



40 FT. SELF SUPPORTING MAST ANTENNA

Overview

Built to withstand 70 mph wind load, the Southern Avionics 40 foot (12m) Monopole Antenna is designed to radiate 250 Watts at 190 to 625 kHz.

The antenna is made of hot-dipped galvanized steel sections configured on 12.5 inch (31.75cm) equilateral triangular design with electrically welded continuous steel 'zigzag' cross bracing. The lattice tower sections are designed in accordance with U.S. National Standard ANSI/EIA-222 F.

Three high voltage insulators are used to isolate the radiator from ground. Rain shields are included to enhance the insulation characteristics of the antenna. A 6 (six) radial top hat is used to develop and enhance antenna capacitance. The 6 radials allow us to increase the basic radiator capacitance from 171pF to 275pF through the use of extra top loading. This added capacitance reduce the system's Quality factor (Q) thus allowing more side band audio tone to be received down range by the pilot.

The antenna includes a 16 (sixteen) radial ground system consisting of 300m of #10 AWG soft-drawn copper wire, 17 (seventeen) 2m long ground rods with ground clamps and associated hardware.

P/N SLF10080

Specifications

ELECTRICAL

FREQUENCY: 190 kHz – 750 kHz.

POWER RATING: 1000 Watts PEP / 250 Watts carrier power at 100% amplitude modulation

CAPACITANCE: 275pF

POLARIZATION: Vertical

PATTERN: Omni-directional

ELECTRICAL LENGTH: 8.61m

MECHANICAL

DESIGN: Self-supporting, galvanized, heavy duty 1-1/4" steel tubing with welded cross bracing

HEIGHT: 41 Feet 14 Inches (12.5m) with buried base section and insulators

INSTALLED WEIGHT: 285 lbs (129.4 kg)

