

## LRT-AEC Series Datasheet



- 100, 250, 500, 750, 1000, 1500 mm travel
- 20  $\mu\text{m}$  full travel accuracy
- 300 kg load capacity
- Includes stainless steel dust covers
- Ball screw and lead screw configurations
- Integrated linear encoders with 50 nm resolution provide slip/stall detection and position correction
- Optional integrated power-off brake for vertical applications
- Designed for use with an X-MCC Series controller for coordinated motion
- With AutoDetect, the X-MCC controller configures its settings automatically for the connected peripheral

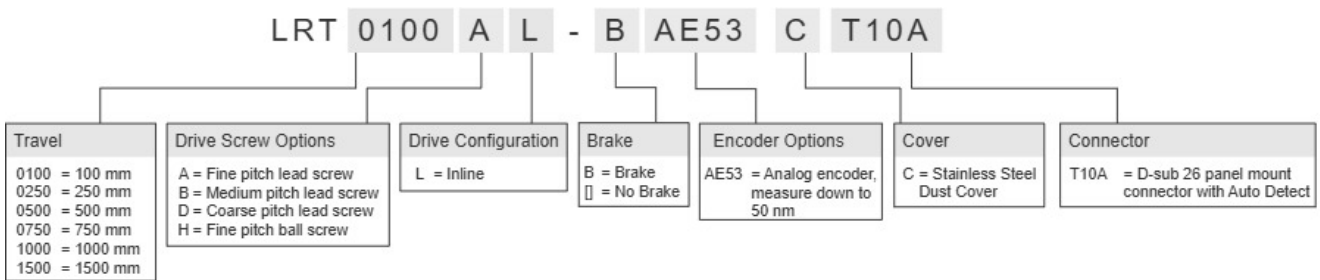
## LRT-AEC Series Overview

Zaber's LRT-AEC Series are computer-controlled, motorized linear stages designed for positioning high loads to within 20 µm accuracy. An integrated linear encoder combined with stage calibration provides high accuracy positioning over the full travel of the device. They have low pitch, roll, yaw and runout and long lifetime. Flexible dust covers keep out moderate debris. An optional power-off brake is available to enable vertical applications with backdrivable screws.

The stages are designed to connect directly to our X-MCC Series universal motor controllers, or they can be used with third party 2-phase stepper motor controllers through the panel mount DB26 connector. Set up is easy with AutoDetect. Once connected, the X-MCC controller will automatically detect and configure the LRT-AEC.

For more information visit: <https://www.zaber.com/products/linear-stages/LRT-AEC>

## LRT-AEC Series Part Numbering & Options



## LRT-AEC Series Drawings

- [LRT-AECT10A.png \(Drawing for the LRT-AECT10A\)](#)
- [LRT-BAECT10A.png \(Drawing for the LRT-BAECT10A\)](#)

## LRT-AEC Series Specifications

| <b>Built-in Controller</b>  |                                      |
|-----------------------------|--------------------------------------|
| Recommended Controller      | X-MCC (48 V) Recommended             |
| AutoDetect                  | Yes                                  |
| Accuracy (unidirectional)   | 20 $\mu\text{m}$ (0.000787")         |
| Backlash                    | < 15 $\mu\text{m}$ (< 0.000591")     |
| Encoder Type                | Linear analog encoder                |
| Encoder Resolution          | 50 nm                                |
| Maximum Centered Load       | 2940 N (659.3 lb)                    |
| Maximum Moment (Pitch)      | 70 N-m (51.7 ft-lb)                  |
| Maximum Moment (Roll)       | 80 N-m (59.0 ft-lb)                  |
| Maximum Moment (Yaw)        | 70 N-m (51.7 ft-lb)                  |
| Vertical Runout             | < 10 $\mu\text{m}$ (< 0.000394")     |
| Horizontal Runout           | < 50 $\mu\text{m}$ (< 0.001968")     |
| Pitch                       | 0.015° (0.262 mrad)                  |
| Roll                        | 0.02° (0.349 mrad)                   |
| Yaw                         | 0.03° (0.523 mrad)                   |
| Stiffness in Pitch          | 1400 N-m/° (12 $\mu\text{rad/N-m}$ ) |
| Stiffness in Roll           | 700 N-m/° (25 $\mu\text{rad/N-m}$ )  |
| Stiffness in Yaw            | 1200 N-m/° (15 $\mu\text{rad/N-m}$ ) |
| Motor Steps Per Rev         | 200                                  |
| Motor Type                  | Stepper (2-phase)                    |
| Motor Rated Current         | 3000 mA/phase                        |
| Inductance                  | 2 mH/phase                           |
| Motor Connection            | D-sub 26                             |
| Guide Type                  | Recirculating Ball Linear Guide      |
| Limit or Home Sensing       | Linear Encoder Index Mark            |
| Axes of Motion              | 1                                    |
| LED Indicators              | No                                   |
| Operating Temperature Range | 0 to 50 °C                           |
| CE Compliant                | Yes                                  |
| Vacuum Compatible           | No                                   |

| Part Number          | Microstep Size (Default Resolution) | Travel Range     | Repeatability          | Minimum Incremental Move |
|----------------------|-------------------------------------|------------------|------------------------|--------------------------|
| LRT0100AL-AE53CT10A  | 0.124023438 µm                      | 100 mm (3.937")  | < 1 µm (< 0.000039")   | 500 nm                   |
| LRT0100BL-AE53CT10A  | 0.49609375 µm                       | 100 mm (3.937")  | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT0100BL-BAE53CT10A | 0.49609375 µm                       | 100 mm (3.937")  | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT0100DL-AE53CT10A  | 1.984375 µm                         | 100 mm (3.937")  | < 1.5 µm (< 0.000059") | 8000 nm                  |
| LRT0100DL-BAE53CT10A | 1.984375 µm                         | 100 mm (3.937")  | < 1.5 µm (< 0.000059") | 8000 nm                  |
| LRT0100HL-AE53CT10A  | 0.390625 µm                         | 100 mm (3.937")  | < 1.5 µm (< 0.000059") | 1200 nm                  |
| LRT0100HL-BAE53CT10A | 0.390625 µm                         | 100 mm (3.937")  | < 1.5 µm (< 0.000059") | 1200 nm                  |
| LRT0250AL-AE53CT10A  | 0.124023438 µm                      | 250 mm (9.843")  | < 1 µm (< 0.000039")   | 500 nm                   |
| LRT0250BL-AE53CT10A  | 0.49609375 µm                       | 250 mm (9.843")  | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT0250BL-BAE53CT10A | 0.49609375 µm                       | 250 mm (9.843")  | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT0250DL-AE53CT10A  | 1.984375 µm                         | 250 mm (9.843")  | < 1.5 µm (< 0.000059") | 8000 nm                  |
| LRT0250DL-BAE53CT10A | 1.984375 µm                         | 250 mm (9.843")  | < 1.5 µm (< 0.000059") | 8000 nm                  |
| LRT0250HL-AE53CT10A  | 0.390625 µm                         | 250 mm (9.843")  | < 1.5 µm (< 0.000059") | 1200 nm                  |
| LRT0250HL-BAE53CT10A | 0.390625 µm                         | 250 mm (9.843")  | < 1.5 µm (< 0.000059") | 1200 nm                  |
| LRT0500AL-AE53CT10A  | 0.124023438 µm                      | 500 mm (19.685") | < 1 µm (< 0.000039")   | 500 nm                   |
| LRT0500BL-AE53CT10A  | 0.49609375 µm                       | 500 mm (19.685") | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT0500BL-BAE53CT10A | 0.49609375 µm                       | 500 mm (19.685") | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT0500DL-AE53CT10A  | 1.984375 µm                         | 500 mm (19.685") | < 1.5 µm (< 0.000059") | 8000 nm                  |
| LRT0500DL-BAE53CT10A | 1.984375 µm                         | 500 mm (19.685") | < 1.5 µm (< 0.000059") | 8000 nm                  |
| LRT0500HL-AE53CT10A  | 0.390625 µm                         | 500 mm (19.685") | < 1.5 µm (< 0.000059") | 1200 nm                  |
| LRT0500HL-BAE53CT10A | 0.390625 µm                         | 500 mm (19.685") | < 1.5 µm (< 0.000059") | 1200 nm                  |
|                      |                                     | 750 mm           | < 1 µm                 |                          |

