


Linear Locks / Simplified Linear Locks

Linear Locks

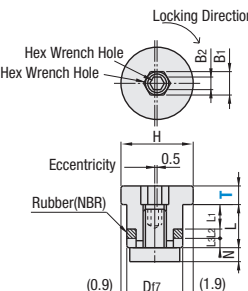


RoHS 10

Type	Material	Surface Treatment
LLT	1045 Carbon Steel or Equivalent (Thermal Refined)	Electroless Nickel Plating
LLTR	1045 Carbon Steel or Equivalent (Thermal Refined)	Low Temperature Black Chrome Plating
LLTS	420 Stainless Steel	—

How to Mount

After turning B₁ clockwise, turn B₂ (inner screw) clockwise.




Applicable Linear Guides (Recommendation)

Type	H	T1.4	T1.8	T3.5	T5
Miniature Standard Rails	6	•	—	—	—
	8	•	—	—	—
	10	•	—	—	—
	13	•	•	—	—
	16	•	•	•	—
Miniature Wide Rails	6.5	•	—	—	—
	9	•	•	—	—
	12	•	•	—	—
	14	•	•	•	—
	16	•	•	•	•
Linear Guides for Medium/Heavy Load	24	•	•	•	•
	28	•	•	•	•
	30	•	•	•	•
	33	•	•	•	•
	36	•	•	•	•
	42	•	•	•	•

Part Number	Type	T	H	D _r	L	N	L ₁	L ₂	L ₃	B ₁	B ₂	Mounting Hole Dimensions			Max. Allowable Tightening Torque (N-Cm)	Max. Allowable Push Force (N)	Mass (g)
												D ₁	F (min)	W			
LLT	LLTR	1.4	12.8	10	8	2.5	5	1.4	1.6	5	2.5	10	11	6.5	3.8	78	7
		1.8															
		3.5															
LLTS	5	14.8	12	9	6	12	12	7.5	15.8	323	14						

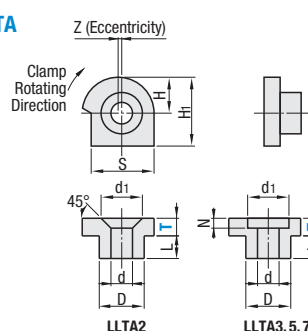
For orders larger than indicated quantity, please request a quotation.

Simplified Linear Locks



Material: 1045 Carbon Steel or Equivalent (Thermal Refined)
Surface Treatment: CA Coating
Accessories: Mounting Screw

LLTA



LLTA2, LLTA3, 5, 7

Applicable Linear Guides (Recommendation)

Type	H	T2	T3	T5	T7
Miniature Standard Rails	6	—	—	—	—
	8	—	—	—	—
	10	•	—	—	—
	13	•	—	—	—
	16	•	•	—	—
Miniature Wide Rails	6.5	—	—	—	—
	9	—	—	—	—
	12	•	—	—	—
	14	•	—	—	—
	16	•	•	—	—
Linear Guides for Medium/Heavy Load	24	•	•	•	•
	28	•	•	•	•
	30	•	•	•	•
	33	•	•	•	•
	36	•	•	•	•
	42	•	•	•	•

Part Number	Type	T	L	D	-0.01 -0.06	H	H ₁	S	Z	d	d ₁	N	Mounting Hole Dimensions					Mass (g)	Mounting Screws	Max. Allowable Push Force (N)	Max. Allowable Tightening Torque (N-Cm)
													D ₁	W	F	M	G (min)				
LLTA	2	2.8	5	4	8	7	0.4	2.4	4.6	—	5	4	3	M2	5	1	Phillips Head Countersunk Screws M2 x 8	70	2.8		
	3	3.8	7	6	12	11	0.5	3.4	6.2	2	7	6	4	M3	6	3	Hex Socket Low Head Cap Screws M3 x 10	157	7.9		
	5	4.8	9	7	14	13	0.5	4.5	8	3	9	7	5	M4	6	6	Hex Socket Low Head Cap Screws M4 x 12	306	15.3		
	7	5.8	11	8	18	14	0.5	5.5	9.5	4	11	8	6	M5	8	13	Hex Socket Low Head Cap Screws M5 x 16	488	24.4		

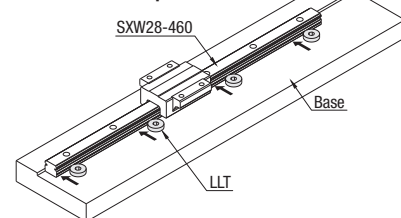
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Part Number Example

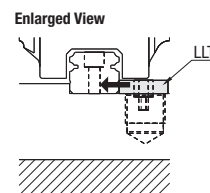
Part Number: LLT5 LLTA7

Application Example

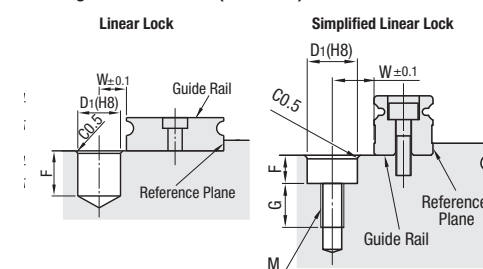
Linear Locks Example



Press the rail onto the datum plane by turning the linear locks.

