



DESCRIPTION

The 500H-50x50 is an ideal system for measuring large aperture antennas with medium to high gain (>15 dBi) making it suitable for testing larger arrays or reflector antennas that require a zenith orientation for testing. The 500H-67x54 is based on an "H" frame design and is constructed using two reinforced steel X-rails that support a stiff yet light weight Y bridge on precision bearing rails. The high capacity probe stage can accommodate various probes from L to mmWave bands including any necessary RF equipment, probe extensions and optional roll and Z-stages.

CAPABILITIES

The system interfaces with a wide variety of RF equipment and is capable of measuring amplitude and phase patterns from L-band to mmWave bands. The system includes NSI Antenna Measurement Software. The system software runs on a Pentium based measurement workstation and provides automatic setup of scans based on measurement parameters and desired output. Measured data can be processed for far-field or holographic patterns yielding complete characterization of the antenna's beam pointing and cross polarization. The model 500H-67x54 can be supplied with a variety of options and can be upgraded to allow for vertical planar measurements to expand system capabilities.

FEATURES

- High Accuracy - Uncorrected Planarity < 0.015" (0.375 mm) RMS
- 67' x 54' (20.4 m x 16.5 m) Scan Area
- Precision Rack and Pinion Drive
- L-band to mmWave Measurements
- Far-field, Near-field, and Holographic Patterns
- Space Based Applications

SPECIFICATIONS	
Construction	Steel X beams supporting steel Y bridge
Drive system	Precision Stepper Motors, Rack and Pinion
Scan Area	67' x 54' (20.4 m x 16.5 m)
Planarity	< 0.015" (0.375 mm) RMS
Corrected Planarity (Requires optional Structure Correction Software and Probe Translation Stage)	< 0.004" (0.100 mm) RMS
Resolution	0.001" (0.025 mm) (X) 0.002" (0.050 mm) (Y)
Position Repeatability	0.002" (0.050 mm) RMS
Scan Speed	10 in/s (0.25 m/s) (X) 20 in/s (0.50 m/s) (Y)
Probe Carriage Capacity	100 lb (45 kg)
System Controller	NSI controller with serial and parallel I/O interfaces
Measurement Workstation	Measurement workstation computer with large LCD monitor
Stepper Motor Power Amplifier	NSI Motor Amplifier
Motor Cables	Cables with quick-connect terminations
Probe	Optional - See our list of standard Open Ended Waveguide (OEWG) probes
Scanner Absorber	X-Y absorber kit, 12" pyramidal under bridge, 5" wedge absorber on X rails
RF Cables	20 GHz RF Cables
Supported RF Devices	NSI Panther Receiver Subsystem or selection of Agilent, Rohde & Schwarz and Anritsu VNA's (contact NSI for a complete list)
Power	100-240 VAC switchable, 47-63 Hz

DIMENSIONS

- ◆ Width - 876" (22.3 m)
- ◆ Depth - 708" (17.9 m)
- ◆ Height - Variable
- ◆ System Weight - 67,000 lb (30,400 kg)

ORDERING INFORMATION

Please contact the NSI Sales department to order this product.

Nearfield Systems, Incorporated

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