| Part Number          | Microstep Size (Default Resolution) | Travel Range      | Repeatability          | Minimum Incremental Move |
|----------------------|-------------------------------------|-------------------|------------------------|--------------------------|
| LRT0750AL-AE53CT10A  | 0.124023438 µm                      | (29.528")         | (< 0.000039")          | 500 nm                   |
| LRT0750BL-AE53CT10A  | 0.49609375 µm                       | 750 mm (29.528")  | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT0750BL-BAE53CT10A | 0.49609375 µm                       | 750 mm (29.528")  | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT0750DL-AE53CT10A  | 1.984375 µm                         | 750 mm (29.528")  | < 1.5 µm (< 0.000059") | 8000 nm                  |
| LRT0750DL-BAE53CT10A | 1.984375 µm                         | 750 mm (29.528")  | < 1.5 µm (< 0.000059") | 8000 nm                  |
| LRT0750HL-AE53CT10A  | 0.390625 µm                         | 750 mm (29.528")  | < 1.5 µm (< 0.000059") | 1200 nm                  |
| LRT0750HL-BAE53CT10A | 0.390625 µm                         | 750 mm (29.528")  | < 1.5 µm (< 0.000059") | 1200 nm                  |
| LRT1000AL-AE53CT10A  | 0.124023438 µm                      | 1000 mm (39.370") | < 1 µm (< 0.000039")   | 500 nm                   |
| LRT1000BL-AE53CT10A  | 0.49609375 µm                       | 1000 mm (39.370") | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT1000BL-BAE53CT10A | 0.49609375 µm                       | 1000 mm (39.370") | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT1000DL-AE53CT10A  | 1.984375 µm                         | 1000 mm (39.370") | < 1.5 µm (< 0.000059") | 8000 nm                  |
| LRT1000DL-BAE53CT10A | 1.984375 µm                         | 1000 mm (39.370") | < 1.5 µm (< 0.000059") | 8000 nm                  |
| LRT1000HL-AE53CT10A  | 0.390625 µm                         | 1000 mm (39.370") | < 1.5 µm (< 0.000059") | 1200 nm                  |
| LRT1000HL-BAE53CT10A | 0.390625 µm                         | 1000 mm (39.370") | < 1.5 µm (< 0.000059") | 1200 nm                  |
| LRT1500AL-AE53CT10A  | 0.124023438 µm                      | 1500 mm (59.055") | < 1 µm (< 0.000039")   | 500 nm                   |
| LRT1500BL-AE53CT10A  | 0.49609375 µm                       | 1500 mm (59.055") | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT1500BL-BAE53CT10A | 0.49609375 µm                       | 1500 mm (59.055") | < 1.5 µm (< 0.000059") | 2000 nm                  |
| LRT1500DL-AE53CT10A  | 1.984375 µm                         | 1500 mm (59.055") | < 1.5 µm (< 0.000059") | 8000 nm                  |
| LRT1500DL-BAE53CT10A | 1.984375 µm                         | 1500 mm (59.055") | < 1.5 µm (< 0.000059") | 8000 nm                  |

| Part Number | Maximum Speed | Minimum Speed | Speed Resolution | Peak Thrust |
|-------------|---------------|---------------|------------------|-------------|
|             |               |               |                  |             |

| Part Number          | Maximum Speed           | Minimum Speed                      | Speed Resolution                   | Peak Thrust          |
|----------------------|-------------------------|------------------------------------|------------------------------------|----------------------|
| LRT0100AL-AE53CT10A  | 45 mm/s<br>(1.772"/s)   | 0.0000757 mm/s<br>(0.000003"/s)    | 0.0000757 mm/s<br>(0.000003"/s)    | 1200 N<br>(269.1 lb) |
| LRT0100BL-AE53CT10A  | 175 mm/s<br>(6.890"/s)  | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT0100BL-BAE53CT10A | 175 mm/s<br>(6.890"/s)  | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT0100DL-AE53CT10A  | 700 mm/s<br>(27.559"/s) | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |
| LRT0100DL-BAE53CT10A | 700 mm/s<br>(27.559"/s) | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |
| LRT0100HL-AE53CT10A  | 240 mm/s<br>(9.449"/s)  | 0.000238583 mm<br>/s (0.000009"/s) | 0.000238583 mm<br>/s (0.000009"/s) | 1200 N<br>(269.1 lb) |
| LRT0100HL-BAE53CT10A | 240 mm/s<br>(9.449"/s)  | 0.000238583 mm<br>/s (0.000009"/s) | 0.000238583 mm<br>/s (0.000009"/s) | 1200 N<br>(269.1 lb) |
| LRT0250AL-AE53CT10A  | 45 mm/s<br>(1.772"/s)   | 0.0000757 mm/s<br>(0.000003"/s)    | 0.0000757 mm/s<br>(0.000003"/s)    | 1200 N<br>(269.1 lb) |
| LRT0250BL-AE53CT10A  | 175 mm/s<br>(6.890"/s)  | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT0250BL-BAE53CT10A | 175 mm/s<br>(6.890"/s)  | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT0250DL-AE53CT10A  | 700 mm/s<br>(27.559"/s) | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |
| LRT0250DL-BAE53CT10A | 700 mm/s<br>(27.559"/s) | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |
| LRT0250HL-AE53CT10A  | 240 mm/s<br>(9.449"/s)  | 0.000238583 mm<br>/s (0.000009"/s) | 0.000238583 mm<br>/s (0.000009"/s) | 1200 N<br>(269.1 lb) |
| LRT0250HL-BAE53CT10A | 240 mm/s<br>(9.449"/s)  | 0.000238583 mm<br>/s (0.000009"/s) | 0.000238583 mm<br>/s (0.000009"/s) | 1200 N<br>(269.1 lb) |
| LRT0500AL-AE53CT10A  | 45 mm/s<br>(1.772"/s)   | 0.0000757 mm/s<br>(0.000003"/s)    | 0.0000757 mm/s<br>(0.000003"/s)    | 1200 N<br>(269.1 lb) |
| LRT0500BL-AE53CT10A  | 175 mm/s<br>(6.890"/s)  | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT0500BL-BAE53CT10A | 175 mm/s<br>(6.890"/s)  | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT0500DL-AE53CT10A  | 700 mm/s<br>(27.559"/s) | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |
| LRT0500DL-BAE53CT10A | 700 mm/s<br>(27.559"/s) | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |
| LRT0500HL-AE53CT10A  | 240 mm/s<br>(9.449"/s)  | 0.000238583 mm<br>/s (0.000009"/s) | 0.000238583 mm<br>/s (0.000009"/s) | 1200 N<br>(269.1 lb) |
| LRT0500HL-BAE53CT10A | 240 mm/s<br>(9.449"/s)  | 0.000238583 mm<br>/s (0.000009"/s) | 0.000238583 mm<br>/s (0.000009"/s) | 1200 N<br>(269.1 lb) |

