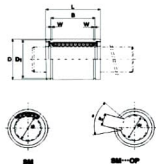


LM Bearing



Nominal Part No.			Nominal Shaft Dia (mm)		Major Dimensions and Tolerance (mm)										Eccentricity (max) μm	Radial (max) μm	Basic Load CN CoN
Part No	Ball Weight g	Open Type	dr	Tolerance μm	D Tolerance μm	L Tolerance μm	B Tolerance μm	W	D ₁	H	H ₁	±E					
LM 6 UU	4 8	Cu Cu	6		12 0	19	13.5		1.1 11.5		8	28	12	-4	200 260		
LM 8 UU	4 16	Cu Cu	8		15 -11	24	17.5		1.1 14.3	1	8	28					
LM 10 UU	4 30	Cu Cu	10	0	19 0	29	22		1.3 18		8	30					
LM 12 UU	4 31.5	LM 12-OP	12	-9	21 0	30	23	-200	1.3 20		8	30					
LM 16 UU	5 69	LM 16-OP	16		28 -13	37	28.5		1.6 27	1.5	11	60 μm	15	-6	860 1370		
LM 20 UU	5 87	LM 20-OP	20	0	32 0	42	30.5		1.8 30.5		11	60 μm					
LM 25 UU	6 220	LM 25-OP	25	-10	40 -16	59	41		1.85 38	2	12	50 μm					
LM 30 UU	6 250	LM 30-OP	30		45	64	44.5		1.85 43	2.5	15	50 μm					
LM 35 UU	6 390	LM 35-OP	35	0	52 0	70	49.5	0	2.1 49		17	50 μm	20	-8	1660 3130		
LM 40 UU	6 585	LM 40-OP	40	0	60 0	80	60.5	-300	2.1 57		20	50 μm					
LM 50 UU	6 1580	LM 50-OP	50	-12	80 -19	100	74		2.6 78.5		25	50 μm					
LM 60 UU	6 2000	LM 60-OP	60	0	90 0	110	85		3.15 86.5	3	30	50 μm	25	-13	4700 9690		
LM 80 UU	6 4420	LM 80-OP	80	-15	120 -22	140	105.5	0 -400	4.15 116		40	50 μm					



Nominal Part No		Ball Circuit	Weight (g)	Eccentricity (max) μm	Radial Clearance (max) μm	Basic Load Rating C kgf Co kgf		dr (mm)	Tolerance μm	D (mm)	Tolerance μm	L (mm)	Tolerance μm	D ₁ (mm)	H	PCD	K	W	A	F	d1xd2xh
LMF6UU	LMK6UU	LMH6UU	26.5			200	206	6		12	0	19		28	5	20	22	18	20	-	3.4x6.5x3.3
LMF8UU	LMK8UU	LMH8UU	34			170	220	8		15	0	17	0	32	5	24	25	-	20	-	
LMF10UU	LMK10UU	LMH10UU	40		-5	260	400	8	0	15	-13	24	-300	32	5	24	26	21	24	-	
LMF12UU	LMK12UU	LMH12UU	78			370	540	10		19		29		40	6	29	30	25	29	-	
LMF16UU	LMK16UU	LMH16UU	76			419	290	12		21	0	30		42	6	32	32	27	32	-	4.5x8x4.4
LMF13UU	LMK13UU	LMH13UU	94		-7	500	770	13		23	-16	32		43	6	33	34	29	33	-	
LMF18UU	LMK18UU	LMH18UU	134			770	1170	16		28		37	0	48	6	38	37	34	31	22	
LMF20UU	LMK20UU	LMH20UU	180			860	1370	20		32	0	42	-300	54	8	43	42	38	36	24	
LMF25UU	LMK25UU	LMH25UU	340		-9	989	1560	25	0	40	-19	59		62	8	51	50	46	40	32	5.5x9.5x5.4
LMF30UU	LMK30UU	LMH30UU	460			1560	2740	30	-12	45		64		74	10	60	58	51	49	35	6.6x11x6.5
LMF35UU	LMK35UU	-	795			1660	3130	35	0	52	0	70		82	10	67	64	-	-	-	
LMF40UU	LMK40UU	-	1054		-13	2150	4010	40	0	60	-22	80	0	96	13	78	75	-	-	-	9x14x8.6
LMF50UU	LMK50UU	-	2209			3820	7830	50	0	80	0	100	-400	116	13	98	92	-	-	-	
LMF60UU	LMK60UU	-	2960		-16	4700	9990	60	-20	90	-25	110		134	18	112	108	-	-	-	11x17.5x10.8

Hard Chrome Plated Shaft & End Support

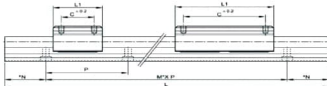
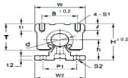


Part number	Outer Diameter D mm	Tolerance g6 µm	Max Length L mm	Depth of Effective Hardness Layer Tolerance ±0.5	Mass kg/m
SF 8	8	-4	2000	1	0.23
SF 8	8	-5	3000		0.4
SF 10	10	-14	4000		0.82
SF 12	12	-6			0.89
SF 13	13	-17			1.04
SF 16	16				1.58
SF 20	20	-7	6000	1.2	2.47
SF 25	25	-20		1.8	3.85
SF 30	30			2	5.55
SF 35	35	-9		2.2	7.56
SF 40	40	-25		2.4	9.87
SF 50	50			2.4	15.4
SF 60	60	-10		2.8	22.2
SF 80	80	-29			39.46



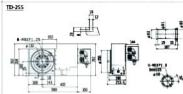
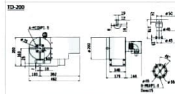
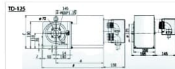
Part number	Shaft Dia.	h	A	W	H	T	E	D	C	B	S	J	Wgt. g
SK12	Ø12	23	21	42	38	6	20	5	32	14	Ø5.5	M4	30
SK16	Ø16	27	24	48	44	8	25	5	38	16	Ø5.5	M4	40
SK20	Ø20	31	30	60	51	10	30	7.5	45	20	Ø6.6	M5	70
SK25	Ø25	35	35	70	60	12	38	7	56	24	Ø6.6	M6	130
SK30	Ø30	42	42	84	70	12	44	10	64	28	Ø9	M6	180
SK35	Ø35	50	49	98	85	15	50	12	74	32	Ø11	M8	270
SK40	Ø40	60	57	114	96	15	60	12	90	36	Ø11	M8	420
SK50	Ø50	70	63	126	120	18	74		100	40	Ø14	M12	750

Shaft Support Rail Assembly



NC Rotary Table

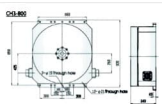
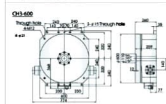
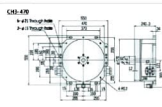
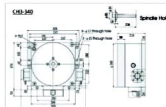
Model (Unit:mm)		TD-125(V)	TD-170(V)	TD-200(V)	TD-255P(V)
Use Method		Horizontal & Vertical (V-Vertical)			
Clamp Method		Pneumatic Skg/cm ²			
Faceplate Dimension		φ 125	φ 170	φ 200	φ 225
Spindle Through Hole Diameter		φ 22	φ 45	φ 45	φ 50
Faceplate Center Hole Diameter		φ 40H7	φ 50H7	φ 50H7	φ 60H7
Center High		110	135	150	160
Faceplate T Slot Width		12H7			
Position Key		14h7		16h7	
Servo Motor	FANUC	φ 1/2	φ 3	φ 3	φ 6
	ME/DAS	HA23/33	HA40/HCS2	HA40/HCI02	HA80/HCI52(102)
Total Speed Reduction Ratio		1/100			
Min. Speed Reduction Ratio		0.001*			
Indexing Accuracy (Cumulative)(Arc. Sec.)		45	30	30	15
Repeatability (Arc. Sec.)		4			
Clamp Force (kgf/m)		8	16	16	45
Max. Torque Capacity of Worm Gear (kgf/m)		15	27	27	46
Max. Workpiece of Capacity(kg)	Vertical (with tailstock)	50(100)	75(150)	75(150)	100(250)
	Horizontal	100	150	150	250
Net weight (without motor)(kg)		38	40	55	130



Hydraulic Indexing Table

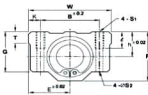


Model (Unit:mm)	CH3-340	CH3-470	CH3-470S	CH3-600	CH3-600S
Clamp Method		Hydraulic 35kg/cm ²			
Faceplate Diameter		φ340	φ470	φ600	φ600
Spindle Through Hole		φ30	φ40	φ50	
Faceplate Center Hole		φ65	φ90	φ110	
Faceplate T Slot Width		None	None	18H7	20H7
Division		Standard division: Every model have 4,6,8,12,24 standard, you can option any one of it. Special division: 2,3,5,9,10 ...etc divisions.			
Indexing Accuracy(Arc. Sec.)		±5			
Repeatability (Arc. Sec.)		±1			
Max. Workpiece of Capacity (kg)		500	700	1250	
Net weight (kg)		130	275	330	560



