



EMC Antennas
Biconical Antenna
Model 3110C

FEATURES:

- **Unique Element Design to Improve Performance**
- **Improved Balun Design for Increased Efficiency**
- **Compact Size for Use in Limited Space**
- **Both Stinger and EMCO Mounts Included**



ETS-Lindgren's Model 3110C Biconical Antenna

The ETS-Lindgren Model 3110C Biconical Antenna combines several unique features, achieving high levels of performance.

The balun, feedline, and element cage design give the Model 3110C response curves that are almost linear, making it ideal for swept measurements.

To achieve this kind of performance, the balun is designed using an unbalanced-to-balanced transformer. This results in very even current transformation. Ferrites are also placed along the feedlines, reducing common mode current that can interfere with the antenna

pattern in the vertically polarized measurements.

The 3110C is easy to mount, and now features a stinger mount with square collar. This collar allows for easy polarization alignment when using an ETS-Lindgren mast.

Common applications include measurements to MIL-STD specifications; ANSI C63.4, FCC-18 and EN 55022 emissions testing.

ETS-Lindgren's 3110C biconical antennas are designed for maximum performance in the 30 to 300 MHz frequency range.

FEATURES

Unique Element Design

Some biconical antennas exhibit an electrical "bump" at 281 MHz, but ETS-Lindgren's biconical element crosspiece design improves performance by eliminating this problem. The biconical's crosspiece connects the center element to the outer element diminishing the "bump". Another enhancement is element cages that cannot be overtightened when screwed into the balun.

Improved Balun Design

With a balun constructed from a microtransformer, the 3110C has a perfect impedance match and balance between 50 Ω and 200 Ω

(the impedance of the biconical elements), for the whole frequency range of the antenna.

Compact Size

The compact size of EMCO biconical antennas makes them ideal for anechoic chambers and shielded enclosures. Biconical antennas conserve limited space and help minimize proximity effects.

Quality Construction

Biconical elements are constructed of lightweight corrosion resistant aluminum, providing years of trouble-free indoor and outdoor service.

Flexible Mounting System

The 3110C antenna includes both an EMCO traditional mount, which is ideal for tripod and fits all EMCO masts, and a rear “stinger” mount. The stinger mount permits on-axis rotation/polarization.

STANDARD CONFIGURATION

- Antenna Elements
- Balun
- Base
- Stinger and Classic EMCO Mounting Systems
- Individually calibrated at 1 m per SAE ARP 958 and 3 and 10 m per ANSI C63.5. Actual factors and a signed Certificate of Calibration Conformance included in Manual

OPTIONS

- Portable Elements
- Extended Portable Elements
- Carrying Cases for Portable Models
- Custom Carrying Cases
- ETS-Lindgren Tripod
- Support Rod

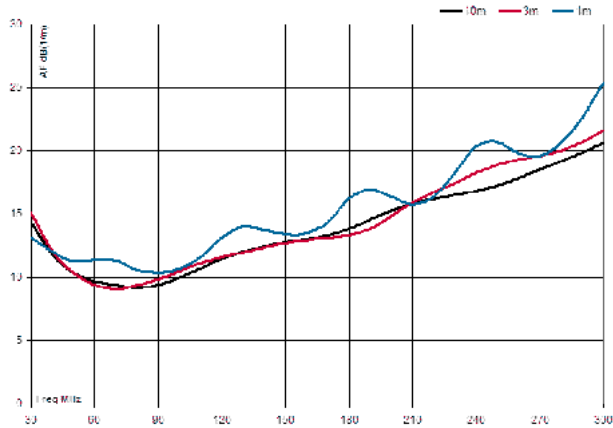
Electrical Specifications

MODEL	FREQUENCY RANGE	VSWR RATIO (AVG)	MAXIMUM CONTINUOUS POWER	PEAK POWER	IMPEDANCE (NOMINAL)	CONNECTORS
3110C	30 MHz - 300 MHz	2.0:1	250 mW	n/a	50 Ω	Type N

