

*Motion Solutions
for High Precision Applications*

RAPIDLINE™

These carefully designed **RAPIDLINE™** linear motor stages exhibit superior performance when compared with lead-screw driven stages, with no cost penalty. In particular, they can achieve higher acceleration, faster settling and more precisely controlled velocity. Since the **RAPIDLINE™** has fewer moving parts, reliability is inherently better. The internal cable management system handles two-axis stacked assemblies with support for the user's signal, power and vacuum connections. No external cable track is required.



Applications

- Wafer Inspection
- Film Thickness Metrology
- Bio-Chip Manufacturing
- Integrated Circuit Manufacturing
- Flip Chip Inspection
- BGA Inspection
- Disk Media Profiling
- Bio-Chip & FT-IR Spectroscopy

Benefits

- Low Vibration
- No External Cable Track Required
- High Throughput (3X Precision Lead-Screw Performance)
- High Reliability (Fewer Points of Wear)
- Best Price / Performance Ratio
- Linear Motor Performance at Lead-Screw Prices

Standard Features

- Low Noise Recirculating Ball Bearings
- Non-Contact Encoder
- Brushless Three-Phase Linear Motors
- Complete Internal Cable Management System
- Integral Limit Switches
- Reference Mark at Center of Travel



ISO 9001 Certified
www.jmar-psi.com

*Rapidline is a trademark of JMAR Precision Systems.

Specifications

Configurations

Travel:	8", 12", 18", 24", 36"
Resolution:	0.1 μ m, 0.2 μ m, 0.5 μ m, 1 μ m
Overtravel:	0.3" at each end

Nominal Dimensions

Base Width:	8"
Carriage Width:	9"
Height:	3"
Length:	Travel + 14.63"

Performance Specifications

Acceleration:	1.5 G (with 15 lb. payload)
Velocity:	1 meter per second
Load Capacity:	100 lbs.

Straightness

8" full travel:	\pm 2 microns per inch
12" full travel:	\pm 3 microns
18" full travel:	\pm 4 microns
24" full travel:	\pm 6 microns
36" full travel:	\pm 8 microns

Flatness

8" full travel:	\pm 2 microns per inch
12" full travel:	\pm 3 microns
18" full travel:	\pm 4 microns
24" full travel:	\pm 6 microns
36" full travel:	\pm 8 microns

Accuracy

8" full travel:	\pm 3 microns (at 25° C)
12" full travel:	\pm 5 microns (at 25° C)
18" full travel:	\pm 6 microns (at 25° C)
24" full travel:	\pm 8 microns (at 25° C)
36" full travel:	\pm 12 microns (at 25° C)

Repeatability

1 μ m encoder:	\pm 1.5 microns
0.5 μ m encoder:	\pm 0.75 microns
0.2 μ m encoder:	\pm 0.3 microns
0.1 μ m encoder:	\pm 0.2 microns

Vibration (vertical)

At 25mm/sec:	<15nm RMS
At 100mm/sec:	<25nm RMS

JMAR Precision Systems
Main Office
9207 Eton Avenue
Chatsworth, CA 91311
(800) 793-0179 or
(818) 700-8977
(818) 700-8984 (fax)
salesjpsi@jmar.com (e-mail)
www.jmar-psi.com (web address)

Contact JMAR Precision Systems
Main Office for International
locations and phone numbers.

U.S. Regional Sales Offices:

West Coast

San Jose, California
(510) 413-1050

Midwest

Minneapolis, Minnesota
(800) 793-0179

Southeast

Tampa, FL
(800) 793-0179

Southwest

Dallas, Texas
(800) 793-0179

Northwest

Portland, Oregon
(800) 793-0179

U.S. Regional Technical Office

East Coast

Westborough, Massachusetts
(508) 303-6558
(508) 303-6568 (fax)

Specifications subject to change without notice