

MI SERIES 6900 PLANAR SCANNER

Key Features

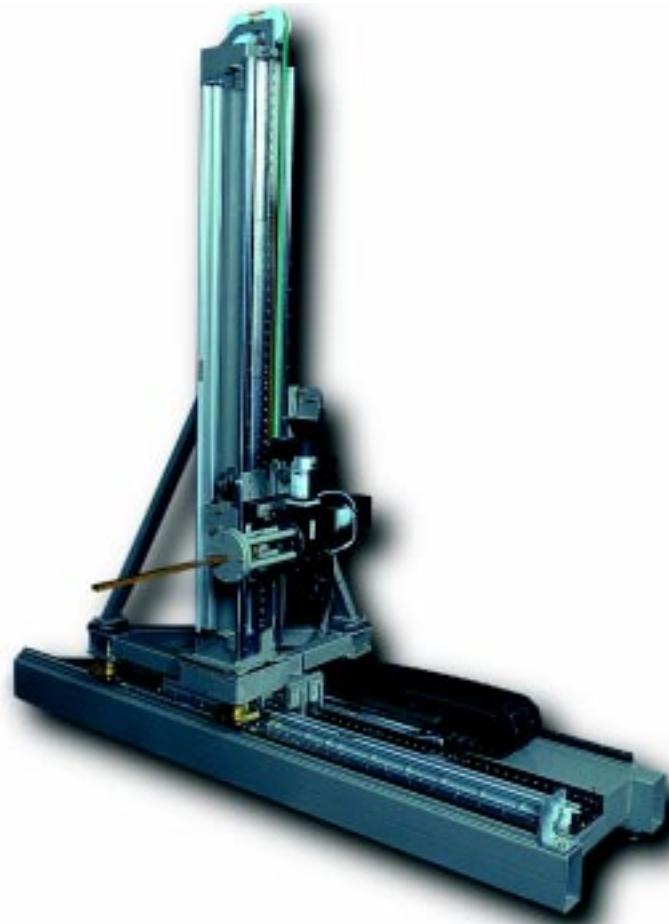
- State-of-the-art brushless linear drive systems
- Superior acceleration and velocity control
- Closed loop linear position encoders ensure position repeatability and accuracy
- All steel construction designed to maintain alignment and stability
- Dynamic planarity supports high-precision applications
- Modular design allows use in all planar scanning and positioning applications

Description

The MI Series 6900 Planar Scanner was developed to provide a more reliable, higher accuracy, and faster scanning mechanism for precision scanning and positioning applications.

The MI Series 6900 Planar Scanner combines speed with accuracy to support high-speed positioning and scanning challenges.

MI Technologies' scanners feature state-of-the-art brushless linear drive



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motors and linear encoders in both X and Y-axes. The linear motors provide superior acceleration and speed with minimum vibration. The scanners use a linear encoder feedback to form a closed loop for precise position feedback along its X and Y axes. The use of linear motors enables operation of the scanner with only the bearings-to-rail as the contacting points on the axis. This feature reduces vibration

and frictional wear of the scanner and eliminates many of the planarity errors commonly caused by rack and pinion, lead screws and other contacting drive systems.



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MI Series 6900 Planar Scanner

The MI Series 6900 Planar Scanner comes in four standard sizes: 3' x 3', 5' x 5', 8' x 8' and 8' x 10'. Each model offers scanning speeds up to 30" per second and planarity from .002" RMS.

MI Series 6900 Planar Scanners use an inverted Tee design (also called a moving tower). There are several advantages to this design versus a box frame scanner.

- The structural load path is much more direct, reducing the impact of changing loads.

- Coordinated drive systems, located at the top and bottom rail (or left and right) are not required, increasing stability and accuracy.
 - Alignment and calibration is greatly simplified as adjustments are not spread over long distances. X alignment points are located on the base.
 - Thermal gradient effects are minimized.
 - The scanners can be scaled for vertical size.
- MI Technologies can engineer custom scanners to fit the needs of our customers.

Product Specifications

Planarity		Velocity	
X-Y plane	0 .002 inch RMS (50.8 microns RMS)	X Axis	20 in/sec (500 mm/sec)
		Y Axis	30 in/sec (750 mm/sec)
		Z Axis	Customer Selectable
		Roll Axis	Customer Selectable
Position Readout Accuracy		Drive System	
X Axis	±0.0002 inch (±5 microns)	X Axis	Linear Induction Motor
Y Axis	±0.0002 inch (±5 microns)	Y Axis	Linear Induction Motor
Z Axis	Contact Factory	Z Axis	Customer Selectable
Roll Axis	Contact Factory	Roll Axis	Customer Selectable
Readout Resolution		Position Transducer	
X Axis	±0.00005 inch (±1 microns)	X Axis	Linear Encoder
Y Axis	±0.00005 inch (±1 microns)	Y Axis	Linear Encoder
Z Axis	Customer Selectable	Z Axis	Customer Selectable
Roll Axis	Customer Selectable	Roll Axis	Customer Selectable

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