

T-LA Series Datasheet



- 13, 28 and 60 mm travel
- Up to 4 mm/s speed and up to 15 N thrust
- Built-in controller; daisy-chains data and power with other T-series products
- Designed to replace standard micrometer heads on manual translation stages. (See note #2 below)

T-LA Series Overview

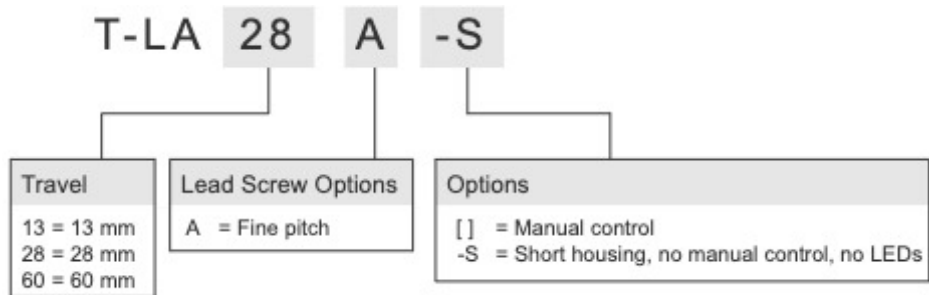
We recently released the T-NA Linear Actuator, a powerful and robust unit, which resolves the following limitations of the T-LA: The T-LA lead screws may experience some side-to-side wobble while extending and retracting. This is eliminated when the actuator is pushing against a constrained surface, for example, in a translation stage. You cannot mount anything to the moving tip of the T-LA actuator. It is designed to push only. The T-LA actuator is designed to push a force of 15 N or less. Some stages contain springs with stronger forces than this. We advise checking the spring force of your stage before choosing which actuator to drive it. The T-LA is more delicate and has a limited lifetime compared to the T-NA08. View the T-LA Specs Page for a lifetime vs thrust comparison.

If any of these issues are of concern to you, consider purchasing a T-NA08 Series Actuator instead.

See our TSB Linear Slides page for more information on compatible slides.

For more information visit: <https://www.zaber.com/products/linear-actuators/T-LA>

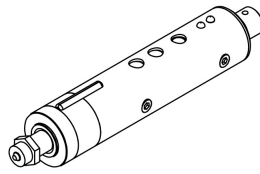
T-LA Series Part Numbering



T-LA Series Drawings

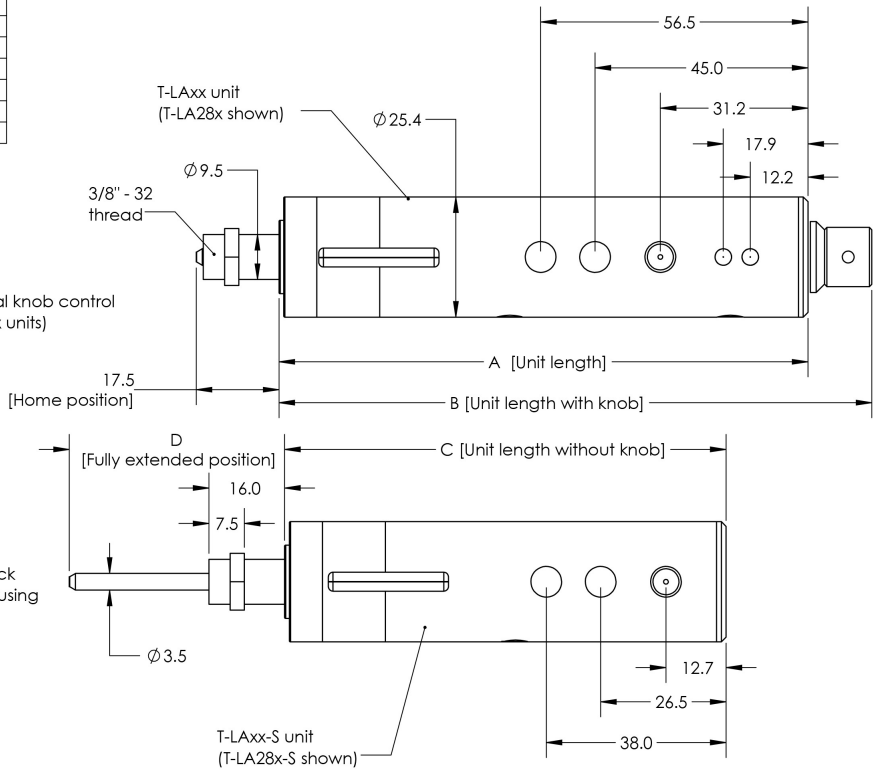
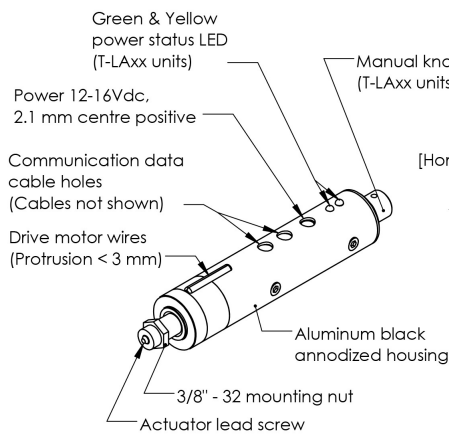
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T-LA Linear Actuator
dimensions in mm



