ETS-Lindgren's EMCO Model 3143B BiConiLog is a hybrid antenna that combines innovative design, compact size, and excellent performance. This antenna enables users to measure a frequency range of 30 MHz to 1 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.

This model includes a stinger mount as standard equipment. Individual antenna calibration data is provided for emission testing.

**FEATURES**

- **Frequency Range**
  The Model 3143B frequency range covers from 30 MHz to 1 GHz. This frequency range covers the necessary range of emissions testing on a traditional OATS/semi-anechoic chamber setup.

- **VSWR Levels**
  Typical VSWR for the 3143B is >3:1 above 70 MHz, an excellent level at this low frequency for an antenna this size.

- **Emissions and Immunity Antenna**
  Emission measurements can be performed without having to change antennas.

  For immunity measurements, the 3143B covers the typical 80 MHz to 1 GHz range.

- **Flexible Mounting System**
  The Model 3143B comes with a bracket that accepts either a 1/4” 20 thread screw or rear stinger mount.

- **Individually Calibrated**
  The 3143B is individually calibrated at 10 m per ANSI C63.5 and calibrations at 1m and 3m per SAE ARP 958.

**STANDARD CONFIGURATION**

- Antenna Assembly
- Mounting Bracket for ETS-Lindgren or Other Tripod Mounts with 1/4” x 20 Threads
- Stinger Mount
- 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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>FREQUENCY RANGE</th>
<th>MAXIMUM CONTINUOUS POWER</th>
<th>IMPEDANCE (NOMINAL)</th>
<th>VSWR RATIO (AVG)</th>
<th>CONNECTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3143B</td>
<td>30 MHz – 60 MHz</td>
<td>500 W</td>
<td>50 Ω</td>
<td>3:1</td>
<td>Type N female (1)</td>
</tr>
<tr>
<td></td>
<td>60 MHz – 600 MHz</td>
<td>1 kW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>600 MHz – 1 GHz</td>
<td>500 W</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Physical Specifications

<table>
<thead>
<tr>
<th>MODEL</th>
<th>WIDTH</th>
<th>DEPTH</th>
<th>HEIGHT</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>3143B</td>
<td>133.9 cm</td>
<td>124.3 cm</td>
<td>76.2 cm</td>
<td>5.5 kg</td>
</tr>
<tr>
<td></td>
<td>52.7 in</td>
<td>49.0 in</td>
<td>30.0 in</td>
<td>12.0 lb</td>
</tr>
</tbody>
</table>

Antenna Factor and Gain Typical Measured Data Performance

VSWR Typical Measured Data Performance
Typical Avg. Power Required in Horizontal Polarization

3143B Power Required Horizontal at 3 m Distance
Average of power for 16 points on a 1.5m by 1.5 grid

Typical Avg. Power Required in Vertical Polarization

3143B Power Required Vertical at 3 m Distance
Average of power for 16 points on a 1.5m by 1.5 grid

Beamwidth Typical Measured Data Performance

3143B 3dB Beamwidth

Information presented is subject to change as product enhancements are made. Contact ETS-Lindgren Sales Department for current specifications.