Cam Follower & Housing

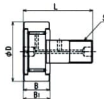
Model No.	Main dimensions					Basic load rating				
	Outer diameter D	Threaded S	Outer ring width B	B ₁	Overall length L	With cage		Full-roller type		
						Dynamic rating	Static rating	Dynamic rating	Static rating	
						C	C ₀	C	C ₀	
	mm	mm	mm	mm	mm	kN	kN	kN	kN	
CF 5	13	M5×0.8	9	10	23	3.14	2.77	—	—	
CF 6	16	M6×1	11	12	28	3.59	3.58	6.94	8.5	
CF 8	19	M8×1.25	11	12	32	4.17	4.65	8.13	11.2	
CF 10	22	M10×1.25	12	13	36	5.33	6.78	9.42	14.3	
CF 10-1	26	M10×1.25	12	13	36	5.33	6.78	9.42	14.3	
CF 12	30	M12×1.5	14	15	40	7.87	9.75	13.4	19.8	
CF 12-1	32	M12×1.5	14	15	40	7.87	9.75	13.4	19.8	
CF 16	35	M16×1.5	18	19.5	52	12	18.3	20.6	37.6	
CF 18	40	M18×1.5	20	21.5	58	14.7	25.2	25.2	51.3	
CF 20	52	M20×1.5	24	25.5	66	20.7	34.8	33.2	64.8	
CF 20-1	47	M20×1.5	24	25.5	66	20.7	34.8	33.2	64.8	
CF 24	62	M24×1.5	29	30.5	80	30.6	53.2	46.7	92.9	
CF 24-1	72	M24×1.5	29	33.5	80	30.6	53.2	46.7	92.9	
CF 30	80	M30×1.5	35	37	100	45.4	87.6	67.6	145	
CF 30-1	85	M30×1.5	35	37	100	45.4	87.6	67.6	145	
CF 30-2	90	M30×1.5	35	37	100	45.4	87.6	67.6	145	



Model No.	Serial Order Number	Main Dimensions					Mounting Dimensions						LR Bearing Size	Dynamic C-Val	Static C-Val	Unit Weight			
		N	E	W	L	G	T	B	C	K	R ₁	R ₂					C		
HF16	16	19	29	59	44	38.5	32	9	36	34			M8	4.3	12	LM25U4	79	620	250
HF20	20	21	27	54	50	41	35	11	40	40			M6	5.2		LM25U4	90	140	255
HF25	25	28	38	78	69	51.5	42	12	54	50	11					LM25U4	120	160	320
HF30	30	30	38	77	71.5	50.5	40	15	58	58			M8	7	18	LM35U4	160	280	735
HF35	35	34	34	89	78	68	54	16	70							LM35U4	170	320	1100
HF40	40	40	51	100	90	78	62	20	80				M10	8.7	25	LM45U4	220	410	1590



Cable Drag Chain



Carrier Cross Sections and Bend Radii for Types 0345 - 0455 - 0555 - 0665



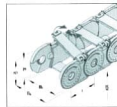
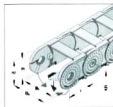
Cable Carriers - 030 Design

The connecting brackets can be opened quickly and easily using a screwdriver



Cable Carriers - 040 Design

The connecting brackets can be opened quickly and easily using a screwdriver.



Band Radii for Designs 030/035 and 040/045

Dimensions in mm

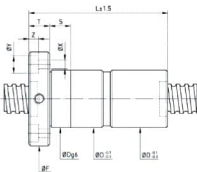
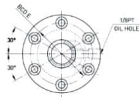
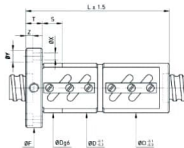
Type	Available Bend Radii KR							
0345	38	50	75	100	125	150	--	--
0455	52	65	95	125	150	180	200	225
0555	63	80	100	125	160	200	230	--
0665	75	100	120	140	200	250	300	--

Technical Data/Weights

Technical Data Weights
for Designs 030/035 and 040/045 Dimensions in mm/Weights in kg/m

Type	t	h_t	h_{C_t}	Available Widths B_i							B_k
				Weight							
0345	34.5	20	26	15	20	25	38	50	65	90	--
				6.43	0.45	0.46	0.50	0.53	0.57	0.71	--
0455	45.5	26	36	25	38	58	78	103	130	--	--
				6.81	0.88	0.95	1.02	1.15	1.27	--	--
0555	55.5	38	50	50	75	100	125	150	--	--	--
				1.47	1.60	1.72	1.86	1.98	--	--	--
0665	66.5	44	60	50	75	125	150	175	200	225	250
				2.06	2.22	2.37	2.53	2.69	2.85	3.00	3.16

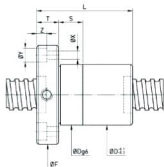
Ground Ballscrew-FDW & FDI Type



Model	Size		Ball Dia	PCD	RD	Circuits	Stiffness Kg/um K	Dynamic Load	Static Load	Nut		Flange				Bolt			Fit
	Nominal Dia	Lead						1x10*6 Revs C (KgF)	CO(KgF)										
16-S B2	16	5	3.175	16.6	13.3	2.5x2	65	1385	2799	40	110	64	12	51	5.5	9.5	5.5	24	
20-S B2	20	5	3.175	20.6	17.3	2.5x2	76	1519	3465	44	110	68	12	55	5.5	9.5	5.5	24	
25-S B2	25	5	3.175	25.6	22.3	2.5x2	90	1704	4417	50	110	74	12	62	5.5	9.5	5.5	24	
25-10 B1	25	10	4.763	26	21.1	2.5x1	48	1592	3237	60	122	86	16	73	6.6	11	6.5	24	
32-S B2	32	5	3.175	32.6	29.3	2.5x2	109	1886	5666	58	110	84	12	71	6.6	11	6.5	24	
32-10 B2	32	10	6.35	33.4	26.9	2.5x2	118	4810	11199	74	182	108	16	90	9	14	8.5	30	
40-S B2	40	5	3.175	40.6	37.3	2.5x2	132	2071	7134	68	114	102	16	84	9	14	8.5	30	
40-10 B2	40	10	6.35	41.4	34.9	2.5x2	145	5370	14138	84	192	125	18	104	11	17.5	11	30	
50-10 B2	50	10	6.35	51.4	44.9	2.5x2	173	5923	17670	94	194	135	18	114	11	17.5	11	30	
63-10 B2	63	10	6.35	64.4	57.9	2.5x2	206	6533	22371	110	196	152	20	130	11	17.5	11	30	

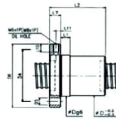
Model	Size		Ball Dia	PCD	RD	Circuits	Stiffness Kg/um K	Dynamic Load	Static Load	Nut		Flange				Bolt			Fit
	Nominal Dia	Lead						1x10 ⁶ Revs C (KgF)	CO(KgF)										
16-S T3	16	5	3.175	16.6	13.32	3	20	731	1331	28	30	78	54	12	41	5.5	9.5	5.5	24
16-S T4	16	5	3.175	16.6	13.32	4	23	936	1775	28	30	90	54	12	41	5.5	9.5	5.5	24
20-S T3	20	5	3.175	20.6	17.32	3	39	852	1767	32	34	78	57	12	45	5.5	9.5	5.5	24
20-S T4	20	5	3.175	20.6	17.32	4	54	1091	2356	32	34	92	57	12	45	5.5	9.5	5.5	24
25-S T3	25	5	3.175	25.6	22.32	3	55	977	2314	37	40	78	64	12	52	5.5	9.5	5.5	24
25-S T4	25	5	3.175	25.6	22.32	4	73	1252	3085	37	40	96	64	12	52	5.5	9.5	5.5	24
32-S T3	32	5	3.175	32.6	29.32	3	64	1117	3081	44	48	78	74	12	60	6.6	11	6.5	24
32-S T4	32	5	3.175	32.6	29.32	4	82	1431	4108	44	48	96	74	12	60	6.6	11	6.5	24
32-10 T3	32	10	6.35	33.4	39.89	3	68	2539	5327	51	56	129	82	16	68	6.6	11	6.5	24
32-10 T4	32	10	6.35	33.4	39.89	4	82	3252	7102	51	56	155	82	16	68	6.6	11	6.5	24
40-S T4	40	5	3.175	40.6	37.32	4	99	1599	5280	51	54	96	80	16	66	6.6	11	6.5	24
40-10 T3	40	10	6.35	41.4	34.91	3	76	2959	7069	60	65	133	96	16	80	9	14	8.5	30
40-10 T4	40	10	6.35	41.4	34.91	4	101	3789	9426	60	65	155	96	16	80	9	14	8.5	30
50-S T4	50	5	3.175	50.6	47.32	4	121	1757	6745	62	65	96	116	16	80	9	14	8.5	30
50-10 T3	50	10	6.35	51.4	44.91	3	95	3397	9256	69	74	135	114	18	92	11	17.5	11	40
50-10 T4	50	10	6.35	51.4	44.91	4	124	4350	12341	69	74	157	114	18	92	11	17.5	11	40
63-10 T4	63	10	6.35	64.4	57.91	4	158	4860	15858	82	88	159	134	20	110	14	20	13	40