Model Number*	Travel	A	B	C	D
T-LA13A	12.5	N/A	125.5	111.8	30.5
T-LA13A-S	12.5	93.3	N/A	N/A	30.5
T-LA28A	28.0	N/A	125.5	111.8	45.5
T-LA28A-S	28.0	93.3	N/A	N/A	45.5
T-LA60A	59.5	N/A	160.5	146.8	77.5
T-LA60A-S	59.5	128.3	N/A	N/A	77.5

*See product page for complete list of available models at www.zaber.com



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T-LA Series Specifications

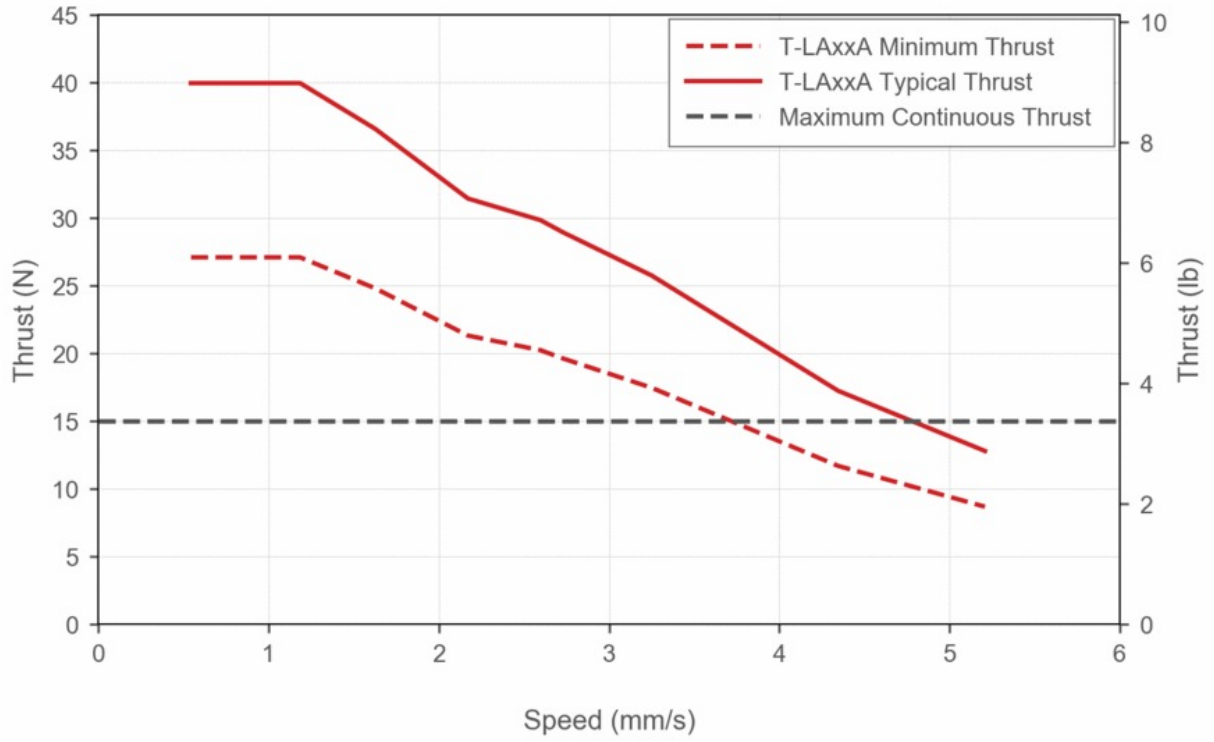
Specification	Value	Alternate Unit
Microstep Size (Default Resolution)	0.09921875 μm	
Built-in Controller	Yes	
Repeatability	< 4 μm	< 0.000157"
Backlash	< 22 μm	< 0.000866"
Maximum Speed	4 mm/s	0.157"/s
Minimum Speed	0.0009300 mm/s	0.000037"/s
Speed Resolution	0.0009300 mm/s	0.000037"/s
Encoder Type	None	
Peak Thrust	25 N	5.6 lb
Maximum Continuous Thrust	15 N	3.4 lb
Communication Interface	RS-232	
Communication Protocol	Zaber Binary	
Maximum Current Draw	300 mA	
Power Supply	12-16 VDC	
Power Plug	2.1 mm centre positive	
Motor Temperature Rise	75 °C	
Linear Motion Per Motor Rev	0.3048 mm	0.012"
Motor Steps Per Rev	48	
Motor Type	Stepper (2 phase)	
Inductance	55 mH/phase	
Default Resolution	1/64 of a step	
Data Cable Connection	Minidin 6	
Mechanical Drive System	Precision leadscrew	
Limit or Home Sensing	Magnetic home sensor	
Axes of Motion	1	
Mounting Interface	3/8-32 nut or 3/8" shank	
Operating Temperature Range	0 to 50 °C	
Vacuum Compatible	No	
RoHS Compliant	Yes	
CE Compliant	Yes	

