

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



G115-B/5 COMPACT LINEAR POSITIONING STAGE

POSITIONING LINEAR STAGE

Introducing the G115-B/5, the smallest model within our product range, ideally suited for applications with limited space.

This cutting-edge high-precision linear stage is the latest innovation from Gorman Dynamics. Engineered to withstand the most rigorous industrial conditions, it proves exceptionally versatile across various industries. Distinguished by its remarkable stiffness and incorporation of top-tier components, including a high-precision ball-screw, robust recirculating ball bearing guides, and a motor equipped with high-resolution multi-turn absolute rotary encoders offering 1024, 2048, and 2500 lines per revolution, with 1Vpp and TTL options to accommodate diverse applications.

The G115-B/5 series stages are meticulously optimized, featuring high-precision ball-screws protected by an effective stage sealing system. Precision recirculating linear bearings, coupled with meticulous machining and assembly, ensure exceptional geometric performance specifications.

At Gorman Dynamics, our commitment to delivering superior, dependable solutions remains unwavering.

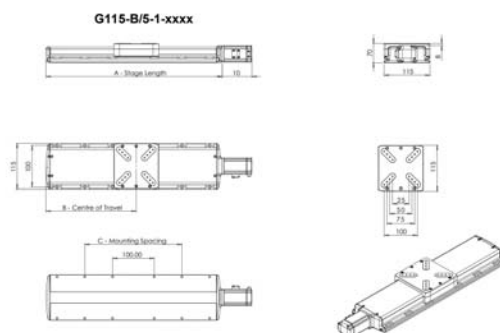
APPLICATIONS FOR LINEAR STAGES

Precision linear stages hold a pivotal role in numerous applications where exceptional accuracy and precision are imperative.

These stages find widespread use 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	G115-B/5-50	G115-B/5-100	G115-B/5-150	G115-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 ²	-	-	-	-	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 θ_x	Nm	-	-	-	-	Max.
Permissible Torque in θ_y	Nm	-	-	-	-	Max.
Permissible Torque in θ_z	Nm	-	-	-	-	Max.
Stage Weight	kg	4.2	4.6	5.0	5.8	±5 %

G115 Series - Motor and Encoder Options G115-B/5-xxx-E?-B?

E1 - High resolution multi-turn absolute encoder

E2 - 1024 line incremental encoder

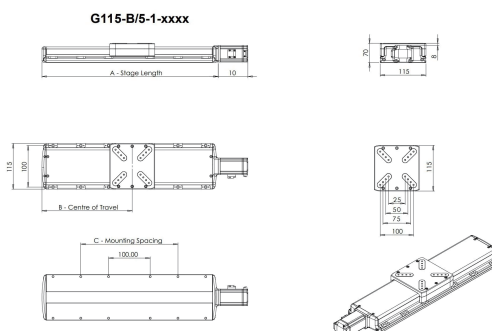
E3 - 2048 line incremental encoder

E4 - 2500 line incremental encoder

B0 - No Brake

B1 - With Brake

Product Dimensions (mm)	Travel	Hard Stop	A	B	C
G115-B/5-50	50	116	288	148	100
G115-B/5-100	100	166	338	173	100, 200
G115-B/5-150	150	216	388	198	100, 200
G115-B/5-200	200	316	438	223	100, 200, 300
G115-B/5-300	300	416	538	273	100 ~ 400 mm
G115-B/5-400	400	516	638	323	100 ~ 500 mm



Specifications

Motion	Unit	G115-B/5-300	G115-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 ²	-	-	Max.

Mechanical Properties

Guide Type	Ball Bearing Guide		-	
Load Capacity	kg	42	42	Max.
Push / Pull Force Capacity	N	-	-	Max.
Permissible Torque in θ_x	Nm	-	-	Max.
Permissible Torque in θ_y	Nm	-	-	Max.
Permissible Torque in θ_z	Nm	-	-	Max.
Stage Weight	kg	4.2	4.6	±5 %

G115 Series - Motor and Encoder Options G115-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
G115-B/5-50	50	116	288	148	100
G115-B/5-100	100	166	338	173	100, 200
G115-B/5-150	150	216	388	198	100, 200
G115-B/5-200	200	316	438	223	100, 200, 300
G115-B/5-300	300	416	538	273	100 ~ 400 mm
G115-B/5-400	400	516	638	323	100 ~ 500 mm

