

LRQ-E Series Datasheet

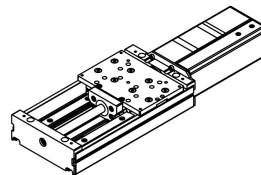


- 75, 150, 300, 450, 600 mm travel
- 100 kg load capacity
- Up to 840 mm/s speed and up to 300 N thrust
- Encoder position feedback with slip/stall detection and automatic recovery
- Inline and parallel drive configurations
- Ball screw and lead screw configurations
- Designed for use with an X-MCB1 Series stepper motor controller or any 2-phase stepper motor controller
- Custom versions available

Zaber's LRQ-E Series products are computer-controlled, motorized linear stages with high stiffness, load, and lifetime capabilities in a compact size. At only 36 mm high, these stages are excellent for applications where a low profile is required. These stages are capable of speeds up to 840 mm/s, and can bolt together into XY and XYZ systems. Some multi axis configurations may require additional accessories, please contact Zaber Technical Support to ensure the correct ones are selected. Each device is available in either an inline or parallel drive configuration.

The built-in motor encoder allows for closed-loop operation and slip/stall recovery features. The stages are designed to connect directly to our X-MCB1 Series stepper motor controller, or they can be used with any 2-phase stepper motor controller through the panel mount DB15 connector. When connected to our X-Series controllers, the stages are designed to be 'plug and play' just like all of Zaber's other products.

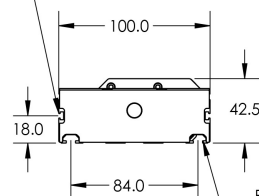
Drawings



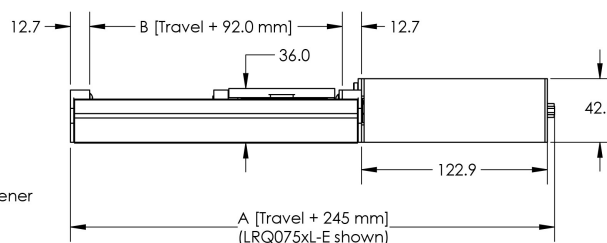
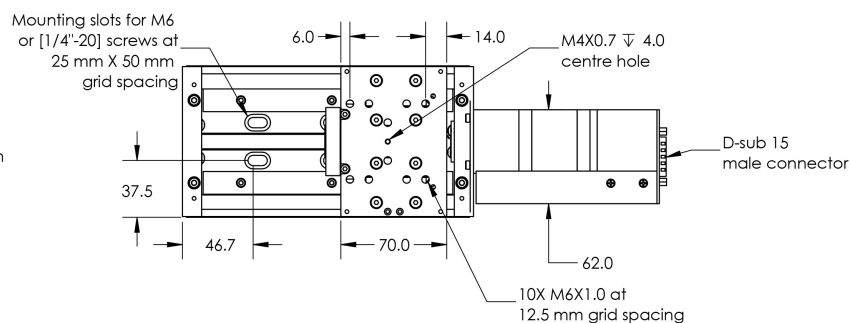
Model Number*	Travel	A	B
LRQ075xL-E	75.0	320.0	167.0
LRQ150xL-E	150.0	395.0	242.0
LRQ300xL-E	300.0	545.0	392.0
LRQ450xL-E	450.0	695.0	542.0
LRQ600xL-E	600.0	845.0	692.0

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

Recommended fastener for side T-slots: standard M2.5 nuts
Note: Do not mount stage using these side T-slots. For accessories only



Recommended fastener for bottom T-slots: 6mm T-nuts



Specifications

Specification	Value	Alternate Unit
Built-in Controller	No	
Recommended Controller	X-MCB1 (48 V) Recommended	
Encoder Resolution	500 CPR	2000 states/rev
Encoder Type	Rotary quadrature encoder	
Maximum Centered Load	1000 N	224.3 lb
Maximum Cantilever Load	3000 N-cm	4248.4 oz-in
Guide Type	Recirculating Ball Linear Guide	
Stiffness in Pitch	640 N-m/°	27 µrad/N-m
Stiffness in Roll	1850 N-m/°	9 µrad/N-m
Stiffness in Yaw	665 N-m/°	26 µrad/N-m
Motor Steps Per Rev	200	
Motor Type	Stepper (2 phase)	
Motor Rated Current	2300 mA/phase	
Inductance	2.8 mH/phase	
Motor Connection	D-sub 15	
Limit or Home Sensing	Magnetic home sensor	
Axes of Motion	1	
Mounting Interface	M6 and M3 threaded holes	
Vacuum Compatible	No	
Operating Temperature Range	0 to 50 °C	
RoHS Compliant	Yes	
CE Compliant	Yes	

Part Number	Microstep Size (Default Resolution)	Travel Range	Accuracy (unidirectional)	Repeatability
LRQ075AL-E01T3	0.09921875 µm	75 mm (2.953 ")	23 µm (0.000906 ")	< 2.5 µm (< 0.000098 ")
LRQ075BL-E01T3	0.49609375 µm	75 mm (2.953 ")	15 µm (0.000591 ")	< 2.5 µm (< 0.000098 ")
LRQ075DL-E01T3	1.984375 µm	75 mm (2.953 ")	48 µm (0.001890 ")	< 3 µm (< 0.000118 ")