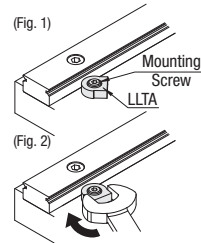


Mounting Hole Dimensions (Reference)




LLTA (Simplified Linear Locks) Mounting Procedures

- Drill holes for mounting linear locks on the base. (Refer to Mounting Hole Dimensions.)
- Temporarily tighten the rail screws.
- Insert the mounting screws in LLTA and temporarily tighten. (Fig. 1)
- Turn the LLTA shoulder clockwise with a wrench and press the rail onto the datum plane. (Fig. 2)
- Fully tighten the rail screws.
- Fully tighten the LLTA mounting screws.

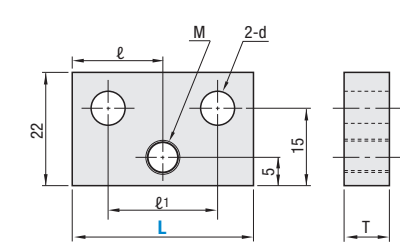


Linear Locking Plates / Linear Guides Lock Unit / Linear Guides Taper Locks

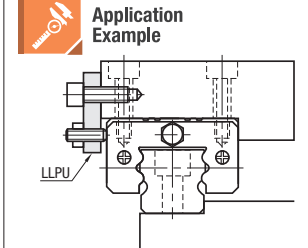
Linear Lock Plates



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Application Example

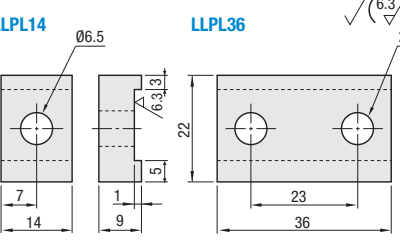


Type	Material	Surface Treatment	Part Number					
			L	T	ℓ	ℓ ₁	d	M
LLPU	1045 Carbon Steel or Equivalent	Electroless Nickel Plating	23	6	11.5	11	5.5	5
			28		14.0	15		
			33		16.5	20		
			43		21.5	30		

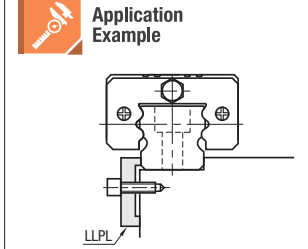
Linear Lock Plates



RoHS 10




Application Example

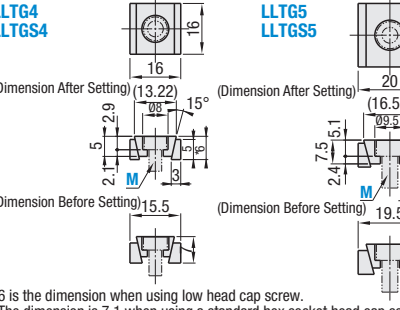


Type	Part Number	
	Nominal	
LLPL	14	
	36	

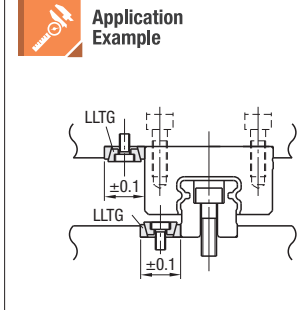
Linear Guides Lock Unit



RoHS 10



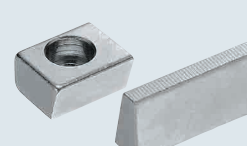
Application Example



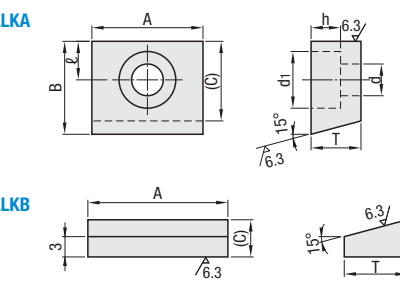
Type	Part Number	M	(Recommendation) Tightening Torque (N·m)	Rail Clamp Force (kN)
LLTGS	5	8	9	

LLTG components are held together by elastic adhesive. Install as shipped.

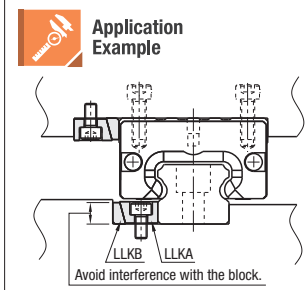
Linear Guide Taper Locks



RoHS 10



Application Example



Type	Part Number	No.	A	B	T	(C)	ℓ	d	d ₁	h
6	22	18	11	15.1	7.5	6.5	11	6.5		
LLKB	5	20	—	9	5.41	—	—	—	—	
	6	22	—	11	5.95	—	—	—	—	

Part Number Example

Part Number: LLPU23 LLTG4 LLKA6