

# 500mm Travel, Belt Driven Motorized Linear Stage

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## Product Downloads

### General

Metric **Type:**

Yes **Encoder:**

Yes **Manual Control/ LED Indicators:**

Zaber Technologies Inc. **Manufacturer:**

Requires a 24-48 VDC power supply and either [#15-](#) **Note:**

[295](#) for USB connectivity or [#15-297](#) for RS-232 connectivity. A data cable ([#15-296](#) or [#15-299](#)) can be used to daisy chain multiple stages together to control simultaneously.

**Type of Motor:**  
2-Phase Stepper

**Encoder Type:**  
Rotary Quadrature Encoder

**Motor Installation Guide:**  
Motor Installation and Setup Guide can be found [here](#)

## Physical & Mechanical Properties

**Type of Movement:**  
Linear (X)

**Guide System:**  
Recirculating Ball Linear Guide

**Stage Size (mm):**  
650 x 134

**Travel (mm):**  
500

**Accuracy (µm):**  
550

**Backlash (µm):**  
< 250

**Height (mm):**  
76

**Load Capacity (kg):**  
50

**Repeatability (µm):**  
< 20

**Speed (mm/s):**  
3000 (Maximum)

**Thrust (N):**  
90

**Weight (kg):**  
2.423

**Encoder Resolution:**  
400 CPR

## Optical Properties

**Resolution (µm):**  
7.03125

## Electrical

**Maximum Operating Current (mA):**  
3500

## Hardware & Interface Connectivity

**Type of Drive:**  
Synchronous Belt

**Power Supply:**  
Power Supply Required and Sold Separately.  
USA: [#15-294](#)  
Europe: [#15-294](#)  
Japan: [#23-662](#)  
Korea: [#33-773](#)  
China: [#15-294](#)

**Computer Interface:**  
USB with [#15-295](#)  
RS-232 with [#15-297](#)

## Environmental & Durability Factors

**Operating Temperature (°C):**  
0 - 50

## Regulatory Compliance

**RoHS 2015:**  
[Compliant](#)

**Certificate of Conformance:**  
[View](#)

**Reach 247:**  
[Compliant](#)

## Product Details

- Designed for Use with Mbst 40mm T-Slot Extrusion Framing Systems and Accessories

- 500mm and 1000mm Long Travel Lengths Available
- Controlled Manually or via RS-232 Serial Interface
- Integrated 400 Counts per Revolution (CPR) Motor Mounted Encoder

Zaber™ T-Slot Extrusion Belt Driven Stages are computer-controlled stages based on a modular, expandable, T-Slot extrusion structure. The stages are compatible and easily integrated with most T-Slot extrusion framing systems. Zaber™ T-Slot Extrusion Belt Driven Stages can be controlled by the [Zaber™ Programmable Joystick Controller](#) (sold separately), a computer using an optional RS-232 or USB data cable, or manually with the knob integrated into the motor unit. The stage mounting platforms include 6XM4 x0.7 mounting holes on a 25mm grid. Each stage features rotary quadrature encoders integrated into the stepper motor, with 400 Counts per Revolution (CPR) encoder resolution. The integrated rotary encoder provides closed-loop control and slip/stall detection and recovery.

**Note:** 24-48 VDC universal power supply (required), data cables for daisy chaining, and computer interface cables (USB or RS-232) are sold separately as accessories.

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