80-12B2	12	7.938	2.5x2		257	9797	35422	136	232	185	22	159	13	20	13	40		
80-12B3			2.5x3		380	13884	53131	136	302	185	22	159	13	20	13	40		
80-16B2	16	9.525	2.5x2		340	16485	58851	145	302	210	28	174	18	26	17.5	50		
80-16B3			2.5x3		498	23363	88276	145	398	210	28	174	18	26	17.5	50		
80-20B2			20		9.525	2.5x2	338	16485	58851	145	345	210	28	174	18	26	17.5	50
80-20B3						2.5x3	498	23363	88276	145	470	210	28	174	18	26	17.5	50
100-12B2	100	12	7.938	2.5x2	301	10761	44596	160	240	224	28	188	18	26	17.5	50		
100-12B3				2.5x3	452	15251	66894	160	312	224	28	188	18	26	17.5	50		
100-16B2		16	9.525	2.5x2	400	18123	74425	170	308	248	32	205	22	32	21.5	60		
100-16B3				2.5x3	595	25684	11637	170	404	248	32	205	22	32	21.5	60		
100-20B2				20	9.525	2.5x2	400	18123	74425	170	353	248	32	205	22	32	21.5	60
100-20B3						2.5x3	595	25684	11637	170	475	248	32	205	22	32	21.5	60

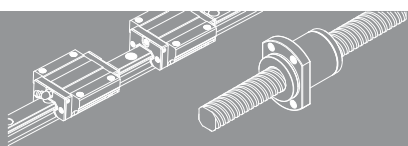
Remark : Stiffness values listed above are derived from theoretical formula to the elastic deformation between balltrack and balls while preload is 10% of dynamic load rating and axial load is applied.



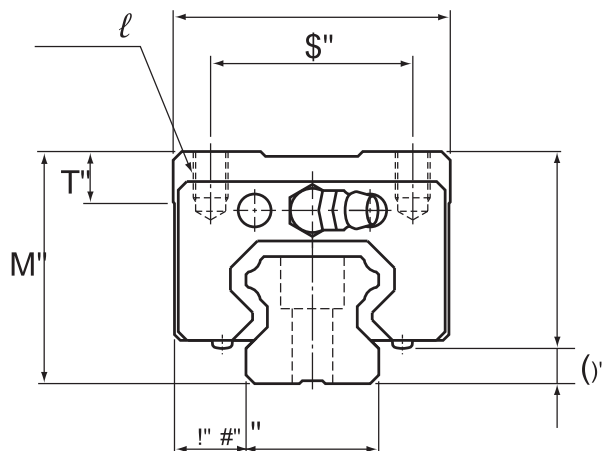


Dimensions for Stock Rolled Ballscrews

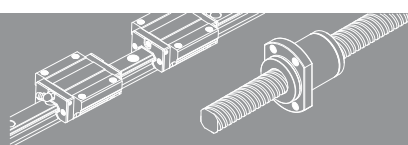
Model	Size		Ball Dia.	Circuits	Dynamic Load 1x10 ⁶ revs C (kgf)	Static Load Co (kgf)	D	D4	Flange Hole No	D5	06	H1	L1	L2	L7	L11	M-Oil Hole		
	Nominal Dia.	Lead																	
16-5T3	16	5	3.175	3	664	1196	28	38	6	5.5	48	40	10	40	10	5	M6x1P		
20-5T3	20			3	733	1495	36	47	6	6.6	58	44	10	44	10	5	M6x1P		
20-514	20			4	939	1993	36	47	6	6.6	58	44	10	52	10	5	M6x1P		
25-5T3	25	5	3.175	3	880	2082	40	51	6	6.6	62	48	10	44	10	5	M6x1 P		
25-5T4				4	1127	2776	40	51	6	6.6	62	48	10	52	10	5	M6x1P		
25-10T3	25	10	4.763	3	1430	2914	40	51	6	6.6	62	48	16	65	10	5	M6x1P		
32-5T3	32	5	3.175	3	1008	2773	50	65	6	9	80	62	10	46	12	6	M6x1P		
32-5T4				4	1291	3697	50	65	6	9	80	62	10	53	12	6	M6x1P		
32-5T6				6	1830	5545	50	65	6	9	80	62	10	66	12	6	M6x1P		
32-10T3				10	6.350	3	2264	4803	50	65	6	9	80	62	16	74	12	6	M6x1P
32-10T4	4	2900	6404			50	65	6	9	80	62	16	85	12	6	M6x1P			
40-5T4	40	5	3.175	4	1414	4621	63	78	8	9	93	74	10	53	14	7	M8x1P		
40-5T6				6	2004	6932	63	78	8	9	93	70	10	66	14	7	M8x1P		
40-10T3				10	6.350	3	2652	6367	63	78	8	9	93	70	16	74	14	7	M8x1P
40-10T4						4	3396	8489	63	78	8	9	93	70	16	87	14	7	M8x1P
50-5T4	50	5	3.175	4	1562	5940	75	93	8	11	110	85	10	57	16	8	M8x1P		
50-5T6				6	2214	8910	75	93	8	11	110	85	10	70	16	8	M8x1P		
50-10T3				10	6.350	3	3045	8334	75	93	8	11	110	85	16	78	16	8	M8x1P
50-10T4						4	3899	11112	75	93	8	11	110	85	16	89	16	8	M8x1P
50-10T6	6	5526	16668	75	93	8	11	110	85	16	112	16	8	M8x1P					



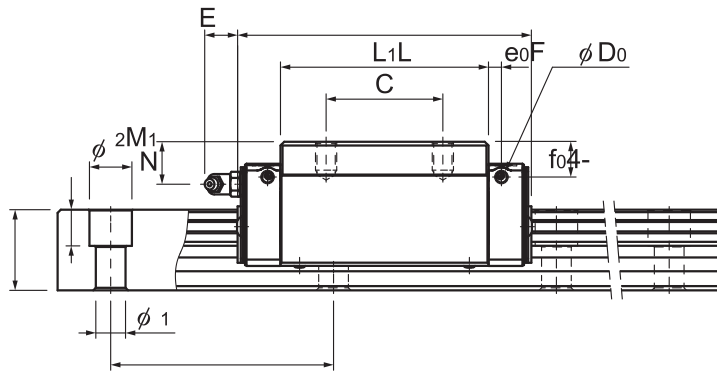
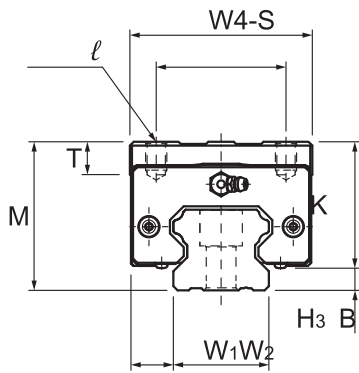
Models HSR-R, HSR-RM, HSR-LR and HSR-LRM



Model No.	Outer dimensions			LM block dimensions									Grease nipple M	W H ₃	L
	Height	Width	Length			X ℓ	L ₁	T	K	N	E				
HSR 15R HSR 15RM	28	34	56.6	26	26	M4 x 5	38.8	6	23.3	8.3	5.5	PB1021B	4.7		
HSR 20R HSR 20RM	30	44	74	32	36	M5 x 6	50.8	8	26	5	12	B-M6F	4		
HSR 20LR HSR 20LRM	30	44	90	32	50	M5 x 6	66.8	8	26	5	12	B-M6F	4		
HSR 25R HSR 25RM	40	48	83.1	35	35	M6 x 8	59.5	9	34.5	10	12	B-M6F	5.5		
HSR 25LR HSR 25LRM	40	48	102.2	35	50	M6 x 8	78.6	9	34.5	10	12	B-M6F	5.5		
HSR 30R HSR 30RM	45	60	98	40	40	M8 x 10	70.4	9	38	10	12	B-M6F	7		
HSR 30LR HSR 30LRM	45	60	120.6	40	60	M8 x 10	93	9	38	10	12	B-M6F	7		
HSR 35R HSR 35RM	55	70	109.4	50	50	M8 x 12	80.4	11.7	47.5	15	12	B-M6F	7.5		
HSR 35LR HSR 35LRM	55	70	134.8	50	72	M8 x 12	105.8	11.7	47.5	15	12	B-M6F	7.5		
HSR 45R HSR 45LR	70	86	139 170.8	60	60 80	M10 x 17	98 129.8	15	60	20	16	B-PT1/8	10		
HSR 55R HSR 55LR	80	100	163 201.1	75	75 95	M12 x 18	118 156.1	20.5	67	21	16	B-PT1/8	13		
HSR 65R HSR 65LR	90	126	186 245.5	76	70 120	M16 x 20	147 206.5	23	76	19	16	B-PT1/8	14		
HSR 85R HSR 85LR	110	156	245.6 303	100	80 140	M18 x 25	178.6 236	29	94	23	16	B-PT1/8	16		



Models HSR-R, HSR-RM, HSR-LR and HSR-LRM

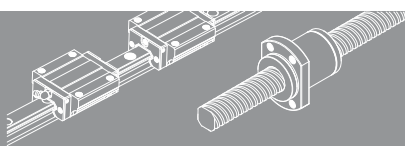


LM Guide

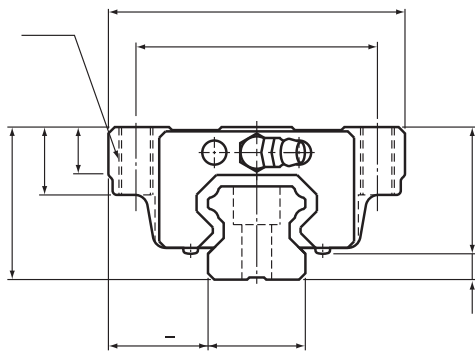
Models HSR45 to 85R/LR/XR/XLR

Unit: mm

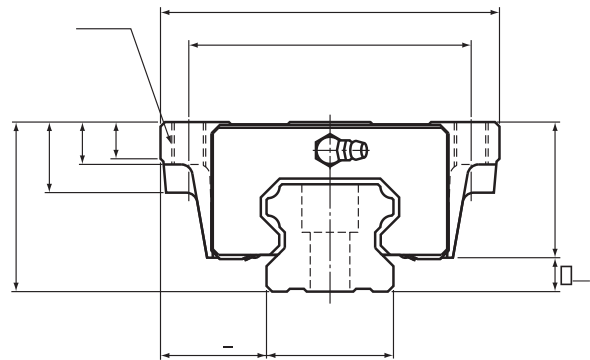
	LM rail dimensions						Basic load rating		Static permissible moment kN·m [□]					Mass	
	Width	Height	Pitch	Length [□]	C	C ₀	M _A M _B M _C			LM block	LM rail				
	W ₁ 0.05						W ₂	M ₁	F			d ₁ ^x d ₂ ^x h	Max	kN	kN
	15	9.5	15	60	4.5 × 7.5 × 5.3	3000 (1240)	10.9	15.7	0.0945	0.527	0.0945	0.527	0.0998	0.18	1.5
	15	9.5	15	60	4.5 × 7.5 × 5.3	3000 (1240)	14.2	22.9	0.194	0.984	0.194	0.984	0.145	0.26	1.5
	20	12	18	60	6 × 9.5 × 8.5	3000 (1480)	19.8	27.4	0.218	1.2	0.218	1.2	0.235	0.25	2.3
	20	12	18	60	6 × 9.5 × 8.5	3000 (1480)	23.9	35.8	0.363	1.87	0.363	1.87	0.307	0.35	2.3
	23	12.5	22	60	7 × 11 × 9	3000 (2020)	27.6	36.4	0.324	1.8	0.324	1.8	0.366	0.54	3.3
	23	12.5	22	60	7 × 11 × 9	3000 (2020)	35.2	51.6	0.627	3.04	0.627	3.04	0.518	0.67	3.3
	28	16	26	80	9 × 14 × 12	3000 (2520)	40.5	53.7	0.599	3.1	0.599	3.1	0.652	0.9	4.8
	28	16	26	80	9 × 14 × 12	3000 (2520)	48.9	70.2	0.995	4.89	0.995	4.89	0.852	1.1	4.8
	34	18	29	80	9 × 14 × 12	3000 (2520)	53.9	70.2	0.895	4.51	0.895	4.51	1.05	1.5	6.6
	34	18	29	80	9 × 14 × 12	3000 (2520)	65	91.7	1.49	7.13	1.49	7.13	1.37	2	6.6
	45	20.5	38	105	14 × 20 × 17	3090	82.2 100	101 135	1.5 2.59	8.37 13.4	1.5 2.59	8.37 13.4	1.94 2.6	2.6 3.1	11
	53	23.5	44	120	16 × 23 × 20	3060	121 148	146 194	2.6 4.46	14.1 22.7	2.6 4.46	14.1 22.7	3.43 4.56	4.3 5.4	15.1
	63	31.5	53	150	18 × 26 × 22	3000	195 249	228 323	5.08 9.81	25 45.6	5.08 9.81	25 45.6	6.2 8.79	7.3 9.7	22.5 22.5
	63	31.5	53	150	18 × 26 × 22	3000	195 249	228 323	5.08 9.81	25 45.6	5.08 9.81	25 45.6	6.2 8.79	7.3 9.3	22.5
	85	35.5	65	180	24 × 35 × 28	3000	304 367	355 464	10.2 16.9	51.2 81	10.2 16.9	51.2 81	12.8 16.7	13 16	35.2



