

## Precision **Positioning Stages & Drives** with Direct **National Instruments™** Interface



- 1) PC w/ NI Controller & LabVIEW
- 2) #5HC68-C68-5 Cable for NI Controller Connection
- 3) Primatics **MDM2100** Drive
- 4) Single Cable Interface for Positioning Stages
- 5) Primatics **PDR110** Rotary Positioning Stage
- 6) Primatics **PLG110** Linear Positioning Stage

Assembling precision positioning systems around *National Instruments* Motion Controllers is simplified with *Primatics* components. We offer several models of Servo and Stepper Drives that connect directly to the NI-73xx Series products with a single cable. We also offer a broad range of *Linear* and *Rotary Positioning Stages* to meet your motion requirements.

Each stage is connected to the motor drives with a single cable. Within minutes you can be controlling motion using MAX, or developing your application in LabVIEW.

The following pages show just a sample of our NI compatible positioning products. For more products, as well as complete datasheets, drawings, solids and manuals, visit our website at [www.primatics.com/ni.htm](http://www.primatics.com/ni.htm).

**MDC400**



Drives, pg 2

**PLG110**



Linear Stages, pg 3

**PDR160**



Rotary Stages, pg 4



# MDC Family



- Multi-axis drive systems for up to 2, 4 or 8 axes of stepper or servo motion
- Interfaces directly to motion controllers from National Instruments, Galil & Delta Tau
- Integrated motor power
- Desktop or rack mount versions
- Removable drive modules offer mix and match capability that allows you to purchase only the number of drives you require.
- Many different cable options
- All MDCs include a STOP feature

Performance Specifications	MDC200	MDC400	MDC800
Number of Motion Axes	1 or 2	1 to 4	1 to 8
Motor Compatibility	DC Brushed Servo, DC Brushless Servo & Stepper		
Motor Voltage (VDC)	48 or 75		
Dimensions (H x W x D) (mm)	133 x 235 x 293	133 x 449 x 446	228 x 449 x 446



MDC800 Back View Showing Plug-In Card

# MDM2000 Family

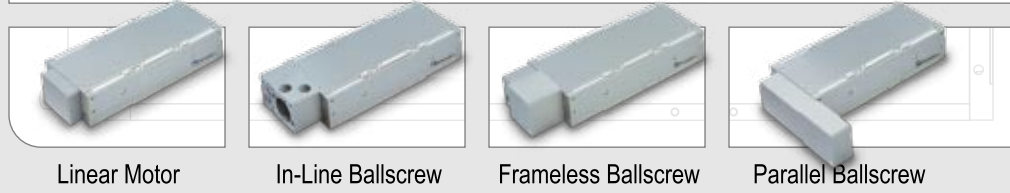
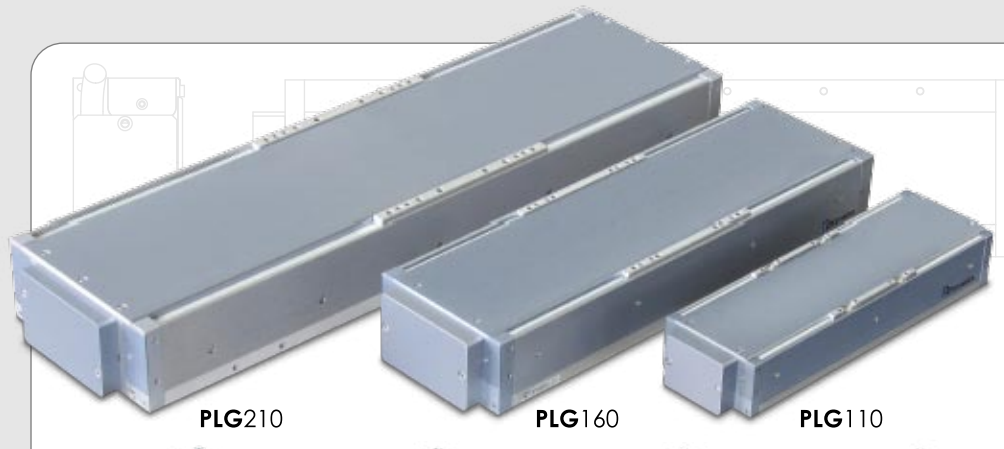
- Multi-axis drive systems offering direct connectivity to National Instruments motion controllers and up to 4 axes of motion.
- MDM2100 is for Servo motors only
- MDM2200 is for Stepper motors only
- Integrated motor power
- Designed for NI-73xx controllers
- Only NI's standard SHC68-C68-S cable required for PC interface
- Only one connector required per stage