| Part Number          | Maximum Speed           | Minimum Speed                      | Speed Resolution                   | Peak Thrust          |
|----------------------|-------------------------|------------------------------------|------------------------------------|----------------------|
| LRT0750AL-AE53CT10A  | 45 mm/s<br>(1.772"/s)   | 0.0000757 mm/s<br>(0.000003"/s)    | 0.0000757 mm/s<br>(0.000003"/s)    | 1200 N<br>(269.1 lb) |
| LRT0750BL-AE53CT10A  | 175 mm/s<br>(6.890"/s)  | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT0750BL-BAE53CT10A | 175 mm/s<br>(6.890"/s)  | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT0750DL-AE53CT10A  | 700 mm/s<br>(27.559"/s) | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |
| LRT0750DL-BAE53CT10A | 700 mm/s<br>(27.559"/s) | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |
| LRT0750HL-AE53CT10A  | 150 mm/s<br>(5.905"/s)  | 0.000238583 mm<br>/s (0.000009"/s) | 0.000238583 mm<br>/s (0.000009"/s) | 1200 N<br>(269.1 lb) |
| LRT0750HL-BAE53CT10A | 150 mm/s<br>(5.905"/s)  | 0.000238583 mm<br>/s (0.000009"/s) | 0.000238583 mm<br>/s (0.000009"/s) | 1200 N<br>(269.1 lb) |
| LRT1000AL-AE53CT10A  | 28 mm/s<br>(1.102"/s)   | 0.0000757 mm/s<br>(0.000003"/s)    | 0.0000757 mm/s<br>(0.000003"/s)    | 1200 N<br>(269.1 lb) |
| LRT1000BL-AE53CT10A  | 120 mm/s<br>(4.724"/s)  | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT1000BL-BAE53CT10A | 120 mm/s<br>(4.724"/s)  | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT1000DL-AE53CT10A  | 500 mm/s<br>(19.685"/s) | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |
| LRT1000DL-BAE53CT10A | 500 mm/s<br>(19.685"/s) | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |
| LRT1000HL-AE53CT10A  | 95 mm/s<br>(3.740"/s)   | 0.000238583 mm<br>/s (0.000009"/s) | 0.000238583 mm<br>/s (0.000009"/s) | 1200 N<br>(269.1 lb) |
| LRT1000HL-BAE53CT10A | 95 mm/s<br>(3.740"/s)   | 0.000238583 mm<br>/s (0.000009"/s) | 0.000238583 mm<br>/s (0.000009"/s) | 1200 N<br>(269.1 lb) |
| LRT1500AL-AE53CT10A  | 13 mm/s<br>(0.512"/s)   | 0.0000757 mm/s<br>(0.000003"/s)    | 0.0000757 mm/s<br>(0.000003"/s)    | 1200 N<br>(269.1 lb) |
| LRT1500BL-AE53CT10A  | 55 mm/s<br>(2.165"/s)   | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT1500BL-BAE53CT10A | 55 mm/s<br>(2.165"/s)   | 0.000303 mm/s<br>(0.000012"/s)     | 0.000303 mm/s<br>(0.000012"/s)     | 600 N (134.6 lb)     |
| LRT1500DL-AE53CT10A  | 225 mm/s<br>(8.858"/s)  | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |
| LRT1500DL-BAE53CT10A | 225 mm/s<br>(8.858"/s)  | 0.00121 mm/s<br>(0.000048"/s)      | 0.00121 mm/s<br>(0.000048"/s)      | 200 N (44.9 lb)      |

| Part Number | Back-driving Force* | Maximum Continuous Thrust | Linear Motion Per Motor Rev | Maximum Axial Brake Force |
|-------------|---------------------|---------------------------|-----------------------------|---------------------------|
|             |                     | 1200 N                    | 1.5875 mm                   |                           |

| Part Number          | Back-driving Force*     | Maximum Continuous Thrust | Linear Motion Per Motor Rev | Maximum Axial Brake Force |
|----------------------|-------------------------|---------------------------|-----------------------------|---------------------------|
| LRT0100AL-AE53CT10A  | Non-back-driving        | (269.1 lb)                | (0.062")                    |                           |
| LRT0100BL-AE53CT10A  | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            |                           |
| LRT0100BL-BAE53CT10A | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            | 600 N (134.9 lb)          |
| LRT0100DL-AE53CT10A  | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            |                           |
| LRT0100DL-BAE53CT10A | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            | 180 N (40.5 lb)           |
| LRT0100HL-AE53CT10A  | (± 30%) 157 N (35.2 lb) | 1200 N (269.1 lb)         | 5 mm (0.197")               |                           |
| LRT0100HL-BAE53CT10A | (± 30%) 157 N (35.2 lb) | 1200 N (269.1 lb)         | 5 mm (0.197")               | 1200 N (269.8 lb)         |
| LRT0250AL-AE53CT10A  | Non-back-driving        | 1200 N (269.1 lb)         | 1.5875 mm (0.062")          |                           |
| LRT0250BL-AE53CT10A  | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            |                           |
| LRT0250BL-BAE53CT10A | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            | 600 N (134.9 lb)          |
| LRT0250DL-AE53CT10A  | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            |                           |
| LRT0250DL-BAE53CT10A | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            | 180 N (40.5 lb)           |
| LRT0250HL-AE53CT10A  | (± 30%) 157 N (35.2 lb) | 1200 N (269.1 lb)         | 5 mm (0.197")               |                           |
| LRT0250HL-BAE53CT10A | (± 30%) 157 N (35.2 lb) | 1200 N (269.1 lb)         | 5 mm (0.197")               | 1200 N (269.8 lb)         |
| LRT0500AL-AE53CT10A  | Non-back-driving        | 1200 N (269.1 lb)         | 1.5875 mm (0.062")          |                           |
| LRT0500BL-AE53CT10A  | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            |                           |
| LRT0500BL-BAE53CT10A | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            | 600 N (134.9 lb)          |
| LRT0500DL-AE53CT10A  | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            |                           |
| LRT0500DL-BAE53CT10A | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            | 180 N (40.5 lb)           |
| LRT0500HL-AE53CT10A  | (± 30%) 157 N (35.2 lb) | 1200 N (269.1 lb)         | 5 mm (0.197")               |                           |
| LRT0500HL-BAE53CT10A | (± 30%) 157 N (35.2 lb) | 1200 N (269.1 lb)         | 5 mm (0.197")               | 1200 N (269.8 lb)         |

| Part Number          | Back-driving Force*     | Maximum Continuous Thrust | Linear Motion Per Motor Rev | Maximum Axial Brake Force |
|----------------------|-------------------------|---------------------------|-----------------------------|---------------------------|
| LRT0750AL-AE53CT10A  | Non-back-driving        | 1200 N (269.1 lb)         | 1.5875 mm (0.062")          |                           |
| LRT0750BL-AE53CT10A  | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            |                           |
| LRT0750BL-BAE53CT10A | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            | 600 N (134.9 lb)          |
| LRT0750DL-AE53CT10A  | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            |                           |
| LRT0750DL-BAE53CT10A | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            | 180 N (40.5 lb)           |
| LRT0750HL-AE53CT10A  | (± 30%) 157 N (35.2 lb) | 1200 N (269.1 lb)         | 5 mm (0.197")               |                           |
| LRT0750HL-BAE53CT10A | (± 30%) 157 N (35.2 lb) | 1200 N (269.1 lb)         | 5 mm (0.197")               | 1200 N (269.8 lb)         |
| LRT1000AL-AE53CT10A  | Non-back-driving        | 1200 N (269.1 lb)         | 1.5875 mm (0.062")          |                           |
| LRT1000BL-AE53CT10A  | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            |                           |
| LRT1000BL-BAE53CT10A | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            | 600 N (134.9 lb)          |
| LRT1000DL-AE53CT10A  | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            |                           |
| LRT1000DL-BAE53CT10A | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            | 180 N (40.5 lb)           |
| LRT1000HL-AE53CT10A  | (± 30%) 157 N (35.2 lb) | 1200 N (269.1 lb)         | 5 mm (0.197")               |                           |
| LRT1000HL-BAE53CT10A | (± 30%) 157 N (35.2 lb) | 1200 N (269.1 lb)         | 5 mm (0.197")               | 1200 N (269.8 lb)         |
| LRT1500AL-AE53CT10A  | Non-back-driving        | 1200 N (269.1 lb)         | 1.5875 mm (0.062")          |                           |
| LRT1500BL-AE53CT10A  | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            |                           |
| LRT1500BL-BAE53CT10A | (± 30%) 420 N (94.2 lb) | 600 N (134.6 lb)          | 6.35 mm (0.250")            | 600 N (134.9 lb)          |
| LRT1500DL-AE53CT10A  | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            |                           |
| LRT1500DL-BAE53CT10A | (± 30%) 40 N (9.0 lb)   | 180 N (40.4 lb)           | 25.4 mm (1.000")            | 180 N (40.5 lb)           |

