

NA Series Datasheet



- 16, 30, and 60 mm travel
- Threaded tip for multiple mounting options
- Available in several sizes for a variety of thrusts and speeds
- Designed for use with an X-MCC Series stepper motor controller or any 2-phase stepper motor controller
- With AutoDetect, the X-MCC controller configures its settings automatically for the connected peripheral
- Custom versions available

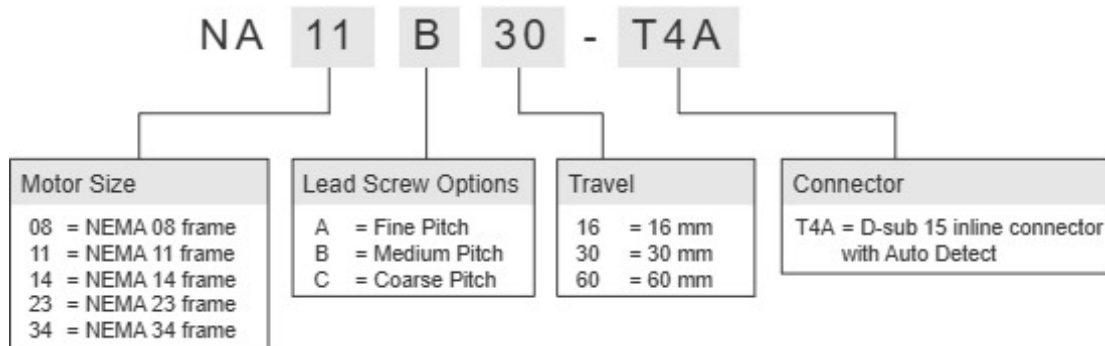
NA Series Overview

These electric linear actuators, based on standard NEMA stepper motors, come in a variety of sizes to fit many applications. Each electric linear actuator includes 30 cm of cable wired to a male DB15 connector for use with our X-MCC Series stepper motor controller. Set up is easy with AutoDetect. Once connected, the X-MCC controller will automatically detect and configure the NA. These linear actuators have a built-in magnetic home sensor.

Please note: An AMB140 bracket must be purchased separately to mount the NA11 actuators to our TSB translation stages.

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

NA Series Part Numbering & Options



NA Series Drawings

- [NA-T4.png \(Drawing for the NA-T4\)](#)

NA Series Specifications

| Built-in Controller | |
|-------------------------|------------------------|
| Recommended Controller | MCC (48 V) Recommended |
| AutoDetect | Yes |
| Encoder Type | No |
| Motor Temperature Rise | 75 °C |
| Motor Steps Per Rev | 200 |
| Motor Type | Stepper (2 phase) |
| Motor Connection | D-sub 15 |
| Default Resolution | 1/64 of a step |
| Mechanical Drive System | Precision lead screw |
| Limit or Home Sensing | Magnetic home sensor |
| Axes of Motion | 1 |
| CE Compliant | Yes |
| Vacuum Compatible | No |

| Part Number | Microstep Size (Default Resolution) | Travel Range | Accuracy (unidirectional) | Repeatability |
|-------------|-------------------------------------|----------------|---------------------------|-----------------------|
| NA08A16-T4A | 0.047625 µm | 16 mm (0.630") | 20 µm (0.000787") | < 5 µm (< 0.000197") |
| NA11B30-T4A | 0.09921875 µm | 30 mm (1.181") | 25 µm (0.000984") | < 5 µm (< 0.000197") |
| NA14B60-T4A | 0.09525 µm | 60 mm (2.362") | 36 µm (0.001417") | < 5 µm (< 0.000197") |
| NA23C60-T4A | 0.1984375 µm | 60 mm (2.362") | 36 µm (0.001417") | < 5 µm (< 0.000197") |
| NA34C60-T4A | 0.1984375 µm | 60 mm (2.362") | 45 µm (0.001772") | < 10 µm (< 0.000394") |

| Part Number | Backlash | Maximum Speed | Minimum Speed | Speed Resolution |
|-------------|-----------------------|--------------------|-----------------------------|-----------------------------|
| NA08A16-T4A | < 15 µm (< 0.000591") | 30 mm/s (1.181"/s) | 0.000029 mm/s (0.000001"/s) | 0.000029 mm/s (0.000001"/s) |
| NA11B30-T4A | < 18 µm (< 0.000709") | 63 mm/s (2.480"/s) | 0.000061 mm/s (0.000002"/s) | 0.000061 mm/s (0.000002"/s) |

