BLADE ANTENNAS

The Haigh-Farr family of rugged Blade antennas is available in frequencies ranging from UHF to upper C-band, and may be provided in either straight or rounded blade configurations.

These blade antennas exhibit quasi-uniform null-free hemispherical patterns.

These antennas have demonstrated proven reliability in over 30 years of high-performance airborne applications.

Blade antennas are also used extensively in ground-based vehicles such as race cars, trucks, tanks, and motorcycles, to name a few.

FEATURES:

- **Hemispherical Coverage** (see patterns on next pages)
- **Frequencies from UHF to C-Band**
- **Small, Compact Footprint**
- **Aerodynamic Design**
- **Common Footprint for All Models**
- **Built to Withstand Extreme Shock & Vibration Environments**

APPLICATIONS:

- **Data Links, Telemetry, Transponder**
- **Aircraft**
- **UAVs**
- **Helicopters**
- **Tactical Missiles**
- **Ships**
- **Ground-Based Vehicles**
- **Single or Array Implementations with Matching Power Dividers and Cables**

DESIGN CAPABILITY:

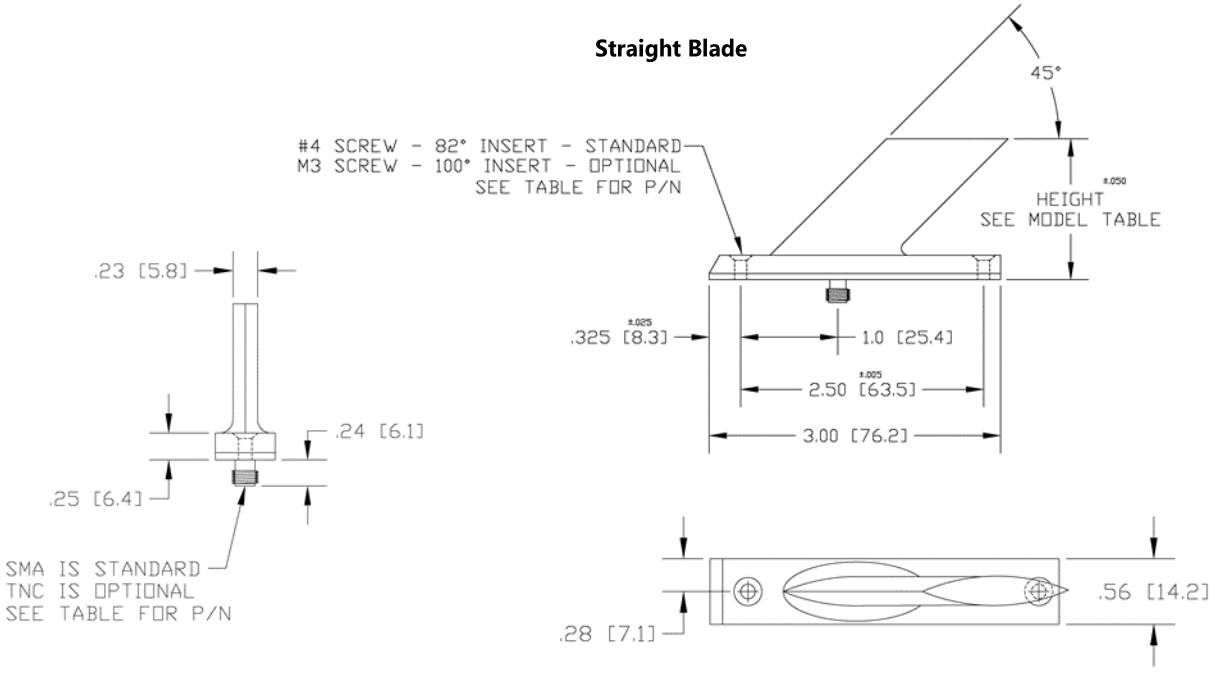
Haigh-Farr has more than 50 years history of designing and producing exceptionally rugged, high- performance antennas. If you don't find an antenna meeting your requirements in our standard list of products, Haigh-Farr has the experience and modeling capability to customize a solution. Adaptations of existing designs can be done with very short lead times. Contact Haigh-Farr for a review of your antenna requirements.

