3-1 TM Miniature Linear Guide

Height of Shoulder on Mounting Surface and Chamfering

Height of shoulder should be taken into consideration when installing a Linear Guide, if the block or rail is over-chamfered, the tip part has the possibility to effect the accuracy of Linear Guide, or if the height of shoulder is too high, it interferes the operation of block. Install the Linear Guide as suggested, the accuracy of Linear Guide can be maintained.

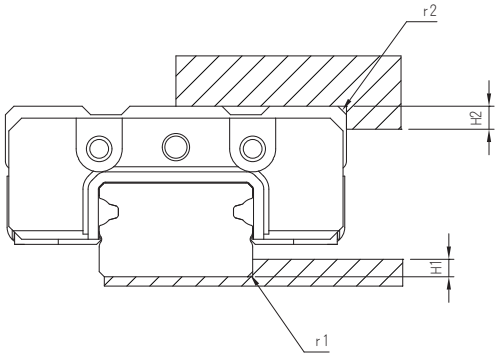

Table 3.1.5 Height of shoulder and chamfer

Model No.	Corner Radius of Mounting Surface r1	Corner Radius of Mounting Surface r2	Shoulder height on rail side H1	Shoulder height on rail side H2
TM07N	0.3	0.2	1	3
TM09N	0.3	0.3	1.7	3
TM12N	0.5	0.4	2.5	4
TM15N	0.5	0.5	2.5	5
TW09W	0.3	0.3	2.5	3
TW12W	0.5	0.5	3	4
TW15W	0.5	0.5	3	5

Table 3.1.6 Condition with Hexagonal Head Bolt

Model No.	Screw No.	Fasten Torque		
		Steel	Casting	Aluminum Alloy
TM07N	M2	57	39.2	29.4
TM09N	M3	186	127	98
TM12N	M3	186	127	98
TM15N	M3	186	127	98
TW09W	M3	186	127	98
TW12W	M4	392	274	206
TW15W	M4	392	274	206

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■ 3-1-7 Nominal Model Code of TM Type

Length of Block

Perform joint treatment when required lengths exceed 1300. Please contact TBI MOTION for detailed information.

T	M	07	W	L	A	-	2	-		-	1000	-	N	A	-	Z0	-	II	-	K
①	②	③	④	⑤	⑥		⑦		⑧		⑨		⑩	⑪		⑫		⑬		⑭

① Nominal Model	② Block Type	③ Dimension	④ Width of Rail
T	M : Mini X : Special (Drawing will be provided for special item in order to distinguish the height of the rail.)	07, 09, 12, 15	N : Standard W : Wide

⑤ Length of Block	⑥ Material of Block	⑦ Quantity of Block
N : Standard L : Long	S : Stainless steel A : Alloy steel	(Mark 1 when there is only 1 runner block)

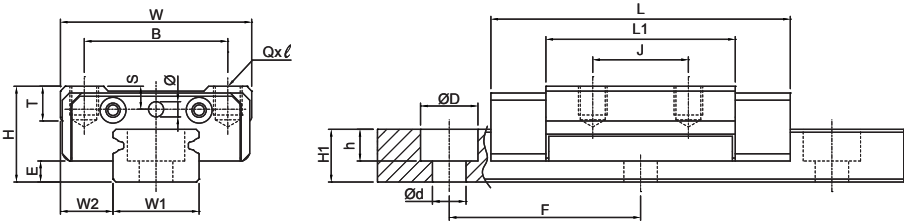
⑧ Accessory Code	⑨ Length of Rail	⑩ Accuracy Grade	⑪ Material of Rail
□ : Standard (End seal + Side seal)	Unit : mm	N : Normal	S : Stainless steel
		H : High	A : High Carbon steel
		P : Precision	

⑫ Preload	⑬ Two Sets per Axis	⑭ Rail Special Machining
ZF : Slight Clearance	(No need to be marked when there is only one rail) II	K : Tapped-Hole Rail X : Rail with Special Machining
Z0 : No Preload		
Z1 : Light Preload		

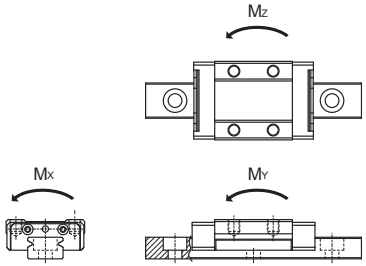
※No symbol required when no plating is need.