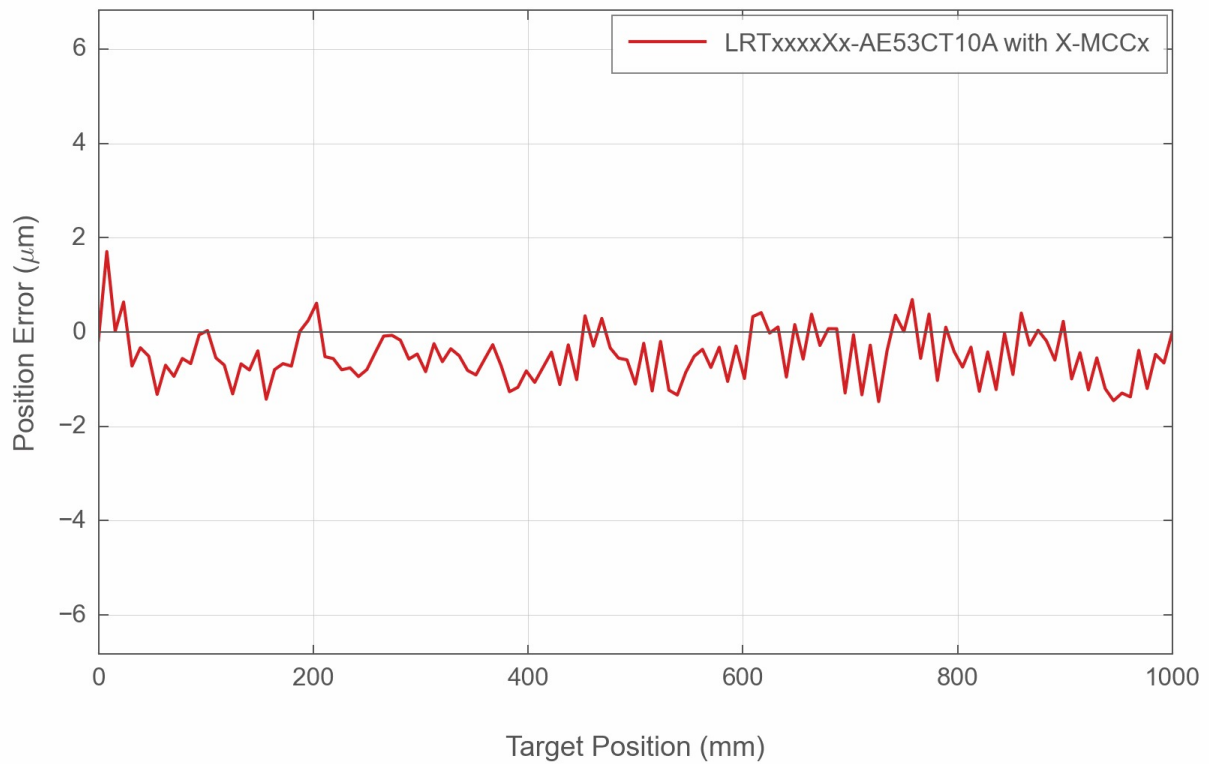
| Part Number | Weight |
|-------------|--------|
|-------------|--------|

| Part Number          | Weight               |
|----------------------|----------------------|
| LRT0100AL-AE53CT10A  | 3.65 kg (8.047 lb)   |
| LRT0100BL-AE53CT10A  | 3.65 kg (8.047 lb)   |
| LRT0100BL-BAE53CT10A | 4.276 kg (9.427 lb)  |
| LRT0100DL-AE53CT10A  | 3.65 kg (8.047 lb)   |
| LRT0100DL-BAE53CT10A | 4.276 kg (9.427 lb)  |
| LRT0100HL-AE53CT10A  | 3.65 kg (8.047 lb)   |
| LRT0100HL-BAE53CT10A | 4.276 kg (9.427 lb)  |
| LRT0250AL-AE53CT10A  | 4.441 kg (9.791 lb)  |
| LRT0250BL-AE53CT10A  | 4.441 kg (9.791 lb)  |
| LRT0250BL-BAE53CT10A | 5.067 kg (11.171 lb) |
| LRT0250DL-AE53CT10A  | 4.441 kg (9.791 lb)  |
| LRT0250DL-BAE53CT10A | 5.067 kg (11.171 lb) |
| LRT0250HL-AE53CT10A  | 4.441 kg (9.791 lb)  |
| LRT0250HL-BAE53CT10A | 5.067 kg (11.171 lb) |
| LRT0500AL-AE53CT10A  | 5.758 kg (12.694 lb) |
| LRT0500BL-AE53CT10A  | 5.758 kg (12.694 lb) |
| LRT0500BL-BAE53CT10A | 6.384 kg (14.074 lb) |
| LRT0500DL-AE53CT10A  | 5.758 kg (12.694 lb) |
| LRT0500DL-BAE53CT10A | 6.384 kg (14.074 lb) |
| LRT0500HL-AE53CT10A  | 5.758 kg (12.694 lb) |
| LRT0500HL-BAE53CT10A | 6.384 kg (14.074 lb) |
| LRT0750AL-AE53CT10A  | 7.076 kg (15.600 lb) |
| LRT0750BL-AE53CT10A  | 7.076 kg (15.600 lb) |
| LRT0750BL-BAE53CT10A | 7.702 kg (16.980 lb) |
| LRT0750DL-AE53CT10A  | 7.076 kg (15.600 lb) |
| LRT0750DL-BAE53CT10A | 7.702 kg (16.980 lb) |
| LRT0750HL-AE53CT10A  | 7.076 kg (15.600 lb) |
| LRT0750HL-BAE53CT10A | 7.702 kg (16.980 lb) |
| LRT1000AL-AE53CT10A  | 8.393 kg (18.503 lb) |
| LRT1000BL-AE53CT10A  | 8.393 kg (18.503 lb) |
| LRT1000BL-BAE53CT10A | 9.019 kg (19.883 lb) |
| LRT1000DL-AE53CT10A  | 8.393 kg (18.503 lb) |
| LRT1000DL-BAE53CT10A | 9.019 kg (19.883 lb) |