Part Number	Microstep Size (Default Resolution)	Travel Range	Accuracy (unidirectional)	Repeatability
LRQ075HL-E01T3	0.1953125 µm	75 mm (2.953 ")	17.5 µm (0.000689 ")	< 5 µm (< 0.000197 ")
LRQ075AP-E01T3	0.09921875 µm	75 mm (2.953 ")	23 µm (0.000906 ")	< 2.5 µm (< 0.000098 ")
LRQ075BP-E01T3	0.49609375 µm	75 mm (2.953 ")	15 µm (0.000591 ")	< 2.5 µm (< 0.000098 ")
LRQ075DP-E01T3	1.984375 µm	75 mm (2.953 ")	15 µm (0.000591 ")	< 2.5 µm (< 0.000098 ")
LRQ075HP-E01T3	0.1953125 µm	75 mm (2.953 ")	27.5 µm (0.001083 ")	< 5 µm (< 0.000197 ")
LRQ150AL-E01T3	0.09921875 µm	150 mm (5.905 ")	45 µm (0.001772 ")	< 2.5 µm (< 0.000098 ")
LRQ150BL-E01T3	0.49609375 µm	150 mm (5.905 ")	25 µm (0.000984 ")	< 2.5 µm (< 0.000098 ")
LRQ150DL-E01T3	1.984375 µm	150 mm (5.905 ")	55 µm (0.002165 ")	< 3 µm (< 0.000118 ")
LRQ150HL-E01T3	0.1953125 µm	150 mm (5.905 ")	30 µm (0.001181 ")	< 5 µm (< 0.000197 ")
LRQ150AP-E01T3	0.09921875 µm	150 mm (5.905 ")	45 µm (0.001772 ")	< 2.5 µm (< 0.000098 ")
LRQ150BP-E01T3	0.49609375 µm	150 mm (5.905 ")	25 µm (0.000984 ")	< 2.5 µm (< 0.000098 ")
LRQ150DP-E01T3	1.984375 µm	150 mm (5.905 ")	55 µm (0.002165 ")	< 3 µm (< 0.000118 ")
LRQ150HP-E01T3	0.1953125 µm	150 mm (5.905 ")	40 µm (0.001575 ")	< 5 µm (< 0.000197 ")
LRQ300AL-E01T3	0.09921875 µm	300 mm (11.811 ")	90 µm (0.003543 ")	< 2.5 µm (< 0.000098 ")
LRQ300BL-E01T3	0.49609375 µm	300 mm (11.811 ")	35 µm (0.001378 ")	< 2.5 µm (< 0.000098 ")
LRQ300DL-E01T3	1.984375 µm	300 mm (11.811 ")	70 µm (0.002756 ")	< 3 µm (< 0.000118 ")
LRQ300HL-E01T3	0.1953125 µm	300 mm (11.811 ")	55 µm (0.002165 ")	< 5 µm (< 0.000197 ")
LRQ300AP-E01T3	0.09921875 µm	300 mm (11.811 ")	90 µm (0.003543 ")	< 2.5 µm (< 0.000098 ")
LRQ300BP-E01T3	0.49609375 µm	300 mm (11.811 ")	35 µm (0.001378 ")	< 2.5 µm (< 0.000098 ")
LRQ300DP-E01T3	1.984375 µm	300 mm (11.811 ")	70 µm (0.002756 ")	< 3 µm (< 0.000118 ")

Part Number	Microstep Size (Default Resolution)	Travel Range	Accuracy (unidirectional)	Repeatability
LRQ300HP-E01T3	0.1953125 µm	300 mm (11.811 ")	65 µm (0.002559 ")	< 5 µm (< 0.000197 ")
LRQ450AL-E01T3	0.09921875 µm	450 mm (17.716 ")	135 µm (0.005315 ")	< 2.5 µm (< 0.000098 ")
LRQ450BL-E01T3	0.49609375 µm	450 mm (17.716 ")	60 µm (0.002362 ")	< 2.5 µm (< 0.000098 ")
LRQ450DL-E01T3	1.984375 µm	450 mm (17.716 ")	85 µm (0.003346 ")	< 3 µm (< 0.000118 ")
LRQ450HL-E01T3	0.1953125 µm	450 mm (17.716 ")	85 µm (0.003346 ")	< 5 µm (< 0.000197 ")
LRQ450AP-E01T3	0.09921875 µm	450 mm (17.716 ")	135 µm (0.005315 ")	< 2.5 µm (< 0.000098 ")
LRQ450BP-E01T3	0.49609375 µm	450 mm (17.716 ")	60 µm (0.002362 ")	< 2.5 µm (< 0.000098 ")
LRQ450DP-E01T3	1.984375 µm	450 mm (17.716 ")	85 µm (0.003346 ")	< 3 µm (< 0.000118 ")
LRQ450HP-E01T3	0.1953125 µm	450 mm (17.716 ")	95 µm (0.003740 ")	< 5 µm (< 0.000197 ")
LRQ600AL-E01T3	0.09921875 µm	600 mm (23.622 ")	150 µm (0.005905 ")	< 2.5 µm (< 0.000098 ")
LRQ600BL-E01T3	0.49609375 µm	600 mm (23.622 ")	90 µm (0.003543 ")	< 2.5 µm (< 0.000098 ")
LRQ600DL-E01T3	1.984375 µm	600 mm (23.622 ")	100 µm (0.003937 ")	< 3 µm (< 0.000118 ")
LRQ600HL-E01T3	0.1953125 µm	600 mm (23.622 ")	115 µm (0.004528 ")	< 5 µm (< 0.000197 ")
LRQ600AP-E01T3	0.09921875 µm	600 mm (23.622 ")	150 µm (0.005905 ")	< 2.5 µm (< 0.000098 ")
LRQ600BP-E01T3	0.49609375 µm	600 mm (23.622 ")	90 µm (0.003543 ")	< 2.5 µm (< 0.000098 ")
LRQ600DP-E01T3	1.984375 µm	600 mm (23.622 ")	100 µm (0.003937 ")	< 3 µm (< 0.000118 ")
LRQ600HP-E01T3	0.1953125 µm	600 mm (23.622 ")	125 µm (0.004921 ")	< 5 µm (< 0.000197 ")
Part Number	Backlash	Maximum Speed	Minimum Speed	Speed Resolution
LRQ075AL-E01T3	< 8 µm (< 0.000315 ")	40 mm/s (1.575 "/s)	0.000061 mm/s (0.000002 "/s)	0.000061 mm/s (0.000002 "/s)