Ground Ballscrew-FSI Type



T=5 M3
T=6 M5
T=10,11 MaxIP
T2/12 LUBFI
ØL HOLE

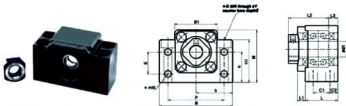
Rolled Ballscrew - FSI Type



Model	Size		Ball Dia	PCD	RO	Circuits	Stiffness kg/mm K	Dynamic Load		Static Load	Nut			Flange			Bolt			FR
	Nominal Dia	Lead						1x10 ⁶ Revs C (kgf)	C0(kgf)		O	L	F	T	RO-5	X	Y	Z		
16-5 T3	16	5	3.175	17	13.3	3	11	731	1331		30	46	56	12	41	5.5	9.5	5.5	12	
16-5 T4	16	5	3.175	17	13.3	4	12	936	1775		30	52	56	12	41	5.5	9.5	5.5	12	
20-5 T3	20	5	3.175	21	17.3	3	20	852	1767		34	46	57	12	45	5.5	9.5	5.5	12	
20-5 T4	20	5	3.175	21	17.3	4	27	1091	2356		34	53	57	12	45	5.5	9.5	5.5	12	
25-5 T3	25	5	3.175	26	22.3	3	28	977	2314		40	46	64	11	51	5.5	9.5	5.5	10	
25-5 T4	25	5	3.175	26	22.3	4	37	1252	3085		40	51	64	11	51	5.5	9.5	5.5	10	
25-10 T3	25	10	4.763	26	21.1	3	25	1591	3236		45	65	69	15	55	6.6	11	6.5	12	
25-10 T4	25	10	4.763	26	21.1	4	33	2038	4315		45	80	69	15	55	6.6	11	6.5	12	
32-5 T3	32	5	3.175	33	29.3	3	33	1117	3081	44	48	46	74	12	60	6.6	11	6.5	12	
32-5 T4	32	5	3.175	33	29.3	4	42	1431	4508	44	48	53	74	12	60	6.6	11	6.5	12	
32-10 T3	32	10	6.35	33	26.9	3	35	2539	5327	51	56	72	82	16	68	6.6	11	6.5	12	
32-10 T4	32	10	6.35	33	26.9	4	48	3252	7102	51	56	83	82	16	68	6.6	11	6.5	12	
40-5 T4	40	5	3.175	41	37.3	4	50	1599	5280	51	54	53	80	16	66	6.6	11	6.5	12	
40-10 T3	40	10	6.35	41	34.9	3	40	2959	7069	60	65	76	96	16	80	9	14	8.5	15	
40-10 T4	40	10	6.35	41	34.9	4	51	3789	9426	60	65	87	96	16	80	9	14	8.5	15	
50-5 T4	50	5	3.175	51	47.3	4	62	1757	6745	62	65	57	96	16	80	9	14	8.5	15	
50-5 T6	50	5	3.175	51	47.3	6	91	2490	10117	62	65	70	96	16	80	9	14	8.5	15	
50-10 T3	50	10	6.35	51	44.9	3	50	3397	9256	69	74	78	114	18	92	11	18	11	20	
50-10 T4	50	10	6.35	51	44.9	4	63	4350	12341	69	74	89	114	18	92	11	18	11	20	
63-10 T4	60	10	6.35	64	57.9	4	79	4860	15858	82	88	91	134	20	110	14	20	13	20	
63-10 T6	60	10	6.35	64	57.9	6	115	6887	23786	82	88	114	134	20	110	14	20	13	20	

Model	Ball Dia	Circuits	Dynamic Load		Static Load		D	D4	Flange Hole No	D5	D6	H1	L1	L2	L7
			1x10 ⁶ Revs C (kgf)	CD (kgf)	C0 (kgf)	C0 (kgf)									
16-5 T3	3.175	3	900	1700	28	38	6	5.5	48	40	10	40	10		
20-5 T3	3.175	3	1100	2300	36	47	6	6.6	58	44	10	44	10		
20-5 T4	3.175	4	1300	3100	36	47	6	6.6	58	44	10	52	10		
25-5 T3	3.175	3	1200	3000	40	51	6	6.6	62	48	10	44	10		
25-5 T4	3.175	4	1500	4000	40	51	6	6.6	62	48	12	52	10		
25-10 T3	4.763	3	1900	4200	40	51	6	6.6	62	48	16	65	10		
32-5 T3	3.175	3	1300	4000	50	65	6	9	80	62	10	46	12		
32-5 T4	3.175	4	1700	5300	50	65	6	9	80	62	10	53	12		
32-5 T6	3.175	6	2400	7900	50	65	6	9	80	62	10	66	12		
32-10 T3	6.35	3	3100	6800	50	65	6	9	80	62	16	74	12		
32-10 T4	6.35	4	3900	9100	50	65	6	9	80	62	16	85	12		
40-5 T4	3.175	4	1900	6800	63	78	8	9	93	70	10	53	14		
40-5 T6	3.175	6	2700	10200	63	78	8	9	93	70	10	66	14		
40-10 T3	6.35	3	3500	9100	63	78	8	9	93	70	16	74	14		
40-10 T4	6.35	4	4500	12100	63	78	8	9	93	70	16	87	14		
50-5 T4	3.175	4	2100	8700	75	93	8	11	110	85	10	57	16		
50-5 T6	3.175	6	2900	13000	75	93	8	11	110	85	10	70	16		
50-10 T3	6.35	3	4000	11900	75	93	8	11	110	85	16	78	16		
50-10 T4	6.35	4	5100	15800	75	93	8	11	110	85	16	89	16		
50-10 T6	6.35	6	7300	23700	75	93	8	11	110	85	16	112	16		

Ballscrew End Support BK & BF Type



Model No.	d1	L	L1	L2	L3	C1	C2	B	H	b	h	B1	H1	E	P	d2	X	Y	Z
BK 10	10	25	5	29	5	13	6	60	39	30	22	34	32.5	15	40	5.5	6.0	10.8	5
BK 12	12	25	5	29	5	13	6	60	43	30	25	35	32.5	18	40	5.5	6.0	10.8	1.5
BK 15	15	27	6	32	6	15	6	70	48	35	28	40	38	18	54	5.5	6.0	11	6.5
BK 17	17	35	9	44	7	19	8	86	64	43	39	50	55	28	68	6.0	6.0	14	8.5
BK 20	20	35	8	43	8	19	8	88	60	44	34	52	50	22	70	6.0	6.0	14	8.5
BK 25	25	42	12	54	9	22	10	106	80	53	48	64	70	33	85	9	11	17.5	11
BK 30	30	45	14	61	9	23	11	128	89	64	51	76	78	33	102	11	14	20	13
BK 35	35	50	14	67	12	26	12	140	96	70	52	88	79	35	114	11	14	20	13
BK 40	40	61	18	76	15	33	14	160	110	80	60	100	60	37	130	14	18	26	17.5



Model No.	d1	L	B	H	b	h	B1	H1	E	P	d2	X	Y	Z
BF 10	8	20	60	39	30	22	34	32.5	15	46	5.5	6.0	10.8	5
BF 12	10	20	60	43	30	25	35	32.5	18	46	5.5	6.0	10.8	1.5
BF 15	15	20	70	48	35	28	40	38	18	54	5.5	6.0	11	6.5
BF 17	17	23	86	64	43	39	50	55	28	68	6.0	6.0	14	8.5
BF 20	20	26	88	60	44	34	52	50	22	70	6.0	6.0	14	8.5
BF 25	25	30	106	80	53	48	64	70	33	85	9	11	17.5	11
BF 30	30	32	128	89	64	51	76	78	33	102	11	14	20	13
BF 35	35	32	140	96	70	52	88	79	35	114	11	14	20	13
BF 40	40	37	160	110	80	60	100	60	37	130	14	18	26	17.5