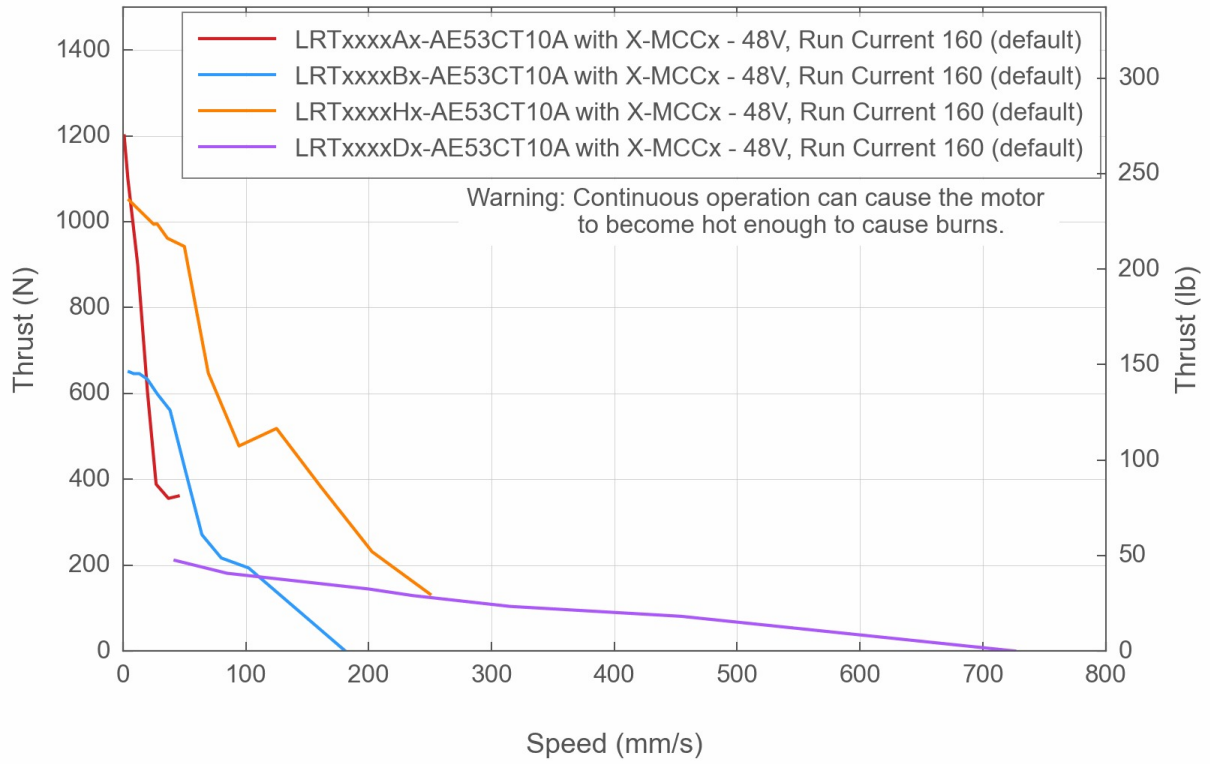
| Part Number          | Weight                |
|----------------------|-----------------------|
| LRT1000HL-AE53CT10A  | 8.393 kg (18.503 lb)  |
| LRT1000HL-BAE53CT10A | 9.019 kg (19.883 lb)  |
| LRT1500AL-AE53CT10A  | 11.028 kg (24.313 lb) |
| LRT1500BL-AE53CT10A  | 11.028 kg (24.313 lb) |
| LRT1500BL-BAE53CT10A | 11.654 kg (25.693 lb) |
| LRT1500DL-AE53CT10A  | 11.028 kg (24.313 lb) |
| LRT1500DL-BAE53CT10A | 11.654 kg (25.693 lb) |