Part Number	Backlash	Maximum Speed	Minimum Speed	Speed Resolution
LRQ075BL-E01T3	< 21 µm (< 0.000827 ")	205 mm/s (8.071 "/s)	0.000303 mm/s (0.000012 "/s)	0.000303 mm/s (0.000012 "/s)
LRQ075DL-E01T3	< 60 µm (< 0.002362 ")	840 mm/s (33.071 "/s)	0.001211 mm/s (0.000048 "/s)	0.001211 mm/s (0.000048 "/s)
LRQ075HL-E01T3	< 30 µm (< 0.001181 ")	100 mm/s (3.937 "/s)	0.000119 mm/s (0.000005 "/s)	0.000119 mm/s (0.000005 "/s)
LRQ075AP-E01T3	< 14 µm (< 0.000551 ")	40 mm/s (1.575 "/s)	0.000061 mm/s (0.000002 "/s)	0.000061 mm/s (0.000002 "/s)
LRQ075BP-E01T3	< 27 µm (< 0.001063 ")	205 mm/s (8.071 "/s)	0.000303 mm/s (0.000012 "/s)	0.000303 mm/s (0.000012 "/s)
LRQ075DP-E01T3	< 66 µm (< 0.002598 ")	205 mm/s (8.071 "/s)	0.000303 mm/s (0.000012 "/s)	0.000303 mm/s (0.000012 "/s)
LRQ075HP-E01T3	< 30 µm (< 0.001181 ")	100 mm/s (3.937 "/s)	0.000119 mm/s (0.000005 "/s)	0.000119 mm/s (0.000005 "/s)
LRQ150AL-E01T3	< 8 µm (< 0.000315 ")	40 mm/s (1.575 "/s)	0.000061 mm/s (0.000002 "/s)	0.000061 mm/s (0.000002 "/s)
LRQ150BL-E01T3	< 21 µm (< 0.000827 ")	205 mm/s (8.071 "/s)	0.000303 mm/s (0.000012 "/s)	0.000303 mm/s (0.000012 "/s)
LRQ150DL-E01T3	< 60 µm (< 0.002362 ")	840 mm/s (33.071 "/s)	0.001211 mm/s (0.000048 "/s)	0.001211 mm/s (0.000048 "/s)
LRQ150HL-E01T3	< 30 µm (< 0.001181 ")	100 mm/s (3.937 "/s)	0.000119 mm/s (0.000005 "/s)	0.000119 mm/s (0.000005 "/s)
LRQ150AP-E01T3	< 14 µm (< 0.000551 ")	40 mm/s (1.575 "/s)	0.000061 mm/s (0.000002 "/s)	0.000061 mm/s (0.000002 "/s)
LRQ150BP-E01T3	< 27 µm (< 0.001063 ")	205 mm/s (8.071 "/s)	0.000303 mm/s (0.000012 "/s)	0.000303 mm/s (0.000012 "/s)
LRQ150DP-E01T3	< 66 µm (< 0.002598 ")	840 mm/s (33.071 "/s)	0.001211 mm/s (0.000048 "/s)	0.001211 mm/s (0.000048 "/s)
LRQ150HP-E01T3	< 30 µm (< 0.001181 ")	100 mm/s (3.937 "/s)	0.000119 mm/s (0.000005 "/s)	0.000119 mm/s (0.000005 "/s)
LRQ300AL-E01T3	< 8 µm (< 0.000315 ")	40 mm/s (1.575 "/s)	0.000061 mm/s (0.000002 "/s)	0.000061 mm/s (0.000002 "/s)
LRQ300BL-E01T3	< 21 µm (< 0.000827 ")	205 mm/s (8.071 "/s)	0.000303 mm/s (0.000012 "/s)	0.000303 mm/s (0.000012 "/s)
LRQ300DL-E01T3	< 60 µm (< 0.002362 ")	840 mm/s (33.071 "/s)	0.001211 mm/s (0.000048 "/s)	0.001211 mm/s (0.000048 "/s)
LRQ300HL-E01T3	< 30 µm (< 0.001181 ")	100 mm/s (3.937 "/s)	0.000119 mm/s (0.000005 "/s)	0.000119 mm/s (0.000005 "/s)
LRQ300AP-E01T3	< 14 µm (< 0.000551 ")	40 mm/s (1.575 "/s)	0.000061 mm/s (0.000002 "/s)	0.000061 mm/s (0.000002 "/s)
LRQ300BP-E01T3	< 27 µm	205 mm/s	0.000303 mm/s	0.000303 mm/s

Part Number	Backlash	Maximum Speed	Minimum Speed	Speed Resolution
	(< 0.001063 ")	(8.071 "/s)	(0.000012 "/s)	(0.000012 "/s)
LRQ300DP-E01T3	< 66 µm (< 0.002598 ")	840 mm/s (33.071 "/s)	0.001211 mm/s (0.000048 "/s)	0.001211 mm/s (0.000048 "/s)
LRQ300HP-E01T3	< 30 µm (< 0.001181 ")	100 mm/s (3.937 "/s)	0.000119 mm/s (0.000005 "/s)	0.000119 mm/s (0.000005 "/s)
LRQ450AL-E01T3	< 8 µm (< 0.000315 ")	40 mm/s (1.575 "/s)	0.000061 mm/s (0.000002 "/s)	0.000061 mm/s (0.000002 "/s)
LRQ450BL-E01T3	< 21 µm (< 0.000827 ")	205 mm/s (8.071 "/s)	0.000303 mm/s (0.000012 "/s)	0.000303 mm/s (0.000012 "/s)
LRQ450DL-E01T3	< 60 µm (< 0.002362 ")	840 mm/s (33.071 "/s)	0.001211 mm/s (0.000048 "/s)	0.001211 mm/s (0.000048 "/s)
LRQ450HL-E01T3	< 30 µm (< 0.001181 ")	100 mm/s (3.937 "/s)	0.000119 mm/s (0.000005 "/s)	0.000119 mm/s (0.000005 "/s)
LRQ450AP-E01T3	< 14 µm (< 0.000551 ")	40 mm/s (1.575 "/s)	0.000061 mm/s (0.000002 "/s)	0.000061 mm/s (0.000002 "/s)
LRQ450BP-E01T3	< 27 µm (< 0.001063 ")	205 mm/s (8.071 "/s)	0.000303 mm/s (0.000012 "/s)	0.000303 mm/s (0.000012 "/s)
LRQ450DP-E01T3	< 66 µm (< 0.002598 ")	840 mm/s (33.071 "/s)	0.001211 mm/s (0.000048 "/s)	0.001211 mm/s (0.000048 "/s)
LRQ450HP-E01T3	< 30 µm (< 0.001181 ")	100 mm/s (3.937 "/s)	0.000119 mm/s (0.000005 "/s)	0.000119 mm/s (0.000005 "/s)
LRQ600AL-E01T3	< 8 µm (< 0.000315 ")	40 mm/s (1.575 "/s)	0.000061 mm/s (0.000002 "/s)	0.000061 mm/s (0.000002 "/s)
LRQ600BL-E01T3	< 21 µm (< 0.000827 ")	205 mm/s (8.071 "/s)	0.000303 mm/s (0.000012 "/s)	0.000303 mm/s (0.000012 "/s)
LRQ600DL-E01T3	< 60 µm (< 0.002362 ")	840 mm/s (33.071 "/s)	0.001211 mm/s (0.000048 "/s)	0.001211 mm/s (0.000048 "/s)
LRQ600HL-E01T3	< 30 µm (< 0.001181 ")	100 mm/s (3.937 "/s)	0.000119 mm/s (0.000005 "/s)	0.000119 mm/s (0.000005 "/s)
LRQ600AP-E01T3	< 14 µm (< 0.000551 ")	40 mm/s (1.575 "/s)	0.000061 mm/s (0.000002 "/s)	0.000061 mm/s (0.000002 "/s)
LRQ600BP-E01T3	< 27 µm (< 0.001063 ")	205 mm/s (8.071 "/s)	0.000303 mm/s (0.000012 "/s)	0.000303 mm/s (0.000012 "/s)
LRQ600DP-E01T3	< 66 µm (< 0.002598 ")	840 mm/s (33.071 "/s)	0.001211 mm/s (0.000048 "/s)	0.001211 mm/s (0.000048 "/s)
LRQ600HP-E01T3	< 30 µm (< 0.001181 ")	100 mm/s (3.937 "/s)	0.000119 mm/s (0.000005 "/s)	0.000119 mm/s (0.000005 "/s)