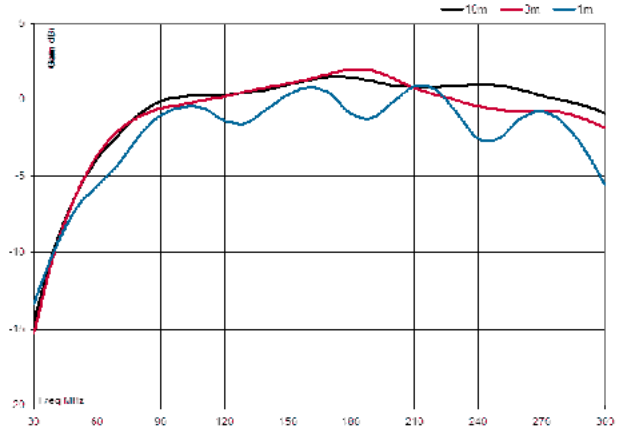
Physical Specifications

MODEL	WIDTH	DEPTH	DIAMETER	WEIGHT
3110C	132.1 cm 52.0 in	79.0 cm 31.1 in	52.0 cm 20.5 in	2.7 kg 6.0 lb

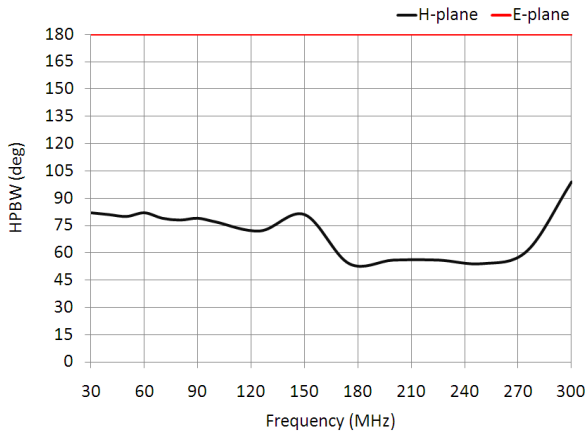
Antenna Factor Typical Measured Data Performance



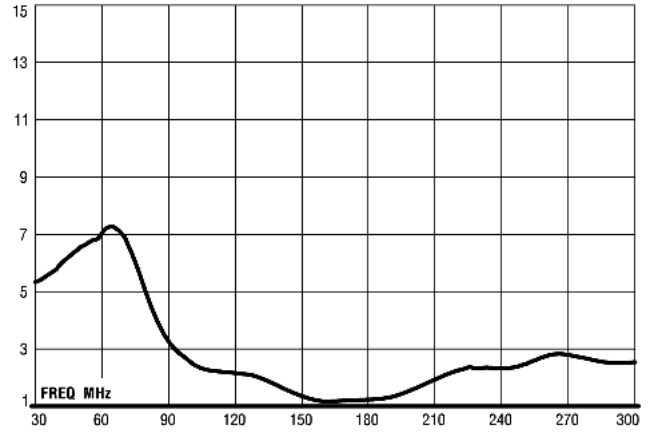
Gain Typical Measured Data Performance



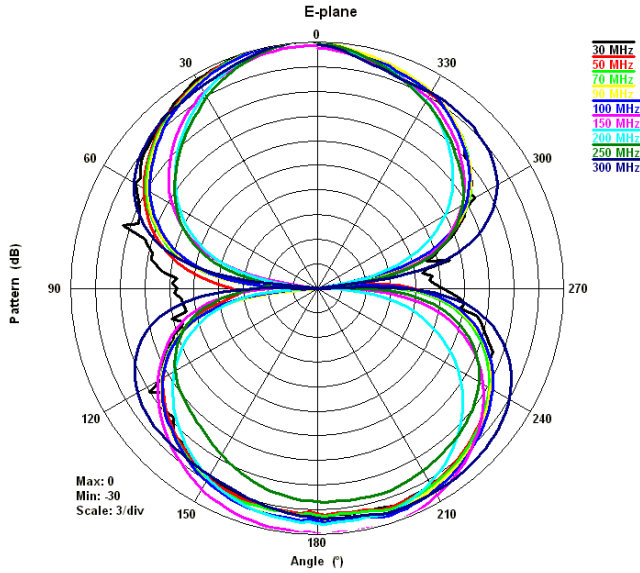
Beamwidth Typical Measured Data Performance



VSWR Typical Measured Data Performance



**E-Plane 30 MHz to 300 MHz
Typical Measured Data Performance**



**H-Plane 30 MHz to 300 MHz
Typical Measured Data Performance**

