



WRAPAROUND™ ANTENNAS:

The Haigh-Farr Wraparound™ is a self-contained omnidirectional antenna for cylindrical or conical shaped bodies. A single point feed is used and no external splitters, combiners or cable harnesses are required for installation. The antenna is conformal, and may be mounted flush, or on the exterior of the vehicle.

Designs are available from 300 MHz to 13 GHz with typical applications including Flight Termination, GPS, Telemetry, Data Links and Transponder. Multiple antenna elements may be combined within the same physical Wraparound™, providing multi-band capability in a single, compact package.

Wraparound™ antennas have been flown on vehicles from subsurface sea to space, including high-mach kinetic kill weapons, high-G projectiles and re-entry vehicles. The Wraparound™ has been qualified for use on several high performance vehicles flown on test and launch ranges throughout the United States and Europe.

For high aero-heating applications an ablative heat shield may be added to the antenna for additional thermal protection.

APPLICATIONS:

- Launch Vehicles, Atmospheric Rockets, Missiles
- High Speed UAV's and Targets
- Artillery Rounds
- Spacecraft, Guided Bombs
- Scoring Systems
- Oil Rigs

FEATURES:

- Omnidirectional: Full Spherical Coverage
- 300 MHz to 13 GHz
- Multi-Channel Designs
- Single Point Feed
- No External Dividers and Cables Required
- Thin, Aerodynamic Shape
- Conformal – Flush or External Mounting
- Fastened or Bonded to the Vehicle
- OEM or Retro-Fit Applications
- Rugged Construction - Designed for High-G, High Radial G (Spinup), and Extreme Vibration Environments

HAIGH-FARR CAPABILITIES:

Haigh-Farr engineers utilize state of the art simulation tools for initial design work, well proven manufacturing techniques and world-class facilities for hardware production, and an abundance of in-house environmental test equipment and RF anechoic chambers for final performance verification of our products. Such design flow has enabled Haigh-Farr to make the most rugged and reliable antennas on the market for over half a century; and if our standard product offerings don't meet your exact needs, we can leverage off of this experience to design something that will.

Please contact Haigh-Farr today for antenna recommendations to meet your needs of tomorrow.



TYPICAL SPECIFICATIONS

ELECTRICAL:

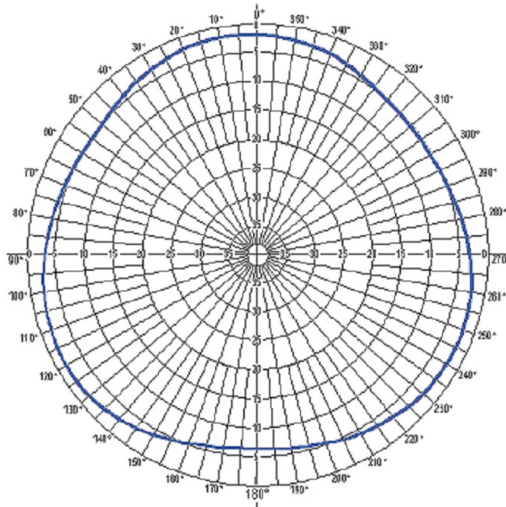
Operating Band:	300 MHz to 13 GHz
Number of Channels:	Design parameter – 1, 2, 3, 4 or greater
Input Impedance:	50 Ohms
Bandwidth:	Design parameter, 1% - 5%
VSWR Across Band:	2:1 Max across Band
Polarization:	Design Parameter
Power:	40 W cw, 5 kW peak
Radiation Pattern:	See plots on following page

MECHANICAL:

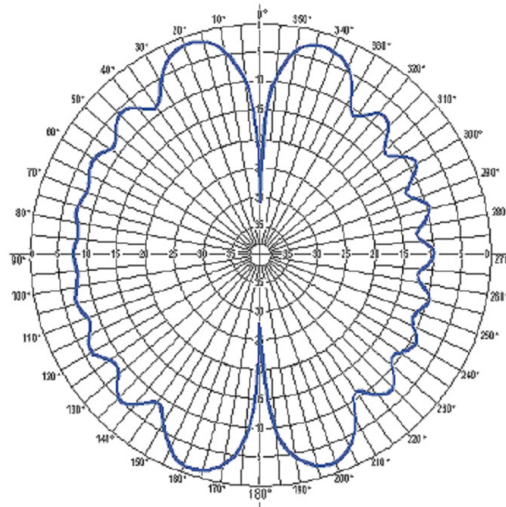
Connector:	SMA standard, other connector options available including direct cable feeds
Weight:	Design parameter - Function of diameter and electrical requirements
Dimensions:	Design parameter - Function of diameter and electrical requirements; Thickness: .05" (1.25mm) to .3" (7.6 mm)
Mounting Surface:	Antenna is flexible and designed to naturally mate with specified cylindrical or conical surface
Securing:	Screw and/or Bond
Altitude:	Any
Environment:	Design parameter - typical of tactical supersonic missiles and kinetic kill weapons



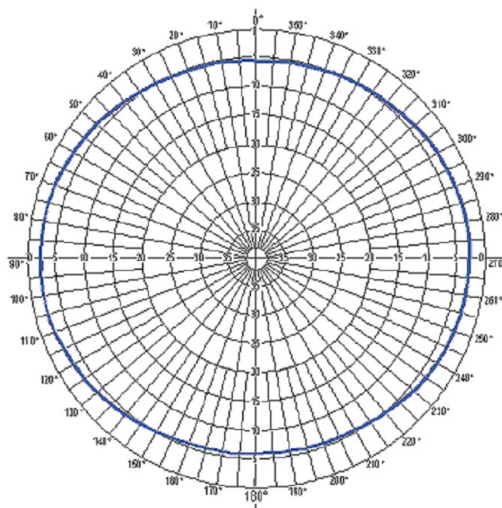
REPRESENTATIVE RADIATION PATTERNS



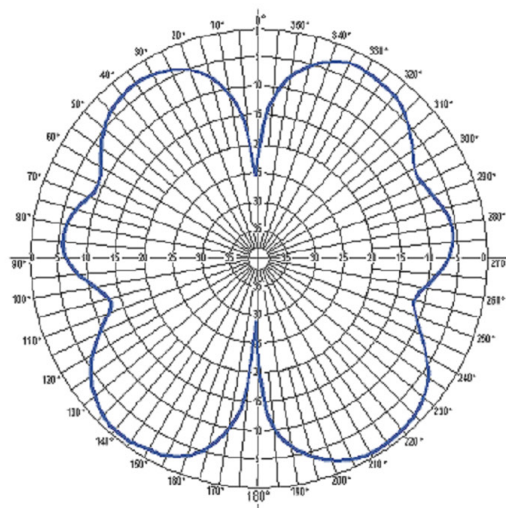
**ROLL - 2230 MHz
ISOTROPIC - 2 dB**



**PITCH - 2230 MHz
ISOTROPIC - 7 dB**



**ROLL - 421 MHz
ISOTROPIC - 2 dB**



**PITCH - 421 MHz
ISOTROPIC - 7 dB**

¹Radiation patterns are a function of the vehicle shape and size since the vehicle serves as the ground plane for the antenna. The patterns shown were measured on a typical smooth cylindrical ground plane.