## LRT-AEC Series Charts

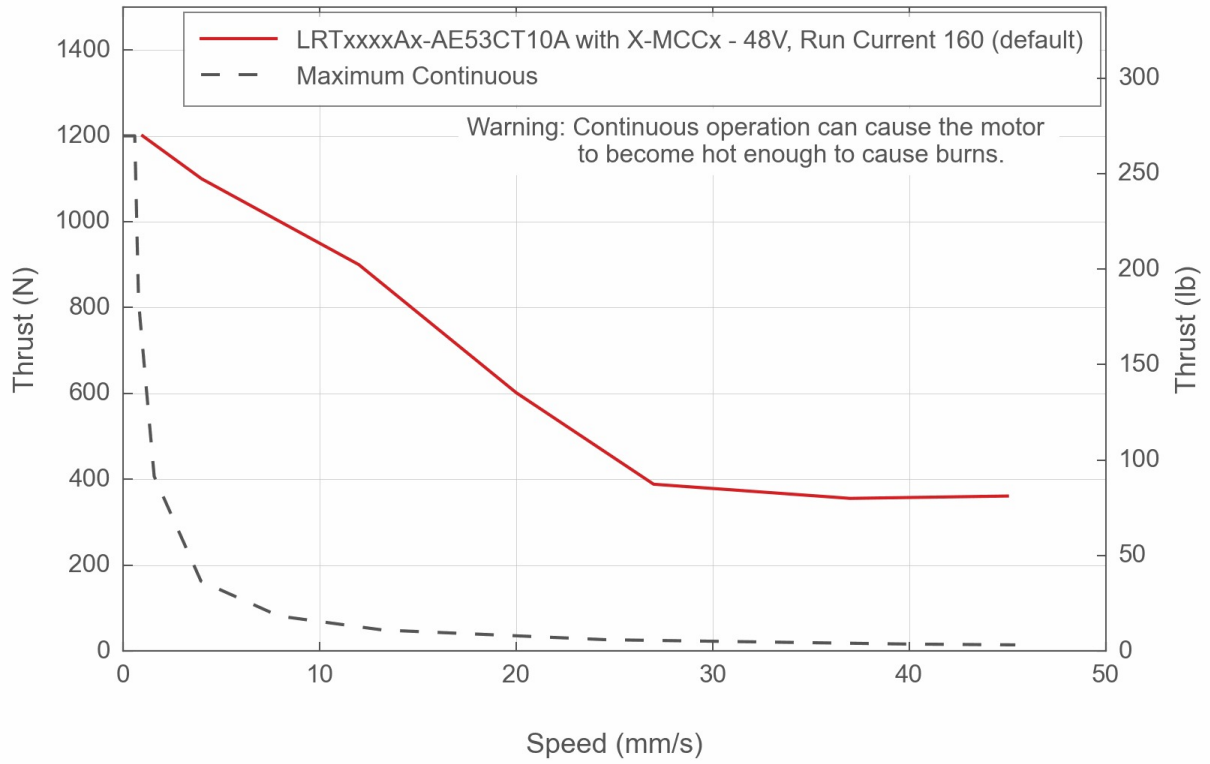
### Typical Accuracy



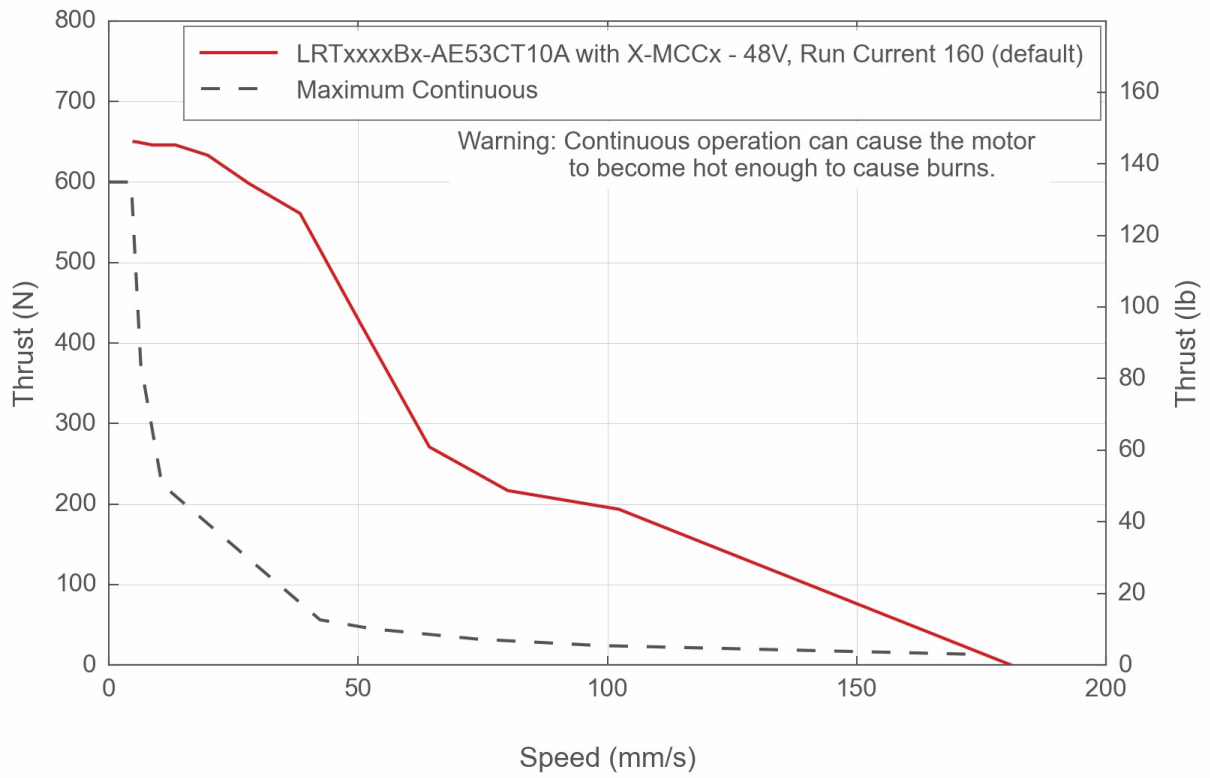
## Thrust Speed Performance



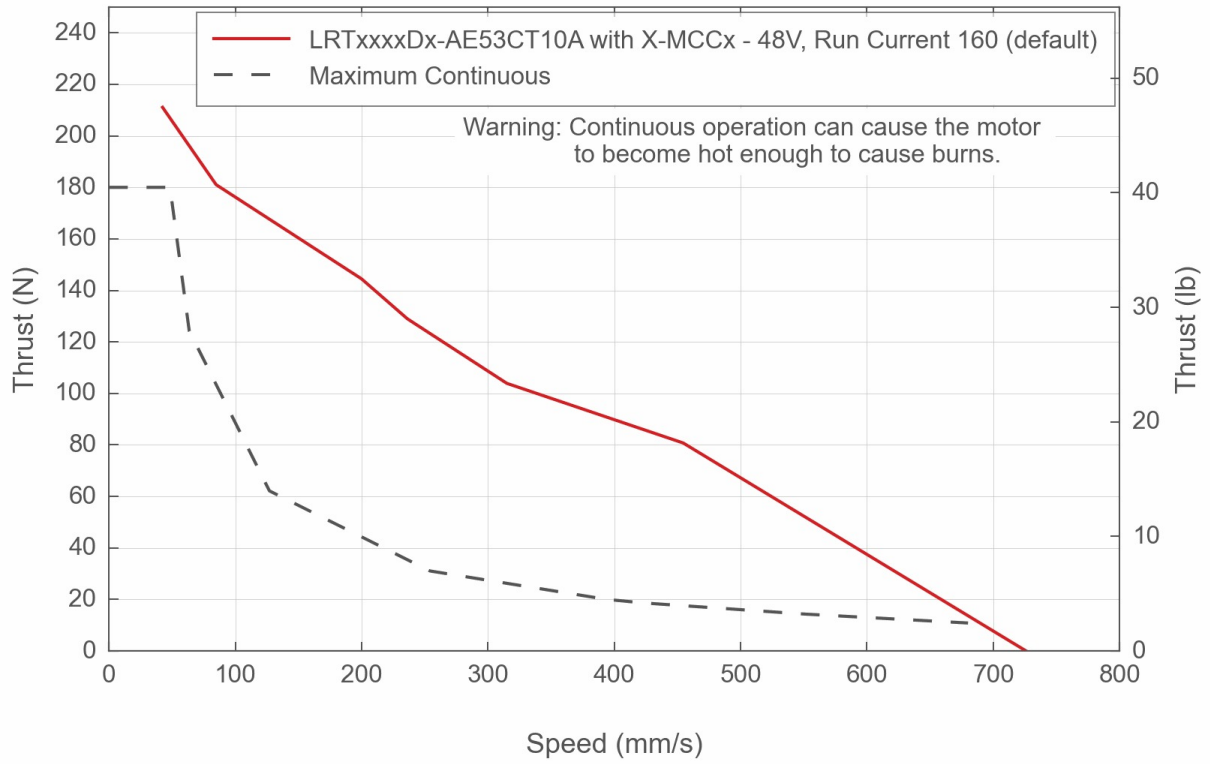
## Thrust Speed Performance



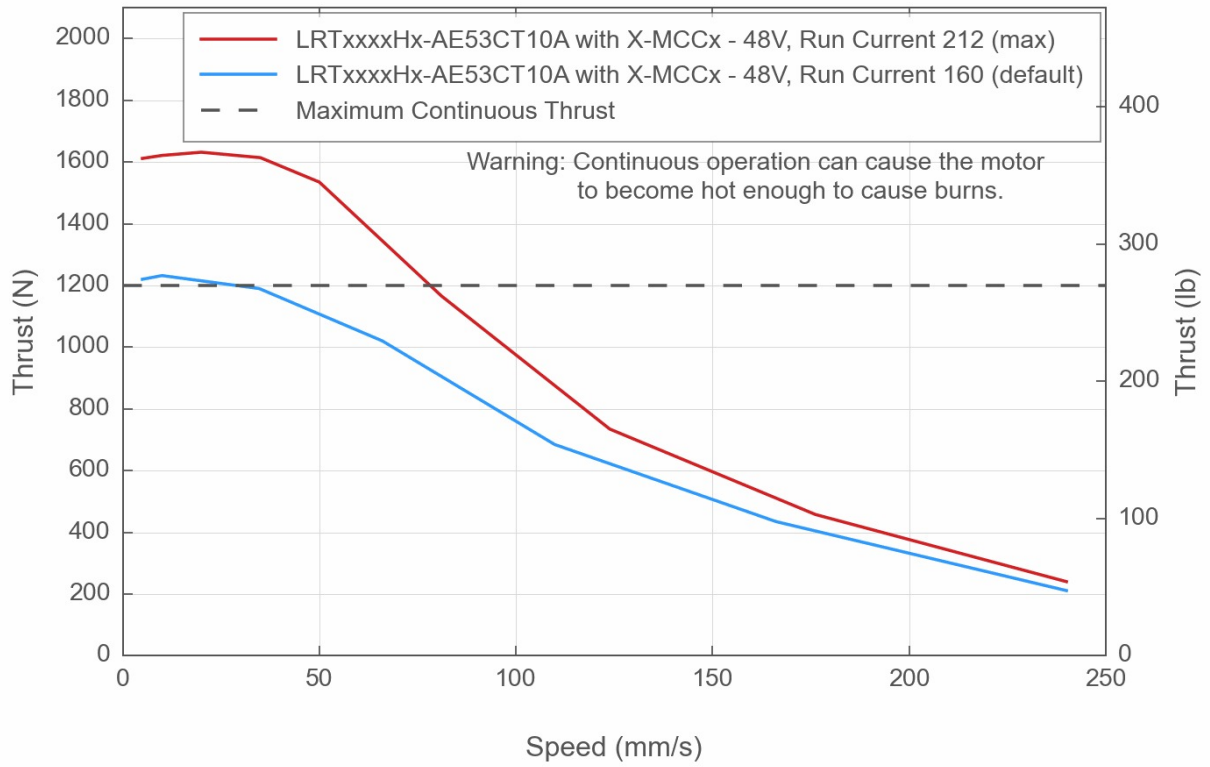