Models HSR-A and HSR-AM, Models HSR-LA and HSR-LAM

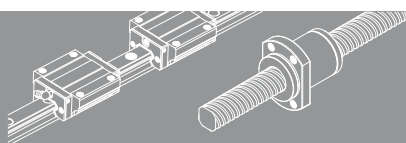


Models HSR 15A to HSR 25LA

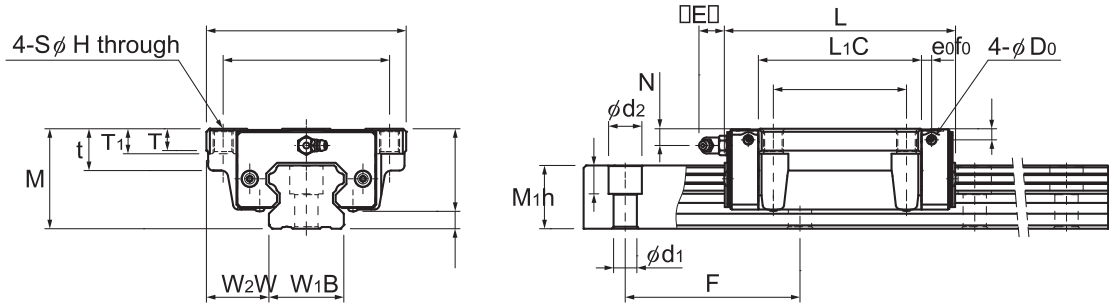


Models HSR 30A to HSR 85LA

Model No.	Outer dimensions			LM block dimensions											Grease nipple	H ₃
	Height	Width	Length					t	T	T ₁	K	N	E			
HSR 15A HSR 15AM	24	47	56.6	38	30	M5	38.8	—	7	11	19.3	4.3	5.5	PB1021B	4.7	
HSR 20A HSR 20AM	30	63	74	53	40	M6	50.8	—	9.5	10	26	5	12	B-M6F	4	
HSR 20LA HSR 20LAM	30	63	90	53	40	M6	66.8	—	9.5	10	26	5	12	B-M6F	4	
HSR 25A HSR 25AM	36	70	83.1	57	45	M8	59.5	—	11	16	30.5	6	12	B-M6F	5.5	
HSR 25LA HSR 25LAM	36	70	102.2	57	45	M8	78.6	—	11	16	30.5	6	12	B-M6F	5.5	
HSR 30A HSR 30AM	42	90	98	72	52	M10	70.4	—	9	18	35	7	12	B-M6F	7	
HSR 30LA HSR 30LAM	42	90	120.6	72	52	M10	93	—	9	18	35	7	12	B-M6F	7	
HSR 35A HSR 35AM	48	100	109.4	82	62	M10	80.4	—	12	21	40.5	8	12	B-M6F	7.5	
HSR 35LA HSR 35LAM	48	100	134.8	82	62	M10	105.8	—	12	21	40.5	8	12	B-M6F	7.5	
HSR 45A HSR 45LA	60	120	139 170.8	100	80	M12	98 129.8	25	13	15	50	10	16	B-PT1/8	10	
HSR 55A HSR 55LA	70	140	163 201.1	116	95	M14	118 156.1	29	13.5	17	57	11	16	B-PT1/8	13	
HSR 65A HSR 65LA	90	170	186 245.5	142	110	M16	147 206.5	37	21.5	23	76	19	16	B-PT1/8	14	
HSR 85A HSR 85LA	110	215	245.6 303	185	140	M20	178.6 236	55	28	30	94	23	16	B-PT1/8	16	



Models HSR-A and HSR-AM, Models HSR-LA and HSR-LAM

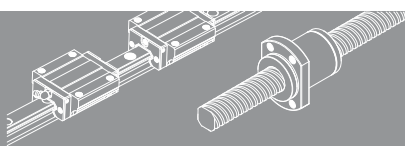


Models HSR45 to 65C/LC/XC/XLC

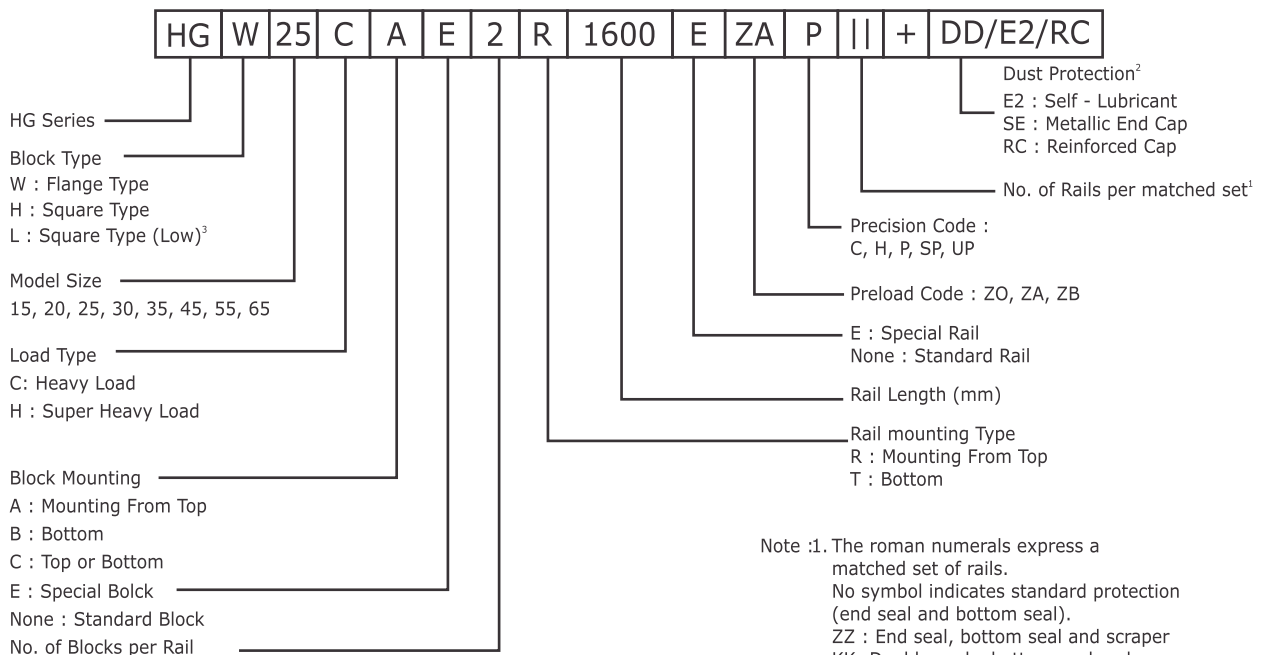
Unit: mm

LM Guide

	LM rail dimensions						Basic load rating		Static permissible moment kN•m [□]					Mass	
	Width	Height	Pitch	Length [□]	Length [□]	Length [□]	C	C ₀	M _A M _B M _C M _{LM}			block	LM rail		
	W ₁ 0.05	W ₂	M ₁						d ₁ X	d ₂ X h	Max			kN	kN
	15	16	15	60	4.5 X 7.5 X 5.3	3000 (1240)	10.9	15.7	0.0945	0.527	0.0945	0.527	0.0998	0.2	1.5
	15	16	15	60	4.5 X 7.5 X 5.3	3000 (1240)	14.2	22.9	0.194	0.984	0.194	0.984	0.145	0.29	1.5
	20	21.5	18	60	6 X 9.5 X 8.5	3000 (1480)	19.8	27.4	0.218	1.2	0.218	1.2	0.235	0.35	2.3
	20	21.5	18	60	6 X 9.5 X 8.5	3000 (1480)	23.9	35.8	0.363	1.87	0.363	1.87	0.307	0.47	2.3
	23	23.5	22	60	7 X 11 X 9	3000 (2020)	27.6	36.4	0.324	1.8	0.324	1.8	0.366	0.59	3.3
	23	23.5	22	60	7 X 11 X 9	3000 (2020)	35.2	51.6	0.627	3.04	0.627	3.04	0.518	0.75	3.3
	28	31	26	80	9 X 14 X 12	3000 (2520)	40.5	53.7	0.599	3.1	0.599	3.1	0.652	1.1	4.8
	28	31	26	80	9 X 14 X 12	3000 (2520)	48.9	70.2	0.995	4.89	0.995	4.89	0.852	1.3	4.8
	34	33	29	80	9 X 14 X 12	3000 (2520)	53.9	70.2	0.895	4.51	0.895	4.51	1.05	1.6	6.6
	34	33	29	80	9 X 14 X 12	3000 (2520)	65	91.7	1.49	7.13	1.49	7.13	1.37	2.0	6.6
	45	37.5	38	105	14 X 20 X 17	3090	82.2 100	101 135	1.5 2.59	8.37 13.4	1.5 2.59	8.37 13.4	1.94 2.6	2.8 3.3	11 11
	53	43.5	44	120	16 X 23 X 20	3060	121 148	146 194	2.6 4.46	14.1 22.7	2.6 4.46	14.1 22.7	3.43 4.56	4.5 5.7	15.1 15.1
	63	53.5	53	150	18 X 26 X 22	3000	195 249	228 323	5.08 9.81	25 45.6	5.08 9.81	25 45.6	6.2 8.79	8.5 10.7	22.5 22.5



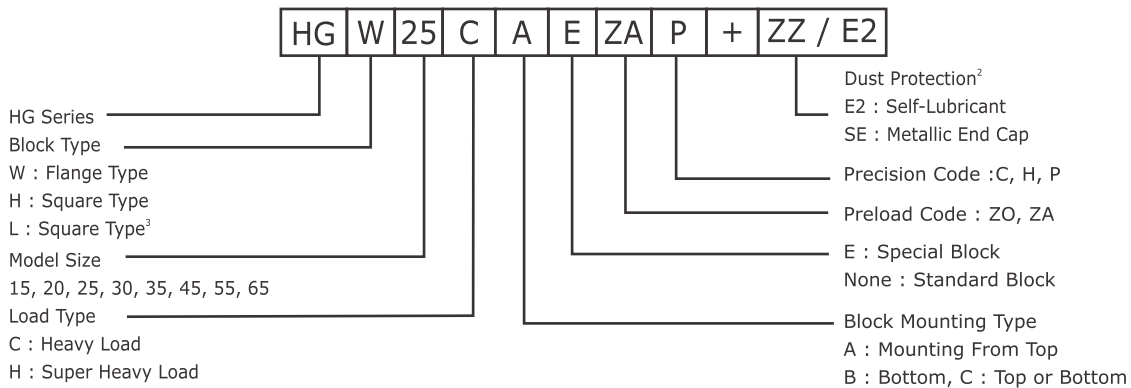
(1) Non-interchangeable type



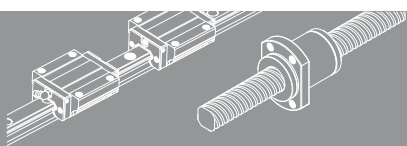
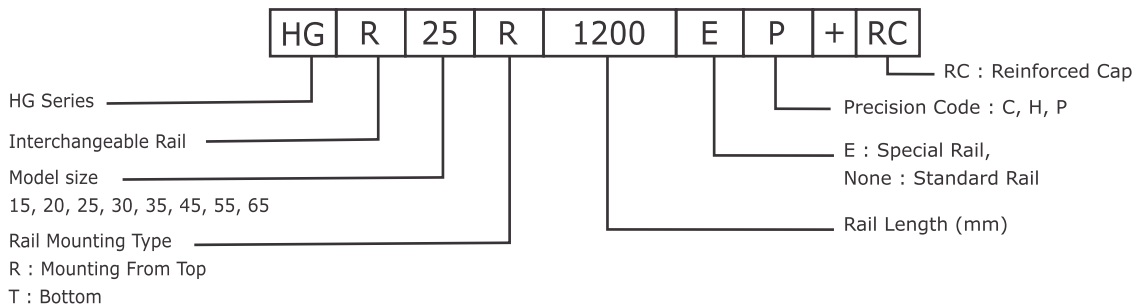
Note :1. The roman numerals express a matched set of rails.
No symbol indicates standard protection (end seal and bottom seal).
ZZ : End seal, bottom seal and scraper
KK : Double seals, bottom seal and scraper.
DD : Double seals and bottom seal
Block type HGL is the low profile design of HGH (square type), the assembled height is same as HGW (flange type) in same size.