3-1 TM Miniature Linear Guide

TM-N Series Specifications



Model No.	Assembly (mm)			Block(mm)									Rail(mm)					
	H	W2	E	W	B	S	J	T	L	L1	Qxℓ	Ø	W1	H1	ØD	h	Ød	F
TM07NN	8	5	1.2	17	12	1.6	8	2.25	22.8	12.3	M2x2	1.3	7	4.7	4.2	2.3	2.4	15
TM07NL	8	5	1.2	17	12	1.6	13	2.25	30.8	20.3	M2x2	1.3	7	4.7	4.2	2.3	2.4	15
TM09NN	10	5.5	1.9	20	15	2.4	10	3.62	30.4	19.8	M3x3	1.3	9	5.5	6	3.3	3.5	20
TM09NL	10	5.5	1.9	20	15	2.4	16	3.62	40.7	30.1	M3x3	1.3	9	5.5	6	3.3	3.5	20
TM12NN	13	7.5	2.7	27	20	3.0	15	4.54	34.4	20.6	M3x3.5	1.3	12	7.5	6	4.5	3.5	25
TM12NL	13	7.5	2.7	27	20	3.0	20	4.54	46.9	33.1	M3x3.5	1.3	12	7.5	6	4.5	3.5	25
TM15NN	16	8.5	3.7	32	25	3.5	20	5.86	42.4	27	M3x5	1.3	15	9.5	6	4.5	3.5	40
TM15NL	16	8.5	3.7	32	25	3.5	25	5.86	59.4	44	M3x5	1.3	15	9.5	6	4.5	3.5	40



Model No.	Load Rating (kgf)		Static Permissible Moment					Weight	
			Mx(kgf-mm)	My(kgf-mm)		Mz(kgf-mm)		Block (kg)	Rail (kg/m)
	C	Co	Single Block	Single Block	Double Block	Single Block	Double Block		
TM07NN	144	204	745	232	3,234	232	3,234	0.005	0.21
TM07NL	220	374	1,367	849	7,261	849	7,261	0.009	
TM09NN	220	374	1,713	849	7,117	849	7,117	0.013	0.32
TM09NL	299	579	2,648	2,099	14,174	2,099	14,174	0.020	
TM12NN	381	536	3,269	1,094	12,391	1,094	12,391	0.024	0.61
TM12NL	555	919	5,604	3,437	26,857	3,437	26,857	0.039	
TM15NN	581	834	6,336	2,316	23,096	2,316	23,096	0.048	1
TM15NL	860	1,459	11,088	7,527	52,908	7,527	52,908	0.080	

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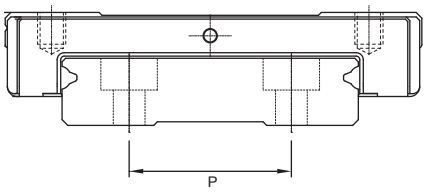
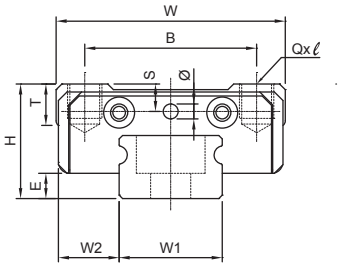
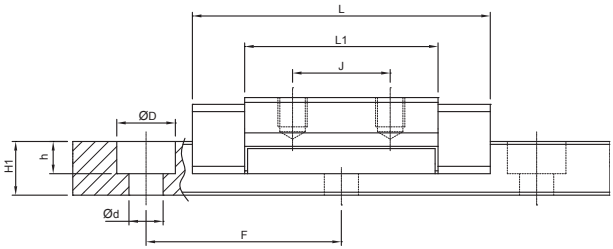
TM-W Series Specifications

TM15W





Model No.	Assembly (mm)			Block(mm)									Rail(mm)						
	H	W2	E	W	B	S	J	T	L	L1	Qxℓ	Ø	W1	H1	ØD	h	Ød	F	P
TM09WN	12	6	3	30	21	2.6	12	4	39.1	26.7	M3x3	1.3	18	7.3	6	4.5	3.5	30	
TM09WL	12	6	3	30	23	2.6	24	4	50.7	38.3	M3x3	1.3	18	7.3	6	4.5	3.5	30	
TM12WN	14	8	3.5	40	28	3.1	15	4.5	46.2	29	M3x3.5	1.3	24	8.5	8	4.5	4.5	40	
TM12WL	14	8	3.5	40	28	3.1	28	4.5	61.2	44	M3x3.5	1.3	24	8.5	8	4.5	4.5	40	
TM15WN	16	9	3.6	60	45	3.3	20	4.8	55.1	38.5	M4x4.5	1.3	42	9.5	8	4.5	4.5	40	23
TM15WL	16	9	3.6	60	45	3.3	35	4.8	74.2	57.6	M4x4.5	1.3	42	9.5	8	4.5	4.5	40	23



Model No.	Load Rating (kgf)		Static Permissible Moment					Weight	
			Mx(kgf-mm)	My(kgf-mm)		Mz(kgf-mm)		Block (kg)	Rail (kg/m)
	C	Co	Single Block	Single Block	Double Block	Single Block	Double Block		
TM09WN	208	368	4,645	1,621	12,205	1,621	12,205	0.03	0.97
TM09WL	260	509	7,123	3,905	23,411	3,905	23,411	0.043	
TM12WN	313	530	10,190	2,864	23,153	2,864	23,153	0.05	1.47
TM12WL	415	796	15,748	7,083	46,164	7,083	46,164	0.076	
TM15WN	517	856	26,387	5,459	42,543	5,459	42,543	0.116	2.85
TM15WL	686	1,283	41,779	14,144	87,256	14,144	87,256	0.175	