Part Number	Peak Thrust	Maximum Continuous Thrust	Vertical Runout	Horizontal Runout
LRQ075AL-E01T3	110 N (24.7 lb)	100 N (22.4 lb)	< 20 µm (< 0.000787 ")	< 20 µm (< 0.000787 ")
LRQ075BL-E01T3	100 N (22.4 lb)	100 N (22.4 lb)	< 20 µm (< 0.000787 ")	< 20 µm (< 0.000787 ")
LRQ075DL-E01T3	25 N (5.6 lb)	25 N (5.6 lb)	< 20 µm (< 0.000787 ")	< 20 µm (< 0.000787 ")
LRQ075HL-E01T3	300 N (67.3 lb)	200 N (44.9 lb)	< 20 µm (< 0.000787 ")	< 20 µm (< 0.000787 ")
LRQ075AP-E01T3	110 N (24.7 lb)	100 N (22.4 lb)	< 20 µm (< 0.000787 ")	< 20 µm (< 0.000787 ")
LRQ075BP-E01T3	100 N (22.4 lb)	100 N (22.4 lb)	< 20 µm (< 0.000787 ")	< 20 µm (< 0.000787 ")
LRQ075DP-E01T3	100 N (22.4 lb)	100 N (22.4 lb)	< 20 µm (< 0.000787 ")	< 20 µm (< 0.000787 ")
LRQ075HP-E01T3	300 N (67.3 lb)	200 N (44.9 lb)	< 20 µm (< 0.000787 ")	< 20 µm (< 0.000787 ")
LRQ150AL-E01T3	110 N (24.7 lb)	100 N (22.4 lb)	< 25 µm (< 0.000984 ")	< 20 µm (< 0.000787 ")
LRQ150BL-E01T3	100 N (22.4 lb)	100 N (22.4 lb)	< 25 µm (< 0.000984 ")	< 20 µm (< 0.000787 ")
LRQ150DL-E01T3	25 N (5.6 lb)	25 N (5.6 lb)	< 25 µm (< 0.000984 ")	< 20 µm (< 0.000787 ")
LRQ150HL-E01T3	300 N (67.3 lb)	200 N (44.9 lb)	< 25 µm (< 0.000984 ")	< 20 µm (< 0.000787 ")
LRQ150AP-E01T3	110 N (24.7 lb)	100 N (22.4 lb)	< 25 µm (< 0.000984 ")	< 20 µm (< 0.000787 ")
LRQ150BP-E01T3	100 N (22.4 lb)	100 N (22.4 lb)	< 25 µm (< 0.000984 ")	< 20 µm (< 0.000787 ")
LRQ150DP-E01T3	25 N (5.6 lb)	25 N (5.6 lb)	< 25 µm (< 0.000984 ")	< 20 µm (< 0.000787 ")
LRQ150HP-E01T3	300 N (67.3 lb)	200 N (44.9 lb)	< 25 µm (< 0.000984 ")	< 20 µm (< 0.000787 ")
LRQ300AL-E01T3	110 N (24.7 lb)	100 N (22.4 lb)	< 35 µm (< 0.001378 ")	< 30 µm (< 0.001181 ")
LRQ300BL-E01T3	100 N (22.4 lb)	100 N (22.4 lb)	< 35 µm (< 0.001378 ")	< 30 µm (< 0.001181 ")
LRQ300DL-E01T3	25 N (5.6 lb)	25 N (5.6 lb)	< 35 µm (< 0.001378 ")	< 30 µm (< 0.001181 ")
LRQ300HL-E01T3	300 N (67.3 lb)	200 N (44.9 lb)	< 35 µm (< 0.001378 ")	< 30 µm (< 0.001181 ")

