ETS•LINDGREN
An ESCO Technologies Company

EMC Antennas
BiConiLog™
Model 3142D

FEATURES:

- **26 MHz - 6 GHz Frequency Range**
- **Avg. 2:1 VSWR Above 50 MHz**
- **Emissions Testing:**
  - **-- ANSI C63.4**
  - **-- FCC-15 and FCC-18**
  - **-- EN 55022**
- **Immunity Testing:**
  - **-- IEC 61000-4-3**
- **Flexible Mounting Systems**

ETS-Lindgren's EMCO Model 3142D BiConiLog Antenna

ETS-Lindgren's EMCO Model 3142D BiConiLog is a hybrid antenna that combines innovative design, compact size, and excellent performance. This antenna enables users to measure a frequency range of 26 MHz to 6 GHz in one sweep, negating the need for multiple antennas and time-consuming equipment setup. Accuracy and repeatability are improved, while time and money are saved.

This BiConiLog is designed as a dual-purpose antenna that can be used for both immunity and emission testing. From 26 MHz to 60 MHz, the Model 3142D antenna with optional end plates exhibits an average 5.5 dB gain improvement vs. typical hybrid antennas. At some frequencies, a 10 dB gain improvement is achieved.

This model replaces the EMCO Model 3142C, and includes a new stinger mount as standard equipment. Individual antenna calibration data is provided for emission testing.

FEATURES

Frequency Range
The Model 3142D increases the upper frequency limit to accommodate the new upper limit of 6 GHz included in the IEC 61000-4-3 standard.

VSWR Levels
The average VSWR is 2:1 above 50 MHz, an excellent level at this low frequency for an antenna this size.

Emissions Testing
The 3142 is ideal for emissions testing, since it cover the entire range of typical emissions measurements.

Immunity Testing
For immunity measurements, the 3142D covers the typical 80 MHz to 6 GHz range, as well as the 26 MHz to 6 GHz used for testing medical equipment.

Individually Calibrated
The 3142D is individually calibrated at 10 m per ANSI C63.5 and calibrations at 1m and 3m per SAE ARP 958.

Flexible Mounting System
The 3142D antenna includes both a Classic EMCO mount and a rear "stinger" mount.

APPLICATIONS

- Emissions
  - -- ANSI C63.4
  - -- FCC-15 and FCC-18
  - -- EN 55022
- Immunity
  - -- IEC 61000-4-3

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STANDARD CONFIGURATION

- Antenna
- Individually calibrated:
  -- 10 m per ANSI C63.5
  -- 3 m per SAE ARP 958
  -- 1 m per SAE ARP 958
- Actual antenna factors and a signed Certificate of Calibration Conformance included in manual
- Manual

OPTIONS

- ETS-Lindgren offers several non-metallic, non-reflective tripods. For easy horizontal and vertical polarization changes, the 7-TR tripod is recommended

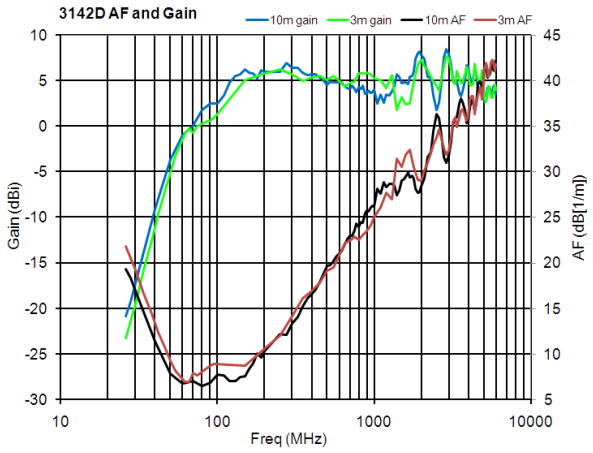
Electrical Specifications

MODEL	FREQUENCY RANGE	MAXIMUM CONTINUOUS POWER	IMPEDANCE (NOMINAL)	VSWR RATIO (AVG)	CONNECTORS
3142D	26 MHz – 60 MHz 60 MHz – 600 MHz 600 MHz – 1 GHz 1 GHz – 6 GHz	500 W 1 kW 500 W 200 W	50 Ω	2:1	Type N female (1)

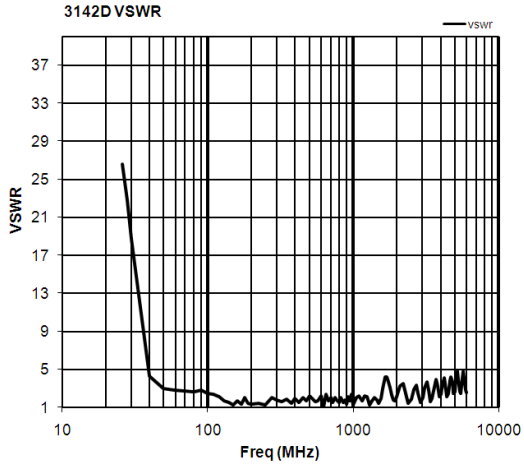
Physical Specifications

MODEL	WIDTH	DEPTH	HEIGHT	WEIGHT
3142D	133.9 cm 52.7 in	168.1 cm 66.2 in	76.2 cm 30.0 in	7.7 kg 17.0 lb

