

## NSI-300V-23x18

23' x 18' (7.0 m x 5.5 m) Vertical Planar Near-field Measurement System



### DESCRIPTION

The 300V-23x18 is an ideal system for measuring medium and high gain antennas (>15 dBi) with large sized apertures making it suitable for testing large arrays or reflector antennas. The 300V-23x18 is based on an inverted "T" design and is constructed of steel. For high stability a welded cross-braced dual-rail base is used. This robust design is easy to maintain and align, and highly accurate. The high capacity probe carriage accommodates probes as low as L-band including 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 performance. A single data set provides information on antenna gain, side lobe structure, beam pointing and cross polarization.

The 300V-23x18 can be supplied with a variety of options and can be upgraded to allow for cylindrical or spherical measurements to expand system utility.

### FEATURES

- High Accuracy Planarity <0.004" (0.10 mm) RMS
- 23' x 18' (7.0 m x 5.5 m) Scan Area
- Precision Rack and Pinion Drive
- L-Band to mmWave Measurements
- Inverted "T" Frame Design for High Accuracy
- Far-field, Near-field and Holographic Patterns
- Cylindrical and Spherical Options Available

SPECIFICATIONS	
Construction	Inverted "T" Frame (steel)
Drive system	Precision Stepper Motor; Rack and Pinion
Scan Area	23'x 18' (7.0 m x 5.5 m)
Planarity	<0.004" (0.10 mm) RMS
Corrected Planarity (Requires optional Structure Correction Software and Probe Translation Stage)	<0.002" (0.05 mm) RMS
Resolution (x,y)	0.001" (0.025 mm)
Position Repeatability	0.002" (0.05 mm) RMS
Scan Speed (X-Y)	X - 10 in/s (0.25 m/s) Y - 15 in/s (0.38 m/s)
Probe Carriage Capacity	125 lbs. (57 kg) maximum recommended, WR1500
System Controller	NSI controller with parallel I/O, and serial interface
Measurement Workstation	Measurement workstation computer with large LCD monitor.
Stepper Motor Power Amplifier	EIA 19" rack mount. (7" high x 14" deep)
Motor Cables	Quick-connect; 40' (12 m)
Scanner Absorber	X-Y Absorber Kit (12" pyramidal cone) .
Probe	WR90 Open-ended Waveguide Probe SMA (f) transition & Pyramidal absorber (3")
Probe Mount	Angle Bracket - allows mounting probe in "V" or "H" orientation
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, 500 watts

## DIMENSIONS

- ◆ Width - 340" (8.6 m)
- ◆ Depth - 105" (2.6 m)
- ◆ Height - 271" (6.9 m)
- ◆ System Weight - 10 000 lbs (4 536 kg) approx.

## ORDERING INFORMATION

Please contact the NSI Sales department to order this product.

### Nearfield Systems, Incorporated

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