Part Number	Peak Thrust	Maximum Continuous Thrust	Vertical Runout	Horizontal Runout
LRQ300AP-E01T3	110 N (24.7 lb)	100 N (22.4 lb)	< 35 µm (< 0.001378 ")	< 30 µm (< 0.001181 ")
LRQ300BP-E01T3	100 N (22.4 lb)	100 N (22.4 lb)	< 35 µm (< 0.001378 ")	< 30 µm (< 0.001181 ")
LRQ300DP-E01T3	25 N (5.6 lb)	25 N (5.6 lb)	< 35 µm (< 0.001378 ")	< 30 µm (< 0.001181 ")
LRQ300HP-E01T3	300 N (67.3 lb)	200 N (44.9 lb)	< 35 µm (< 0.001378 ")	< 30 µm (< 0.001181 ")
LRQ450AL-E01T3	110 N (24.7 lb)	100 N (22.4 lb)	< 45 µm (< 0.001772 ")	< 40 µm (< 0.001575 ")
LRQ450BL-E01T3	100 N (22.4 lb)	100 N (22.4 lb)	< 45 µm (< 0.001772 ")	< 40 µm (< 0.001575 ")
LRQ450DL-E01T3	25 N (5.6 lb)	25 N (5.6 lb)	< 45 µm (< 0.001772 ")	< 40 µm (< 0.001575 ")
LRQ450HL-E01T3	300 N (67.3 lb)	200 N (44.9 lb)	< 45 µm (< 0.001772 ")	< 40 µm (< 0.001575 ")
LRQ450AP-E01T3	110 N (24.7 lb)	100 N (22.4 lb)	< 45 µm (< 0.001772 ")	< 40 µm (< 0.001575 ")
LRQ450BP-E01T3	100 N (22.4 lb)	100 N (22.4 lb)	< 45 µm (< 0.001772 ")	< 40 µm (< 0.001575 ")
LRQ450DP-E01T3	25 N (5.6 lb)	25 N (5.6 lb)	< 45 µm (< 0.001772 ")	< 40 µm (< 0.001575 ")
LRQ450HP-E01T3	300 N (67.3 lb)	200 N (44.9 lb)	< 45 µm (< 0.001772 ")	< 40 µm (< 0.001575 ")
LRQ600AL-E01T3	110 N (24.7 lb)	100 N (22.4 lb)	< 75 µm (< 0.002953 ")	< 60 µm (< 0.002362 ")
LRQ600BL-E01T3	100 N (22.4 lb)	100 N (22.4 lb)	< 75 µm (< 0.002953 ")	< 60 µm (< 0.002362 ")
LRQ600DL-E01T3	25 N (5.6 lb)	25 N (5.6 lb)	< 75 µm (< 0.002953 ")	< 60 µm (< 0.002362 ")
LRQ600HL-E01T3	300 N (67.3 lb)	200 N (44.9 lb)	< 75 µm (< 0.002953 ")	< 60 µm (< 0.002362 ")
LRQ600AP-E01T3	110 N (24.7 lb)	100 N (22.4 lb)	< 75 µm (< 0.002953 ")	< 60 µm (< 0.002362 ")
LRQ600BP-E01T3	100 N (22.4 lb)	100 N (22.4 lb)	< 75 µm (< 0.002953 ")	< 60 µm (< 0.002362 ")
LRQ600DP-E01T3	25 N (5.6 lb)	25 N (5.6 lb)	< 75 µm (< 0.002953 ")	< 60 µm (< 0.002362 ")
LRQ600HP-E01T3	300 N (67.3 lb)	200 N (44.9 lb)	< 75 µm (< 0.002953 ")	< 60 µm (< 0.002362 ")

Part Number	Pitch	Roll	Yaw	Linear Motion Per Motor Rev
LRQ075AL-E01T3	0.025 ° (0.436 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	1.27 mm (0.050 ")
LRQ075BL-E01T3	0.025 ° (0.436 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	6.35 mm (0.250 ")
LRQ075DL-E01T3	0.025 ° (0.436 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	25.4 mm (1.000 ")
LRQ075HL-E01T3	0.025 ° (0.436 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	2.5 mm (0.098 ")
LRQ075AP-E01T3	0.025 ° (0.436 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	1.27 mm (0.050 ")
LRQ075BP-E01T3	0.025 ° (0.436 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	6.35 mm (0.250 ")
LRQ075DP-E01T3	0.025 ° (0.436 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	6.35 mm (0.250 ")
LRQ075HP-E01T3	0.025 ° (0.436 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	2.5 mm (0.098 ")
LRQ150AL-E01T3	0.03 ° (0.523 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	1.27 mm (0.050 ")
LRQ150BL-E01T3	0.03 ° (0.523 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	6.35 mm (0.250 ")
LRQ150DL-E01T3	0.03 ° (0.523 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	25.4 mm (1.000 ")
LRQ150HL-E01T3	0.03 ° (0.523 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	2.5 mm (0.098 ")
LRQ150AP-E01T3	0.03 ° (0.523 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	1.27 mm (0.050 ")
LRQ150BP-E01T3	0.03 ° (0.523 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	6.35 mm (0.250 ")
LRQ150DP-E01T3	0.03 ° (0.523 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	25.4 mm (1.000 ")
LRQ150HP-E01T3	0.03 ° (0.523 mrad)	0.015 ° (0.262 mrad)	0.02 ° (0.349 mrad)	2.5 mm (0.098 ")
LRQ300AL-E01T3	0.034 ° (0.593 mrad)	0.015 ° (0.262 mrad)	0.03 ° (0.523 mrad)	1.27 mm (0.050 ")
LRQ300BL-E01T3	0.034 ° (0.593 mrad)	0.015 ° (0.262 mrad)	0.03 ° (0.523 mrad)	6.35 mm (0.250 ")
LRQ300DL-E01T3	0.034 ° (0.593 mrad)	0.015 ° (0.262 mrad)	0.03 ° (0.523 mrad)	25.4 mm (1.000 ")
LRQ300HL-E01T3	0.034 ° (0.593 mrad)	0.015 ° (0.262 mrad)	0.03 ° (0.523 mrad)	2.5 mm (0.098 ")
LRQ300AP-E01T3	0.034 °	0.015 °	0.03 °	1.27 mm