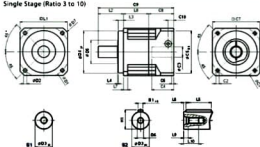
Planetary Gear Box AB Series

Gearbox Performance

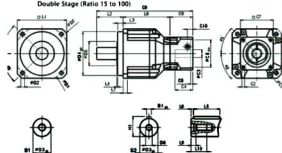
Model No.	Stages	Ratio	AB043	AB055	AB060	AB080	AB090A	AB115	AB143	AB160	AB226
1	1	3	20	55	-	130	-	208	342	588	1,140
		4	19	50	-	140	-	290	542	1,050	1,700
		5	22	60	-	160	-	330	650	1,200	2,000
		6	20	55	-	150	-	350	600	1,100	1,900
		7	19	50	-	140	-	380	550	1,100	1,800
		8	17	45	-	120	-	260	500	1,000	1,600
		9	14	40	-	100	-	230	450	900	1,500
		10	14	40	-	100	-	230	450	900	1,500
		15	20	55	55	130	130	208	342	588	1,140
		20	19	50	50	140	140	290	542	1,050	1,700
2	2	25	22	60	60	160	160	330	650	1,200	2,000
		30	20	55	55	150	150	350	600	1,100	1,900
		35	19	50	50	140	140	380	550	1,100	1,800
		40	17	45	45	120	120	260	500	1,000	1,600
		45	14	40	40	100	100	230	450	900	1,500
		50	22	60	60	160	160	330	650	1,200	2,000
		60	20	55	55	150	150	350	600	1,100	1,900
		70	19	50	50	140	140	380	550	1,100	1,800
		80	17	45	45	120	120	260	500	1,000	1,600
		90	14	40	40	100	100	230	450	900	1,500
3	3	100	14	40	40	100	100	230	450	900	1,500
		Emergency Stop Torque T_{stop}	1.2	3-100	3 times of Nominal Output Torque						
		Nominal Input Speed N_{in}	1.2	3-100	3,000	5,000	5,000	4,000	4,000	3,000	2,000
		Max. Input Speed N_{in}	1.2	3-100	10,000	10,000	10,000	8,000	8,000	6,000	4,000
		Micro Backlash P_0	1	3-10	-	-	-	≤ 1	≤ 1	≤ 1	≤ 1
			2	15-100	-	-	-	≤ 3	≤ 3	≤ 3	≤ 3
		Reduced Backlash P_1	1	3-10	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3
			2	15-100	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
		Standard Backlash P_2	1	3-10	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
			2	15-100	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7
		Torsional Rigidity	1.2	3-100	3	7	7	14	14	25	50
		Max. Radial Load F_{rad}	1.2	3-100	780	1,530	1,530	3,250	3,250	6,700	14,500
		Max. Axial Load F_{axial}	1.2	3-100	350	630	630	1,390	1,390	3,000	6,200
			1.2	3-100	390	765	765	1,625	1,625	3,350	7,250
		Service Life	1.2	3-100	20,000 h						
		Efficiency	1	3-10	≥ 97 %						
			2	15-100	≥ 94 %						
		Weight	1	3-10	0.5	1.3	-	3.7	-	7.8	14.5
			2	15-100	0.8	1.5	1.9	4.1	5.3	9	17.5
		Operating Temp	1.2	3-100	-10°C ~ +90°C						
		Lubrication	1.2	3-100	synthetic gear grease (NPGEL 7920)						
		Noise Level	1.2	3-100	≤ 56	≤ 58	≤ 60	≤ 60	≤ 63	≤ 63	≤ 67
		(N_1 = 3000 rpm/No Load)									

Planetary Gear Box AB Series

Single Stage (Ratio 3 to 10)



Double Stage (Ratio 15 to 100)



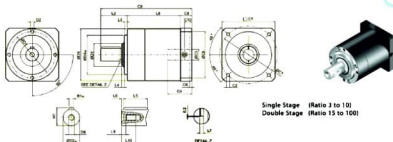
	AB042	AB060	AB090	AB115	AB142	AB180	AB220
D1	50	70	100	130	165	215	250
D2	3.4	5.5	6.6	9	11	13	17
D3	13	16	22	32	40	55	75
D4	35	50	80	110	130	160	180
D5	22	45	60	80	75	95	115
D6	M4 X 0.7P	M5 X 0.8P	M6 X 1.25P	M12 X 1.75P	M16 X 2P	M20 X 2.5P	M20 X 2.5P
D7	56	80	116	152	185	240	292
L1	42	60	90	115	142	180	220
L2	26	37	48	65	97	105	136
L3	5.5	7	10	12	15	20	30
L4	1	1.5	1.5	2	3	3	3
L5	16	25	32	40	63	70	90
L6	2	2	3	5	5	6	7
L7	4	6	8	10	12	15	20
L8	31	61	78.5	102	119.5	154	163.5
L9	4.5	4.8	7.2	10	12	15	15
L10	10	12.5	19	28	36	42	42
C1	46	70	100	130	165	215	235
C2	M4 X 0.7P	M5 X 0.8P	M6 X 1P	M8 X 1.25P	M10 X	M12 X	M12 X
C3	≤11	≤14 / ≤16	≤19 / ≤24	≤32	≤38	≤48	≤55
C4	25	34	40	50	60	85	116
C5	30	50	80	110	130	180	200
C6	3.5	8	4	5	6	6	6
C7	42	60	90	115	142	190	220
C8	29.5	19	17	19.5	22.5	29	63
C9	86.5	117	143.5	186.5	239	288	364.5
C10	8.75	13.5	10.75	13	15	20.75	53
B1	5	5	6	10	12	16	20
H1	15	18	24.5	35	43	59	79.5

	AB042	AB060	AB060A	AB090	AB090A	AB115	AB142	AB180	AB220
D1	50	70		100		130	165	215	250
D2	3.4	5.5		6.6		9	11	13	17
D3	13	16		22		32	40	55	75
D4	35	50		80		110	130	160	180
D5	22	45		65		95	75	95	115
D6	M4 X 0.7P	M5 X 0.8P		M6 X 1.25P		M12 X 1.75P	M16 X 2P	M20 X 2.5P	M20 X 2.5P
D7	56	80		116		152	185	240	292
L1	42	60		90		115	142	180	220
L2	26	37		48		65	97	105	136
L3	5.5	7		10		12	15	20	30
L4	1	1.5		1.5		2	3	3	3
L5	16	25		32		40	63	70	90
L6	2	2		3		5	5	6	7
L7	4	6		8		10	12	15	20
L8	58.5	72	98	111.5	126.5	143.5	176	209.5	248
L9	4.5	4.8		7.2		10	12	15	15
L10	10	12.5		19		28	36	42	42
C1	46	46	70	70	100	100	130	165	215
C2	M4 X 0.7P	M4 X 0.7P	M5 X 0.8P	M5 X 0.8P	M6 X 1P	M6 X 1P	M8 X 1.25P	M10 X 1.5P	M12 X 1.75P
C3	≤11	≤11 / ≤12	≤14 / ≤16	≤14 / ≤16	≤19 / ≤24	≤19 / ≤24	≤32	≤38	≤48
C4	25	25	34	34	40	40	50	60	85
C5	30	30	50	50	80	80	110	130	180
C6	3.5	3.5	8	8	4	4	5	6	6
C7	42	42	60	60	90	90	115	142	190
C8	29.5	29.5	19	19	17	17	19.5	22.5	29
C9	114	138.5	154	178.5	191.5	225.5	292.5	337	415
C10	8.75	8.75	13.5	13.5	10.75	10.75	13	15	20.75
B1	5	5		6		10	12	16	20
H1	15	18		24.5		35	43	59	79.5

Planetary Gear Box PE Series

Gearbox Performance

Model No.	Stage	Ratio	PE050	PE070	PE090	PE120	PE155	
Nominal Output Torque T_{2N}	1	3	14	39	104	215	423	
		4	12	31	85	176	364	
		5	14	39	104	215	423	
		7	12	33	91	195	358	
		10	9	26	65	150	293	
	2	15	14	39	104	215	423	
		16	12	31	85	176	364	
		20	12	31	85	176	364	
		25	14	39	104	215	423	
		30	14	39	104	215	423	
		35	12	33	91	195	358	
		40	12	31	85	176	364	
		50	14	39	104	215	423	
		70	12	33	91	195	358	
		100	9	26	65	150	293	
Emergency Stop Torque T_{jmax1} 3	Nm	1,2	3 times of nominal output torque					
Nominal Input Speed N_{1N}	rpm	1,2	3~100	4,500	4,000	3,600	3,000	2,500
Max. Input Speed N_{1B}	rpm	1,2	3~100	8,000	6,000	6,000	4,800	3,600
Backlash	arcmin	1	3~100	≤ 8	≤ 8	≤ 6	≤ 6	≤ 6
		2	15~100	≤ 10	≤ 10	≤ 8	≤ 8	≤ 8
Torsional Rigidity	Nm/	1,2	3~100	2	4.4	13.5	35.6	64
	arcmin							
Max. Radial Load F_{2R2}	N	1,2	3~100	820	1,910	2,060	4,160	6,450
Max. Axial Load F_{2A2} 2	N	1,2	3~100	410	955	1,030	2,080	3,225
Service Life	hr	1,2	3~100	20,000 *				
Efficiency	%	1	3~10	≥ 97 %				
		2	15~100	≥ 94 %				
Weight	kg	1	3~10	0.8	1.9	3.8	8.9	18
		2	15~100	1.1	2.7	5.2	12.2	24.6
Operating Temp	°C	1,2	3~100	-10°C ~ + 90°C				
Lubrication		1,2	3~100	CASTROL LMX Grease				
Degree of Gearbox Protection		1,2	3~100	IP64				
Mounting Position		1,2	3~100	all directions				
Noise Level ($n_L=3000$ rpm, No Load)	dB(A)	1,2	3~100	≤ 68	≤ 70	≤ 72	≤ 74	≤ 75



Single Stage (Ratio 3 to 10)
Double Stage (Ratio 15 to 100)

	PE050	PE070	PE090	PE120	PE155
D1	44	62	80	108	140
D2	M4 X 9	M5 X 10	M6 X 12	M8 X 15	M10 X 18
D3 _{in}	12	16	22	32	40
D4 _{in}	35	52	68	90	120
D5	17	25	40	50	65
D6	M4 X 0.7P	M5 X 0.8P	M6 X 1.25P	M12 X 1.75P	M16 X 2P
D8	50	70	90	120	150
L2	25	36.5	46	70	97
L3	4.5	5.5	5	6	8
L4	2.5	3	5	6	7
L5	14	25	32	50	70
L6	1	1	1	4	6
L7	1	1	1.5	2	2
L8	1-stage	55	77	92	127
	2-stage	79.5	110	131.5	180
L9	4.5	4.8	7.2	10	12
L10	10	12.5	19	28	36
C1 ¹	46	70	100	130	165
C2 ¹	M4 X 0.7P	M5 X 0.8P	M6 X 1P	M8 X 1.25P	M10 X 1.5P
C3 ¹	≤12	≤16	≤24	≤32	≤38
C4 ¹	30	34	40	50	60
C5 ¹	30	50	80	110	130
C6 ¹	3.5	8	4	5	6
C7 ¹	52	72	92	122	157
C8 ¹	21.5	21.5	20	24	31
C9 ¹	1-stage	101.5	135	158	221
	2-stage	126	168	197.5	274
C10 ¹	14.5	15.5	13	16	21
B1 _{in}	4	5	6	10	12
H1	13.5	18	24.5	35	43

