



#### DESCRIPTION

The 500H-40x22 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-40x22 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.

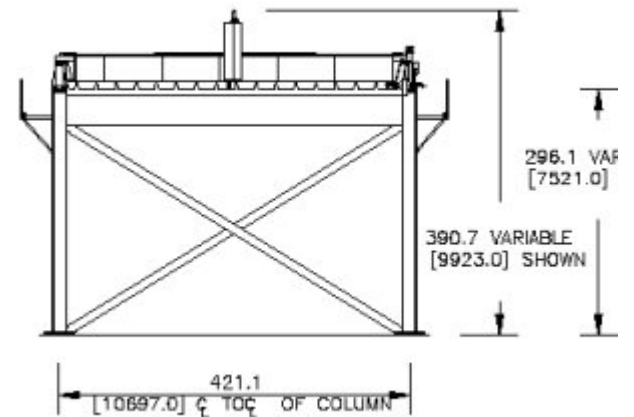
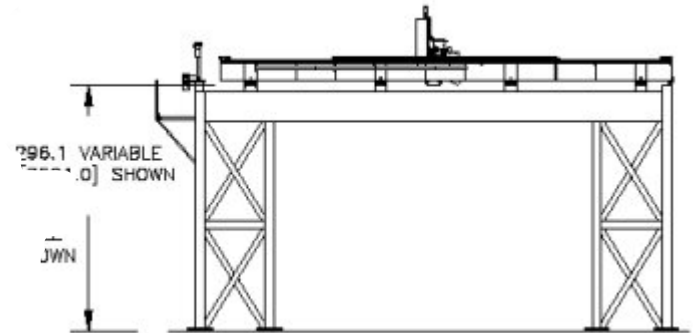
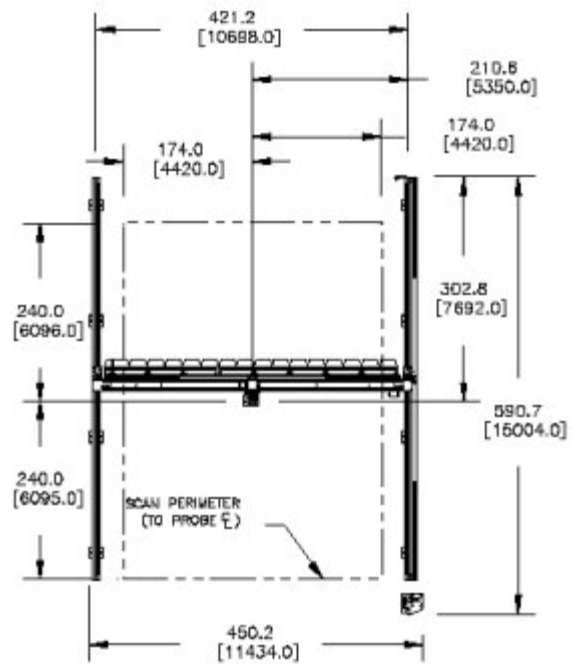
#### CAPABILITIES

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-40x22 can be supplied with a variety of options and can be upgraded to allow for vertical planar measurements to expand system performance.

#### FEATURES

- High Accuracy - Uncorrected Planarity < 0.010" (0.250 mm) RMS
- 40' x 22' (12.2 m x 6.7 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   | 40' x 22' (12.2 m x 6.7 m)  |
| Planarity   | < 0.010" (0.250 mm) RMS   |
| Corrected Planarity (Requires optional Structure Correction Software and Probe Translation Stage) | < 0.002" (0.050 mm) RMS   |
| Resolution  | 0.001" (0.025 mm) (X)<br>0.002" (0.050 mm) (Y)  |
| Position Repeatability  | 0.002" (0.050 mm) RMS   |
| Scan Speed  | 10 in/s (0.25 m/s) (X)<br>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   | Optional - See our list of standard Open Ended Waveguide (OEWG) probes  |
| 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   |



## DIMENSIONS

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

## ORDERING INFORMATION

Please contact the NSI Sales department to order this product.

### Nearfield Systems, Incorporated

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