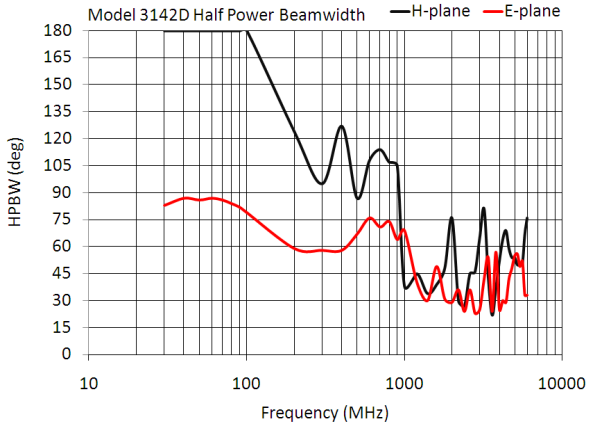
Antenna Factor and Gain Typical Measured Data Performance



VSWR Typical Measured Data Performance



Beamwidth Typical Measured Data Performance



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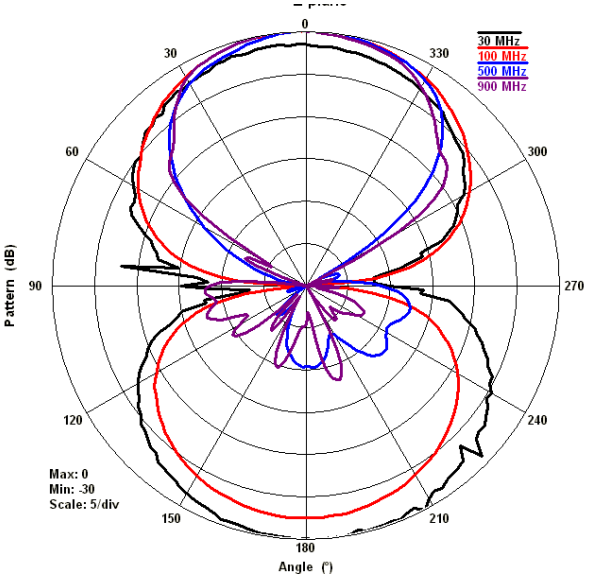
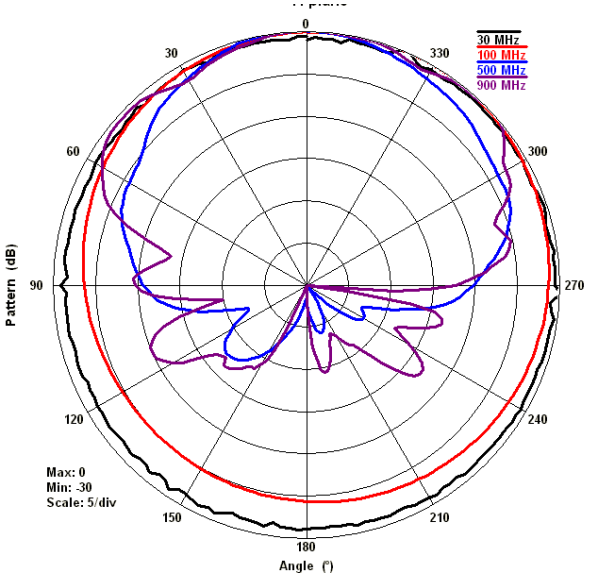
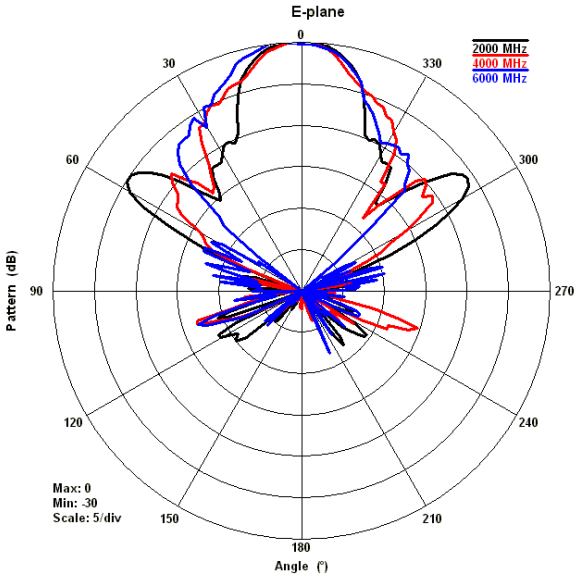
E-Plane 30 MHz to 900 MHz
Typical Measured Data Performance



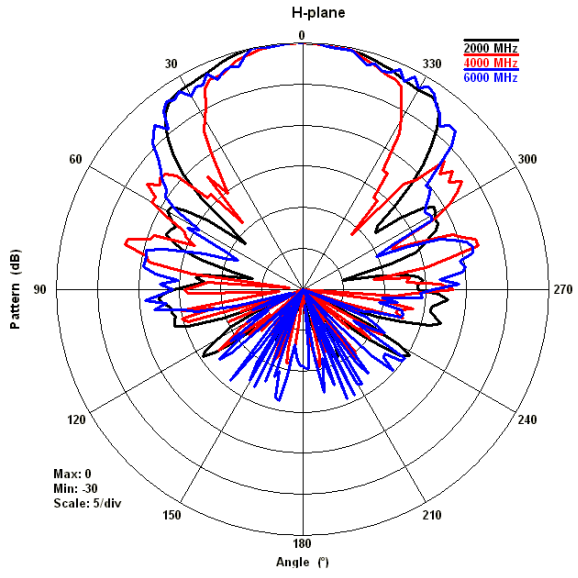
H-Plane 30 MHz to 900 MHz
Typical Measured Data Performance



E-Plane 2 to 6 GHz
Typical Measured Data Performance



H-Plane 2 to 6 GHz
Typical Measured Data Performance



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