| Part Number | Backlash | Maximum Speed | Minimum Speed | Speed Resolution |
|-------------|-------------------------------------|-----------------------|--------------------------------|--------------------------------|
| NA14B60-T4A | < 20 μm (< 0.000787") | 60 mm/s (2.362"/s) | 0.000058 mm/s (0.000002"/s) | 0.000058 mm/s (0.000002"/s) |
| NA23C60-T4A | < 30 μm (< 0.001181") | 80 mm/s (3.150"/s) | 0.000121 mm/s (0.000005"/s) | 0.000121 mm/s (0.000005"/s) |
| NA34C60-T4A | < 65 μm (< 0.002559") | 55 mm/s (2.165"/s) | 0.000121 mm/s (0.000005"/s) | 0.000121 mm/s (0.000005"/s) |

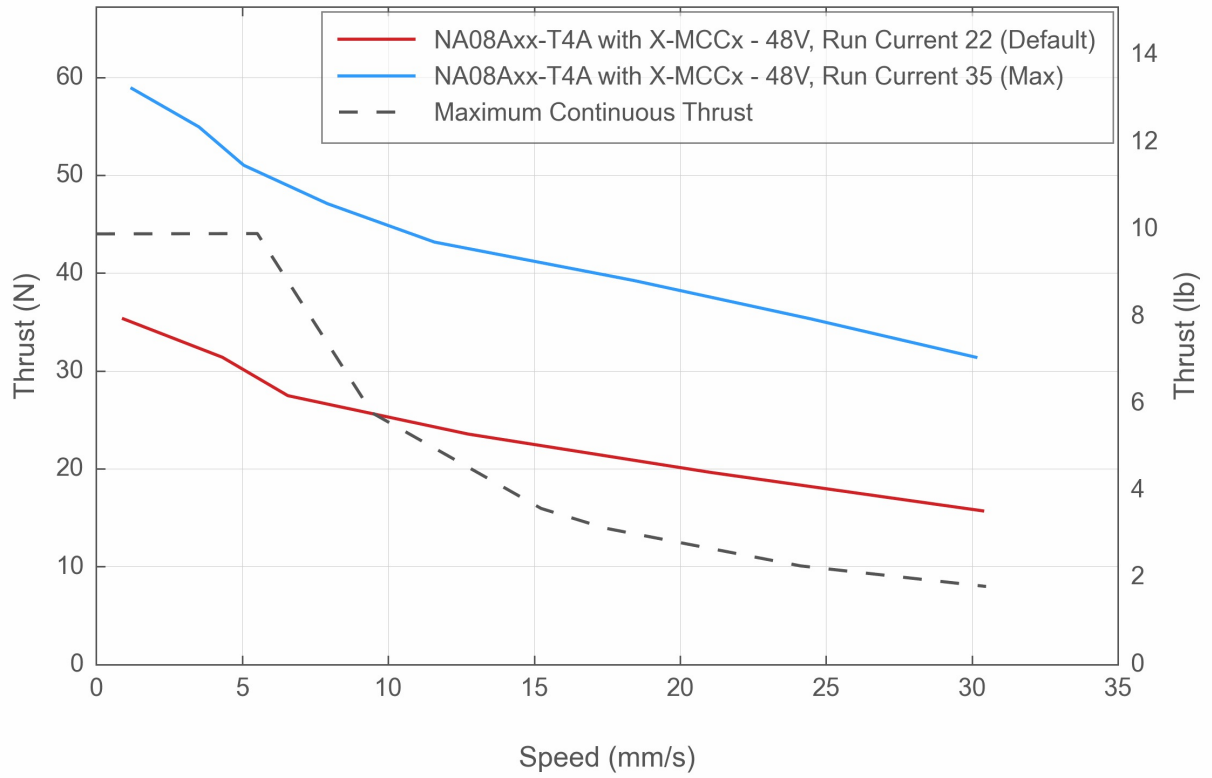
| Part Number | Peak Thrust | Maximum Continuous Thrust | Linear Motion Per Motor Rev | Motor Rated Current |
|-------------|----------------------|---------------------------|-----------------------------|---------------------|
| NA08A16-T4A | 44 N (9.9 lb) | 19 N (4.3 lb) | 0.6096 mm (0.024") | 490 mA/phase |
| NA11B30-T4A | 85 N (19.1 lb) | 58 N (13.0 lb) | 1.27 mm (0.050") | 1000 mA/phase |
| NA14B60-T4A | 225 N (50.5 lb) | 225 N (50.5 lb) | 1.2192 mm (0.048") | 570 mA/phase |
| NA23C60-T4A | 700 N (157.0 lb) | 700 N (157.0 lb) | 2.54 mm (0.100") | 1300 mA/phase |
| NA34C60-T4A | 1300 N (291.5 lb) | 1300 N (291.5 lb) | 2.54 mm (0.100") | 3120 mA/phase |

