

## T-LA Series Datasheet



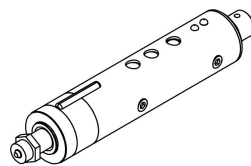
- 13, 28 and 60 mm travel
- Up to 4 mm/s speed and up to 15 N thrust
- Built-in controller; daisy-chains data and power with other T-series products
- Designed to replace standard micrometer heads on manual translation stages. (See note #2 below)

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.

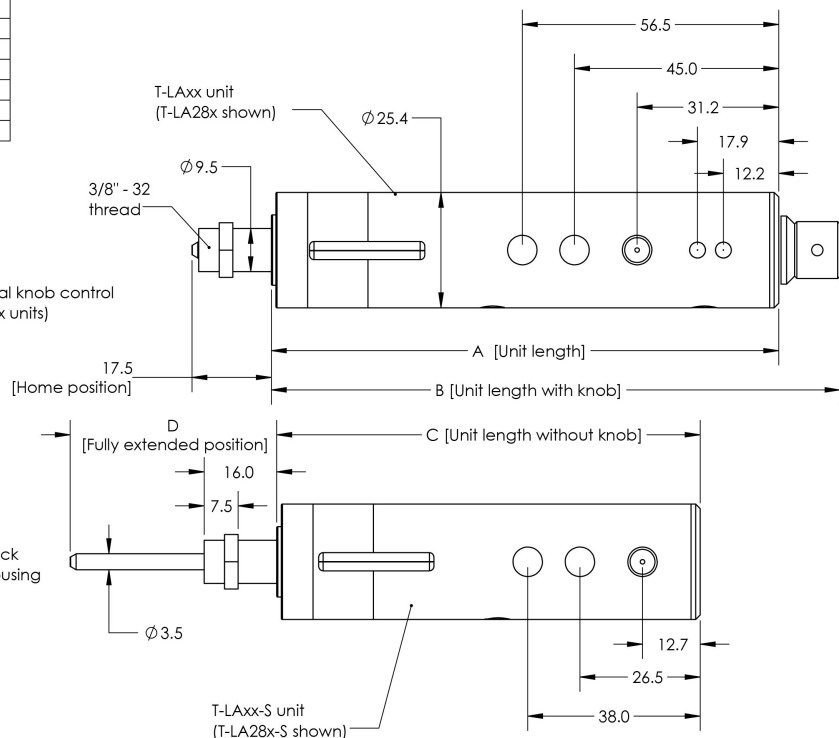
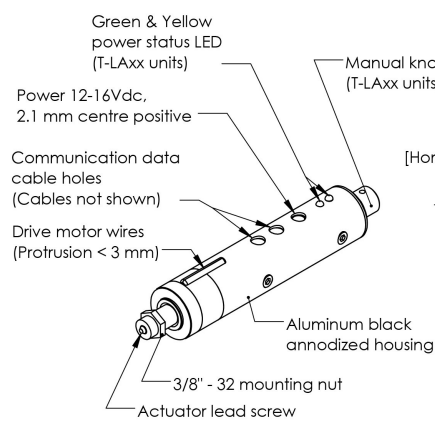
See our TSB Linear Slides page for more information on compatible slides.

## Drawings



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 </tr	

\*See product page for complete list of available models at [www.zaber.com](http://www.zaber.com)