## Thrust Speed Performance



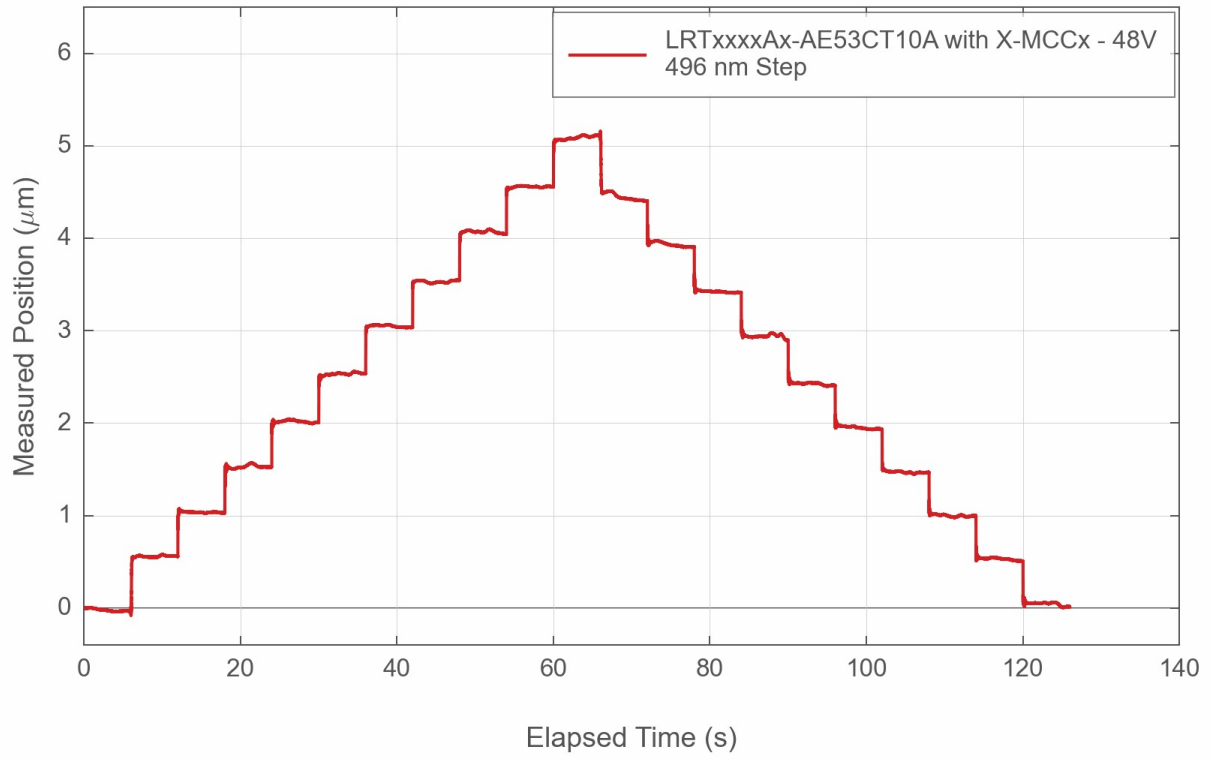
## Thrust Speed Performance



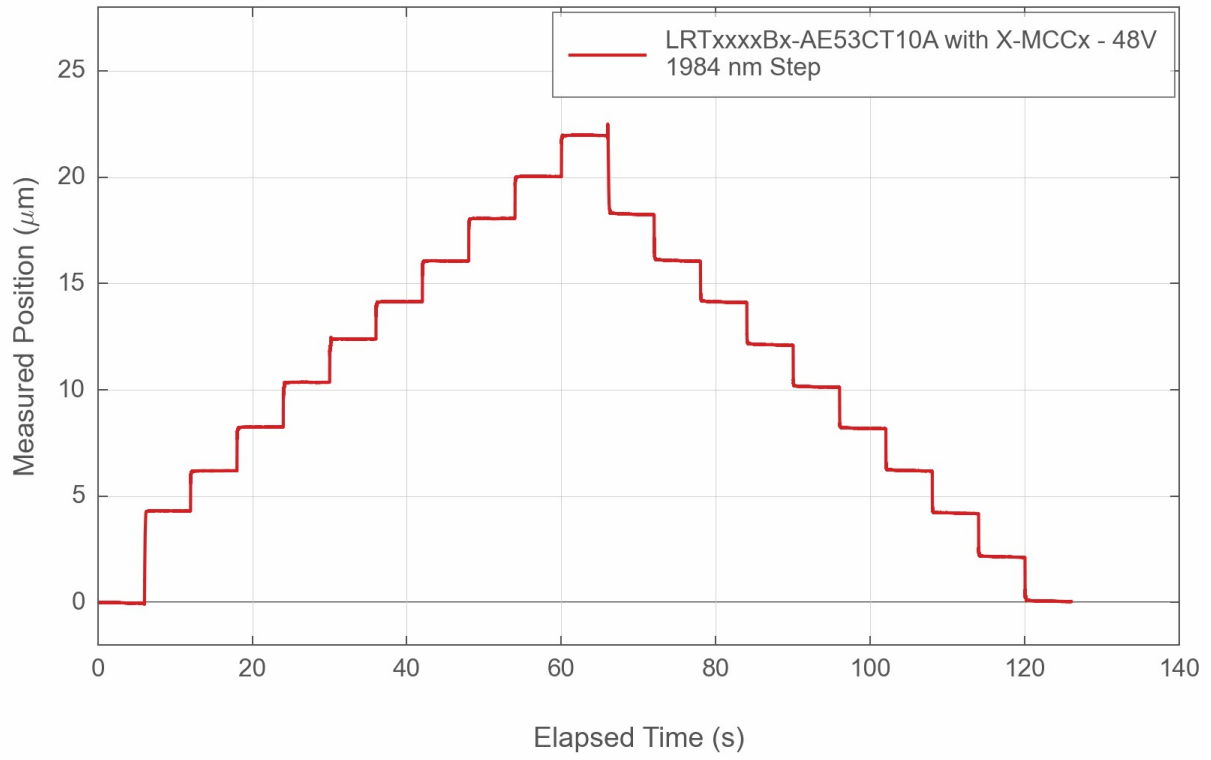
## Thrust Speed Performance



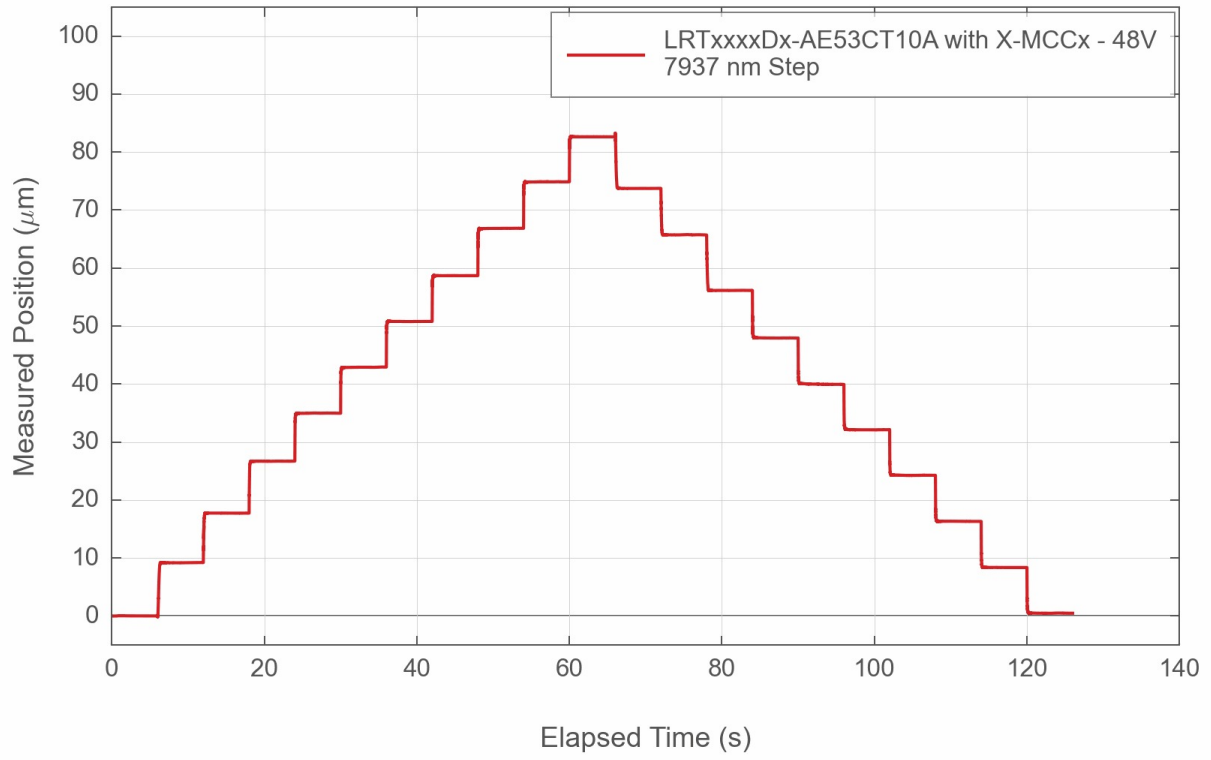
## Typical Minimum Incremental Move



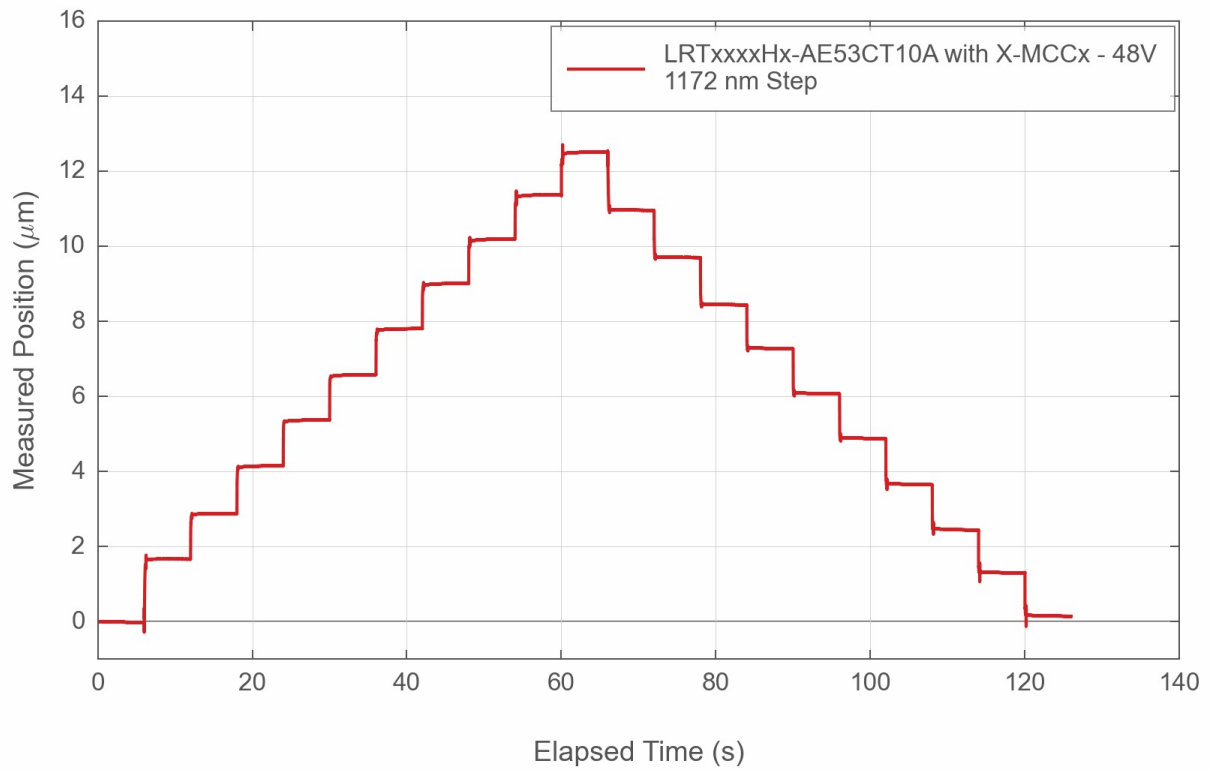