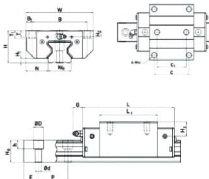
Model No.	Dimensions of Assembly [mm]					Dimensions of Block [mm]										Dimensions of Rail [mm]										Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment																	
																													M _x	M _y	M _z															
	H	H ₁	N	W	B	B ₁	C	L	L	K	G	MxL	T	H	H ₁	W ₁	H ₂	D	d	d	P	E	[mm]	C[kN]	C ₁ [kN]				kN-m	kN-m	kN-m															
EGH15SA	24	4.5	9.5	34	26	4	-	23.1	40.1	14.8	5.7	M4x6	6	5.5	6	15	12.5	6	4.5	3.5	6	20	M3x16	5.35	9.40	0.09	0.04	0.04																		
EGH15CA							26	39.8	56.8	10.15														-	29	50	18.75	7.83	16.19	0.13	0.10	0.10														
EGH20SA							28	6	11	42														32	5	-	29	50	18.75	12	M5x7	7.5	6	6	20	15.5	9.5	8.5	6	60	20	M5x16	7.23	12.74	0.13	0.06
EGH20CA	28	6	11	42	32	5	32	48.1	69.1	12.3	12	M5x7	7.5	6	6	20	15.5	9.5	8.5	6	60	20	M5x16	10.31	21.13	0.22	0.16	0.16																		
EGH25SA							-	35.5	59.1	21.9														-	35	59	82.6	16.15	11	M6x9	8	8	8	23	18	11	9	7	60	20	M6x20	11.40	19.50	0.23	0.12	0.12
EGH25CA							33	7	12.5	48														35	6.5	35	59	82.6	16.15	12	M6x9	8	8	8	23	18	11	9	7	60	20	M6x20	16.27	32.40	0.39	0.32
EGH30SA	42	10	16	60	40	10	-	41.5	69.5	26.75	12	M8x12	9	8	9	28	23	11	9	7	80	20	M6x25	16.42	28.10	0.40	0.21	0.21																		
EGH30CA							40	70.1	98.1	21.05														-	40	70.1	98.1	21.05	23.70	47.46	0.69	0.55	0.55													

Model No.	Dimensions of Assembly [mm]		Dimensions of Block [mm]														Dimensions of Rail [mm]							Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment															
			H	H ₁	N	W	B	B ₁	C	L	L ₁	K ₁	G	M	T	T ₁	H ₂	H ₃	W ₁	H ₄	D	h	d				P	E	[mm]	C[kN]	C ₀ [kN]	kN·m	M ₁ kN·m	M ₂ kN·m								
EGW 15SA	24	4.5	18.5	52	41	5.5	-	23.1	40.1	14.8	5.7	M5	5	7	5.5	6	15	12.5	6	4.5	3.5	60	20	M3x16	5.35	9.40	0.08	0.04	0.04													
EGW 15CA							26	39.8	56.8	10.15															12	M6	7	9	6	6	29	15.5	9.5	8.5	6	60	20	7.83	16.99	0.13	0.10	0.10
EGW 20SA							-	29	50	18.75																												7.23	12.74	0.13	0.06	0.06
EGW 20CA	28	6	19.5	59	49	5	32	48.1	69.1	12.3	12	M8	7.5	10	8	8	23	18	11	9	7	60	20	M5x16	10.31	21.13	0.22	0.16	0.16													
EGW 25SA							-	35.5	58.1	21.9															11.40	18.50	0.23	0.12	0.12													
EGW 25CA							35	59	82.5	16.15															16.27	32.40	0.38	0.32	0.32													
EGW 25CA	33	7	25	73	60	6.5	35	59	82.5	16.15	12	M8	7.5	10	8	8	23	18	11	9	7	60	20	M6x20	16.27	32.40	0.38	0.32	0.32													
EGW 30SA							-	41.5	69.5	26.75															16.42	28.90	0.40	0.21	0.21													
EGW 30CA							40	70.1	98.1	21.05															23.70	47.46	0.68	0.55	0.55													
EGW 30CA	42	10	31	90	72	9	-	41.5	69.5	26.75	12	M10	7	10	8	9	28	23	11	9	7	80	23	M6x25	16.42	28.90	0.40	0.21	0.21													
EGW 30CA							40	70.1	98.1	21.05															23.70	47.46	0.68	0.55	0.55													

Roller Linear Guideways - RG Series

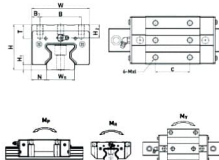


RGW-CC / RGW-HC



Model No.	Dimensions of Assembly [mm]			Dimensions of Block [mm]												Dimensions of Rail [mm]												Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment			Weight	
																															M _x	M _y	M _z	Block	Rail
	H	H ₁	N	W	B	B ₁	C	C ₁	L ₁	L	G	M	T	T ₁	H ₁	H ₂	W ₁	H ₁	D	h	d	P	E	[mm]	C ₁ [kN]	C ₂ [kN]	Co-ns				Co-ns	Co-ns	kg	kg/m	
RGW 25CC	36	5.5	23.5	70	57	6.5	45	40	64.5	97.9	12	M8	9.5	10	6.2	6	23	23.6	11	9	7	30	20	M6x20	27.7	57.1	0.758	0.605	0.605	0.67	3.08				
RGW 25HC									81	114.4														M6x20	33.9	73.4	0.975	0.991	0.991	0.86					
RGW 30CC	42	6	31	90	72	9	52	44	83	131.8	12	M10	9.5	10	6.5	10.8	28	28	14	12	9	40	20	M6x25	39.1	82.1	1.445	1.06	1.06	1.06	4.41				
RGW 30HC									79	124														M6x25	48.1	105	1.846	1.712	1.712	1.42					
RGW 35CC	48	6.5	33	100	82	9	62	52	106	151.5	12	M10	12	13	9	12.8	34	30.2	14	12	9	40	20	M6x25	57.9	105.2	2.17	1.44	1.44	1.61	6.06				
RGW 35HC									139.5	151.5														M6x25	73.1	142	2.93	2.6	2.6	2.21					
RGW 45CC	60	8	37.5	120	100	10	80	60	196	153.2	12.9	M12	14	15	10	14	45	38	20	17	14	52.5	22.5	M12x35	92.6	179.8	4.52	3.05	3.05	3.22	9.07				
RGW 45HC									139.8	187														M12x35	116	230.9	6.33	5.47	5.47	4.41					
RGW 55CC	70	10	43.5	140	116	12	95	70	125.5	183.7	12.9	M14	16	17	12	17.5	53	44	23	20	16	60	30	M14x45	130.5	252	8.01	5.4	5.4	5.18	13.98				
RGW 55HC									173.8	232														M14x45	167.8	348	11.15	10.25	10.25	7.34					
RGW 65CC	90	12	53.5	170	142	14	110	82	190	232	12.9	M16	22	23	15	15	63	53	28	22	18	75	35	M16x50	213	411.6	16.20	11.59	11.59	11.04	20.22				
RGW 65HC									223	295														M16x50	275.3	572.7	22.55	22.17	22.17	16.75					

RGH-CA / RGH-HA



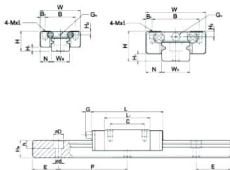
Model No.	Dimensions of Assembly [mm]			Dimensions of Block [mm]												Dimensions of Rail [mm]												Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment			Weight																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
																															M _x	M _y	M _z	Block	Rail																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	H	H ₁	N	W	B	B ₁	C	L ₁	L	G	Mat	T	H ₂	H ₃	W ₁	H ₄	D	h	d	P	E	[mm]	C[KN]	C ₀ [kN]	kN-m	kN-m	kN-m				kg	kg/m																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
RGH 25CA	40	5.5	12.5	48	35	6.5	35	64.5	97.9	12	M8x8	9.5	10.2	10	23	23.6	11	9	7	30	20	M6x20	27.7	57.1	0.758	0.605	0.605	0.55	3.08																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
RGH 25HA							50	81	114.4														33.9	73.4	0.875	0.991	0.991	0.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
RGH 30CA							40	71	109.8														38.1	82.1	1.445	1.06	1.06	0.82																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
RGH 30HA	45	6	16	60	40	10	60	93	131.8	12	M8x10	9.5	9.5	13.8	28	28	14	12	9	40	20	M6x25	48.1	105	1.846	1.712	1.712	1.07	4.41																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
RGH 35CA							50	79	124														57.9	105.2	2.17	1.44	1.44	1.43																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
RGH 35HA							55	6.5	18														70	50	10	50	79	124		12	M8x12	12	16	18.6	34	30.2	14	12	9	40	20	M6x25	57.9	105.2	2.17	1.44	1.44	1.43																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
RGH 35HA	55	6.5	18	70	50	10	72	106.5	151.5	12.9	M10x17	18	20	24	45	38	20	17	14	52.5	22.5	M12x35	73.1	142	2.93	2.6	2.6	1.96	6.06																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
RGH 45CA							60	106	153.2														92.6	179.8	4.52	3.05	3.05	2.97																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
RGH 45HA							70	8	20.5														86	60	13	60	139.8	197		116	230.9	6.33	5.47	5.47	3.97																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
RGH 55CA	80	10	23.5	100	75	12.5	75	125.5	193.7	12.9	M12x18	17.5	22	27.5	53	44	23	20	16	60	30	M14x45	130.5	252	8.01	5.4	5.4	4.52	13.98																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
RGH 55HA							95	173.8	232														167.8	348	11.15	10.25	10.25	6.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
RGH 65CA							70	160	232														213	411.6	16.20	11.59	11.59	8.33																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
RGH 65HA	90	12	31.5	126	76	25	120	223	295	12.9	M16x20	25	15	15	63	53	28	22	18	75	35	M16x50	275.3	572.7	22.17	22.17	22.17	11.62	20.22																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