(2) Non-interchangeable type

Model Number of HG Block

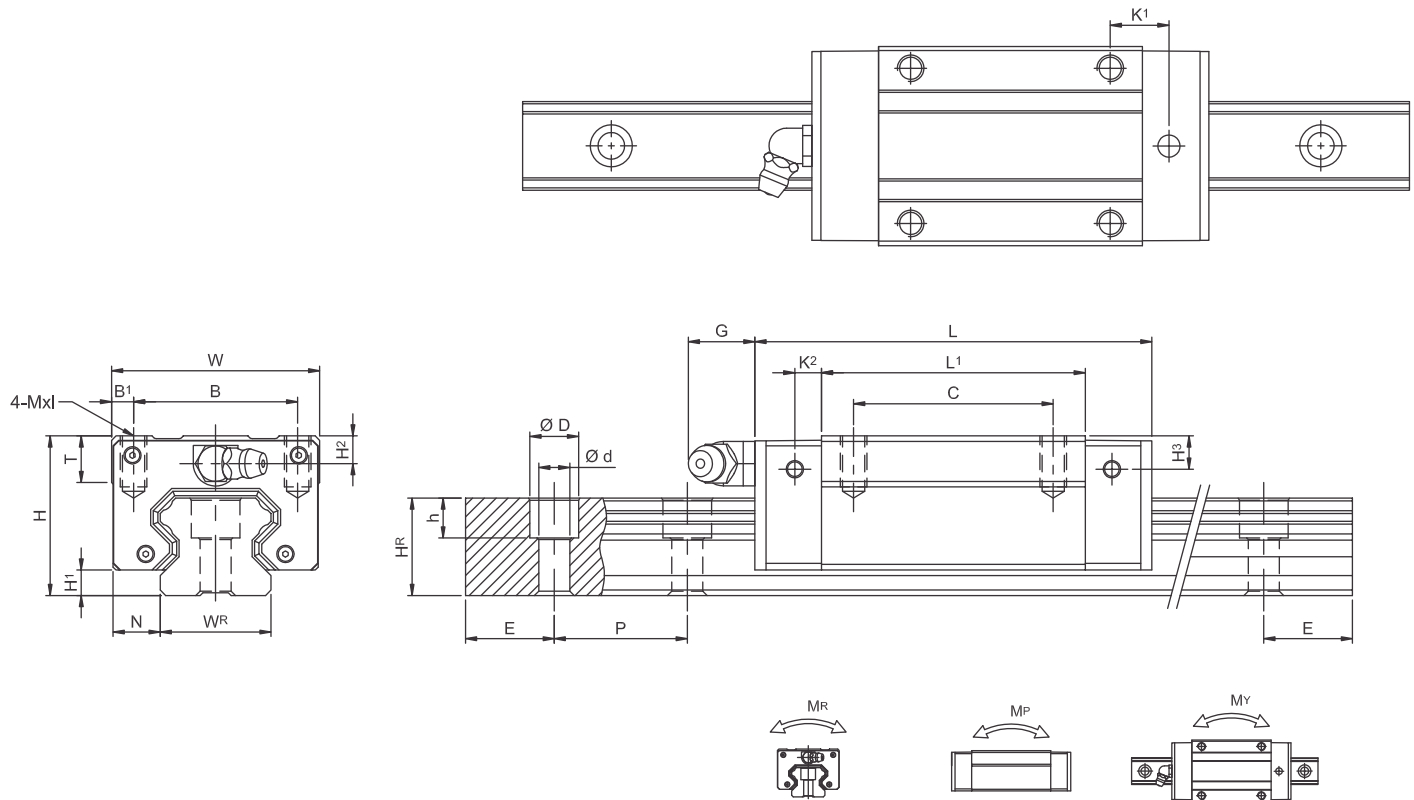


Model Number of HG Block

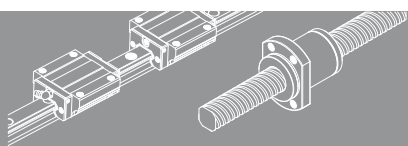


2-1-13 Dimensions for HIWIN HG Series

HGH-CA / HGH-HA



Model No.	Dimensions Of Assembly (mm)			Dimensions Of Block (mm)													Dimensions Of Rail (mm)					Mounting Bolt for Rail (mm)	Basic Dynamic Load Rating C(kN)	Basic Static Load Rating C ₀ (kN)	Static Rated Moment			Weight			
	H	H ₁	N	W	B	B ₁	C	L ₁	L	K1	K2	G	MxI	T	H ₂	H ₂	W ₂	H ₂	D	h	d				P	E	M ₁ kN-m	M ₂ kN-m	M ₃ kN-m	Block Kg	Rail Kg/m
HGH15CA	28	4.3	9.5	34	26	4	26	39.4	61.4	10	4.85	5.3	M4x5	6	7.95	7.7	15	15	7.5	5.3	4.5	60	20	M4x16	11.38	16.97	0.12	0.10	0.10	0.18	1.45
HGH20CA	30	4.6	12	44	32	6	36	50.5	77.5	12.25	6	12	M5x6	8	6	6	20	17.5	9.5	8.5	6	60	20	M5x16	17.5	27.76	0.27	0.20	0.20	0.30	2.21
HGH20HA							50	65.2	92.2	12.6															21.18	35.90	0.35	0.35	0.35	0.39	
HGH25CA	40	5.5	12.5	48	35	6.5	35	58	84	16.8	6	12	M6x8	8	10	9	23	22	11	9	7	60	20	M6x20	26.48	36.49	0.42	0.33	0.33	0.51	3.21
HGH25HA							50	78.6	104.6	19.6															32.75	49.44	0.56	0.57	0.57	0.69	
HGH30CA	45	6	16	60	40	10	40	70	97.4	20.25	6	12	M8x10	8.5	9.5	13.8	28	26	14	12	9	80	20	M8x25	38.74	52.19	0.66	0.53	0.53	0.88	4.47
HGH30HA							60	93	120.4	21.75															47.27	69.16	0.88	0.92	0.92	1.16	
HGH35CA	55	7.5	18	70	50	10	50	80	112.4	20.6	7	12	M8x12	10.2	16	19.6	34	29	14	12	9	80	20	M8x25	49.52	69.16	1.16	0.81	0.81	1.45	6.30
HGH35HA							72	105.8	138.2	22.5															60.21	91.63	1.54	1.40	1.40	1.92	
HGH45CA	70	9.5	20.5	86	60	13	60	97	139.4	23	10	12.9	M10x17	16	18.5	30.5	45	38	20	17	14	105	22.5	M12x35	77.57	102.71	1.98	1.55	1.55	2.73	10.41
HGH45HA							80	128.8	171.2	28.9															94.54	136.46	2.63	2.68	2.68	3.61	
HGH55CA	80	13	23.5	100	75	12.5	75	117.7	166.7	27.35	11	12.9	M12x18	17.5	22	29	53	44	23	20	16	120	30	M14x45	114.44	148.33	3.69	2.64	2.64	4.17	15.08
HGH55HA							95	155.8	204.8	36.4															139.35	196.20	4.88	4.57	4.57	5.49	
HGH65CA	90	15	31.5	126	76	25	70	144.2	200.2	43.1	14	12.9	M16x20	25	15	15	63	53	26	22	18	150	35	M16x50	163.63	215.33	6.65	4.27	4.27	4.27	21.18
HGH65HA							120	203.6	259.6	47.8															208.36	303.13	9.38	7.38	7.38	7.38	

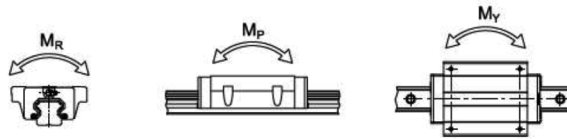
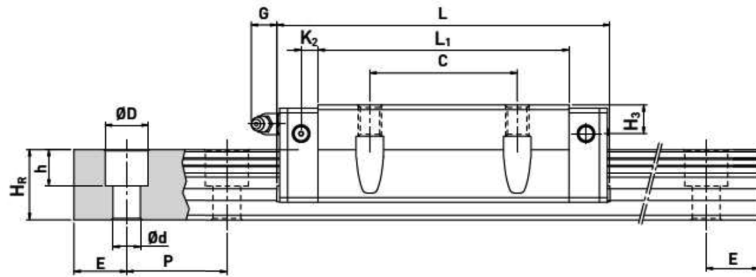
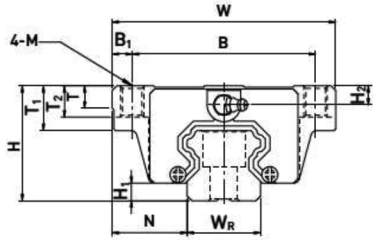
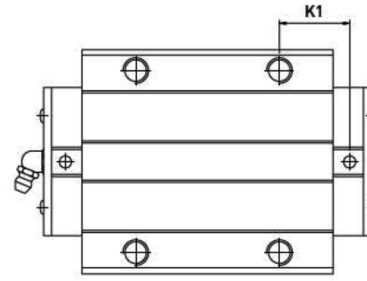


LINEAR GUIDEWAYS - HG SERIES



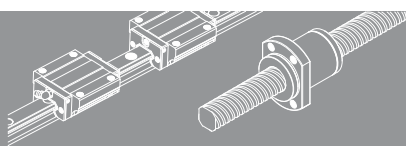
HG Series Heavy Load Ball Type

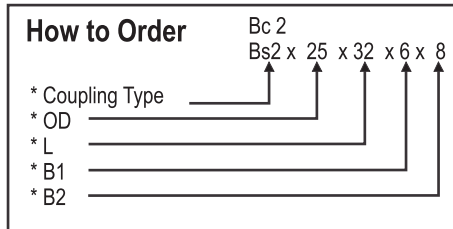
HGW-CC / HGW-HC



Model No.	Dimensions of assembly (mm)		Dimensions of Block (mm)															Dimensions of Rail (mm)										Mounting bolt for rail (mm)	Basic Dynamic Load Rasting C(kN)	Basic Static Load Rasting C1(kN)	Static Rated moment			Weight	
	H	H1	N	W	B	B1	C	L1	L	K1	K2	G	M	T	T1	T2	H2	H3	W2	H2	D	h	d	P	E	MR kN-m	MP kN-m				MY kN-m	Block kg	Rail kg/m		
HGW15CC	24	4.3	16	47	38	4.5	30	39.4	61.4	8	4.85	5.3	M5	6	8.9	6.95	3.95	3.7	15	15	7.5	5.3	4.5	60	20	M4X16	14.7	23.47	0.12	0.10	0.10	0.17	1.45		
HGW20CC	30	4.6	21.5	63	53	5	40	50.5	77.5	10.25	6	12	M6	8	10	9.5	6	6	20	17.5	9.5	8.5	6	60	20	M5X16	27.1	36.68	0.27	0.20	0.20	0.40	2.21		
HGW20CC								65.2	92.2	17.6																	32.7	47.96	0.35	0.35	0.35	0.52			
HGW25CC	36	5.5	23.5	70	57	6.5	45	58	84	10.7	6	12	M8	8	14	10	6	6	23	22	11	9	7	60	20	M6X20	37.9	52.82	0.42	0.33	0.33	0.59	3.21		
HGW25CC								78.6	104.6	21																	42.2	69.07	0.56	0.57	0.57	0.80			
HGW30CC	42	6	31	90	72	9	52	70	97.4	14.25	6	12	M10	8.5	16	10	6.5	6.5	28	26	14	12	9	80	20	M8X25	48.5	71.87	0.66	0.53	0.53	1.09	4.47		
HGW30CC								93	120.4	25.75																	58.6	93.99	0.88	0.92	0.92	1.44			
HGW35CC	48	7.5	33	100	82	9	62	80	112.4	14.6	7	12	M10	10.1	18	13	9	9	34	29	14	12	9	80	20	M8X25	64.6	93.88	1.16	0.81	0.81	1.56	6.30		
HGW35CC								105.8	138.2	27.5																	77.9	122.77	1.54	1.40	1.40	2.06			
HGW45CC	60	9.5	37.5	120	100	10	80	97	198.4	13	10	12.9	M12	15.1	22	15	8.5	8.5	45	38	20	17	14	105	22.5	M12X35	103.8	146.71	1.98	1.55	1.55	2.79	10.41		
HGW45CC								128.8	171.2	28.9																	125.3	191.85	2.63	2.68	2.68	3.69			
HGW55CC	70	13	43.5	140	116	12	95	117.7	166.7	17.35	11	12.9	M14	17.5	26.5	17	12	12	53	44	23	20	16	120	30	M14X45	153.2	211.23	3.69	2.64	2.64	4.52	15.08		
HGW55CC								155.8	204.8	36.4																	184.9	276.23	4.88	4.57	4.57	5.96			
HGW65CC	90	15	53.5	170	142	14	110	144.2	200.2	23.1	14	12.9	M16	25	37.5	23	15	15	63	53	26	22	18	150	35	M16X50	213.2	287.48	6.65	4.27	4.27	9.17	21.18		
HGW65CC								203.6	259.6	52.8																	277.8	420.17	9.38	7.38	7.38	12.89			

