

DESCRIPTION

The 500H-22x22 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-22x22 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.

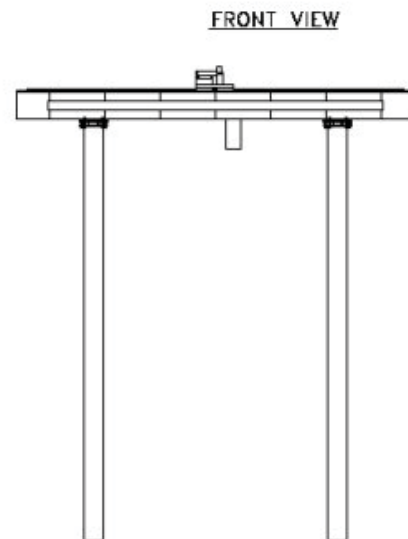
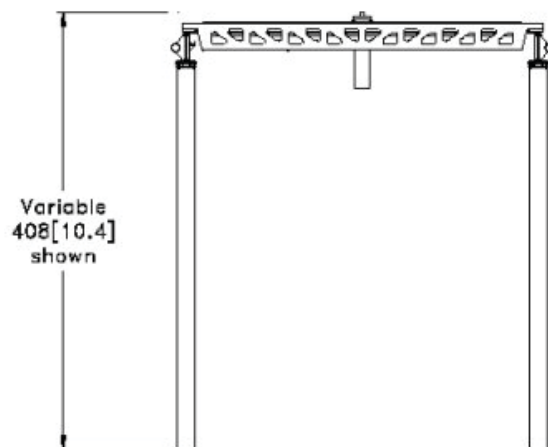
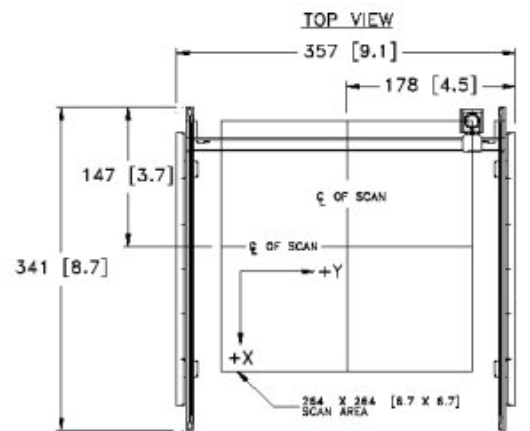
CAPABILITIES

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-22x22 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 < 0.005" (0.125 mm) RMS
- 22' x 22' (6.7m x 6.7m) 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 Synchronized Stepper Motors
Scan Area	22' x 22' (6.7 m x 6.7 m)
Planarity	< 0.005" (0.125 mm) RMS
Corrected Planarity (Requires optional Structure Correction Software and Probe Translation Stage)	< 0.002" (0.05 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	EIA 19" rack mount (7" H x 14" D)
Motor Cables	40' (12 m) with quick-connect terminations
Probe	WR90 Open-ended Waveguide Probe SMA (f) transition & Pyramidal absorber (3")
Scanner Absorber	X-Y absorber kit, 18" 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, 800 watts



SIDE VIEW

DIMENSIONS

- ◆ Width - 357" (9.1m)
- ◆ Depth - 341" (8.7m)
- ◆ Height - 408" (10.4m)
- ◆ Weight - 9,000 lbs (4,077 kg)

ORDERING INFORMATION

Please contact the NSI Sales department to order this product.

Nearfield Systems, Incorporated

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