MOTORIZED LINEAR TRANSLATION STAGE SELECTION GUIDE

Motorized Linear Stages from Newport and New Focus, comprise the widest range of precision linear positioning stages offered by any motion solution provider in the industry. These precision positioning products were designed and built over many decades of experience in providing solutions to many markets including research and academia, industrial, seminconductor, aerospace and defense.

The short list of applications of Newport linear stages include metrology, scanning, inspection, laser direct writing, spectroscopy, genome sequencing, wafer scribing, telecom component alignment etc. Starting from the XM family of direct drive ultra-precision stages to the pre-configured compact Gothic-Arch Bearing stage with tiny Picomotor, there are over 200 models to choose from. Many more linear positioning solutions can be created by matching our popular manual stages with the wide selection of compatible actuators.

Newport also supplies compatible Controllers/drivers, from single axis to multi-axis units, from hand-held to full PC control. Most of Newport's Motorized Linear Stages are ESP compatible, a Newport exclusive plug and play controller technology that minimizes setup time and reduces safety risk.

Vacuum versions are available as standard part numbers in almost all Motorized Linear Stage families.

Linear stages can be selected based on Travel, Minimum Incremental Motion, Repeatability, Accuracy, Speed, etc. Use the selection guides below in association with the linked product family pages to get started or call your Applications Engineer for additional help.

Selecting a Motorized Linear Translation Stage

Click **Motorized Linear Translation Stages** to shop or browse all of our standard models, or select a product family below for more information. We also offer **Manual Linear Stages** and **Motorized Actuators**.

Series		Travel Range (mm)	Minimum Incremental Motion (µm)	On-Axis Accuracy, Guaranteed (µm)	Maximum Speed (mm/s)	Normal Load Capacity (Cz), (N)
	XM Series Ultra-Precision Linear Motor Stages	XMS: 50 , 100 160 XML: 210 , 350	0.01	XMS: 1.5 or ± 0.75 XML: 3.0 or ± 1.5	300	XMS: 100 XML: 300
	GTS Series High-Precision Linear Stages	70 , 150	0.1	2 or ± 1	50	100
	IMS-LM Series High-Performance Long-Travel Linear Motor Stages	300 , 400 500 , 600 800 , 1000 1200 ,	0.02	9 or ± 4.5 to 30 or ± 15	500	100 600
	VP-25X Precision Compact Linear Stages	XA, XL: 25	XL: 0.01 XA: 0.1	2 or ± 1	25	60
	IMS Series High-Performance Long-Travel Linear Stages	CC, PP, CCHA: 300 , 400 500 , 600	0.2 - 1.25	CCHA: 9 or ± 4.5 CC, PP: 15 or ± 7.5	200	600

Series		Travel Range (mm)	Minimum Incremental Motion (µm)	On-Axis Accuracy, Guaranteed (µm)	Maximum Speed (mm/s)	Normal Load Capacity (Cz), (N)
	ILS-LM Series High-Performance Mid-Range Travel Linear Motor Stages	100 , 200 300	0.01	5 or ± 2.5	500	250
	ILS Series High-Performance Mid-Range Travel Linear Stages	CC, PP, HA: 50 , 100 150 , 200 250	HA: 0.3 CC, PP: 1	HA: 4 or ± 2 CC, PP: 5 or ± 2.5	100	250
	FMS Series Linear Metrology Stages	CC, PP: 100 , 200 300	CC: 0.1 PP: 0.5	6 or ± 3	100	150
	MTM Series Long-Travel Steel Linear Stages	CC, PP, PE: 100 , 150 200 , 250	CC.1, PP.1, PE.1: 0.3 CC1, PP1, PE1: 1	5 or ± 2.5	40	1000
	UTS Series Mid-Travel Steel Linear Stages	CC, PP: 50 , 100 150 ,	0.3	4.5 or ± 2.25 to 8 or ± 4	20-40	200
	MFA Series Miniature Steel Linear Stages	CC , PP: 25	0.1	6.0 or ± 3.0	0.3 – 2.5	50
	Agilis™ Series Piezo Motor Driven Linear Stage	12 , 27	0.05	NA	> 0.5	3
	NPX Series NanoPositioning Linear Stages	0.1 , 0.2 0.4	0.002 - 0.004	NA	see note	10 -100
	Motorized Kinematic Stages	25	< 0.03	NA	0.02	13
	Gothic-Arch-Bearing Integrated Motion-Control Solutions	12.7- 25.4	< 0.03	NA	0.02	22

	Compact Gothic-Arch Bearing Integrated Motion Control Solutions	6.5	< 0.03	NA	0.02	13
	Crossed Roller Bearing Translation Stages	12.7	< 0.03	NA	0.02	22
	Triple-Divide™ Translation Stages	12.7 - 25.4	< 0.03	NA	0.02	22

Note: Refer to the specific NanoPositioner product for more details about resonant frequency and stiffness.
For compatibility with Newport controllers view Stage and Controller Compatibility.

Motorized Linear Stages with Integrated Controllers

Series		Travel Range (mm)	Minimum Incremental Motion(µm)	On-Axis Accuracy, Guaranteed (µm)	Maximum Speed (mm/s)	Normal Load Capacity (Cz), (N)
	CONEX-AG-LS25-27P CONEX Integrated Linear Stage and Closed Loop Piezo Motor Controller	27	0.2	20	0.4	100
	CONEX-MFACC CONEX Integrated Linear Stage	25	0.1	6.0 or ± 3.0	2.5	50