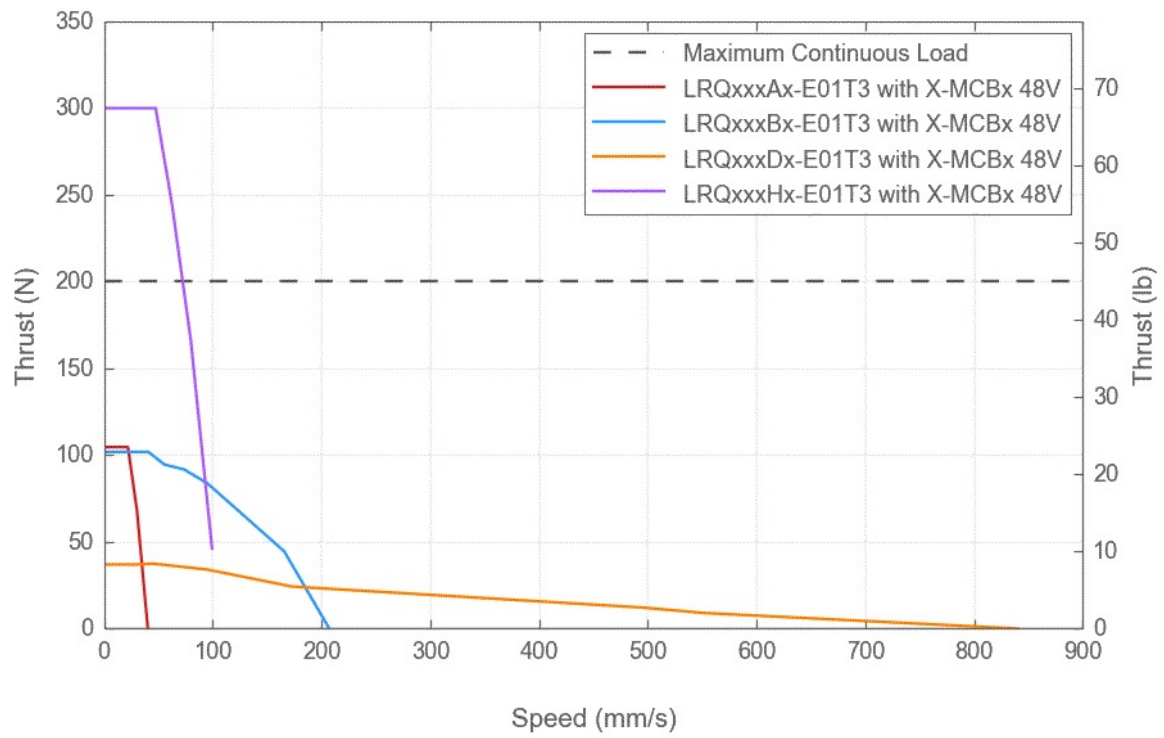
Part Number	Pitch	Roll	Yaw	Linear Motion Per Motor Rev
LRQ300BP-E01T3	(0.593 mrad)	(0.262 mrad)	(0.523 mrad)	(0.050 ")
	0.034 ° (0.593 mrad)	0.015 ° (0.262 mrad)	0.03 ° (0.523 mrad)	6.35 mm (0.250 ")
LRQ300DP-E01T3	0.034 ° (0.593 mrad)	0.015 ° (0.262 mrad)	0.03 ° (0.523 mrad)	25.4 mm (1.000 ")
	0.034 ° (0.593 mrad)	0.015 ° (0.262 mrad)	0.03 ° (0.523 mrad)	2.5 mm (0.098 ")
LRQ450AL-E01T3	0.04 ° (0.698 mrad)	0.025 ° (0.436 mrad)	0.04 ° (0.698 mrad)	1.27 mm (0.050 ")
	0.04 ° (0.698 mrad)	0.025 ° (0.436 mrad)	0.04 ° (0.698 mrad)	6.35 mm (0.250 ")
LRQ450DL-E01T3	0.04 ° (0.698 mrad)	0.025 ° (0.436 mrad)	0.04 ° (0.698 mrad)	25.4 mm (1.000 ")
	0.04 ° (0.698 mrad)	0.025 ° (0.436 mrad)	0.04 ° (0.698 mrad)	2.5 mm (0.098 ")
LRQ450AP-E01T3	0.04 ° (0.698 mrad)	0.025 ° (0.436 mrad)	0.04 ° (0.698 mrad)	1.27 mm (0.050 ")
	0.04 ° (0.698 mrad)	0.025 ° (0.436 mrad)	0.04 ° (0.698 mrad)	6.35 mm (0.250 ")
LRQ450DP-E01T3	0.04 ° (0.698 mrad)	0.025 ° (0.436 mrad)	0.04 ° (0.698 mrad)	25.4 mm (1.000 ")
	0.04 ° (0.698 mrad)	0.025 ° (0.436 mrad)	0.04 ° (0.698 mrad)	2.5 mm (0.098 ")
LRQ600AL-E01T3	0.045 ° (0.785 mrad)	0.035 ° (0.611 mrad)	0.04 ° (0.698 mrad)	1.27 mm (0.050 ")
	0.045 ° (0.785 mrad)	0.035 ° (0.611 mrad)	0.04 ° (0.698 mrad)	6.35 mm (0.250 ")
LRQ600DL-E01T3	0.045 ° (0.785 mrad)	0.035 ° (0.611 mrad)	0.04 ° (0.698 mrad)	25.4 mm (1.000 ")
	0.045 ° (0.785 mrad)	0.035 ° (0.611 mrad)	0.04 ° (0.698 mrad)	2.5 mm (0.098 ")
LRQ600AP-E01T3	0.045 ° (0.785 mrad)	0.035 ° (0.611 mrad)	0.04 ° (0.698 mrad)	1.27 mm (0.050 ")
	0.045 ° (0.785 mrad)	0.035 ° (0.611 mrad)	0.04 ° (0.698 mrad)	6.35 mm (0.250 ")
LRQ600DP-E01T3	0.045 ° (0.785 mrad)	0.035 ° (0.611 mrad)	0.04 ° (0.698 mrad)	25.4 mm (1.000 ")
	0.045 ° (0.785 mrad)	0.035 ° (0.611 mrad)	0.04 ° (0.698 mrad)	2.5 mm (0.098 ")

Part Number	Mechanical Drive System	Weight
LRQ075AL-E01T3	Precision lead screw	2.15 kg (4.740 lb)
LRQ075BL-E01T3	Precision lead screw	2.15 kg (4.740 lb)
LRQ075DL-E01T3	Precision lead screw	2.15 kg (4.740 lb)
LRQ075HL-E01T3	Precision ball screw	2.15 kg (4.740 lb)
LRQ075AP-E01T3	Precision lead screw	2.29 kg (5.049 lb)
LRQ075BP-E01T3	Precision lead screw	2.29 kg (5.049 lb)
LRQ075DP-E01T3	Precision lead screw	2.29 kg (5.049 lb)
LRQ075HP-E01T3	Precision ball screw	2.29 kg (5.049 lb)
LRQ150AL-E01T3	Precision lead screw	2.52 kg (5.556 lb)
LRQ150BL-E01T3	Precision lead screw	2.52 kg (5.556 lb)
LRQ150DL-E01T3	Precision lead screw	2.52 kg (5.556 lb)
LRQ150HL-E01T3	Precision ball screw	2.52 kg (5.556 lb)
LRQ150AP-E01T3	Precision lead screw	2.66 kg (5.864 lb)
LRQ150BP-E01T3	Precision lead screw	2.66 kg (5.864 lb)
LRQ150DP-E01T3	Precision lead screw	2.66 kg (5.864 lb)
LRQ150HP-E01T3	Precision ball screw	2.66 kg (5.864 lb)
LRQ300AL-E01T3	Precision lead screw	3.28 kg (7.231 lb)
LRQ300BL-E01T3	Precision lead screw	3.28 kg (7.231 lb)
LRQ300DL-E01T3	Precision lead screw	3.28 kg (7.231 lb)
LRQ300HL-E01T3	Precision ball screw	3.28 kg (7.231 lb)
LRQ300AP-E01T3	Precision lead	3.42 kg