Note : 1kgf = 9.81 N

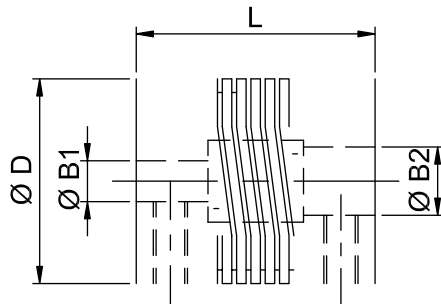




Features :

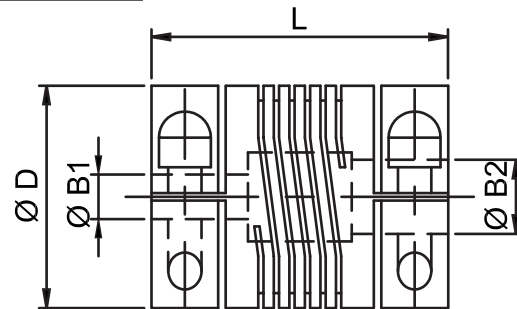
- * Compensation of Axial, Radial & angular misalignments
- * Long service life (All steel material)
- * Taper Bore, hubs, are also available (As per your drawing)
- * Simple and fast assembly.

* Other size are available as per your requirement.



(BS - Type)

Flexible Beam Coupling (Type BS and BC) Material :- Aluminium									
TYPE	DIMENSION (MM)		BORE SIZE (MM)			SCREW Set	MISALIGNMENT		TORQUE N.M.
	OD	L	MIN B1	MIN B2	MAX B1 & B2		ANG	PARAKKEK (MM)	
Bs1	15	20	3	6	6	M3	5°	.127	1.5
Bs2	20	22	4	6	8	M3	5°	.127	2
Bs3	25	30	6	8	12	M4	5°	.127	4
Bs4	30	35	6	10	14	M5	5°	.127	5
Bs5	35	40	3	12	18	M5	5°	.127	6
BS6	40	42	10	14	22	M6	5°	.127	7



Material :- Aluminium

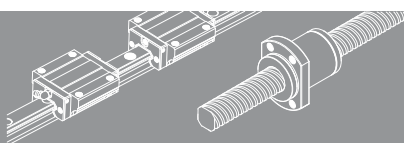
TYPE	DIMENSION (MM)		BORE SIZE (MM)			SCREW Set Clamp	MISALIGNMENT		TORQUE N.M.
	OD	L	MIN B1	MIN B2	MAX B1 & B2		ANG	PARAKKEK (MM)	
Bc1	20	28	4	6	8	M3	5°	.127	2
BC2	25	32	6	8	12	M3	5°	.127	4
BC3	30	40	6	10	14	M4	5°	.127	5
BC4	35	43	8	12	18	M5	5°	.127	6
BC5	40	50	10	14	22	M6	5°	.127	7



(BC - Type)

Features :

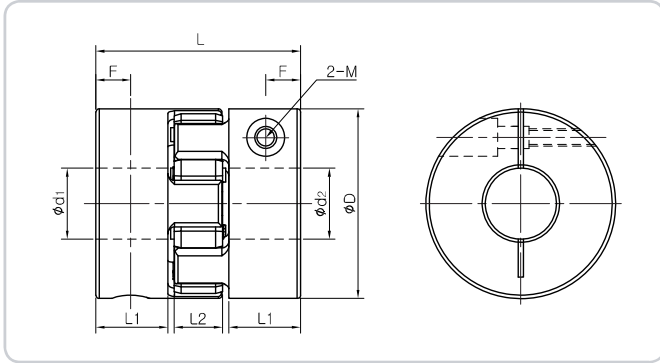
- * Torsional Stiffness * Zero Backlash
 - * Low moment of Inertia. * One piece Construction * Constant Velocity
 - * Inch Bores, Customers Bore, diameter & length are also available
- Use - Encoder's stapper, servomotors and General purpose light duty, power transmission applications.



SPIDER COUPLINGS

SJCM - ■ ■ C-GR(RD)

[CLAMP M TYPE]



Ø D: Ø 55~ Ø 80

Dimensions & Performance

Product Number	Dimension (±0,3)					Fastening Bolt M	Fastening Torque (N · m)	Max-RPM (min ⁻¹)	Max Torque (N · m)	Rated Torque (N · m)	Torsional Stiffness (N · m/rad)	Moment of Inertia (kg · m ²)	Mass (g)	Permissible Misalignment		
	D	L	L ₁	L ₂	F									Angle (°)	Parallel (mm)	End-Play (mm)
SJCM-55C GR	55	59,3	20,8	14	10,1	M6	13	4,000	90	45	2,500	1,3 × 10 ⁻⁴	280	1	0,09	+1,4 -0,5
SJCM-65C GR	65	63,3	21,8	15	10,45	M8	30	3,500	240	120	4,000	2,6 × 10 ⁻⁴	400	1	0,1	+1,5 -0,6
SJCM-80C GR	80	87,2	31,7	18	15,5	M10	50	3,000	480	240	10,000	8,7 × 10 ⁻⁴	860	1	0,1	+1,5 -0,6
SJCM-100C GR	104	96,2	34,2	21	16,9	M12	90	3,000	600	300	7,000	3,1 × 10 ⁻³	1,700	1	0,15	+2,0 -0,6
SJCM-55C RD	55	59,3	20,8	14	10,1	M6	13	4,000	120	60	4,000	1,3 × 10 ⁻⁴	280	1	0,06	+1,4 -0,5
SJCM-65C RD	65	63,3	21,8	15	10,45	M8	30	3,500	360	180	8,000	2,6 × 10 ⁻⁴	400	1	0,08	+1,5 -0,6
SJCM-80C RD	80	87,2	31,7	18	15,5	M10	50	3,000	640	320	20,000	8,7 × 10 ⁻⁴	860	1	0,08	+1,5 -0,6
SJCM-100C RD	104	96,2	34,2	21	16,9	M12	90	3,000	1,200	600	40,000	3,1 × 10 ⁻³	1,700	1	0,1	+2,0 -0,6

* Mass and mass moment of inertia are measured with max. bore size

Standard Inner diameter

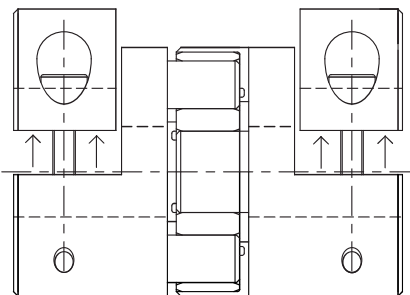
Product Number	Standard Inner Diameter(d ₁ , d ₂ , unit:mm)																			
	10	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35	40	45	50	60
SJCM-55C		●	●	●	●	●	●	●	●	●	●	●	●							
SJCM-65C				●	●	●	●	●	●	●	●	●	●	●	●					
SJCM-80C				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
SJCM-100C								●	●	●	●	●	●	●	●	●	●	●	●	●

■ For the inner diameter, INCH type is available

■ Nonstandard inner diameter is also available

■ Keyway is available

■ The recommendation for shaft tolerance is h7.



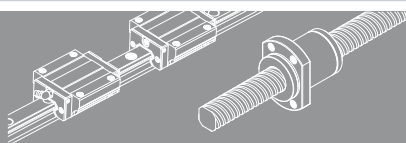
※ It is possible to order the CLAMP Split Type for outer Diameter Size Ø30-Ø100 (Ø 30 is available B TYPE)
 ※ It is impossible for SJCM series.



CLAMP SPLIT TYPE

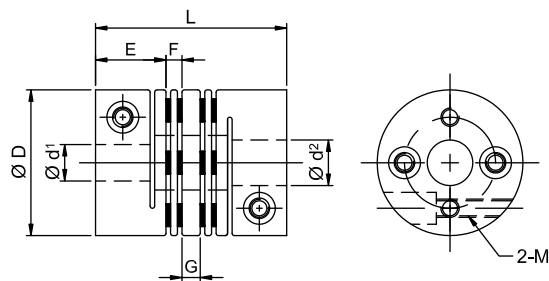


GENERAL CLAMP TYPE



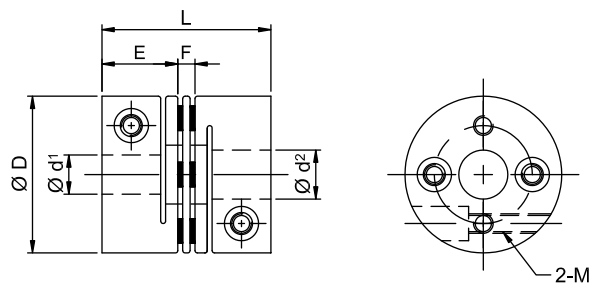
DISC COUPLINGS

BFCW Buffer Type Flexible Coupling
(Application of Ball Screw)



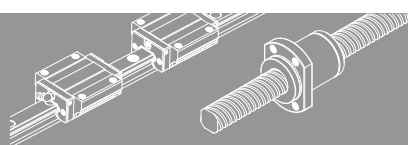
Model No.	OD	L	E	G	F	M	Od 1, Od2	Errors of angularity	Rated Torque (N-m)	Max Rotational Frequency (rpm)	Weight (g)
BFCW-26	26	35	11.5	7.0	2.5	M2.5	5 ~ 10	2°	1.5	10,000	37
BFCW-34	34	45	14.1	10.6	3.1	M3	8 ~ 14	2°	3	10,000	77
BFCW-39	39	49	15	10.8	4.1	M4	10 ~ 16	2°	6	10,000	128
BFCW-44	44	50	15	11	4.5	M4	11 ~ 19	2°	9	10,000	162
BFCW-56	56	63	20	13	5	M5	14 ~ 24	2°	25	10,000	345
BFCW-68	68	74	24	14	6	M6	19 ~ 35	2°	55	10,000	605
BFCW-82	82	98	30	22	8	M8	24 ~ 40	2°	80	10,000	1020

BFC Buffer Type Flexible Coupling
(Application of Ball Screw)



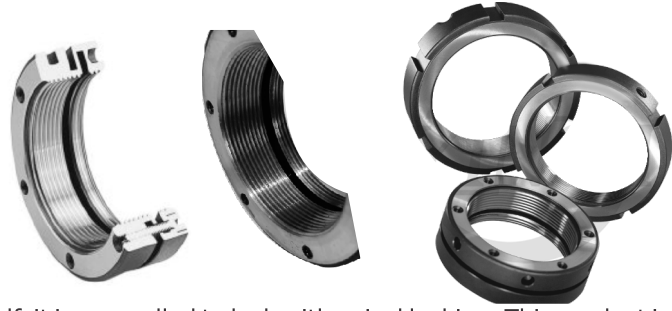
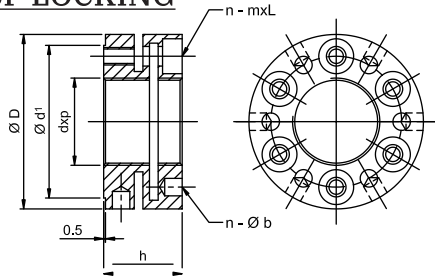
Model No.	OD	L	E	F	M	Od 1, Od2	Errors of angularity	Rated Torque (N-m)	Max Rotational Frequency (rpm)	Weight (g)
BFC-26	26	25.5	11.5	2.5	M2.5	5 ~ 10	1°	1.5	10,000	28
BFC-34	34	31.3	14.1	3.1	M3	8 ~ 14	1°	3	10,000	52
BFC-39	39	34.1	15	4.1	M4	10 ~ 16	1°	6	10,000	88
BFC-44	44	34.5	15	4.5	M4	11 ~ 19	1°	9	10,000	115
BFC-56	56	45	20	5	M5	14 ~ 24	1°	25	10,000	240
BFC-68	68	54	24	6	M6	19 ~ 35	1°	55	10,000	440
BFC-82	82	68	30	8	M8	24 ~ 40	1°	80	10,000	710

- Supply strong high-strength aluminum alloy adopted.
- Low inertia achieved by the shaft diameter interlock type hub outer diameter.
- No hazardous substances used ROHS directive compliant.
- High rigidity single element.
- High flexibility double element.
- Taper shaft compatible adapter.
- Clamp mounting only with one bolt.
- Shaft bolt design freely made from a pilot bore and a simple, strong function lock.
- Pilot bore and a simple, strong function lock.