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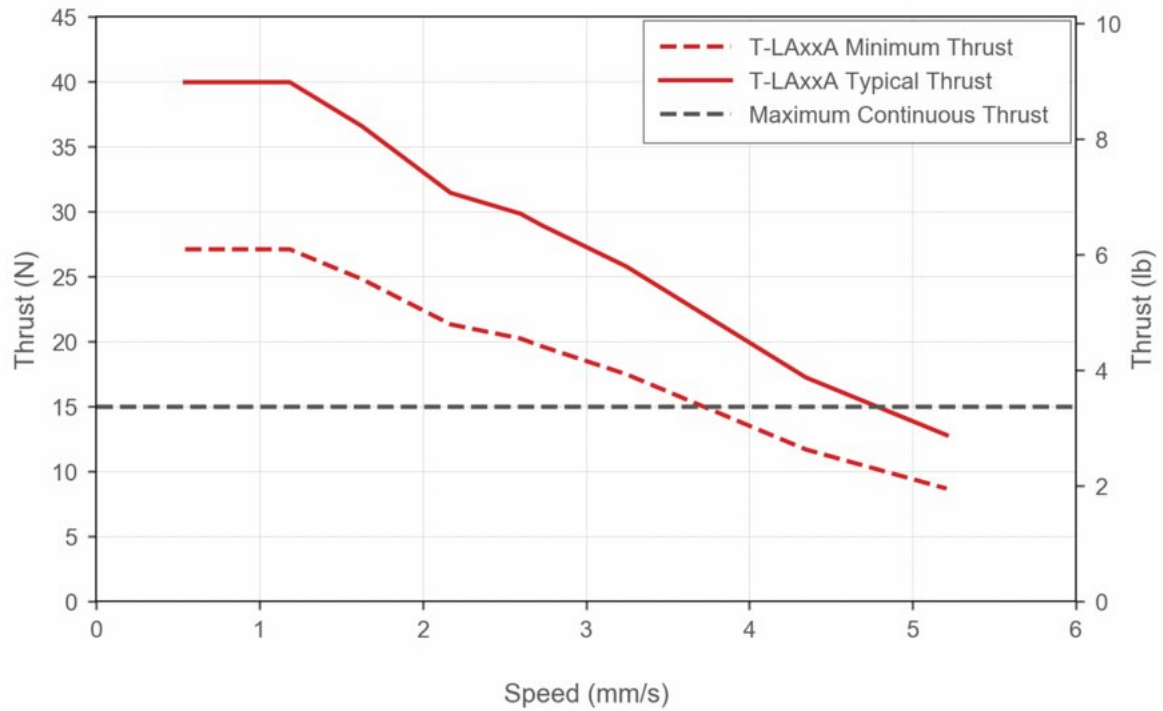
## Specifications

Specification	Value	Alternate Unit
CE Compliant	Yes	
Weight	0.4 kg	0.882 lb
RoHS Compliant	Yes	
Operating Temperature Range	0 to 50 °C	
Vacuum Compatible	No	
Mounting Interface	3/8-32 nut or 3/8" shank	
LED Indicators	Yes	
Axes of Motion	1	
Manual Control	Yes	
Limit or Home Sensing	Magnetic home sensor	
Mechanical Drive System	Precision leadscrew	
Data Cable Connection	Minidin 6	
Default Resolution	1/64 of a step	
Inductance	55 mH/phase	
Motor Type	Stepper (2 phase)	
Motor Steps Per Rev	48	
Linear Motion Per Motor Rev	0.3048 mm	0.012 "
Motor Temperature Rise	75 °C	
Power Plug	2.1 mm centre positive	
Power Supply	12-16 VDC	
Maximum Current Draw	300 mA	
Communication Protocol	Zaber Binary	
Communication Interface	RS-232	
Maximum Continuous Thrust	15 N	3.4 lb
Peak Thrust	25 N	5.6 lb
Encoder Type	None	
Speed Resolution	.0009302 mm/s	0.000037 "/s
Minimum Speed	.0009302 mm/s	0.000037 "/s
Maximum Speed	4 mm/s	0.157 "/s
Backlash	< 6 µm	< 0.000236 "

Specification	Value	Alternate Unit
Repeatability	< 4 $\mu\text{m}$	< 0.000157 "
Accuracy (unidirectional)	24 $\mu\text{m}$	0.000945 "
Travel Range	13 mm	0.512 "
Microstep Size (Default Resolution)	0.09921875 $\mu\text{m}$	
Built-in Controller	Yes	

## Charts

**Thrust Speed Performance**



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