| Part Number | Motor Winding Resistance | Inductance | Motor Rated Power | Motor Frame Size |
|-------------|--------------------------|---------------|-------------------|------------------|
| NA08A16-T4A | 5.1 ohms/phase | 1.5 mH/phase | 2.45 Watts | 08 |
| NA11B30-T4A | 2.1 ohms/phase | 1.5 mH/phase | 4.2 Watts | 11 |
| NA14B60-T4A | 8.8 ohms/phase | 13 mH/phase | 5.7 Watts | 14 |
| NA23C60-T4A | 3.85 ohms/phase | 10.5 mH/phase | 13 Watts | 23 |
| NA34C60-T4A | 1.6 ohms/phase | 8.8 mH/phase | 31.2 Watts | 34 |

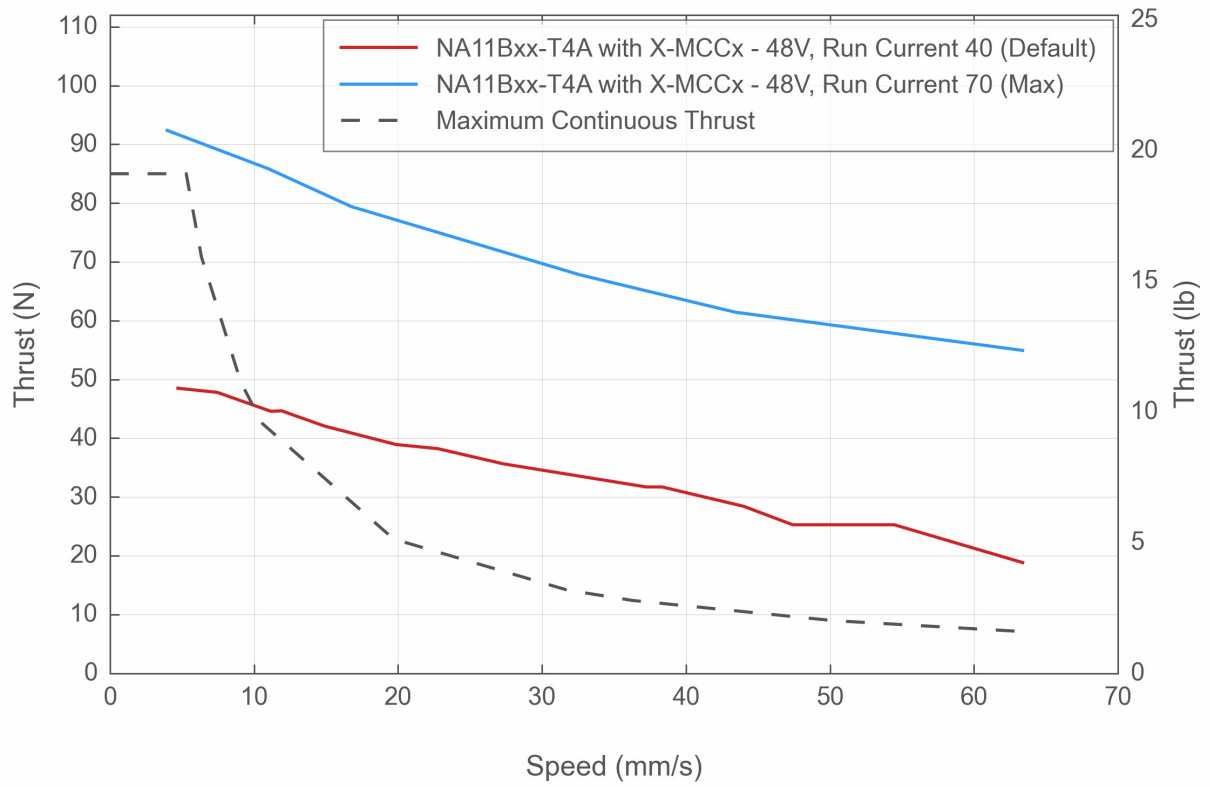
| Part Number | Mounting Interface | Weight |
|-------------|---|--------------------|
| NA08A16-T4A | 4 M2 tapped holes 15.4 mm apart or 9 mm dia smooth shank | 0.07 kg (0.154 lb) |
| NA11B30-T4A | 4 M2.5 tapped holes 23 mm apart or 14 mm smooth shank | 0.16 kg (0.353 lb) |
| NA14B60-T4A | 4 M3 tapped holes 26 mm apart or 15 mm smooth shank | 0.23 kg (0.507 lb) |
| NA23C60-T4A | 5.2 mm holes | 0.75 kg (1.653 lb) |
| NA34C60-T4A | 6.5 mm hole | 2.64 kg (5.820 lb) |

