

748 Series Granger Multi-Bay Horizontally Polarized Log-Periodic HF Antennas

- 6.2-30 MHz Frequency Range
- High Gain
- Up to 10 kW Average, 20 kW Peak Power Rating
- Horizontal Polarization
- 2.0:1 Maximum VSWR
- Low Elevation Take-off Angle
- Medium- to Long-Range Communications (Skywave)

General Description

The Type 748 Series antennas provide a low VSWR over a broad frequency range. In addition, this series offers a low take-off angle, independent of local ground conditions, coupled with very low side lobes and increased directional gain contributed by a two-bay array. The virtual absence of spurious lobes excludes off-path interference at receiving terminals and minimizes interfering radiation from transmitting stations. As a result, the 748 Series antennas are ideal for medium- to long-distance circuits in which reliable communication, with adequate signal-to-noise levels is essential.

Features

Strength And Durability. The 748 Series antennas are designed for dependable long-term service in severe or corrosive environments.

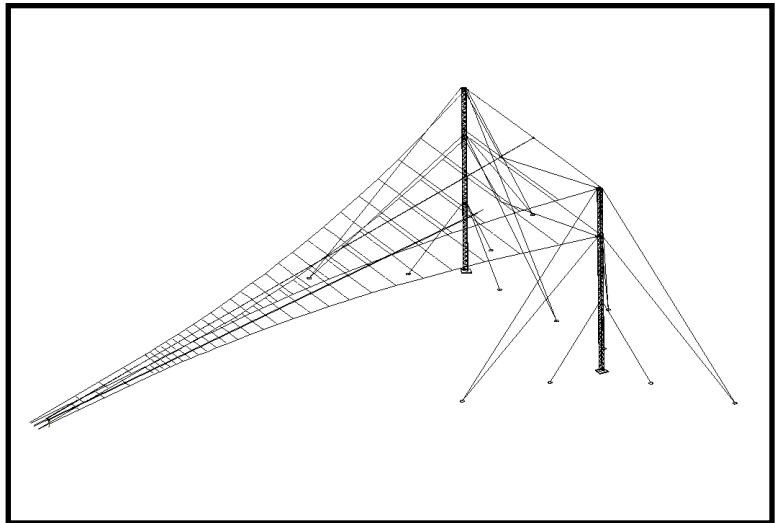
All materials, including radiators of Alumaweld and Parafil rope catenaries are strong and corrosion resistant.

Ease of Installation. To simplify installation at the site, antennas are largely pre-assembled before shipment, and are shipped in kit form. All necessary parts are supplied with the exception of the front end pole, located at the antenna apex.

Antenna Application. The Type 748 antenna is designed for communication to groups of fixed stations or mobile stations such as ships or aircraft, at distances of 500-5000 miles. The radiation patterns change with frequency, to optimize communications at all ranges (see typical radiation patterns, next page). At the lower operating frequencies, optimum for shorter ranges, radiation is beamed at an appropriately high angle. As the operating frequency is raised to reach greater distances, the take-off angle decreases to beam radiation closer to the horizon. Azimuth radiation pattern side lobes are minimal, thereby excluding interfering signals from the sides and rear when receiving, and reducing interference produced when transmitting. Lobe size varies in relation to frequency, the largest lobe in this sector being 15-24 dB below the main lobe.

Accessories

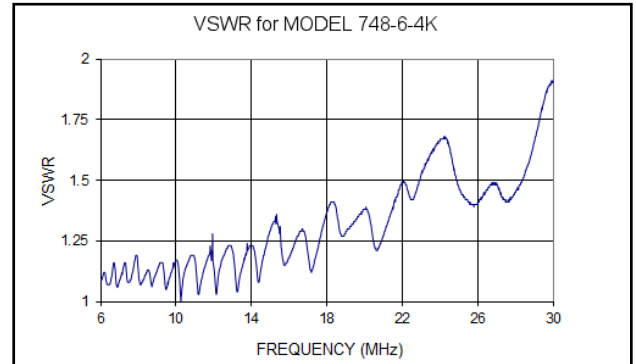
The following accessories are available for ease of installation and maintenance: tower lighting kit, erection kit, paint kit, tool kit, lightning rod kit, anti-climbing kit and spares kit.