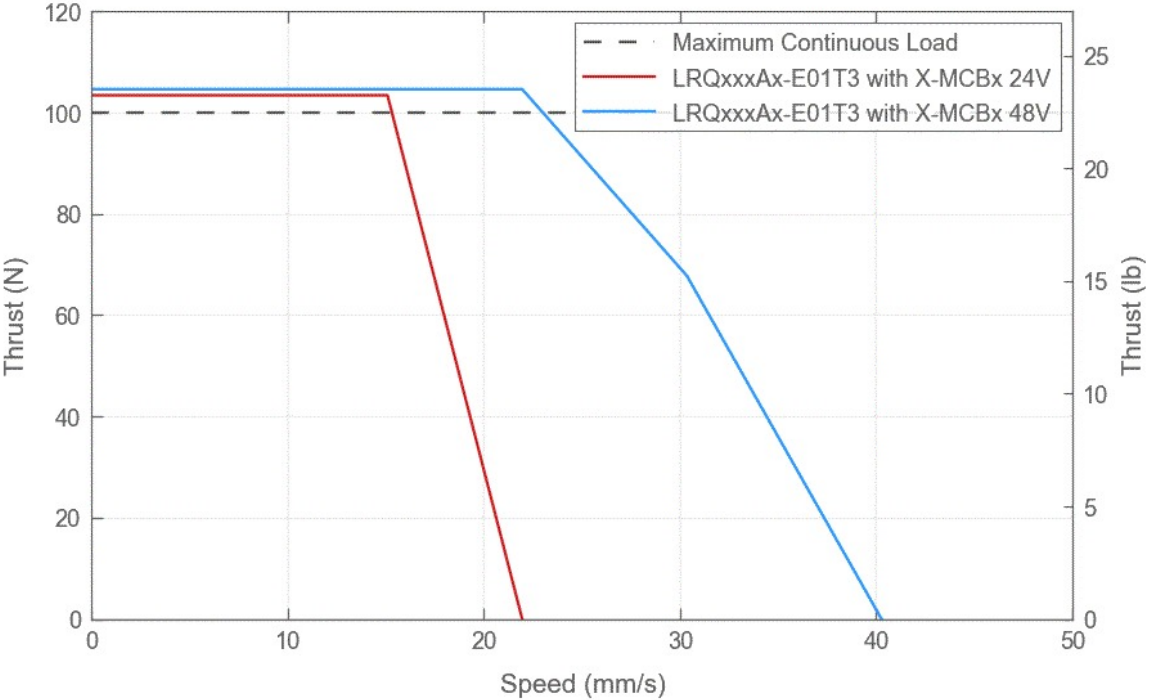
Part Number	Mechanical Drive System	Weight
	screw	(7.540 lb)
LRQ300BP-E01T3	Precision lead screw	3.42 kg (7.540 lb)
LRQ300DP-E01T3	Precision lead screw	3.42 kg (7.540 lb)
LRQ300HP-E01T3	Precision ball screw	3.42 kg (7.540 lb)
LRQ450AL-E01T3	Precision lead screw	4.03 kg (8.885 lb)
LRQ450BL-E01T3	Precision lead screw	4.03 kg (8.885 lb)
LRQ450DL-E01T3	Precision lead screw	4.03 kg (8.885 lb)
LRQ450HL-E01T3	Precision ball screw	4.03 kg (8.885 lb)
LRQ450AP-E01T3	Precision lead screw	4.17 kg (9.193 lb)
LRQ450BP-E01T3	Precision lead screw	4.17 kg (9.193 lb)
LRQ450DP-E01T3	Precision lead screw	4.17 kg (9.193 lb)
LRQ450HP-E01T3	Precision ball screw	4.17 kg (9.193 lb)
LRQ600AL-E01T3	Precision lead screw	4.74 kg (10.450 lb)
LRQ600BL-E01T3	Precision lead screw	4.74 kg (10.450 lb)
LRQ600DL-E01T3	Precision lead screw	4.74 kg (10.450 lb)
LRQ600HL-E01T3	Precision ball screw	4.74 kg (10.450 lb)
LRQ600AP-E01T3	Precision lead screw	4.88 kg (10.759 lb)
LRQ600BP-E01T3	Precision lead screw	4.88 kg (10.759 lb)
LRQ600DP-E01T3	Precision lead screw	4.88 kg (10.759 lb)
LRQ600HP-E01T3	Precision ball screw	4.88 kg (10.759 lb)