NA Series Charts

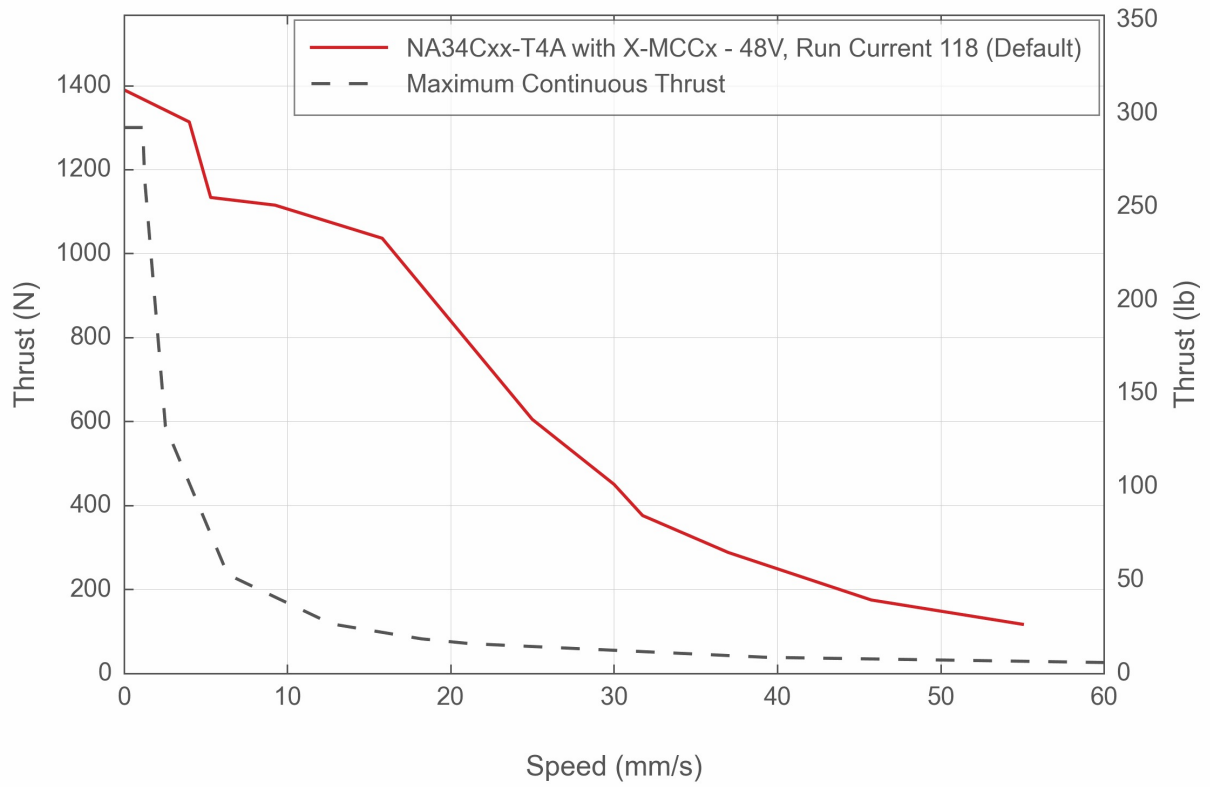
Thrust Speed Performance



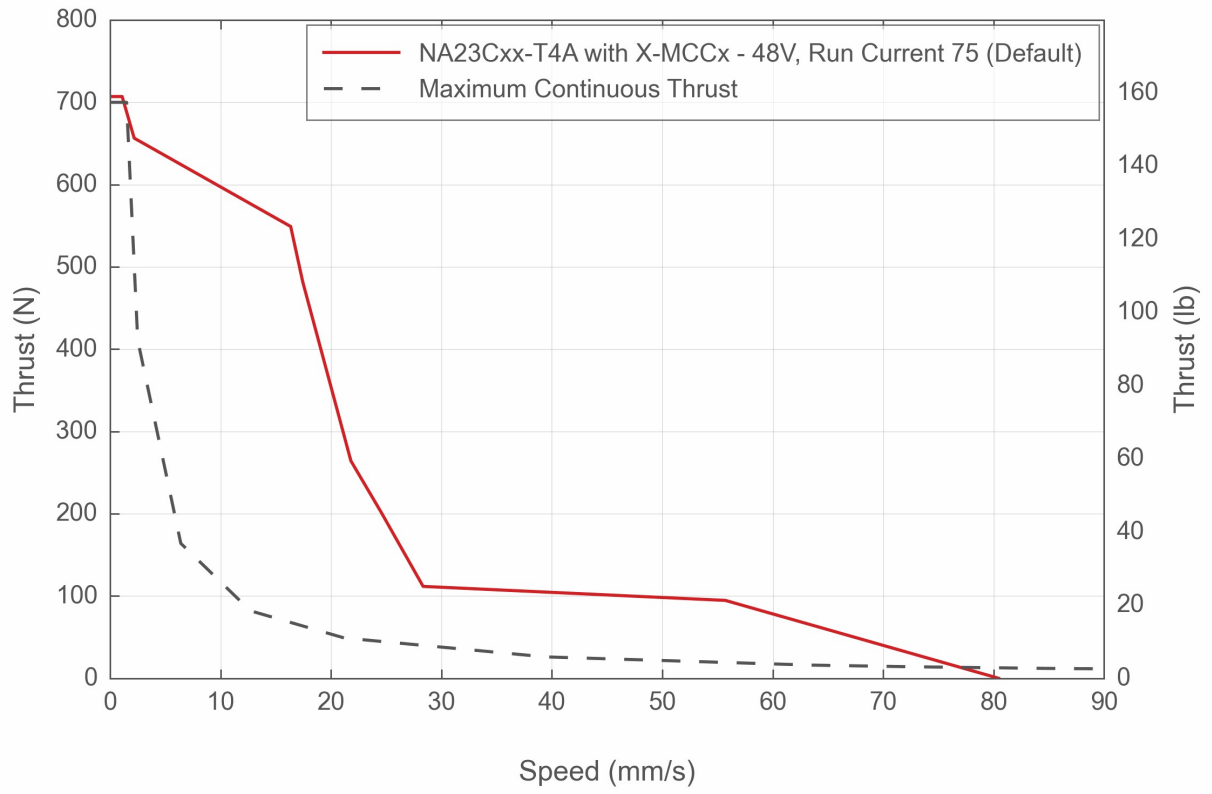
