

PLG210 Series Linear Positioning Stages

PLG210

S E R I E S



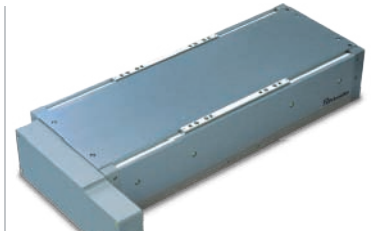
Linear Motor



Ballscrew with Frameless Motor



Ballscrew with In-Line Motor



Ballscrew with Parallel Motor

Feature Summary:

- Travels up to 1200mm
- Loads up to 100 kg
- Internal linear or rotary encoder resolution to 0.1-microns
- Four motor options and two drivetrain options
- Adjustable limit & home sensors
- Aluminum or cast iron base
- All stages individually tested for accuracy, repeatability, straightness & flatness
- Class 10 Cleanroom

Overview

Primatics PLG210 Series positioning stages are the largest of the all-purpose PLG series stages. Ideal for demanding applications such as inspection, attachment and alignment, the PLG210 offers unparalleled flexibility and allows the user to fit a high performance product into many different applications.

Motor Options

All PLG family stages are offered with four motor options; linear motor, frameless motor, in-line motor and parallel motor. The **linear motor** option offers the smoothness of a brushless linear motor in an entirely self-contained package. The **frameless motor** option integrates a brushless motor directly onto the ballscrew with no need for a motor coupler. The **in-line** and **parallel** versions accommodate a user supplied NEMA 34-sized servo or step motor. With over 6000 possible configurations, a model is available for any application.

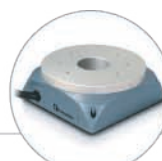
For more information and complete datasheets, go to www.primatics.com

Precision Grade Performance Specs	PLG210-100	PLG210-200	PLG210-300	PLG210-400	PLG210-600	PLG210-800	PLG210-1000	PLG210-1200
Travel (mm)	100	200	300	400	600	800	1000	1200
Error Mapped Accuracy for Stage w/E6 Linear Encoder (μm)	+/- 1.4				+/- 2.0			
Error Mapped Accuracy for Stage w/E4 Linear Encoder (μm)	+/- 1.0				+/- 1.5			
Positional Repeatability w/ Linear Encoder (μm) (0.1, 0.5, 1.0 μ resolution) ²	+/- 0.5, +/- 1.0, +/- 2.0							
Direct Loading Capacity (kg)	100							
Minimum Resolution w/ Linear Encoder (microns)	0.1							
PLG210 Linear Motor Only	PLG210-100	PLG210-200	PLG210-300	PLG210-400	PLG210-600	PLG210-800	PLG210-1000	PLG210-1200
Positional Accuracy (μm) over Total Table Travel ³	+/- 3	+/- 5	+/- 6	+/- 7	+/- 10	+/- 13	+/- 16	+/- 19
Straightness of Travel (μm) over Total Table Travel ²	+/- 2	+/- 3	+/- 3.5	+/- 4.5	+/- 7	+/- 9	+/- 11	+/-13
Flatness of Travel (μm) over Total Table Travel ²	+/- 1.5	+/- 2.5	+/- 3	+/- 4	+/- 6	+/- 8	+/- 10	+/- 12
Max Speed (mm/s) ⁴	1000							
PLG210 Ballscrew Motor Only	PLG210-100	PLG210-200	PLG210-300	PLG210-400	PLG210-600	PLG210-800	PLG210-1000	PLG210-1200
Positional Accuracy w/ Linear Encoder (μm) ²	+/- 3	+/- 5	+/- 6	+/- 7	+/- 10	+/- 13	+/- 16	+/- 19
Straightness of Travel (μm) over Total Table Travel ²	+/- 2.5	+/- 3	+/- 4	+/- 4.5	+/- 7	+/- 9	+/- 11	+/- 13
Flatness of Travel (μm) over Total Table Travel ²	+/- 1.5	+/- 2.5	+/- 3	+/- 4	+/- 6	+/- 8	+/- 10	+/- 12
Max Speed (mm/s) ³	300				200			

¹ For In-Line / Frameless motor mounts ² Measured 50mm above center of carriage ³ 5 mm lead ballscrew ⁴ 0.1 μm linear encoder is limited to 300mm/s



Linear Positioning



Rotary Positioning



Motion Controls



OEM Solutions

ORDERING INFORMATION MATRIX

OPTIONS:

SAMPLE MODEL NUMBER:

	PLG210	AL	0200P	D5	H1	L1	C1	M4	-5	E2	B1	P2	-M
Model Series & Table Width													
Linear Guide Bearings - 210 mm.....	PLG210												
Base Material													
Cast Iron ²		CI											
Aluminum.....		AL											
Table Travel, Precision Grade													
100 mm ¹			0100P										
200 mm ¹			0200P										
300 mm ¹			0300P										
400 mm ¹			0400P										
600 mm ¹				0600P									
800 mm ¹				0800P									
1000 mm ^{1,2}					1000P								
1200 mm ^{1,2}						1200P							
Drivetrain													
5 mm Lead Ballscrew.....			D1		Linear Motor- Standard..	D5							
10 mm Lead Ballscrew ²			D2		Linear Motor- Extended ³	D6							
Home Sensor													
N.C. Current Sinking.....			H1		N.O. Current Sinking.....	H2							
Travel Limits													
N.C. Current Sinking.....			L1		N.O. Current Sinking.....	L2							
Motor Coupling													
No Coupling.....			C1		14mm Flexible Disk.....	C7							
0.5" Flexible Disk ⁴			C6		0.375" Flexible Disk.....	C8							
Motor Mount													
Nema 34 In-Line.....			M1		Nema 34 Parallel, Position 2 ⁵	M3							
Nema 34 Parallel, Position 1 ⁵			M2		Linear/Frameless.....	M4							
Motor Type													
Step Motor w/connector.....													1
Brushless Servo Motor w/ 1250 Line Encoder.....													2
Linear Motor.....													5
No Motor.....													6
Frameless Motor - Double Stack.....													7
Encoder													
No Encoder.....													E1
Linear Encoder - 1 µm.....													E2
Linear Encoder - 0.5 µm.....													E3
Linear Encoder - 0.1 µm.....													E4
Rotary Encoder - 1250 lines ⁶													E5
Linear Encoder - 0.2 µm.....													E6
Linear Encoder - 5.0 µm.....													E7
Analog Output - 1VPP.....													E8
Rotary Encoder - 2500 lines ⁶													E9
Rotary Encoder - 5000 lines ⁶													E0
Brake Option													
No Brake.....													B1
Failsafe Brake ⁷													B2
Protection Level													
Level 1 - Hardcover.....													P1
Level 2 - Hardcover, Belts, Hi Pressure.....													P2
Level 5 - Class 10 Prep (Hardcover, Belts, Hi Flow).....													P5
Options													
Error Mapping.....													M
No Options.....													(Leave Blank)

¹ Standard Linear Motor Travel ² Precision Rolled ³ Reduces Travel by 75mm

⁴ Standard on In-line/Parallel Stages ⁵ Accuracy & Repeatability are Derated ⁶ On Ballscrew Shaft ⁷ Ballscrew Only

***Not all configurations are valid. Consult factory for assistance.**



Last Updated 1/18/2008

32114 Mallard Ave., PO Box 409, Tangent, OR 97389-0409, USA | Phone: [541] 791-9678 | Toll Free: [888] 754-3111 | Fax: [541] 791-9410
www.primatics.com