ANTENNA POSITIONERS MINIMAST™ ANTENNA TOWER

MODEL 2175

- Classic EMCO and Stinger Antenna Mounting
- Variable Speed Operation: 3 cm/sec to 22 cm/sec
- 1 m to 4 m Scan Height Range
- Compact 4.6 m Total Mast Height
- Fiber Optic Upper and Lower Limits Switches
- Fiber Optic Control Lines Eliminate RF Noise
- Air Polarized for Reduced Test Time
- Compatible with EMCenter™ with EMControl™ and Model 2090 Controllers
- Infrared Hand Control Unit Included
- Designed for Indoor Use

ETS-Lindgren's Model 2175 MiniMast Antenna Tower maximizes available space in today's compact chambers, while offering many features found on full-sized ETS-Lindgren towers. The mast section is made from one continuous piece of square fiberglass tubing. This construction improves stability during ascent and descent of the antenna. Nominal height is 4.6 m. Supporting up to 10 kg (22 lbs.) of weight, the MiniMast's sturdy boom can be used with almost any EMC antenna.

Off-set Boom

To facilitate measurement accuracy, the MiniMast features an off-set boom, when classic EMCO mounts are used. Rotating from vertical to horizontal polarization, the antenna's centerline maintains a constant rotational axis. Stinger style end mounted antennas slide into a receiver on the boom. Hand tightened knobs eliminate the need for tools. A rounded pipe at the rear of the cross boom feeds the antenna cable to the antenna, maintaining an appropriate bend radius of the coaxial cable.

Variable Speed Operation

The MiniMast features variable speed operation. Variable speed rates range from 3 cm/sec to 22 cm/sec as controlled by the EMCenter with EMControl card or Model 2090 controller.

Scan Height Range

The Model 2175 as a scan height range of 1 m to 4 m.

Polarization Limits

When the mast is used with the EMCenter with EMControl or the Model 2090 Controller, two carrier limits can be set to help prevent rotating antenna elements into the ground plane or ceiling during polarization changes.

Fiber Optic Control Lines Eliminate RF Noise

To eliminate a potential source of RF noise, the MiniMast features fiber optic control lines (10 m included). ETS-Lindgren's proprietary fiber optic limit upper and lower limit switch design is a key embedded safety feature.

Multi-Purpose Design

Large durable wheels provide easy rolling on most ground plane surfaces. Built with rugged, high density, fiberglass reinforced polymer, the unit's mast and cross boom are highly resistant to deterioration from exposure to UV. A reliable rope and pulley mechanism is used for carrier descent.

Air Polarization

A convenient air polarization capability reduces test time. Polarization occurs in a 90° arc at the rate of approximately 30° per second. A customer supplied external source of compressed air at 410 to 550 kPa (4.1 bar to 5.5 bar or 60 psi to 80 psi) is required.

Compatible with ETS-Lindgren's Advanced Controllers

The MiniMast is compatible with the flexible EMCenter Modular RF Platform with EMControl Positioning Controller and the multi-function Model 2090 Positioning Controller. These Controllers enable test engineers to access many useful commands including a SCAN function which can cycle the MiniMast within a 1 m to 4 m in height. Users can also direct a device to a target location with the SEEK function. The CONFIGURATION and LIMIT functions enable users to program operational parameters and upper/lower or clockwise/counterclockwise limits. POSITION and STEP functions work together to manually control tower cross boom and turntable positioning.

Remote Control Unit

The MiniMast includes a hand-held infrared (IR) remote control unit that can be used to operate the owners' basic functions within short, line-of-sight distances from the motor base. This feature eliminates trips to the control room to adjust cross-boom position when antennas are mounted or exchanged during test setup.

Indoor Use

The Model 2171B is designed for indoor use. For outdoor positioning systems, please contact ETS-Lindgren for additional information.

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Standard Configuration

- Tower Assembly
- Air Polarization (Customer Supplied Air Source)
- Shield and Cable Kit Including:
  - One 10 m Fiber Optic Cable
  - One 3 m Fiber Optic Cable
  - Two Fiber Optic Bulkhead Feed-throughs
- IR Remote Control Unit
- Manual

Options

- Controllers
  - EMCenter with EMControl Card
  - 2090 Positioning Controller
- Universal Antenna Mount
- Custom Mast Heights
- Additional Fiber Optic Cable Lengths

Technical Specifications

Physical	
Height	4.6 m
	15.1 ft
Weight	81.2 kg
	179.0 lb
Base Dimensions	0.9 m x 0.9 m
	2.95 ft x 2.95 ft
Scan Height	4.0 m
	13.1 ft
Maximum Load Capacity	10.0 kg
	22.0 lb
Required Air Pressure	410 to 550 kPA
	60 to 80 psi
Power	220 VAC, 50/60 Hz
	10 A, Single Phase