ETS·LINDGREN
An ESCO Technologies Company

Microwave Antennas

High Gain Conical Horn Antennas

Model 3163

FEATURES:

- **Conical Shape**
- **Series Frequency Range: 4 GHz to 26.5 GHz**
- **High Gain, Low VSWR**

ETS-Lindgren's Model 3163 Series Conical Horn Antennas

THE ETS-LINDGREN MODEL 3163 SERIES CONICAL HORNS are high gain (Over 16 dBi) antennas, designed for use as feeds in tapered anechoic chambers, as well as in applications requiring high gain and linear polarization. These high gain horns exhibit improved reflectivity levels in the quiet zone (QZ) of tapered chambers, with low VSWR across the range. For flexible use, the 3163 series can be mounted directly into the feed section of a tapered chamber, or mounted to a tripod and used in a rectangular chamber.

FEATURES

Conical Shape

The conical shape of these horns make them ideal for use in the feed section of tapered chambers. When back-mounted and attached to a rotator at the feed of the taper chamber, their design allows for rotation inside the conical feed sections.

Flared angles on these antennas allow for easy positioning along the feed section to obtain the best possible illumination of the Quiet Zone (QZ).

Octave Frequency Range

Currently the series features four horns, Models 3163-03 (C band), 3163-04 (X band), 3163-05 (Ku Band) and 3163-06 (K band), covering a frequency range of 4 GHz to 26.5 GHz.

High Gain, Low VSWR

These horns exhibit high gain performance, with the C band horn (model 3163-03) having a gain of 16 dBi or higher across the range. The X to K band horns exhibit gain increasing gain from 16.5 to 25 dBi. The VSWR of these horns is low, with an average level of less than 1.5:1 for most of the range. The VSWR may be higher at the edges of the band of the horns but never exceeding 3.2:1.

STANDARD CONFIGURATION

- Antenna
- Coaxial to waveguide adaptor
- Mount for Tripod
- Manual
- Individually Calibrated at 3 m per ANSI C63.5. Actual antenna factors/gain uncertainty values and a signed Certificate of Calibration Conformance included with Manual

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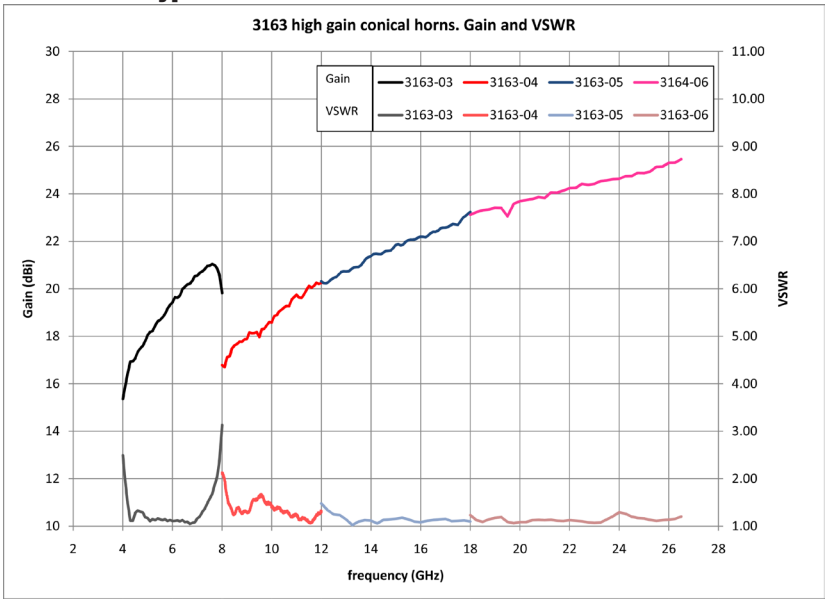
Electrical Specifications

MODEL	FREQUENCY RANGE	VSWR RATIO (AVG)	MAXIMUM CONTINUOUS POWER	IMPEDANCE (NOMINAL)	CONNECTORS
3163-03	4 GHz - 8 GHz	3.2:1 maximum 1.5:1 average	250 watts	50 Ω	Type N (F)
3163-04	8 GHz - 12 GHz	2.5:1 maximum 1.5:1 average	250 watts	50 Ω	Type N (F)
3163-05	12 GHz - 18 GHz	2:1 maximum 1.25:1 average	200 watts	50 Ω	Type N (F)
3163-06	18 GHz - 26.5 GHz	2:1 maximum 1.25:1 average	50 watts	50 Ω	SMA (F)

Physical Specifications

MODEL	APERTURE DIAMETER	LENGTH (WITHOUT MOUNT)	WEIGHT
3163-03	17.8 cm 7.0 in	60.0 cm 23.5 in	1.8 kg 4.0 lbs
3163-04	10.2 cm 4.0 in	37.0 cm 14.6 in	0.5 kg 1.2 lbs
3163-05	10.2 cm 4.0 in	39.0 cm 15.3 in	0.6 kg 1.4 lbs
3163-06	10.2 cm 4.0 in	38.0 cm 14.8 in	0.5 kg 1.2 lbs

Gain/VSWR Typical Performance



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