Miniature Linear Guideways - MG Series



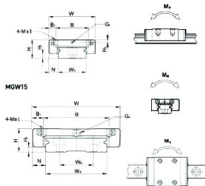
MGN7, MGN9, MGN12

MGN15



Model No.	Dimensions of Assembly (mm)		Dimensions of Block [mm]										Dimensions of Rail [mm]								Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment		
																								M _x	M _y	M _z
	H	H ₁	N	W	B	B ₁	C	L ₁	L	G	G ₁	MxL	H ₂	W ₂	H ₂	D	h	d	P	E	[mm]	C _d [kgf]	C _s [kgf]	kgf-m	kgf-m	kgf-m
MGN 7C	8	1.5	5	17	12	2.5	8	13.5	22.5	-	Ø1.2	M2x2.5	1.5	7	4.8	4.2	2.3	2.4	15	5	M2x6	100	127	0.48	0.29	0.29
MGN 7H							13	21.8	30.8			140										200	0.78	0.49	0.49	
MGN 9C							10	18.9	28.9			190										260	1.2	0.75	0.75	
MGN 9H	10	2	5.5	20	15	2.5	16	29.9	39.9	-	Ø1.2	M3x3	1.8	9	6.5	6	3.5	3.5	20	7.5	M3x6	190	410	2	1.9	1.9
MGN 12C							15	21.7	34.7			290										400	2.6	1.4	1.4	
MGN 12H							20	32.4	45.4			380										600	3.9	3.7	3.7	
MGN 15C	16	4	8.5	32	25	3.5	20	26.7	42.1	4.5	M3	M3x4	3	15	10	6	4.5	3.5	40	15	M2x10	470	570	4.6	2.2	2.2
MGN 15H							25	43.4	58.8			650										800	7.5	5.9	5.9	

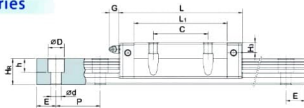
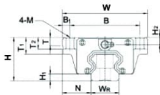
MGW7, MGW9, MGW12



Model No.	Dimensions of Assembly (mm)			Dimensions of Block [mm]										Dimensions of Rail [mm]										Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment		
	H	H ₁	N	W	B	B ₁	C	L	L ₁	G	G ₁	MxL	H ₂	W ₂	W ₃	H ₃	D	h	d	P	E	[mm]	C[Kgrf]	C _s [Kgrf]	Kgrf-m	M _y -m	M _z -m		
MGW 7C	9	1.9	5.5	25	19	3	10	21	31.2	-	Ø1.2	M3x3	1.85	14	-	5.2	6	3.2	3.5	30	10	M3x6	140	210	1.6	0.73	0.73		
MGW 7H							19	30.8	41													180	320	2.39	1.58	1.58			
MGW 9C	12	2.9	6	30	21	4.5	12	27.5	39.3	-	Ø1.4	M3x3	2.4	18	-	7	6	4.5	3.5	30	10	M3x8	280	420	4.09	1.93	1.93		
MGW 9H							23	35	50.7													350	600	5.56	3.47	3.47			
MGW 12C	14	3.4	8	40	28	6	15	31.3	46.1	-	Ø1.4	M3x3.6	2.8	24	-	8.5	8	4.5	4.5	40	15	M4x8	400	570	7.17	2.83	2.83		
MGW 12H							28	45.8	60.4													520	840	10.47	5.85	5.85			
MGW 15C	16	3.4	9	60	45	7.5	20	38	54.8	5.2	M3	M4x4.2	3.2	42	23	9.5	8	4.5	4.5	40	15	M4x10	690	940	20.32	5.78	5.78		
MGW 15H							35	57	73.8													910	1410	30.48	12.5	12.5			

Linear Guideways - HG Series

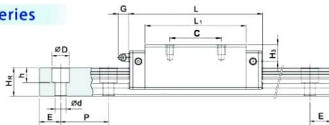
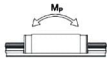
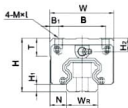
HGW-CC / HGW-HC



Model No.	Dimensions of Assembly (mm)			Dimensions of Block (mm)														Dimensions of Rail (mm)						Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment		
																											M _r	M _s	M _t
	H	H ₁	N	W	B	B ₁	C	L	L ₁	G	M	T	T ₁	T ₂	H ₁	H ₂	W ₁	H ₁	D	h	d	P	E	[mm]	C[kN]	C ₁ [kN]	kN·m	kN·m	kN·m
HGW 15CC	24	4.3	16	47	38	4.5	30	39.4	61.4	5.3	M5	6	8.9	6.95	4.5	5.5	15	15	7.5	5.3	4.5	60	20	M4x16	11.38	25.31	0.17	0.15	0.15
HGW 20CC	30	4.6	21.5	63	53	5	40	50.5	77.5	12	M6	8	10	9.5	6	7	20	17.5	9.5	8.5	6	60	20	M5 x 16	17.75	37.84	0.38	0.27	0.27
HGW 20HC								65.2	92.2																21.18	48.84	0.48	0.47	0.47
HGW 25CC	36	5.5	23.5	70	57	6.5	45	58	84	12	M8	8	14	10	6	9	23	22	11	9	7	60	20	M6x20	26.48	56.19	0.64	0.51	0.51
HGW 25HC								78.6	104.6																32.75	76.00	0.87	0.88	0.88
HGW 30CC	42	6	31	90	72	9	52	70	97.4	12	M10	8.5	16	10	6.5	10.8	28	26	14	12	9	80	20	M8x25	38.74	83.06	1.06	0.85	0.85
HGW 30HC								93	120.4																47.27	110.13	1.40	1.47	1.47
HGW 35CC	48	7.5	33	100	82	9	62	80	112.4	12	M10	10.1	18	13	9	12.6	34	29	14	12	9	80	20	M8x25	49.52	102.87	1.73	1.20	1.20
HGW 35HC								105.8	138.2																60.21	136.31	2.29	2.08	2.08
HGW 45CC	60	9.5	37.5	120	100	10	80	97	139.4	12.9	M12	15.1	22	15	8.5	20.5	45	38	20	17	14	105	22.5	M12x35	77.57	155.93	3.01	2.35	2.35
HGW 45HC								128.8	171.2																94.54	207.12	4.00	4.07	4.07
HGW 55CC	70	13	43.5	140	116	12	95	117.7	166.7	12.9	M14	17.5	26.5	17	12	19	53	44	23	20	16	120	30	M14x45	114.44	227.81	5.66	4.06	4.06
HGW 55HC								155.8	204.8																139.35	301.26	7.49	7.01	7.01
HGW 65CC	90	15	53.5	170	142	14	110	144.2	200.2	12.9	M16	25	37.5	23	15	15	63	53	26	22	18	150	35	M16x50	163.63	324.71	10.02	6.44	6.44
HGW 65HC								203.6	259.6																208.36	457.15	14.15	11.12	11.12