Part Number	Travel Range	Accuracy (unidirectional)	Manual Control	LED Indicators
T-LA13A	13 mm (0.512")	24 µm (0.000945")	Yes	Yes
T-LA13A-S	13 mm (0.512")	24 µm (0.000945")	No	No
T-LA28A	28 mm (1.102")	24 µm (0.000945")	Yes	Yes
T-LA28A-S	28 mm (1.102")	24 µm (0.000945")	No	No
T-LA60A	60 mm (2.362")	36 µm (0.001417")	Yes	Yes
T-LA60A-S	60 mm (2.362")	36 µm (0.001417")	No	No

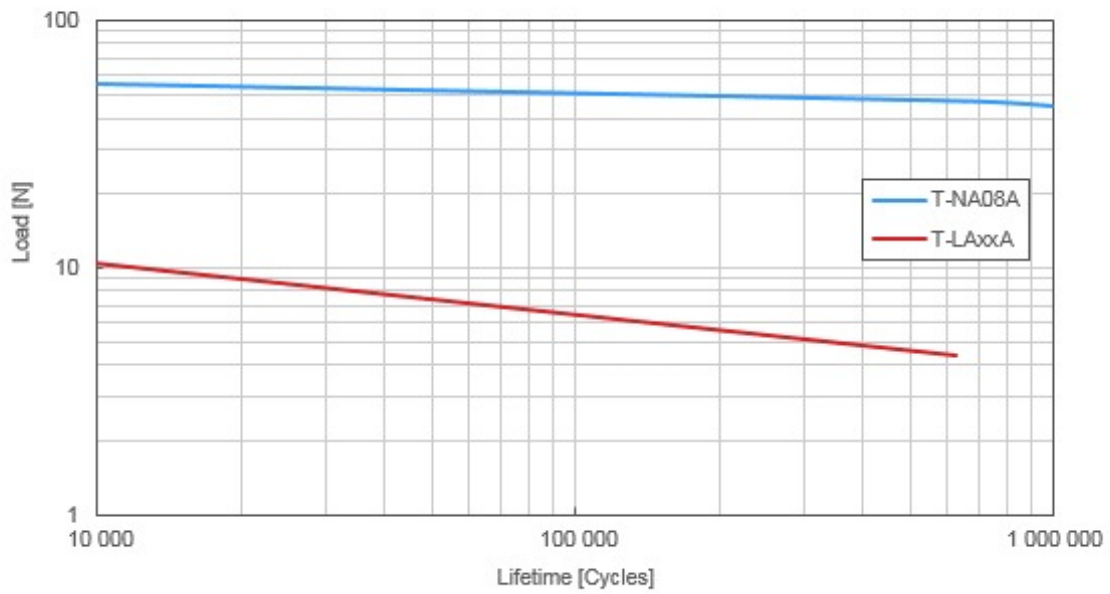
Part Number	Weight
T-LA13A	0.14 kg (0.309 lb)
T-LA13A-S	0.11 kg (0.243 lb)
T-LA28A	0.14 kg (0.309 lb)
T-LA28A-S	0.11 kg (0.243 lb)
T-LA60A	0.15 kg (0.331 lb)
T-LA60A-S	0.14 kg (0.309 lb)

T-LA Series Charts

Thrust Speed Performance



T-LA and T-NA Actuator Lifetime at 2.7 mm/s



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