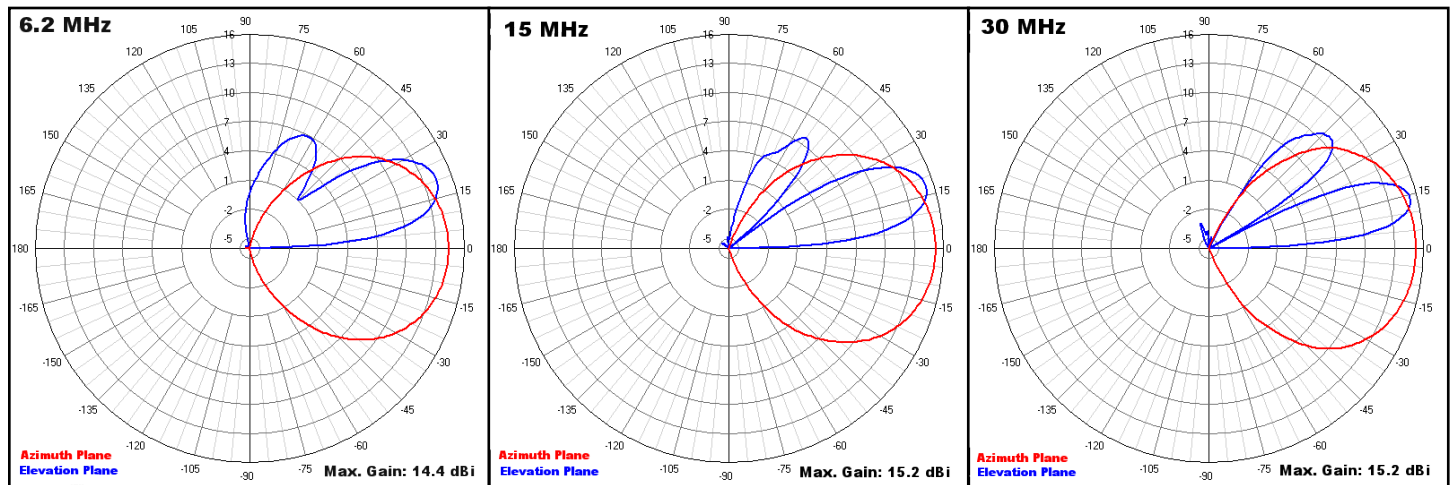
748 Series Horizontal Log Periodic Antenna

Characteristics

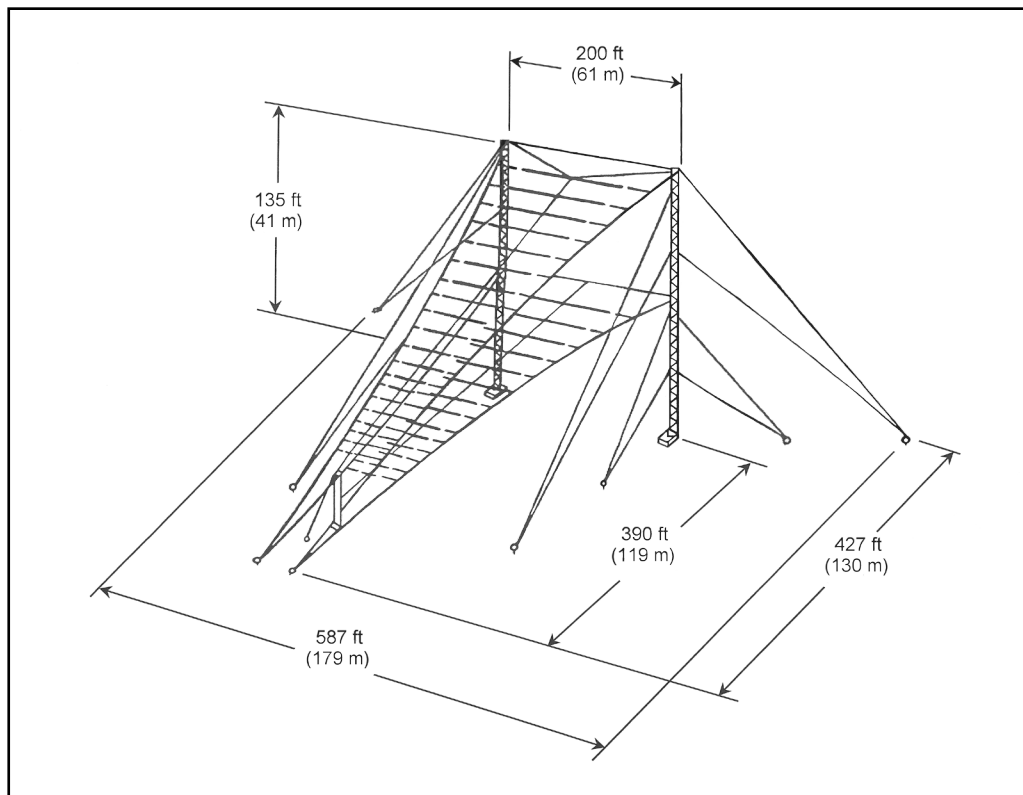
Type	HF log-periodic
Frequency Range, MHz	6.2-30 MHz
Power Rating, kW	10 average, 20 peak
Polarization	Horizontal
VSWR (50 ohms)	2.0:1 maximum
Gain, dBi	15 dBi Nominal
Wind Survival Rating, mph (km/h)	
Without Ice	100 (160)
With 0.5 in (12mm) Radial Ice	70 (100)



Typical Model 748-6 Antenna Patterns (Relative to Isotropic)



748-6 Antenna Size



748 Series Horizontal Log Periodic Antenna

Ordering Information

Type Number	Frequency Range, MHz	Power Rating kW	Input Impedence Ohms	Input Connector
748-6-4K	6.2-30	10 avg./20 peak	50, coaxial	1 5/8" EIA Female
748-6-5K	6.2-30	Receive Only	50, coaxial	Type N Female
748-6-6K	6.2-30	Receive Only	75, coaxial	Type N Female
748-6-7K	6.2-30	2.5 avg./5 peak	50, coaxial	7/8" EIA Female
748-6-8K	6.2-30	1 avg/2 peak	50, coaxial	Type N Female
748-6-10K	6.2-30	5 avg./5 peak	50, coaxial	7/8" EIA Female

Kratos Defense
1120 Jupiter Road, Suite 102
Plano, Texas, 75074
USA
Phone: 1 (214) 291-7654
Fax: 1 (214) 291-7655

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