PRECISION LOCK NUT (BLC TYPE)

BLC CLASP LOCKING



The locking method utilize the elasticity of steel itself, it is compelled to lock with axial locking. This product is designed for bad work surroundings and easy let-off nut. It's ability of locking is 3 times as stronger as traditional locking, this is its advantage. For the locking method of BLC because of the miss of assembly, it can not assure the vertical deflection between ground end and threads, that is the defect of this type.

Remarks :

1) The data is for reference only.

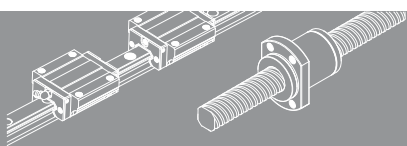
2) 1 Nm = 10.2 kg .cm = 0.731b.ft

Material = SCM440 (42CrM04) Hardness = HRC 28^o- 32^o

Thread tolerance : ISO 6H

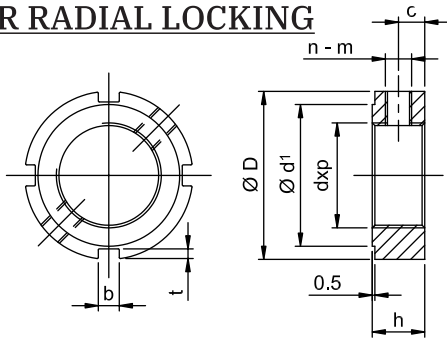
Ground end squareness : 0.007 mm

PART NO.	d X p	D	h	d ₁	n	b	n - m x L
BLC M12 X 1	M12 X 1	26	15	22	3	3	3 - M3 x 10
BLC M16 X 1.5	M16 X 1.5	34	18	29	4	4	4 - M4 x 12
BLC M17 X 1	M17 X 1	37		32			
BLC M18 X 1	M18 X 1	38		33			
BLC M20 X 1	M20 X 1	40		35			
BLC M20 X 1.5	M20 X 1.5			37			
BLC M22 X 1.5	M22 X 1.5	42		39			
BLC M24 X 1.5	M24 X 1.5	44		40			
BLC M25 X 1.5	M25 X 1.5	45		43			
BLC M28 X 1.5	M28 X 1.5	46		45			
BLC M30 X 1.5	M30 X 1.5	48		47			
BLC M32 X 1.5	M32 X 1.5	50	50	5	4 - M4 x 16		
BLC M35 X 1.5	M35 X 1.5	53	53				
BLC M38 X 1.5	M38 X 1.5	56	55				
BLC M40 X 1.5	M40 X 1.5	58	56				
BLC M42 X 1.5	M42 X 1.5	60	60				
BLC M45 X 1.5	M45 X 1.5	64	65			6	6 - M4 x 18
BLC M48 X 1.5	M48 X 1.5	68	66				
BLC M50 X 1.5	M50 X 1.5	70	68				
BLC M52 X 1.5	M52 X 1.5	72	70				
BLC M55 X 1.5	M55 X 1.5	75	77				
BLC M58 X 1.5	M58 X 1.5	78	79				
BLC M60 X 1.5	M60 X 1.5	82	80				
BLC M62 X 1.5	M62 X 1.5	84	83				
BLC M65 X 1.5	M65 X 1.5	88	87				
BLC M70 X 2	M70 X 2	92	93	6	6 - M4 x 18		
BLC M75 X 2	M75 X 2	98	99				
BLC M80 X 2	M80 X 2	105	104				
BLC M85 X 2	M85 X 2	110	114				
BLC M90 X 2	M90 X 2	120	119				
BLC M95 X 2	M95 X 2	125	123				
BLC M100 X 2	M100 X 2	130	133				
BLC M105 X 2	M105 X 2	140	138				
BLC M110 X 2	M110 X 2	145	143				
BLC M115 X 2	M115 X 2	150	147				
BLC M120 X 2	M120 X 2	155	152	8	6 - M6 x 25		
BLC M125 X 2	M125 X 2	160	156				
BLC M130 X 2	M130 X 2	165	166				
BLC M135 X 2	M135 X 2	175	170				
BLC M140 X 2	M140 X 2	180	179				
BLC M145 X 2	M145 X 2	190	183				
BLC M150 X 2	M150 X 2	195	188				
BLC M155 X 3	M155 X 3	200	193				
BLC M160 X 3	M160 X 3	205	196				
BLC M165 X 3	M165 X 3	210	200				
BLC M170 X 3	M170 X 3	215	214				
BLC M180 X 3	M180 X 3	230	223				
BLC M190 X 3	M190 X 3	240	232				
BLC M200 X 3	M200 X 3	250					



PRECISION LOCKNUT (BLR LOCKNUT)

BLR RADIAL LOCKING



The locking method is radial three points thickness is much thinner than other product. It is suitable, especially when there is the restriction of space of screw thickness and you can't find any other substitutes.

Material : SCMM440 (42CrM04)

Hardness : HRC 28° - 32°

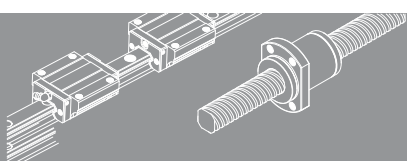
Thread tolerance : ISO 4H

Ground end squareness : 0.002 mm

Remark :

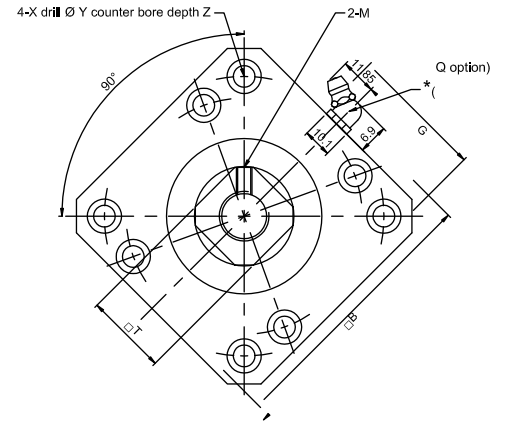
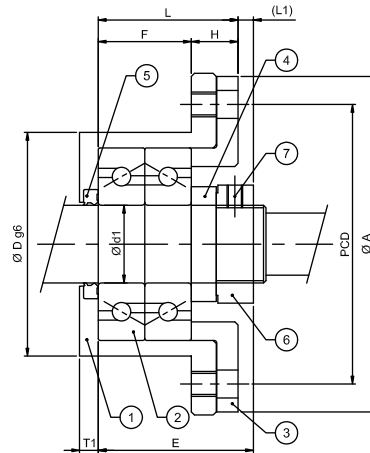
- 1) The data is for reference only
- 2) 1 Nm = 10.2 kg.cm = 0.73 lb.ft

PART NO.	d x p	D	h	b	t	d ₁	c	n - m
BLR M6	M 6 x 0.5	16	8	3	2	12	4	2 - M4
BLR M8	M 8 x 0.75	16				12		
BLR M10	M 10 x 1	18				14		
BLR M12	M 12 x 1	22				18		
BLR M15	M 15 x 1	25	10	4	2	21	5	2 - M5
BLR M17	M 17 x 1	28				23		
BLR M20	M 20 x 1	32	12	5	2	27	6	3 - M5
BLR M22	M 22 x 1.5	34				29		
BLR M25	M 25 x 1.5	38				33		
BLR M30	M 30 x 1.5	45				40		
BLR M32	M 32 x 1.5	48	14	6	2.5	43	7	3 - M6
BLR M35	M 35 x 1.5	52				47		
BLR M38	M 38 x 1.5	56	16	7	3	50	8	3 - M6
BLR M40	M 40 x 1.5	58				52		
BLR M42	M 42 x 1.5	60				54		
BLR M45	M 45 x 1.5	65				59		
BLR M50	M 50 x 1.5	70	18	8	3.5	64	9	3 - M8
BLR M55	M 55 x 2.0	75				68		
BLR M60	M 60 x 2	80	20	10	4	73	10	3 - M8
BLR M65	M 65 x 2	85				78		
BLR M70	M 70 x 2	92				85		
BLR M75	M 75 x 2	98				90		
BLR M80	M 80 x 2	105	22	12	5	95	11	3 - M10
BLR M85	M 85 x 2	110				102		
BLR M90	M 90 x 2	120	24	14	6	108	12	3 - M10
BLR M95	M 95 x 2	125				113		
BLR M100	M 100 x 2	130	26	14	6	120	13	3 - M10
BLR M105	M 105 x 2	140				126		
BLR M110	M 110 x 2	145	24	12	5	133	12	3 - M10
BLR M120	M 120 x 2	155				138		
BLR M130	M 130 x 2	165	26	14	6	138	13	3 - M10
BLR M140	M 140 x 2	180				160		
BLR M150	M 150 x 2	195				171		



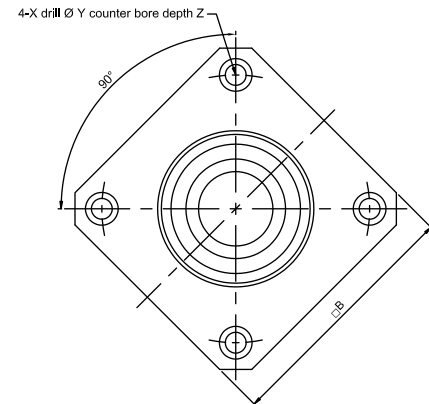
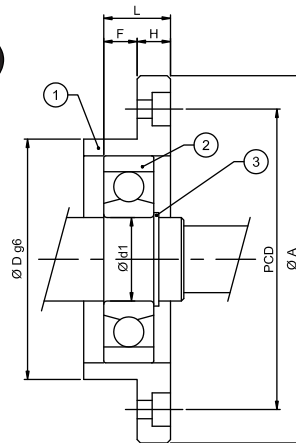
BALL SCREW SUPPORT UNIT

Support Unit FK (Fixed side round type)



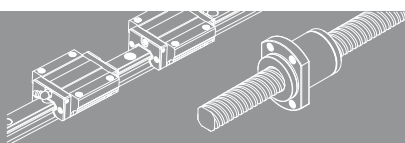
Model No.	Shaft diameter d1	L	H	F	E	Dg6	A	PCD	B	Mounting L1	T1	L2	T2	X	Y	Z	M	T	G	Q
FK 10	10	27	10	17	29.5	34 -0.009 -0.025	52	42	42	7.5	5	8.5	6	4.5	8	4	M3	16	-	-
FK 12	12	27	10	17	29.5	36 -0.009 -0.025	54	44	44	7.5	5	8.5	6	4.5	8	4	M4	19	-	-
FK 15	15	32	15	17	36	40 -0.009 -0.025	63	50	52	10	6	12	8	5.5	9.5	6	M4	22	-	-
FK 17	17	45	22	23	47	50 -0.009 -0.025	77	62	61	11	9	14	12	6.6	11	10	M4	24	-	-
FK 20	20	52	22	30	50	57 -0.010 -0.029	85	70	68	8	10	12	14	6.6	11	10	M4	30	34	M6
FK 25	25	57	27	30	50	63 -0.010 -0.029	98	80	79	13	10	20	17	9	15	13	M5	35	39	M6
FK 30	30	62	30	32	51	75 -0.010 -0.029	117	95	93	11	12	17	18	11	17.5	15	M6	40	46	M6

