

## FEATURES

- **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**
- **Designed for Indoor/Outdoor Use**
- **Air Polarized for Reduced Test Time**
- **Compatibility with Model 2090 Controller Allows for SEEK, SCAN & Other Commands**
- **Infrared Hand Control Unit Included**



*ETS-Lindgren's Model 2175 MiniMast™ Antenna Tower*

**ETS-LINDGREN'S MODEL 2175 MINIMAST™** 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.

## FEATURES

### **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 Model 2090 controller.

### **Scan Height Range**

The Model 2175 as a scan height

range of 1 m to 4 m.

### **Fiber Optic Limits Switches**

When the mast is used with 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). The lines are Kevlar reinforced to provide extra protection against cable damage. ETS-Lindgren's proprietary fiber optic limit upper and lower limit switch design

is a key imbedded safety feature.

**Multi-Purpose Design**

Although designed with compact chambers in mind, the MiniMast can be used outdoors as well. Large durable wheels provide easy rolling on most ground plane surfaces. (As with any mast in an outdoor application, the MiniMast should be fastened to the ground plane using guide ropes). Built with rugged, high density, fiberglass reinforced polymer, the unit’s mast and cross boom are highly resistant to deterioration from exposure to sunlight. 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 degree arc at the rate of approximately 30 degrees per second. A customer supplied external source of compressed air at 410 – 550 kPa (4.1 bar – 5.5 bar or 60 psi – 80 psi) is required.

**Compatible with ETS-Lindgren’s Advanced Controller**

The MiniMast is compatible with the multi-function Model 2090 Multi-device Positioning Controller. The 2090 can independently control two primary devices (e.g. a tower and turntable) with great accuracy. Users also can perform the switching functions of up to four auxiliary devices. The Model 2090 Controller enables 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.

**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 filter optic bulkhead feed-throughs
- IR Remote control unit
- Manual

**OPTIONS**

- Additional fiber optic cables
- Universal antenna mount
- Custom mast heights (please consult with the ETS-Lindgrn Sales Department for details)
- Model 2090 Positioning Controller

**PHYSICAL SPECIFICATIONS**

HEIGHT	WEIGHT	BASE DIMENSIONS	SCAN HEIGHT	MAX. LOAD CAPACITY	REQUIRED AIR PRESSURE	POWER
4.6 m 15.1 ft	81.2 kg 179 lb	.9 m x .9 m 2.95 ft x 2.95 ft	4.0 m 13.1 ft	10.0 kg 22.0 lb	410 - 550 KPA 60 - 80 psi	220 VAC 50/60 Hz 10 amp, Single Phase