## Typical Minimum Incremental Move



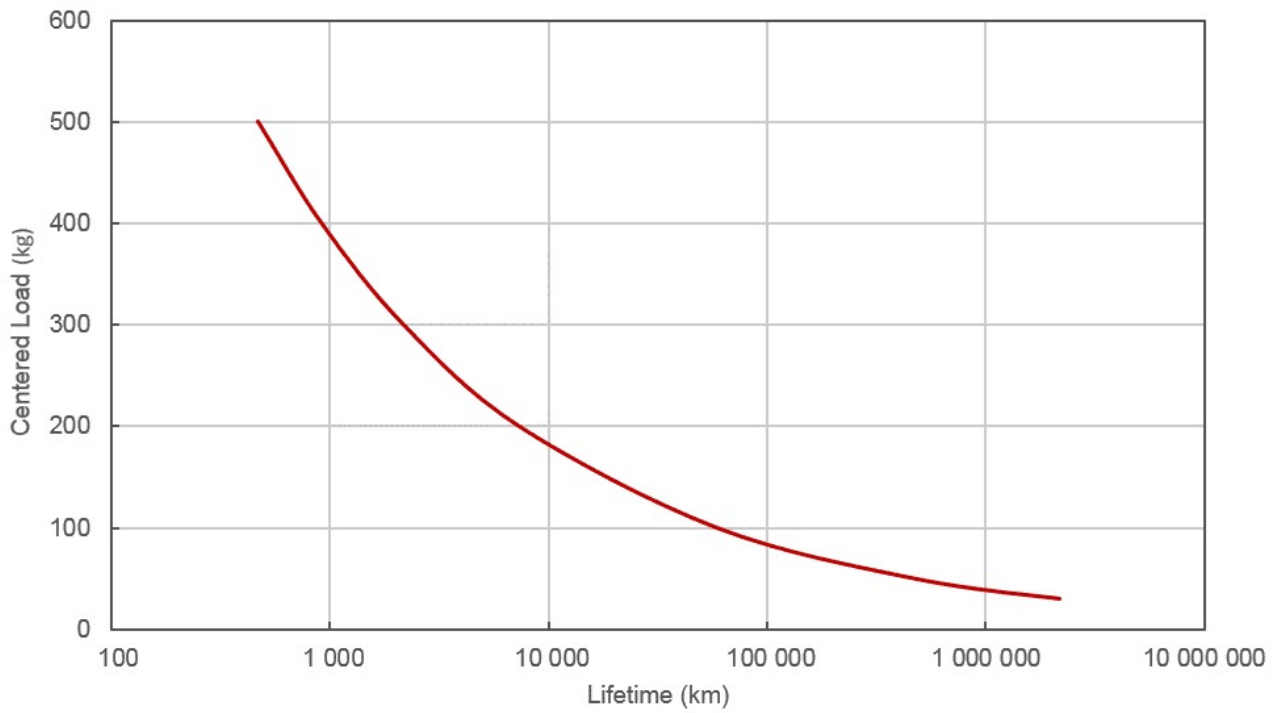
## Typical Minimum Incremental Move



### Typical Minimum Incremental Move



### Typical LRT Bearing Lifetime



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