Support Unit FF (Support - side round type)



Unit : mm

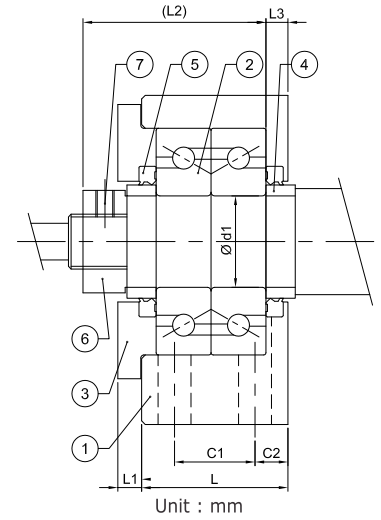
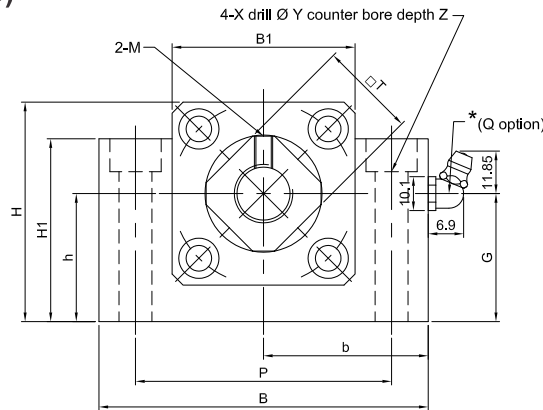
Model No.	Shaft diameter d1	L	H	F	Dg6	A	PCD	B	X	Y	Z	Bearing	Snap ring
FF 06	6	10	6	4	22 -0.007 -0.02	36	28	28	3.4	6.5	4	606ZZ	S 06
FF 10	8	12	7	5	28 -0.007 -0.02	43	35	35	3.4	6.5	4	608ZZ	S 08
FF 12	10	15	7	8	34 -0.009 -0.025	52	42	42	4.5	8	4	6000ZZ	S 10
FF 15	15	17	9	8	40 -0.009 -0.025	63	50	52	5.5	9.5	5.5	6002ZZ	S 15
FF 17	17	20	11	9	50 -0.009 -0.025	77	62	61	6.6	11	6.5	6203ZZ	S 17
FF 20	20	20	11	9	57 -0.010 -0.029	85	70	68	6.6	11	6.5	6204ZZ	S 20
FF 25	25	24	14	10	63 -0.010 -0.029	98	80	79	9	14	8.5	6205ZZ	S 25
FF 30	30	27	18	9	75 -0.010 -0.029	117	95	93	11	17	11	6206ZZ	S 30



BALL SCREW SUPPORT UNIT

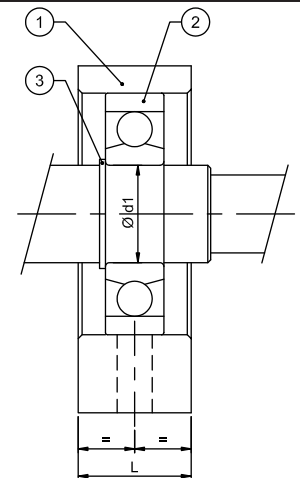
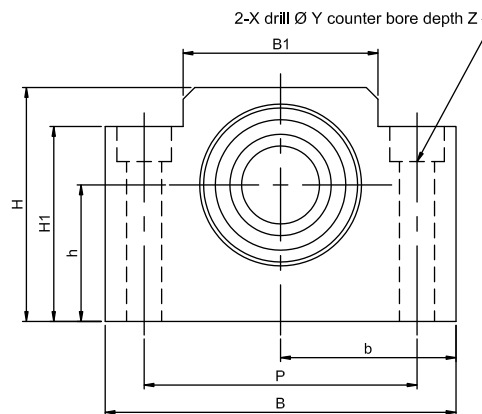


Support Unit BK (Fixed - side rectangular type)

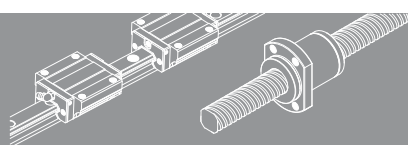


Model No.	Shaft diameter d1	L	L1	L2	L3	B	H	b ±0.02	h ±0.02	B1	H1	P	C1	C2	X	Y	Z	M	T	G	Q
BK 10	10	25	5	29	5	60	39	30	22	34	32.5	46	13	6	6.6	10.8	5	M3	16	-	-
BK 12	12	25	5	29	5	60	43	30	25	34	32.5	46	13	6	6.6	10.8	1.5	M4	19	-	-
BK 15	15	27	6	32	6	70	48	35	28	40	38	54	15	6	6.6	11	6.5	M4	22	-	-
BK 17	17	35	9	44	7	86	64	43	39	50	55	68	19	8	9	14	8.5	M4	24	-	-
BK 20	20	35	8	43	8	88	60	44	34	52	50	70	19	8	9	14	8.5	M4	30	26.7	M6
BK 25	25	42	12	54	9	106	80	53	48	64	70	85	22	10	11	17	11	M5	35	39.5	M6
BK 30	30	45	14	61	9	128	89	64	51	76	78	102	23	11	14	20	13	M6	40	41.5	M6
BK 35	35	50	14	67	12	140	96	70	52	88	79	114	26	12	14	20	13	M8	50	42.5	M6
BK 40	40	61	18	76	15	160	110	80	60	100	90	130	33	14	18	26	17.5	M8	50	42.5	M6

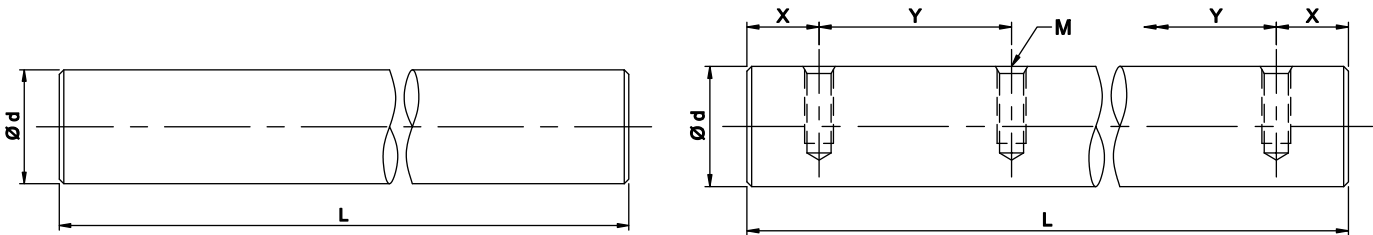
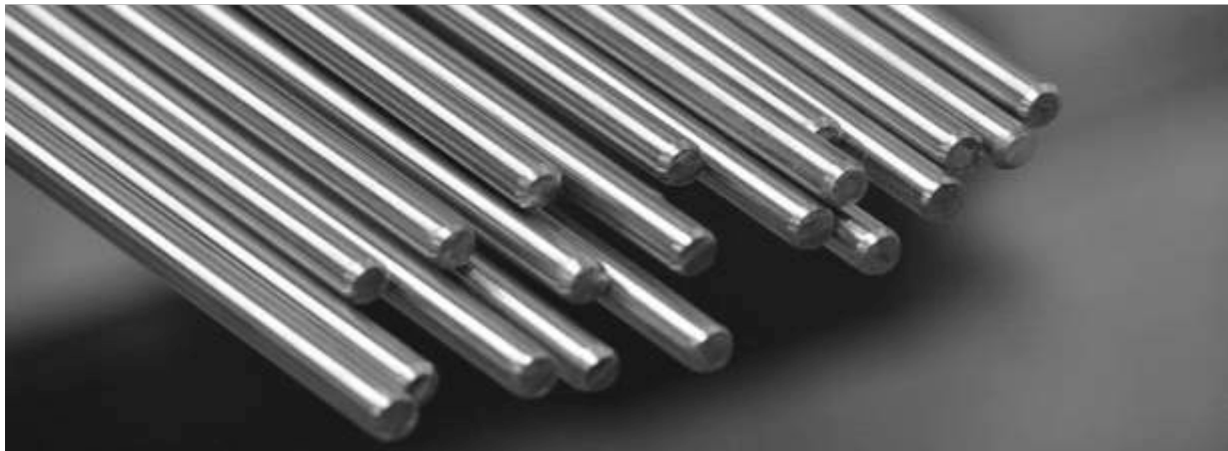
support unit BF Type



Model No.	Shaft diameter d1	L	B	H	b ±0.02	h ±0.02	B1	H1	P	X	Y	Z	Bearing	Snap ring
BF 10	8	20	60	39	30	22	34	32.5	46	6.6	10.8	5	608ZZ	S 08
BF 12	10	20	60	43	30	25	34	32.5	46	6.6	10.8	1.5	6000ZZ	S 10
BF 15	15	20	70	48	35	28	40	38	54	6.6	11	6.5	6002ZZ	S 15
BF 17	17	23	86	64	43	39	50	55	68	9	14	8.5	6203ZZ	S 17
BF 20	20	26	88	60	44	34	52	50	70	9	14	8.5	6004ZZ	S 20
BF 25	25	30	106	80	53	48	64	70	85	11	17	11	6205ZZ	S 25
BF 30	30	32	128	89	64	51	76	78	102	14	20	13	6206ZZ	S 30
BF 35	35	32	140	96	70	52	88	79	114	14	20	13	6207ZZ	S 35
BF 40	40	37	160	110	80	60	100	90	130	18	26	17.5	6208ZZ	S 40

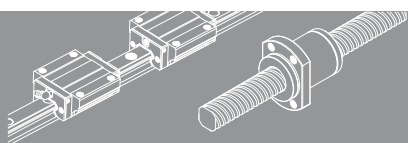


HARDENED & GROUND CHROME PLATED SHAFT



Model No.	Diameter	Tolerance 0.001 mm		Max Length	Depth of effective Hardness layer tolerance ± 0.05	Weight
		g6	h6			kg/m
S	d			mm		
S 8	8	-5	0	4000	1.0	0.4
S 10	10	-14	-9			0.62
S 12	12	-6	0			0.89
S 13	13	-17	-11			1.05
S 16	16					1.58
S 20	20	-7	0			2.47
S 25	25	-20	-13	6000	2.0	3.85
S 30	30					5.55
S 35	35	-9	0			7.55
S 40	40	-25	-16			9.87
S 50	50	-10	0			15.41
S 60	60	-29	-19			22.20
S 80	80			39.46		

Model No.	Diameter	Tolerance 0.001 mm		Depth effective hardness layer tolerance ± 0.5	L Max	x	y	M
		g6	h6					
T S 16	16	-6	0	1.0	6000	75	150	M5
T S 20	20	-17	-11	1.2				M6
T S 25	25	-7	0	1.8				M8
T S 30	30	-20	-13	2.0				M10
T S 40	40	-9	0	2.2				M12
T S 50	50	-25	-16	2.4				
T S 60	60	-10	0	2.8				
		-29	-19					



LM BUSH BEARING

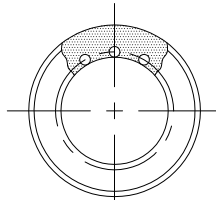
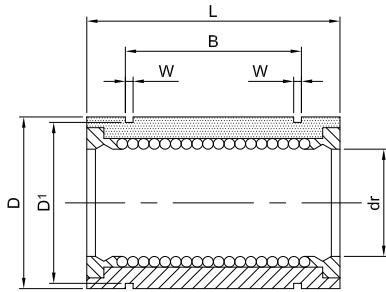
Standard Type



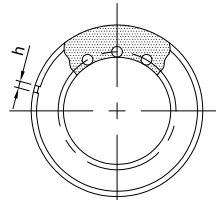
AJ-Type



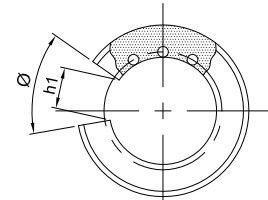
OP Type



LM

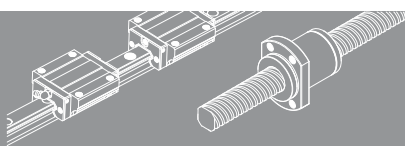


LM...AJ



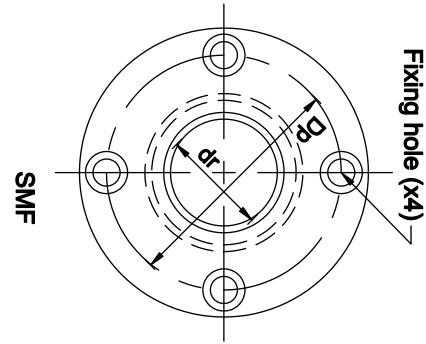
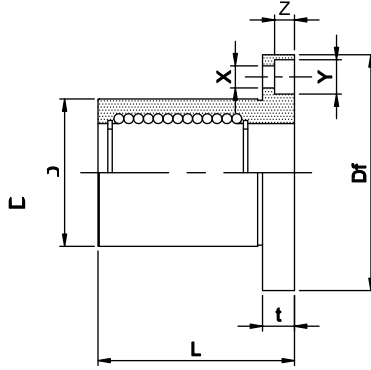
LM...OP