SECTIONS: Three (3) sections 10ft (3m) in length

Two (2) RF insulator sections 5ft (1.5m) in length

One (1) buried support section 5ft (1.5m) in length

WIND RATING: 70 miles per hour (mph) / 112 km/hr

OVERTUNING MOMENT: 6,800 ft-lbs

FINISH: Hot-Dip Galvanized steel

TEMPERATURE RANGE: -50 to +70 degrees Celsius

ICE RATING: 70 mph with no ice accumulation

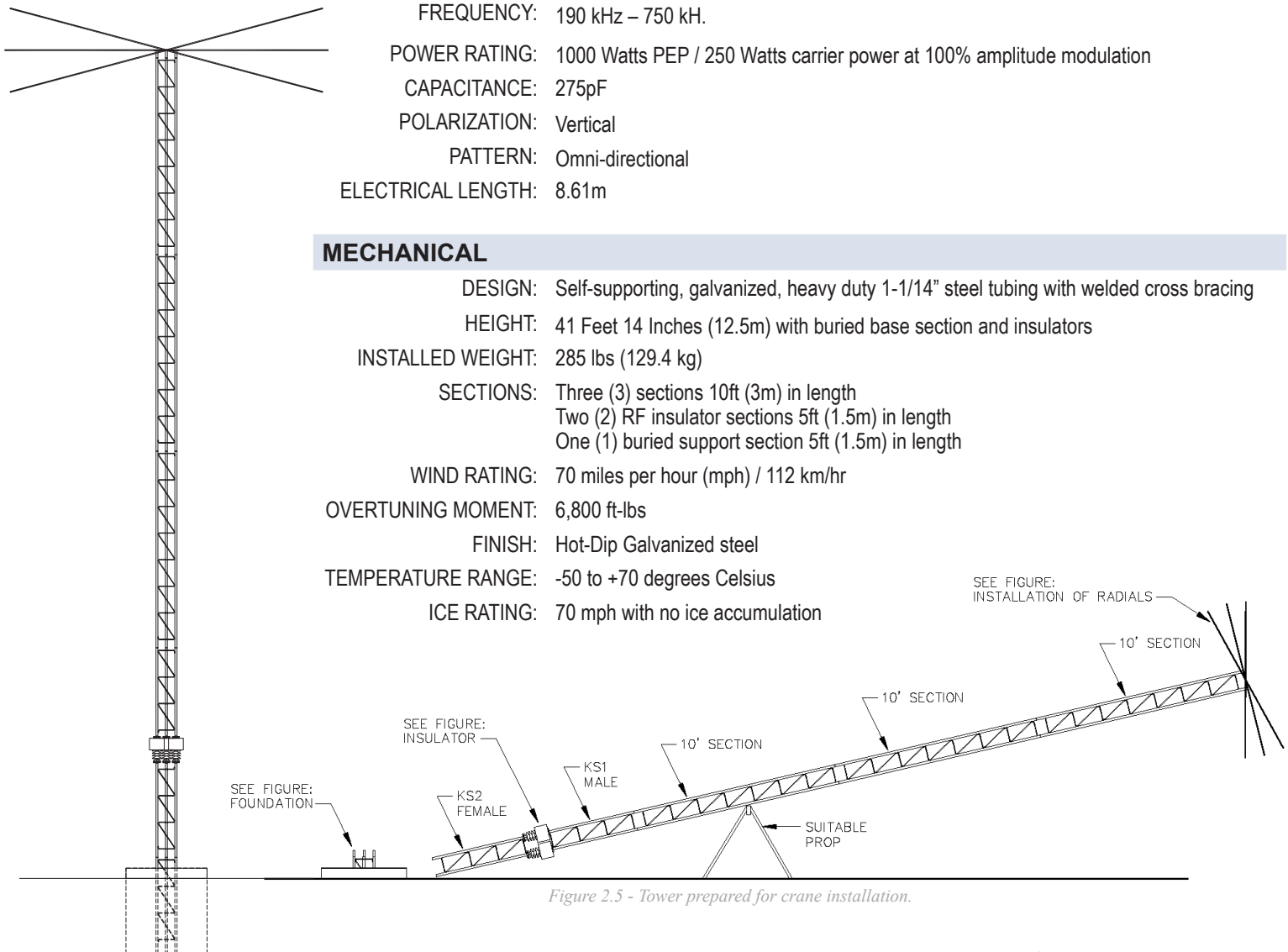


Figure 2.5 - Tower prepared for crane installation.

SOUTHERN AVIONICS COMPANY

Domestic: 1-800-648-6158 • International: +409-842-1717 • Fax: (409) 842-2987
P.O. Box 5345 • Beaumont, TX 77726-5345 • www.SouthernAvionics.com





Installation Options

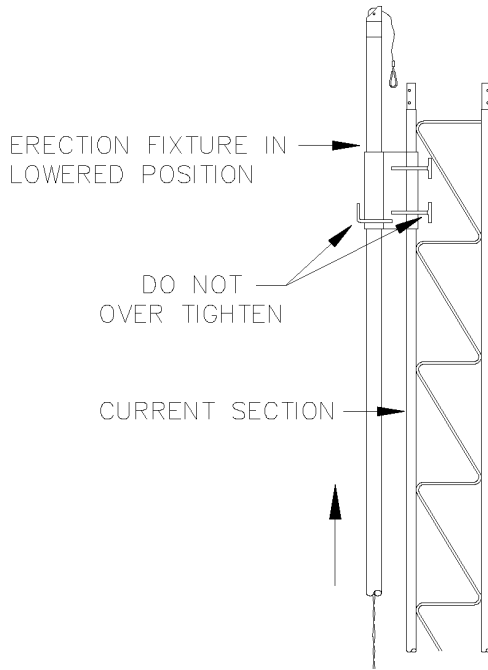


Figure 2.6 - Assembly using erection fixture 1.

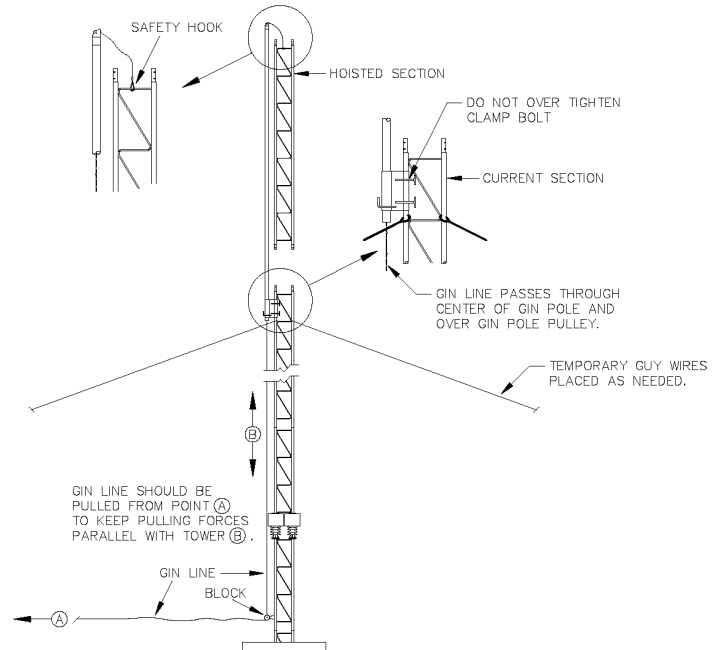


Figure 2.7 - Assembly using erection fixture 2.

Optional Equipment

Solar Powered LED Obstruction Lights

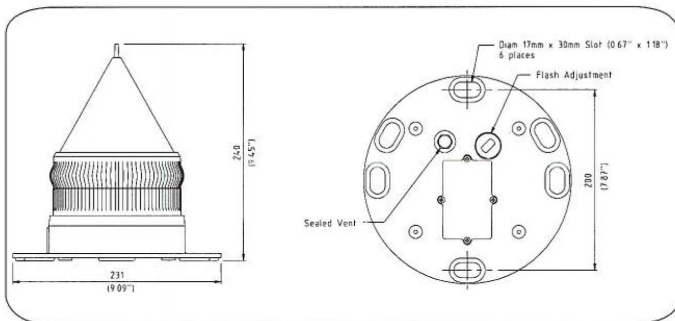


Figure 1.1 - Counterpoise