Charts

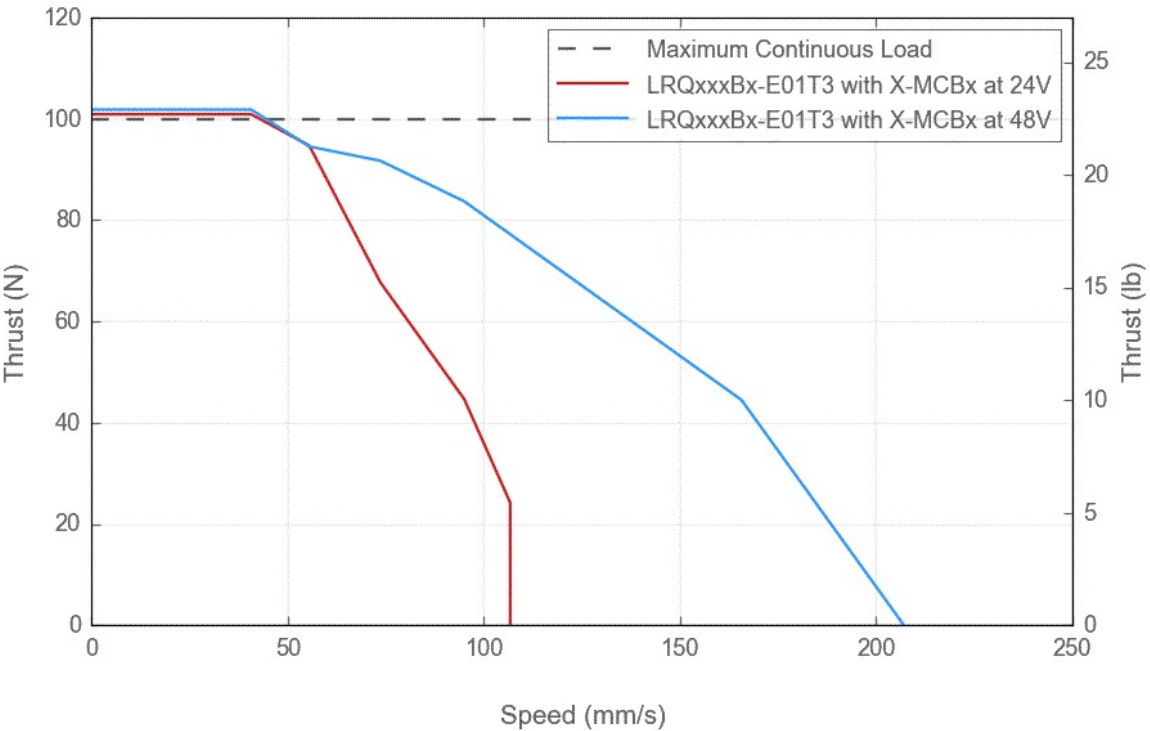
Thrust Speed Performance



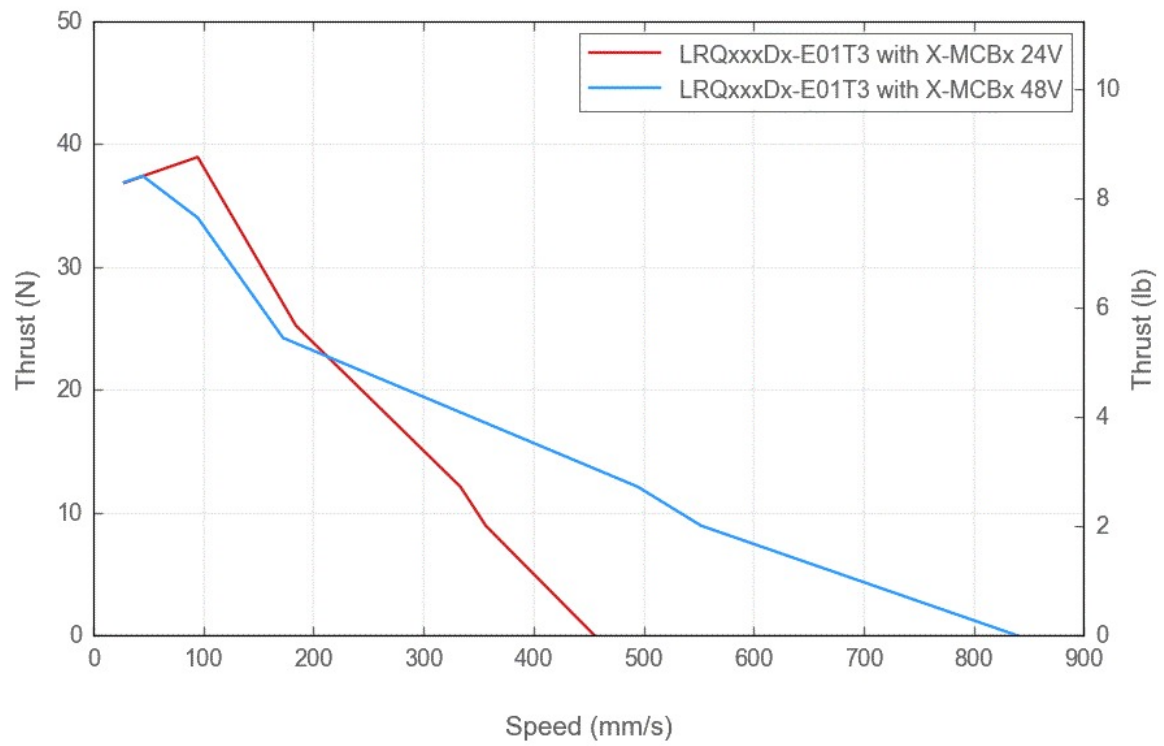
Thrust Speed Performance



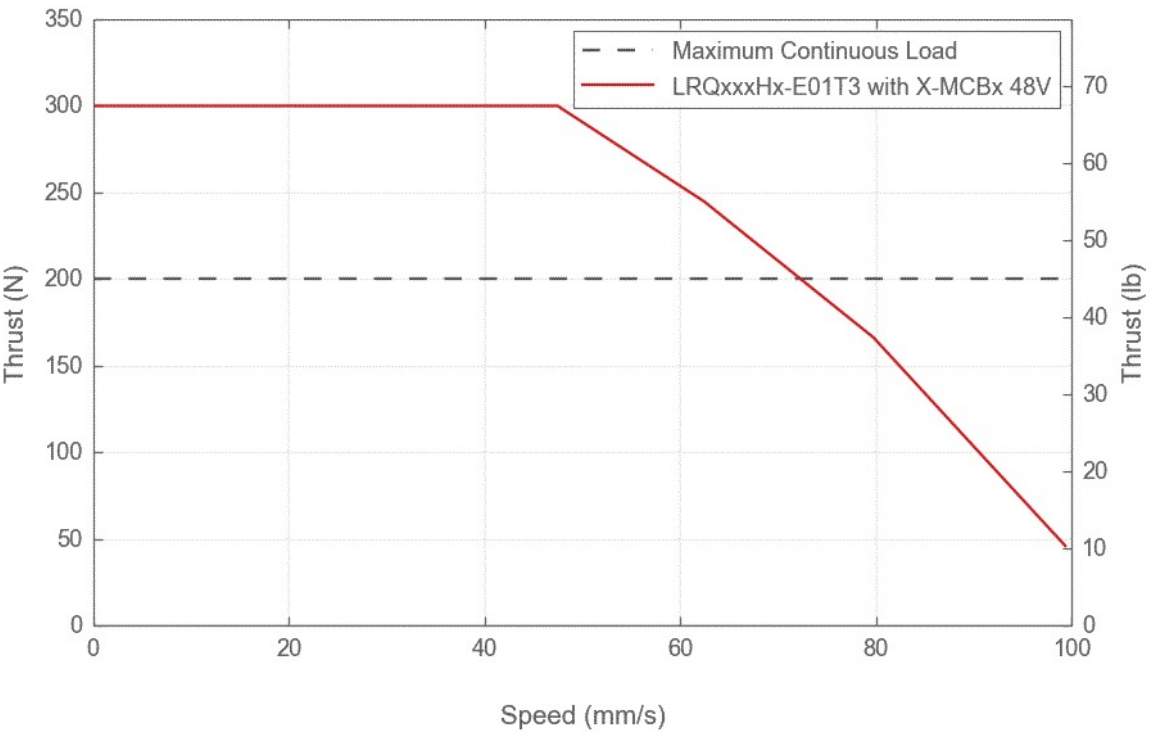
Thrust Speed Performance



Thrust Speed Performance



Thrust Speed Performance



LRQ Linear Bearing Lifetime