Performance Specifications	MDM2100	MDM2200
Number of Motion Axes	1 to 4	
Motor Compatibility	DC Brush and Brushless Servo	Stepper
Motor Voltage (VDC)	48 or 75	24 or 48
Dimensions (H x W x D) (mm)	89 x 305 x 330	

# PLG Family

- 110mm (4.3"), 160mm (6.3") and 210mm (8.3") cross-sectional sizes
- Travel to 1200mm
- Four motor drivetrain options
- Internal linear or rotary encoder resolution to 0.1 microns
- Prima-Flex™ internal cable management system for fully adjustable limit and home sensors
- Aluminum or Cast Iron base
- All stages individually tested for accuracy, repeatability, straightness and flatness
- Multi-axis configurations available
- Class 10 cleanroom option



Linear Motor Driven Performance Specifications	PLG110	PLG160	PLG210
Travel (mm)	100 to 600	100 to 800	100 to 1200
Positional Accuracy (µm) over Total Table Travel	+/- 3 to +/- 10	+/- 3 to +/- 13	+/- 3 to +/- 19
Positional Repeatability (µm)	+/- 0.5, +/- 1, +/- 2		
Max Speed (mm/s)	1000		
Direct Load Capacity (kg)	25	50	100

Ballscrew Driven Performance Specifications	PLG110	PLG160	PLG210
Travel (mm)	50 to 600	50 to 800	100 to 1200
Positional Accuracy (µm) over Total Table Travel	+/- 2.5 to +/- 10	+/- 2.5 to +/- 13	+/- 3 to +/- 17
Positional Repeatability (µm)	+/- 0.5, +/- 1, +/- 2		
Max Speed (mm/s)	200 to 300		
Direct Load Capacity (kg)	25	50	100

# SRB Family

- Ideal for value-priced, moderate precision applications
- 50mm (2"), 60mm (2.4") & 86mm (3.9") cross-sectional sizes
- Travel to 950mm
- Rolled ballscrew drivetrain
- Several options available for motors, motor couplings, encoders, brakes, mounting plates and brackets, and cable assemblies



Performance Specifications	SRB50	SRB60	SRB86
Travel (mm)	60 to 540	100 to 600	250 to 950
Positional Repeatability (mm)	+/- .025		
Max Speed (mm/s)	250 to 500		500 to 1000
Direct Load Capacity (kg)	15	24	36



# PDR Family

- Direct-drive continuous rotary motion
- 110mm (4.3"), 160mm(6.3") & 210mm (8.3") diameter platens
- Integrated brushless servo motor drivetrain eliminates gear wear, backlash and torque variation.
- Internal multiplication electronics
- Oversized cross roller bearing and non-contact drivetrain guarantee long, trouble-free operation
- Class 10 cleanroom option



Performance Specifications	PDR110	PDR160	PDR210
Travel (degrees)	360		
Positional Accuracy (arc-seconds)	+/- 50 to +/- 90	+/- 30 to +/- 65	+/- 30 to +/- 60
Bi-Directional Repeatability (counts)	+/- 4 to +/- 2		
Resolution (arc-seconds)	0.36 to 21.6	0.25 to 16	0.18 to 11.25
Axial Load Capacity (kg)	10	20	30

# PLR Family

- Limited rotation for angular correction
- 190mm (7.5") & 355mm (13.8") diameter platens
- Precision cross-roller bearings deliver high capacity, excellent rigidity and long life



Performance Specifications	PLR190	PLR350
Travel (degrees)	+/- 6	+/- 5
Positional Accuracy (arc-seconds)	+/- 2	
Bi-Directional Repeatability (arc-sec)	+/- 1	
Max Speed (degrees/sec)	15	40
Axial Load Capacity (kg)	70	140

# About Us



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The Primatics team draws from years of experience in the automation and precision positioning stage market to continually create solutions that satisfy a variety of applications. For more information, visit our web site or contact our customer service personnel.