Thrust Speed Performance



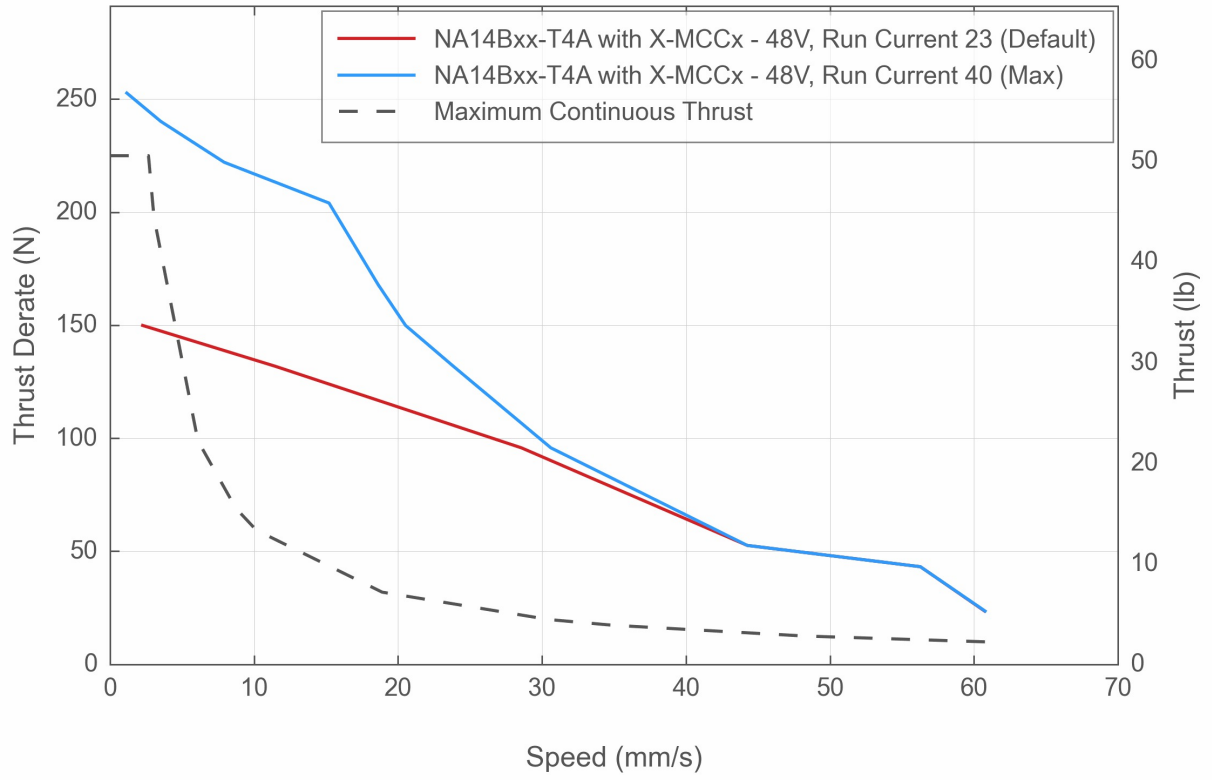
Thrust Speed Performance



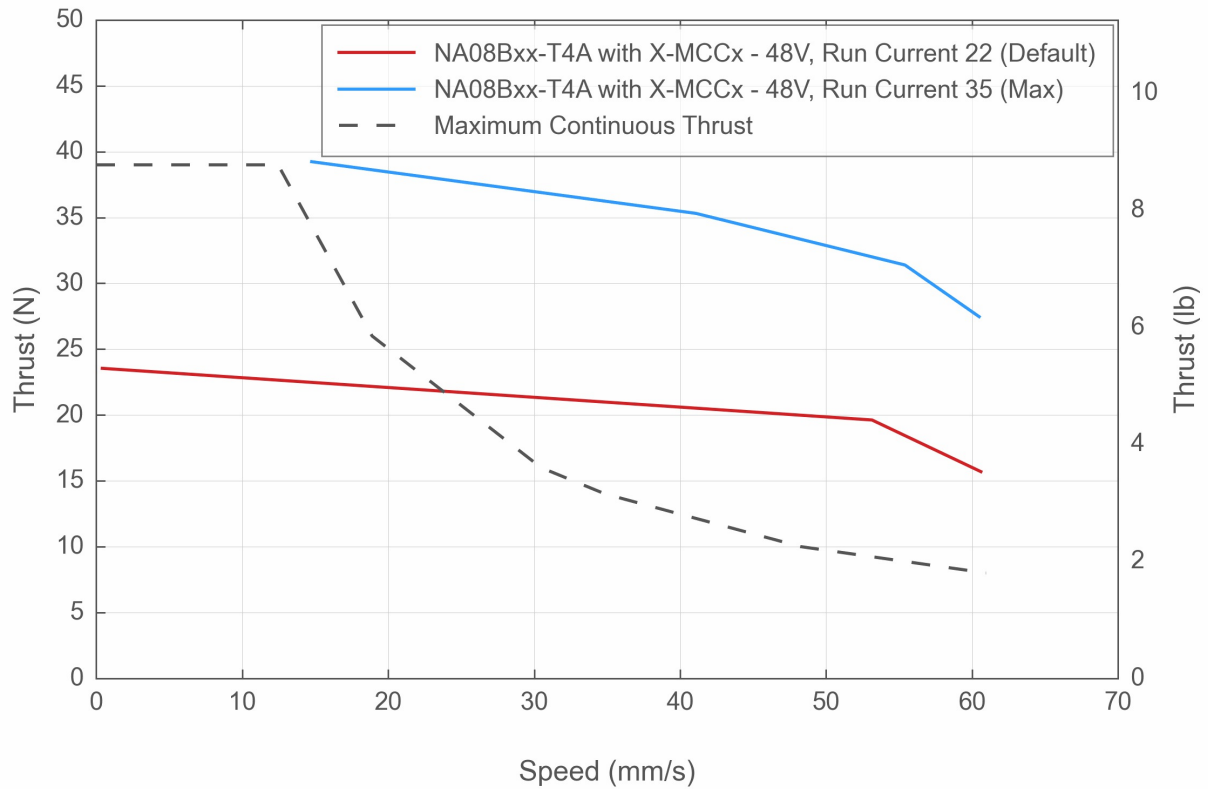
Thrust Speed Performance



Thrust Speed Performance



Thrust Speed Performance



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