

## Key Features

- Width 115 mm
- Travels 50 to 400 mm
- High Load Capacity 42 kg, 420 N
- Speed 500 mm/s
- Side Cover To Protect Against Particles
- High Resolution Multi-turn Encoder
  - Absolute or Incremental
  - 1024, 2048 & 2500 per Rev. 1Vpp and TTL



## S115-B/5 COMPACT LINEAR POSITIONING STAGE

### POSITIONING LINEAR STAGE

Introducing the S115-B/5, the most compact model in our Standard product range, designed specifically for space-constrained applications.

It stands out for its exceptional stiffness & top-quality components, including a high-precision ball screw, robust recirculating ball bearing guides, and a motor with high-resolution multi-turn absolute rotary encoders offering 1024, 2048, and 2500 lines per revolution, available in 1Vpp and TTL options to suit various needs.

The S115-B/5 series stages are precisely optimized, with high-precision ball screws safeguarded by an effective sealing system. Precision recirculating linear bearings, along with meticulous machining and assembly, ensure superior geometric performance specifications.

The S115-B/5 exemplifies this commitment, delivering unparalleled precision, durability, and safety for a wide range of industrial applications.

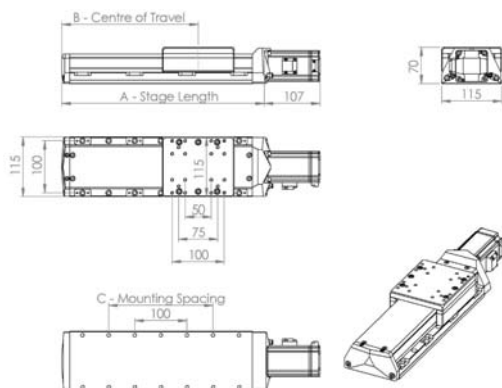
### APPLICATIONS FOR LINEAR STAGES

Precision linear stages are crucial in various applications requiring exceptional accuracy and precision.

They are extensively used across industries such as laser cutting, scanning, digital printing, and electronics assembly and inspection.

These stages are indispensable for tasks like Automatic Optical Inspection (AOI) and laser micro-machining, where ultra-precision and precise scan motion are essential. In medical and scientific equipment, precision linear stages ensure precision and repeatability.

Regardless of the industry or application, integrating precision linear stages is vital for achieving desired results and delivering high-quality output.



## Specifications

Motion	Unit	S115-B/5-50	S115-B/5-100	S115-B/5-150	S115-B/5-200	Tolerance
Travel range	mm	50	100	150	200	-
Position Accuracy, Uncalibrated	µm	±6	±6	±8	±8	Typ.
Position Accuracy, Calibrated	µm	±1.0	±1.25	±1.5	±1.75	Max.
Resolution System	µm	0.05	0.05	0.05	0.05	Typ.
Bi-directional Repeatability	µm	±0.1 ~ ±0.5	±0.1 ~ ±0.5	±0.1 ~ ±0.5	±0.1 ~ ±0.5	Typ.
Flatness / Straightness	µm	±1.5	±2.5	±3	±4	Max.
Yaw, Pitch & Roll	µad	±14	±17	±23	±32	Max.
Maximum Velocity, No Load	mm/s	500	500	500	500	Max.
Maximum Acceleration	m/s <sup>2</sup>	-	-	-	-	Max.

## Mechanical Properties

Guide Type	Ball Bearing Guide					
Load Capacity	kg	42	42	42	42	Max.
Push / Pull Force Capacity	N	-	-	-	-	Max.
Permissible Torque in $\theta_x$	Nm	-	-	-	-	Max.
Permissible Torque in $\theta_y$	Nm	-	-	-	-	Max.
Permissible Torque in $\theta_z$	Nm	-	-	-	-	Max.
Stage Weight	kg	4.2	4.6	5.0	5.8	±5 %

## S115 Series - Motor and Encoder Options S115-B/5-xxx-E?-B?

E1 - High resolution multi-turn absolute encoder

E2 - 1024 line incremental encoder

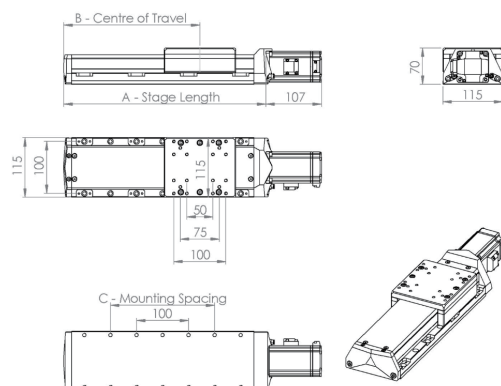
E3 - 2048 line incremental encoder

E4 - 2500 line incremental encoder

B0 - No Brake

B1 - With Brake

Product Dimensions (mm)	Travel	Hard Stop	A	B	C
S115-B/5-50	50	116	288	148	100
S115-B/5-100	100	166	338	173	100, 200
S115-B/5-150	150	216	388	198	100, 200
S115-B/5-200	200	316	438	223	100, 200, 300
S115-B/5-300	300	416	538	273	100 ~ 400 mm
S115-B/5-400	400	516	638	323	100 ~ 500 mm



## Specifications

Motion	Unit	S115-B/5-300	S115-B/5-400	Tolerance
Travel range	mm	300	400	-
Position Accuracy, Uncalibrated	µm	±10	±12	Typ.
Position Accuracy, Calibrated	µm	±2.5	±3.0	Max.
Resolution System	µm	0.05	0.05	Typ.
Bi-directional Repeatability	µm	±0.1 ~ ±0.5	±0.1 ~ ±0.5	Typ.
Flatness / Straightness	µm	±6	±8	Max.
Yaw, Pitch & Roll	µad	±47	±60	Max.
Maximum Velocity, No Load	mm/s	500	500	Max.
Maximum Acceleration	m/s <sup>2</sup>	-	-	Max.

## Mechanical Properties

Guide Type		Ball Bearing Guide	-	
Load Capacity	kg	42	42	Max.
Push / Pull Force Capacity	N	-	-	Max.
Permissible Torque in $\theta_x$	Nm	-	-	Max.
Permissible Torque in $\theta_y$	Nm	-	-	Max.
Permissible Torque in $\theta_z$	Nm	-	-	Max.
Stage Weight	kg	4.2	4.6	±5 %

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