Linear Guideways - HG Series

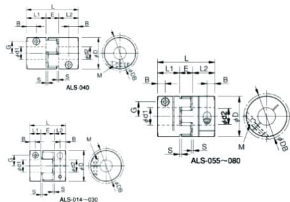
HGH-CA / HGH-HA



Model No.	Dimensions of Assembly (mm)			Dimensions of Block [mm]											Dimensions of Rail [mm]											Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment			Weight	
	H	H ₁	N	W	B	B ₁	C	L ₁	L	G	MxI	T	H ₂	H ₃	W ₁	H ₄	D	h	d	P	E	[mm]	C[kN]	C ₀ [kN]	M _x kN-m	M _y kN-m	M _z kN-m	Block kg	Rail kg/m				
HGH 15CA	28	4.3	9.5	34	26	4	26	39.4	61.4	5.3	M4x5	6	8.5	9.5	15	15	7.5	5.3	4.5	60	20	M4x16	11.38	25.31	0.17	0.15	0.15	0.18	1.45				
HGH 20CA	30	4.6	12	44	32	6	36	50.5	77.5	12	M5x6	8	6	7	20	17.5	9.5	8.5	6	60	20	M5x16	17.75	37.84	0.38	0.27	0.27	0.30	2.21				
HGH 20HA							50	65.2	92.2														21.18	48.84	0.48	0.47	0.47	0.39					
HGH 25CA	40	5.5	12.5	48	35	6.5	35	58	84	12	M6x8	8	10	13	23	22	11	9	7	60	20	M6x20	26.48	56.19	0.64	0.51	0.51	0.51	3.21				
HGH 25HA							50	78.6	104.6														32.75	76.00	0.87	0.88	0.88	0.69					
HGH 30CA	45	6	16	60	40	10	40	70	97.4	12	M8x10	8.5	9.5	13.8	28	26	14	12	9	80	20	M8x25	38.74	83.06	1.06	0.85	0.85	0.88	4.47				
HGH 30HA							60	93	120.4														47.27	110.13	1.40	1.47	1.47	1.16					
HGH 35CA	55	7.5	18	70	50	10	50	80	112.4	12	M8x12	10.2	16	19.6	34	29	14	12	9	80	20	M8x25	49.52	102.87	1.73	1.20	1.20	1.45	6.30				
HGH 35HA							72	105.8	138.2														60.21	136.31	2.29	2.08	2.08	1.92					
HGH 45CA	70	9.5	20.5	86	60	13	60	97	139.4	12.9	M10x17	16	18.5	30.5	45	38	20	17	14	105	22.5	M12x35	77.57	155.93	3.01	2.35	2.35	2.73	10.41				
HGH 45HA							80	128.8	171.2														94.54	207.12	4.00	4.07	4.07	3.61					
HGH 55CA	80	13	23.5	100	75	12.5	75	117.7	166.7	12.9	M12x18	17.5	22	29	53	44	23	20	16	120	30	M14x45	114.44	227.81	5.66	4.06	4.06	4.17	15.08				
HGH 55HA							95	155.8	204.8														139.35	301.26	7.49	7.01	7.01	5.49					
HGH 65CA	90	15	31.5	126	76	25	70	144.2	200.2	12.9	M16x20	25	15	15	63	53	26	22	18	150	35	M16x50	163.63	324.71	10.02	6.44	6.44	7.00	21.18				
HGH 65HA							120	203.6	259.6														208.36	457.15	14.15	11.12	11.12	9.82					

Disk Coupling

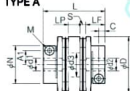
Model	d1**		d2**		D	N	L	LF	LP	S	A1	A2	C	d3	K	M	Tightening torque [N·m]	Shape type	Permissible torque [N·m]	Max. permissible misalignment		
	Min.	Max.	Min.	Max.																Parallel offset [mm]	Angular misalignment [°]	Axial displacement [mm]
SFC-005DA2	4	6	4	6	16	—	23.2	7.85	5.5	1.0	—	4.8	2.5	6.5	6.5	2-M2	0.4~0.5	C	0.5	0.05	0.5 (one side)	±0.1
SFC-010DA2	4	8	4	8	19	—	25.9	9.15	5.5	1.05	—	5.8**	3.15	8.5	8.5	2-M2.5**	1.0~1.1**	C	0.8	0.11	1 (one side)	±0.2
SFC-020DA2	5	10	5	10	26	—	32.3	10.75	7.5	1.65	—	9.5	3.3	10.6	10.6	2-M2.5	1.0~1.1	C	1.5	0.15	1 (one side)	±0.33
SFC-030DA2	5	10	5	10	34	—	37.8	12.4	8	2.5	8	12.5	3.75	15	14.5	2-M3	1.5~1.9	A	4	0.18	1 (one side)	±0.4
	5	10	Over 10	14														B				
SFC-035DA2	8	16	8	16	39	—	48	15.5	11	3	—	14.0	4.5	17	17	2-M4	3.4~4.1	A	6	0.24	1 (one side)	±0.5
	8	15	8	15														B				
SFC-040DA2	8	15	Over 15	19	44	29.6	48	15.5	11	3	11	17.0	4.5	20	19.5	2-M4	3.4~4.1	A	10	0.24	1 (one side)	±0.6
	Over 15	19	Over 15	19														B				
SFC-050DA2	10	19	10	19	56	38	59.8	20.5	14	2.4	—	14.5	—	6	26	2-M5	7.0~8.5	A	25	0.28	1 (one side)	±0.8
	Over 19	25	Over 19	25														B				
	Over 19	25	Over 19	25														C				
	12	24	12	24														A				
SFC-060DA2	12	24	Over 24	30	68	46	73.3	25.2	16.5	3.2	—	17.5	26.5	7.75	31	2-M6	14~15	B	60	0.34	1 (one side)	±0.9
	Over 24	30	Over 24	30														C				
	12	24	Over 24	30														A				
SFC-080DA2	20	35	20	35	82	—	98	30	22	8	—	28	9	40	38	2-M8	27~30	C	100	0.52	1 (one side)	±1.10
SFC-090DA2	25	40	25	40	94	—	98.6	30	22	8.3	—	34	9	47	42	2-M8	27~30	C	180	0.52	1 (one side)	±1.30
SFC-100DA2	35	45	35	45	104	—	101.6	30	22	9.8	—	39	9	50	48	2-M8	27~30	C	250	0.55	1 (one side)	±1.48



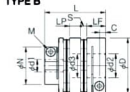
Servo Insert Coupling

Model	d1 · d2		D	DB	L	L1 · L2	E	S	B	G	M	Tightening torque [N·m]
	Min.	Max.										
ALS-014	3	6	14	16.1	22	7	8	1	3.5	4.8	M2	0.4
ALS-020	4	8	20	20	30	10	10	1	5	6.5	M2.5	1
ALS-030	6	14	30	30	35	11	13	1.5	5.5	10.5	M3	1.5
ALS-040	8	20	40	43.2	66	25	16	2	12.5	15	M5	7
ALS-055	10	28	55	55	78	30	18	2	10.5	20	M6	14
ALS-065	14	35	65	69.8	90	35	20	2.5	11.5	24.5	M8	30
ALS-080	19	45	80	80	114	45	24	3	11.5	30	M8	30

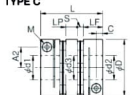
TYPE A



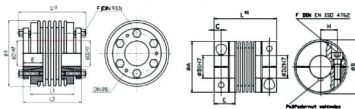
TYPE B



TYPE C



Metal Bellow Coupling



	Torque	Dimensions (mm)							Technical Ratings							
		L	Ø A	Di/Di	E	L1	L2	F	Mass	Moment of Inertia	Spring Stiffness		Misalignment			
	Ten (Nm)	Length (±2)	Outer Ø	Bore Size (H7)	Hub Length			Screw (H9/H10) Tensile	(kg)	(kg·m²)	torsional C (Nm/rad)	radial C (N/mm)	axial C (N/mm)	radial C (mm)	axial C (mm)	angular C (mrad)
KB5/18	18	63	47	10-18	20	38	56	6xM5	0.36	0.075	20	205	50	0.2	1	1.5
		71				46	64	6.5	0.37	0.078	15	82	36	0.25	1	2
KB5/30	30	53				30	46	6xM5	0.4	0.11	38	720	50	0.15	1	1.5
		61	56	12-20	20	38	54	6.5	0.42	0.12	28	225	25	0.25	1	2
KB5/60	60	67				36	54	6xM6	0.77	0.32	75	1150	90	0.15	1	1.5
		73	66	15-25	25	47	65	8.5	0.79	0.34	50	340	50	0.25	1	2
KB5/80	80	78				50	70	6xM6	1.34	1.05	128	1200	80	0.2	1	1.5
		90	82	20-35	30	62	82	10	1.39	1.11	75	400	50	0.25	1	2
KB5/150	150	78				50	70	6xM6	1.36	1.15	155	2020	145	0.2	1	1.5
		90	82	20-35	30	62	82	15	1.41	1.21	105	595	85	0.25	1	2
KB5/200	200	78				50	70	6xM6	1.39	1.29	175	2500	145	0.2	1	1.5
		91	93	20-40	30	63	83	15	1.66	1.49	120	460	82	0.25	1	2
KB5/300	300	90				56	80	6xM8	2.26	4.66	502	6300	280	0.2	1	1.5
		102	110	25-50	37	67	91	17	3.32	4.81	265	1400	145	0.25	1	2
KB5/500	500	101				66	90	6xM8	3.78	6.11	699	7790	100	0.2	1	1.5
		112	122	35-55	40	77	101	25	3.87	6.38	320	970	85	0.25	1	2