Nominal Shaft Diameter mm	Model No.						Main Dimensions and Tolerance											Radial Clearance (max) μm	Basic Load Rating						
	LM	Ball Circuit	LM...AJ	Ball Circuit	LM...OP	Ball Circuit	mm	dr		D		L		B		W mm	D ₁ mm		h mm	h ₁ mm	θ	Eccentricity μm	dynamic C(kgf)	static Co(kgf)	
	LM...UU	LM...UU-AJ	LM...UU-OP	Tolerances μm	Tolerances μm	Tolerances μm		Tolerances μm	Tolerances μm	Tolerances μm															
3	LM 3	4	-	-	-	-	3		7		10												7	10.7	
4	LM 4	4	-	-	-	-	4	0	8	0	12	0										8	9	13	
5	LM 5 LM 5UU	4	-	-	-	-	5		10		15		10.2										17	21	
6	LM 6 LM 6UU	4	LM 6AJ LM 6UU-AJ	4	-	-	6		12		19		13.5									-3	21	27	
8	LM 8 LM 8SUU	4	LM 8SAJ LM 8SUU-AJ	4	-	-	8		15	0	17		11.5										18	22	
8	LM 8 LM 8UU	4	LM 8AJ LM 8UU-AJ	4	-	-	8		15		24		17.5										28	40	
10	LM 10 LM 10UU	4	LM 10AJ LM 10UU-AJ	4	LM 10OP LM 10UU-OP	3	10	0	19		29		22	0	-200							12	38	56	
12	LM 12 LM 12UU	4	LM 12AJ LM 12UU-AJ	4	LM 12OP LM 12UU-OP	3	12		21	0	30	0	23	-200								-4	42	61	
13	LM 13 LM 13UU	4	LM 13AJ LM 13UU-AJ	4	LM 13OP LM 13UU-OP	3	13		23	0	32		23										52	80	
16	LM 16 LM 16UU	4	LM 16AJ LM 16UU-AJ	4	LM 16OP LM 16UU-OP	3	16		28		37		26.5										79	120	
20	LM 20 LM 20UU	5	LM 20AJ LM 20UU-AJ	5	LM 20OP LM 20UU-OP	4	20		32		42		30.5									-6	90	140	
25	LM 25 LM 25UU	6	LM 25AJ LM 25UU-AJ	6	LM 25OP LM 25UU-OP	5	25	0	40	0	59		41									15	100	160	
30	LM 30 LM 30UU	6	LM 30AJ LM 30UU-AJ	6	LM 30OP LM 30UU-OP	5	30		45		64		44.5									-8	160	280	
35	LM 35 LM 35UU	6	LM 35AJ LM 35UU-AJ	6	LM 35OP LM 35UU-OP	5	35		52		70	0	49.5	0	-300								170	320	
40	LM 40 LM 40UU	6	LM 40AJ LM 40UU-AJ	6	LM 40OP LM 40UU-OP	5	40	0	60	0	80	0	60.5	-300								20	-10	220	410
50	LM 50 LM 50UU	6	LM 50AJ LM 50UU-AJ	6	LM 50OP LM 50UU-OP	5	50		80		100		74										390	810	
60	LM 60 LM 60UU	6	LM 60AJ LM 60UU-AJ	6	LM 60OP LM 60UU-OP	5	60	0	90	0	110		85									-13	480	1020	
80	LM 80 LM 80UU	6	LM 80AJ LM 80UU-AJ	6	LM 80OP LM 80UU-OP	5	80	0	120	0	140	0	105.5	-400	0	-400						25	-20	750	1630



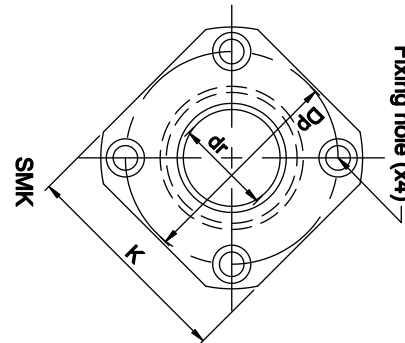
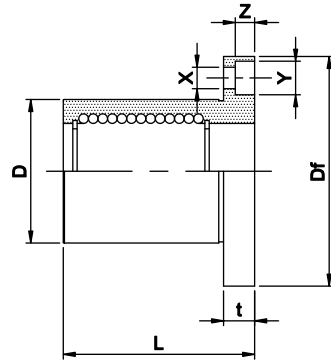
FLANGED LINER BEARINGS

SMF



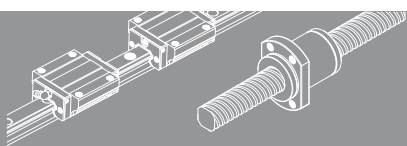
Nominal Part No				Major Dimensions and Tolerance (mm)											Eccentricity μm	Squareness μm	Basic load Rating		Nominal Part No			
Steel Retainer	Resin Retainer	Ball Circuit	Weight g	dr	Tolerance	D	Tolerance	L	Tolerance	Flange							Dynamic C(N)	Static Co(N)				
SMF6	SMF6G	4	24	6		12	0	19		Df	t	Dp	X	Y	Z	12			12	206	265	SMF6
SMF8S	SMF8SG	4	32	8		15	-0.013	17		28	5	20	3.5	6	3.1		12	12		176	216	SMF8S
SMF8	SMF8G	4	37	8	0	15		17		32	5	24	3.5	6	3.1					12	12	274
SMF10	SMF10G	4	72	10	-0.009	19		29		40	6	29	4.5	7.5	4.1	12			12			372
SMF12	SMF12G	4	76	12		21	0	30		42	6	32	4.5	7.5	4.1		12	12		510	784	SMF12
SMF13	SMF13G	4	88	13		23	-0.016	32		43	6	33	4.5	7.5	4.1	12			12	510	784	SMF13
SMF16	SMF16G	5	120	16		28		37		48	6	38	4.5	7.5	4.1					12	12	774
SMF20	SMF20G	5	180	20		32		42	±0.3	54	8	43	5.5	9	5.1	15	15	882	1,370			SMF20
SMF25	SMF25G	6	340	25	0	40	0	59		62	8	51	5.5	9	5.1			15	15	980	1,570	SMF25
SMF30	SMF30G	6	470	30	-0.010	45	-0.019	64		74	10	60	6.6	11	6.1					15	15	1,570
SMF35	SMF35G	6	650	35		52		70		82	10	67	6.6	11	6.1	20	20	1,670	3,140			SMF35
SMF40	SMF40G	6	1,060	40	0	60	0	80		96	13	78	9	14	8.1			20	20	2,160	4,020	SMF40
SMF50	SMF50G	6	2,200	50	-0.012	80	-0.022	100		166	13	98	9	14	8.1					20	20	3,820
SMF60	SMF60G	6	3,000	60	0	90	0	110		134	18	112	11	17	11.1	25	25	4,700	10,000			SMF60
					-0.015		-0.025															

SMK

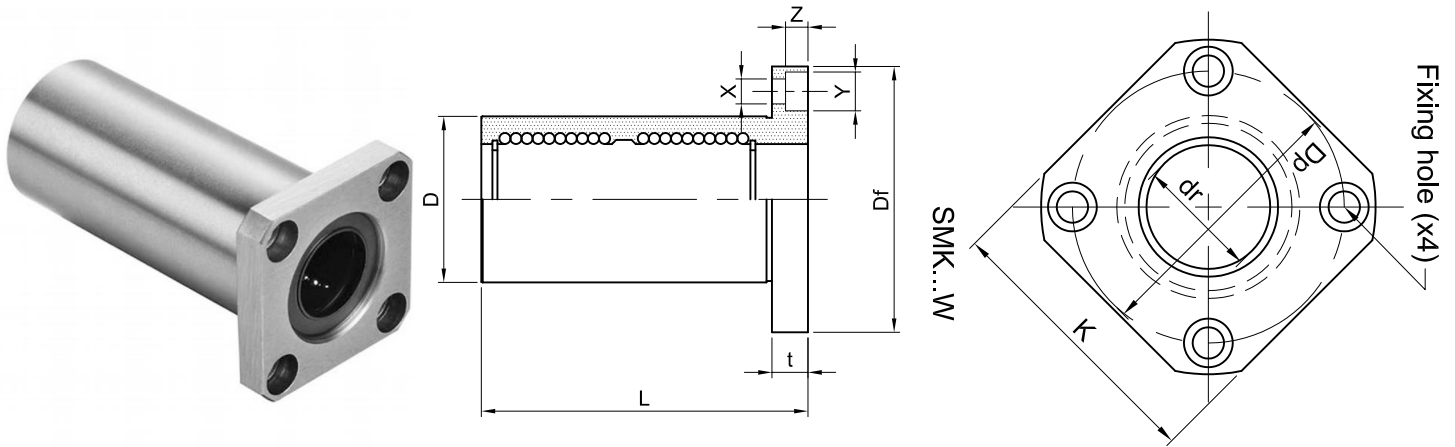


Nominal Part No				Major Dimensions and Tolerance (mm)											Eccentricity μm	Squareness μm	Basic load Rating		Nominal Part No			
Steel Retainer	Resin Retainer	Ball Circuit	Weight g	dr	Tolerance	D	Tolerance	L	Tolerance	Flange							Dynamic C(N)	Static Co(N)				
SMK 6	SMK6G	4	24	6		12	0	19		Df	t	Dp	X	Y	Z	12			12	206	265	SMK6
SMK8	SSMK8SG	4	32	8		15	-0.013	17		28	5	24	3.5	6	3.1		12	12		176	216	SMK8S
SMK8	SMK8G	4	37	8	0	15		17		32	5	24	3.5	6	3.1					12	12	274
SMK10	SMK10G	4	72	10	-0.009	19		29		40	6	29	4.5	7.5	4.1	12			12			372
SMK12	SMK12G	4	76	12		21	0	30		42	6	32	4.5	7.5	4.1		12	12		510	784	SMK12
SMK13	SMK13G	4	88	13		23	-0.016	32		43	6	33	4.5	7.5	4.1	12			12	510	784	SMK13
SMK16	SMK16G	5	120	16		28		37		48	6	38	4.5	7.5	4.1					12	12	774
SMK20	SMK20G	5	180	20		32		42	±0.3	54	8	43	5.5	9	5.1	15	15	882	1,370			SMK20
SMK25	SMK25G	6	340	25	0	40	0	59		62	8	51	5.5	9	5.1			15	15	980	1,570	SMK25
SMK30	SMK30G	6	470	30	-0.010	45	-0.019	64		74	10	60	6.6	11	6.1					15	15	1,570
SMK35	SMK35G	6	650	35		52		70		82	10	67	6.6	11	6.1	20	20	1,670	3,140			SMK35
SMK40	SMK40G	6	1,060	40	0	60	0	80		96	13	78	9	14	8.1			20	20	2,160	4,020	SMK40
SMK50	SMK50G	6	2,200	50	-0.012	80	-0.022	100		116	13	98	9	14	8.1					20	20	3,820
SMK60	SMK60G	6	3,000	60	0	90	0	110		134	18	112	11	17	11.1	25	25	4,700	10,000			SMK60
					-0.015		-0.025															

SI Unit IN= 0. 102 kgf



FLANGED LINER BEARINGS



Example **SMK 16 G W UU SK**

Standard

Inner contact diameter

Retainer material

Blank	Steel
G	Resin

Double-wide type

Outer cylinder surface treatment

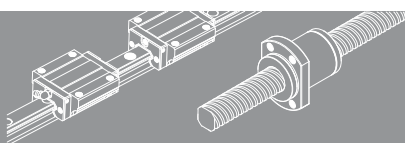
Blank	No surface treatment
SK	Electroless nickel plating