	Torque (Nm)	Dimensions (mm)								Technical Ratings							
		L Length (±1)	Ø A Outer Ø	Di/Di2 Bore Size (H7)	H Hub Length	C Max. Ø	Ø B Hub Length	E Screw (H9/H10) Tensile	F Screw (H9/H10) Tensile	Mass (kg)	Moment of Inertia J (kg·m²)	Spring Stiffness		Misalignment			
KB2/1	0.1	25	10	1-4 2"	3.4	2	11	7	M1.6 0.1	3	0.5	65	10	14	0.12	0.2	1.2
		21							M2	7.5	2.7	260	43	13	0.1	0.2	1
		25	15.5	3-7 6"	5.2	2.5	17.5	8	0.43	8.2	3	160	9	8	0.2	0.4	2
KB2/5	0.5	23							M2	9	3.1	510	74	27	0.1	0.2	1
		26	15.5	3-8 6"	5.7	2.5	17.5	8	0.43	9.3	3.4	380	31	20	0.15	0.3	1.5
		31							M2.5	13	8	750	59	15	0.1	0.3	1.5
KB2/10	1	26	20	3-10 6"	7	3	21	9	0.85	15	9.3	700	20	9	0.15	0.4	2
		31							M3	29	24	1500	67	12	0.15	0.3	1.5
		38	25	3-14 6/10"	9	3.5	27	11	2	33	29	1050	11	9	0.25	0.5	2
KB2/15	1.5	42							M4	61	100	6500	168	32	0.1	0.3	1.5
		41							M4	67	112	4200	41	20	0.2	0.5	2
		50	32.5	6-16 10"	12	5	34	14	3.5	86	233	8100	120	27	0.15	0.4	1.5
KB2/45	4.5	48							M4	86	233	8100	120	27	0.15	0.4	1.5
		57	40.5	6-22 10"	15.5	5	41.5	14	4.5	106	290	6800	29	17	0.3	0.6	2
		10															

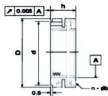
	Torque	Dimensions (mm)							Technical Ratings									
		L	Ø A	Di/Di2	H	C	E	F	Mass	Moment of Inertia	Spring Stiffness		Misalignment				Min. Speed	
		Length (±1)	Outer Ø	Bore Size (H7)				Screw (DIN 913) Tensile	(kg)	(kg·m²)	torsional CA (N/m/rad)	radial CA (N/mm)	axial CA (N/mm)	radial MA (mm)	axial MA (mm)	angular MA (°)	(rpm)	
KB4/18	18	63		10-25	4	17	5.5	19.5	M5	0.1	0.04	20	205	50	0.2	0.5	1.5	12800
		71						B	0.15	0.05	15	82	36	0.25	0.5	2	12800	
KB4/30	30	65							M6	0.3	0.15	38	720	50	0.15	0.6	1.5	10300
		73	56	10-30	20	7.5	24.5	15	0.32	0.16	28	225	28	0.25	1	2	10300	
KB4/60	60	79							M8	0.5	0.33	75	1150	90	0.15	0.6	1.5	8700
		89	66	12-32	23	10	29	40	0.6	0.36	50	340	50	0.25	1	2	8700	
KB4/80	80	91							M10	2.3	2	128	1200	80	0.2	0.5	1.5	6900
		102	82	14-42	28	11	33.5	72	2.4	2.1	75	400	50	0.25	0.8	2	6900	
KB4/150	150	91							M10	2.3	2	155	2020	145	0.2	0.5	1.5	6900
		102	82	19-42	28	11	33.5	84	2.4	2.1	105	595	85	0.25	0.5	2	6900	
KB4/200	200	101							M12	2.6	3.3	175	2300	145	0.2	0.5	1.5	6400
		113	90	22-45	31	13	38	125	2.7	3.5	120	460	82	0.25	0.8	2	6400	
KB4/300	300	105							M12	3.6	7.3	502	6300	280	0.2	0.5	1.5	6000
		116	110	30-60	39	13	38	145	3.7	7.5	285	1400	145	0.25	0.8	2	6000	
KB4/500	500	112							M12	5.1	12.4	690	7790	100	0.2	0.5	1.5	5000
		123	122	35-65	42	15	42	145	5.2	12.7	320	970	85	0.25	1	2	5000	

Precision Lock Nuts



Axial Locking (YSK Series)

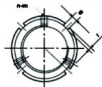
●此型號包含鋼絲
吊卡 1 個



M16x1.5	34	18	29	4-M4x12	4	24	3.5	
M12x1	37		32			26		
M18x1.5	38		33			28		
M20x1	40		35			30		
M22x1.5	42	37	32					
M24x1.5	44	39	34					
M25x1.5	20	45	40			4-M4x14		35
M26x1.5		43	37					
M28x1.5		46	39					
M30x1.5		48	41					
M32x1.5	50	47	50	4-M4x16	44			
M35x1.5	53	50	47					
M38x1.5	56	53	49					
M40x1.5	58	55	51					
M42x1.5	60	22	63	6-M4x18	57	4.5		
M45x1.5	68		65		58			
M48x1.5	69		66		60			
M50x1.5	70		68		62			
M52x1.5	72	25	71		6-M5x20		65	
M55x1.5	75		77				70	
M55x2			79				72	
M58x1.5	82		26				86	6-M5x20
M60x1.5	84	87			77			
M60x2	85	89			80			
M62x1.5	86	91		82				
M65x1.5	28	94	6	7	84	4.5		
M65x2		97			87			
M68x1.5		93			88			
M70x1.5		95			89			
M70x2	95	28	91	6	7	84		
M72x1.5	97		94			87		
M75x1.5	100		94			87		
M75x2	100							

M80x2	110	32	103	6-M6x22	6	8	95	8
M85x2	115		108				100	
M90x2	120		113				105	
M95x2	125		118				110	
M100x2	130		123				115	
M105x2	135	34	128	6-M6x25	8	10	120	10
M110x2	140		133				125	
M115x2	145		137				130	
M120x2	155		146				136	
M125x2	160		36				150	
M130x2	165	38	155	6-M6x25	8	10	148	10
M140x2	180		168				160	
M150x2	190		178				170	
M160x3	205		190				178	
M170x3	215		200				193	
M180x3	230	40	213	6-M8x30	8	10	205	10
M190x3	240		223				215	
M200x3	245		230				223	

Radial Locking (YSR Series)



M6x0.5	16	8	3	2	11	2-M4	3.5
M8x0.75							
M10x0.75	18				13		
M10x1					16		
M12x1.25	20				21		
M14x1.5	25	10	4	2	23	2-M5	4.5
M15x1							
M16x1.5	28				25		
M17x1	30				27	3-M5	
M20x1	32				30		
M20x1.5	35						

M24x1.5	38	12	5			33	3-M6	8
M25x1.5	42					37		
M30x1.5	45					40		
M33x1.5	52					45		
M35x1.5	55	14	6	2.5		47		
M36x1.5	58					49		
M40x1.5	62					52		
M42x1.5	65					56		
M45x1.5	68	16	7	3		59		
M48x1.5	70					64		
M50x1.5	73					66		
M52x1.5	75					68		
M55x2	77	18	8	3.5		70	3-M8	18
M60x2	80					73		
M64x2	85					78		
M65x2	92					84		
M70x2	95	20	10	4		86		
M72x2	98					90		
M76x2	100					92		
M80x2	105					96		
M85x2	110	22	12	5		102		
M90x2	120					108		
M95x2	125					113		
M100x2	130					118		
M105x2	140	24	14	6		125	3-M10	35
M110x2	145					132		
M115x2	150					137		
M120x2	155					142		
M125x2	160	26	16	7		147		
M130x2	165					152		
M135x2	175					160		
M140x2	180					165		
M145x2	190	28	18	8		175	3-M12	60
M150x2	195					180		
M155x3	200					180		
M160x3	210					190		
M165x3	210	30	20			190		
M170x3	220					200		
M180x3	230					205		
M190x3	240					215		
M200x3	250	32	22	225				

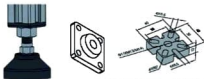
Aluminum Profile

45 x 45



Latency = 12.10K10⁴ Lp latency = 12.30K10⁴
 Wlatency = 5.38K10³ Wp latency = 5.38K10³
 Missing/bd = 1.73
 Delivery Length(bd) = 6000

Levelling Pad



L1-45	L2-45	D-12	45.45
L1-45	L2-90	D-12	45.90

20 x 20



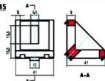
$Lx(mm) = 0.74 \times 10^4$ $Ly(mm) = 0.74 \times 10^4$
 $Wid(mm) = 0.74 \times 10^3$ $Wyl(mm) = 0.74 \times 10^3$
 $Mass(g/tr) = 0.49$
 $Delivery\ Length(mm) = 6000$

45 x 90

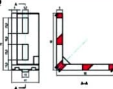


LitterSize = 24.158302 LitterSize = 29.329302
 WaterTemp = 10.258302 WaterTemp = 19.858302
 DissolvedO2 = 3.25
 Delivery Length(mm) = 5000

Bracket For 45 x 45



Massig/post = 72

Bracket For 45 x 90Wardlaw et al. • PMS in the Absence of a Functional β -Casein Gene
J. Neurosci., September 24, 2008 • 28(39):9801–9810 • 9809

T-Nut



Diameter : M8
Material : Steel.
Surface : Zinc Coated
Mass : 19 Gms

Hammer Nut



Material : Steel.
Surface : Zinc Coated
Mass : 7.0 Gms

40 x 40



Lx(mm) = 9.08E[04] Ly(mm) = 9.08E[04]
 Width(mm) = 4.54E[04] Wdth(mm) = 4.54E[04]
 Mass(kg/m) = 1.53
 Delivery Length(m) = 6000

End Cap



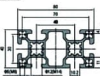
mm	mm	mm	Profile
L1 - 45	L2 - 45	T - 5	45.45
L1 - 45	L2 - 90	T - 5	45.90

Profile Cover



Material : PVC
Color : Black

40 x 80



Labour² = 16.5803 D² Lumber² = 63.2403 D²
Welder² = 8.3082 D² Wyrein² = 15.8133 D²
Hearthlight = 2.62
Delivery Lengthwise = 6000