Seal

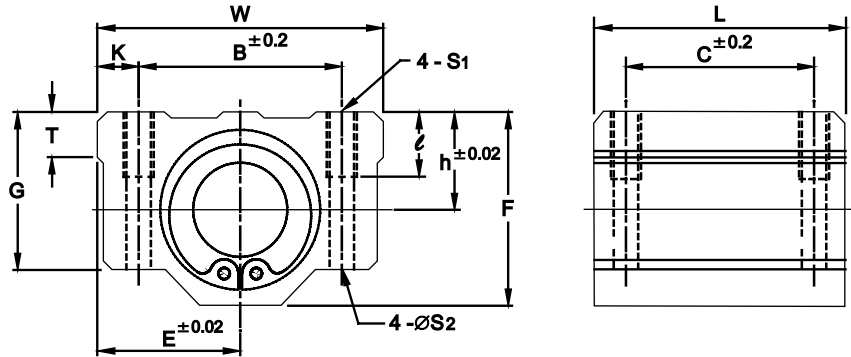
Blank	Without seal
UU	Seals on both sides

Nominal Part No				Major Dimensions and Tolerance (mm)											Eccentricity μm	Squareness μm	Basic load Rating		Nominal Part No	
Steel Retainer	Resin Retainer	Ball Circuit	Weight g	dr	Tolerance	D	Tolerance	L	Tolerance	Flange							Dynamic C(N)	Static Co(N)		
										Df	t	Dp	X	Y	Z					
SMK 6W	SMK 6GW	4	25	6		12	0	35		28	5	20	3.5	6.5	3.1	15	15	323	530	SMK 6W
SMK 8W	SMK 8GW	4	43	8		15	-0.010	45		32	5	24	3.5	6.5	3.1	15	15	431	784	SMK 8W
SMK10W	SMK10GW	4	78	10	0	19		55		40	6	29	4.5	8	4.1	15	15	588	1,100	SMK10W
SMK12W	SMK12GW	4	90	12	-0.010	21	0	57		42	6	32	4.5	8	4.1	15	15	813	1,570	SMK12W
SMK13W	SMK13GW	4	108	13		12	0.016	61		43	6	33	4.5	8	4.1	15	15	813	1,570	SMK13W
SMK16W	SMK16GW	5	165	16		28		70	-0.3	48	6	38	4.5	8	4.1	15	15	1,230	2,350	SMK16W
SMK20W	SMK20GW	5	225	20		32		80		54	8	43	5.5	9.5	5.1	20	20	1,400	2,740	SMK20W
SMK25W	SMK25GW	6	500	25	0	40	0	112		62	8	51	5.5	9.5	5.1	20	20	1,560	3,140	SMK25W
SMK30W	SMK30GW	6	590	30	-0.012	45	-0.019	123		74	10	60	6.6	11	6.1	20	20	2,490	5,490	SMK30W
SMK35W	SMK35GW	6	930	35	0	52	0	135		82	10	67	6.6	11	6.1	25	25	2,650	6,270	SMK35W
SMK40W	SMK40GW	6	1,380	40	-0.015	60	-0.022	154		96	13	78	9	14	8.1	25	25	3,430	8,040	SMK40W
SMK50W	SMK50GW	6	3,400	50	0	80	0	192		116	13	89	9	14	8.1	25	25	6,080	15,900	SMK50W
SMK60W	SMK60GW	6	4,060	60	-0.020	90	-0.025	211		134	18	112	11	17.5	11.1	30	30	7,550	20,000	SMK60W

SI Unit IN= 0. 102 kgf



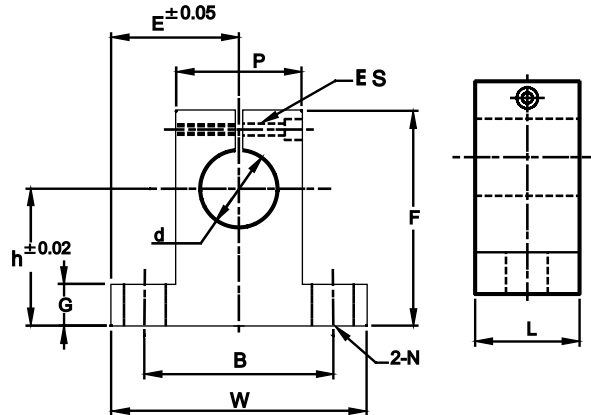
LINER BEARINGS WITH HOUSING



HOUSING-CLOSE TYPE (HF-- UU SERIES)

Model No.	Nominal shaft diameter	Main Dimensions							Mounting Dimensions						LM Bearing Model No.	dynamic C (kg)	static Co (kg)	* Unit Weight g
		h	E	W	L	F	G	T	B	C	K	S ₁	S ₂	I				
HF16	16	19	25	50	44	38.5	32.5	9	36	34	7	M5	4.3	12	LM16UU	79	120	200
HF20	20	21	27	54	50	41	35	11	40	40		M6	5.2		LM20UU	90	140	255
HF25	25	26	38	76	67	51.5	42	12	54	50	10	M8	7	18	LM25UU	100	160	600
HF30	30	30	39	78	72	59.5	49	15	58	58					LM30UU	160	280	735
HF35	35	34	45	90	80	68	54	18	70	60	11	M10	8.7	25	LM35UU	170	320	1100
HF40	40	40	51	102	90	78	62	20	80						LM40UU	220	410	1590

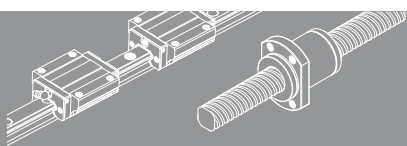
* Includes weight of LM Bearing.



SHAFT END SUPPORT (E-- SERIES)

MODEL NO	Shaft diameter d	h ±0.02	E ±0.05	W	L	F	G	P	B	S	Locking bolt S	Mounting bolt N	Unit Weight g
E16	16	27	24	48	16	44	8	25	38	5.5	M4	M5	40
E20	20	31	30	60	20	51	10	30	45	6.6	M5	M6	70
E25	25	35	35	70	24	60	12	38	56		M6		130
E30	30	42	42	84	28	70		15	44	64	9	M8	M8
E35	35	50	49	98	32	82	50		74	11	M8		
E40	40	60	57	114	36	96	60	90	11			M8	M10
E50*	50	70	63	126	40	120	18	74	100	14	M12	M12	750

1 Other sizes upon request. 1 * Check for availability

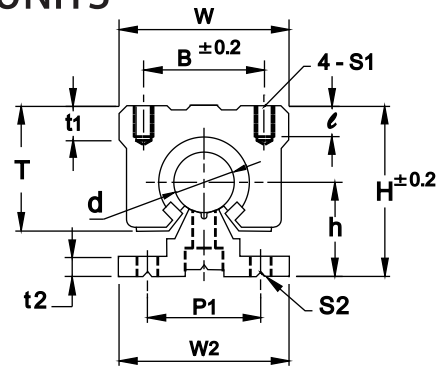


LINER SHAFT WITH BOTTOM SUPPORT



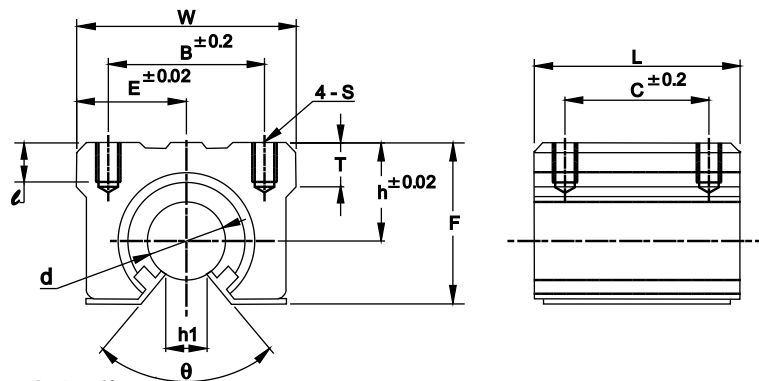
LM SHAFTS

LM SLIDE UNITS



Model No.	Shaft Diameter d	Dimensions of assembly			Dimensions of Block						
		H	h	W	L1	B	C	t1	I	S1	T
AHC - 16	16	45	24.9	45	45	32	30	9	12	M5	33
AHC - 20	20	50	27	48	50	35	35	11		M6	39
AHC - 25	25	60	33	60	65	40	40	14		M7	47
AHC - 30	30	70	37	70	70	50	50	16.8	18	M8	56
AHC - 40	40	90	48	90	90	65	65	22	20	M10	72

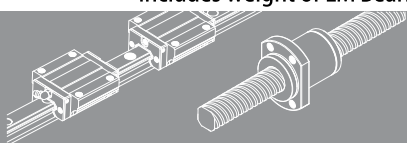
HOUSING UNITS



HOUSING-OPEN TYPE (HC -- UU SERIES)

Model No.	Shaft Dia d	Main Dimensions.						Mounting Dimensions.					Linear ball bearing				
		h A 0.02	E A 0.02	W	L	F	T	h1	q	B A 0.2	C A 0.2	S	I	LM Bearing No.	Basic dynamic load rating C(kg)	Basic Static load rating Co(kg)	*Unit Weight g
HC 16	16	20.1	22.5	45	45	33	9	10	80°	32	30	M 5	12	LM 16UU OP	79	120	150
HC 20	20	23	24	48	50	39	11		60°	35	35	M 6		LM 20UU OP	90	140	200
HC 25	25	27	30	60	65	47	14	11.5	40	40	LM 25UU OP			100	160	450	
HC 30	30	33	35	70	70	56	16.8	14	50°	50	50	M 8	18	LM 30UU OP	160	280	630
HC 40	40	42	45	90	90	72	22			19	65	65	M 10	20	LM 40UU OP	220	410

* Includes weight of LM Bearing.



QUALITY MANAGEMENT SYSTEM

Certificate of Registration



This is to Certify That The Quality Management System of

BALAJI ENGINEERING WORKS

GAT NO. 250, MAHATMA PHULE NAGAR, BORATE VASTI, MOSHI – DEHU
ROAD, NEAR MOSHI D – MART, MOSHI, PUNE – 412105,
MAHARASHTRA, INDIA.

has been assessed and found to conform to the requirements of

ISO 9001:2015

for the following scope :

MANUFACTURER AND SUPPLIER OF VARIOUS KINDS OF BALLSCREWS,
LINEAR MOTION GUIDEWAYS, PRECISION LOCKNUTS, COUPLINGS, OTHER
LINEAR MOTION PARTS AND SERVICE PROVIDER FOR BALLSCREWS AND
LINEAR MOTION GUIDEWAYS.

Certificate No	23DQLW73		
Initial Registration Date	: 21/09/2023	Issuance Date	: 21/09/2023
Date of Expiry*	: 20/09/2026		
1st Surve. Due	: 21/08/2024	2nd Surve. Due	: 21/08/2025

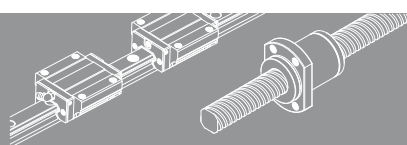
DIRECTOR

ROHS Certification Pvt. Ltd.

B-7, 1st Floor, Scheme-2 Noida, Gurgaon Road Noida, UP-201301

e-mail : info@rohscertification.co.in | website : www.rohscertification.co.in

The Registration is not a Product Quality Certificate. *Subject to successful completion of surveillance audit. Visit for verification on www.rohscertification.co.in
Certificate is the property of ROHS and return when demanded





APPLICATIONS

- Machining Center
- Laser Cutting Machine
- Glass Cutting Machine
- Industrial Robot
- CNC Routers Machine
- Milling Machine
- Packaging Machine
- PCB Drilling Machine
- Press brake machine
- Punch Press
- Wire Cut EDM
- Boring Machine
- CNC Lathes
- CNC Grinding Machine
- Tapping & Drilling Machine
- Automatic Loader
- Beam Welding Machine
- Book Binding Machine
- Diamond Laser cutting machine
- Gantry Robot
- Injection Molding Machine
- Material Handling equipment
- Measuring & Testing Machine
- Medical Equipment
- Rotogravure & Flexographic machine
- Semiconductor Machine
- Stone Processing Machine
- Tapping & Drilling Machine



COUPLING



PRECISION GROUND BALLSCREW



PRECISION GROUND BALLSCREW

HIWIN
Linear Motion Products & Technology

PMI
Precision Ballscrew Div.

THK
The Mark of Linear Motion

SIM
SUNG-IL MACHINERY

BEW
BALAJI ENGINEERING WORKS

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