Rev 1 01/18 approved for release

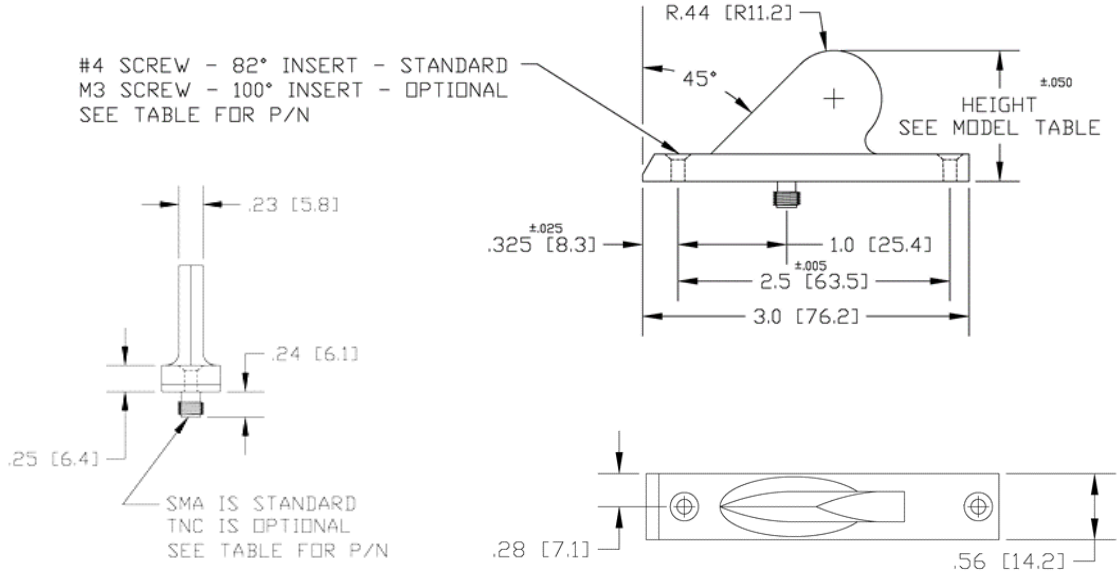
Haigh-Farr, Inc. 43 Harvey Road, Bedford, NH 03110
sales@haigh-farr.com | 603-644-6170 | Fax: 603-644-6190

MECHANICAL DIMENSIONS:

Straight Blade



Rounded Blade



Rev 1 01/18 approved for release

Round Blade P/N	Straight Blade P/N	Frequency Range GHz	VSWR MAX/TYPICAL	5KW[1] ALTITUDE	PEAK[2] POWER	Height Inches [mm]	Weight (SMA) OZ [grams]
6107	6007	1.060 ± .030	2.0:1/1.50:1	116	160 W	2.30 [58.4]	1.0 [28.3]
6108	6008	0.9165 ± .025	2.0:1/1.50:1	116	160 W	2.30 [58.4]	1.0 [28.3]
6109	6009	1.35 – 1.54	2.0:1/1.50:1	116	160 W	1.75 [44.3]	0.9 [26]
6110	6010	1.43 – 1.54	1.5:1/1.25:1	116	160 W	1.68 [42.7]	0.8 [23]
6110-2	6010-2	1.425 – 1.525	1.5:1/1.25:1	116	160 W	1.68 [42.7]	0.8 [23]
6110-3	6010-3	1.45 – 1.65	2.0:1/1.50:1	116	160 W	1.68 [42.7]	0.8 [23]
6110-4	6010-4	1.50 – 1.80	2.0:1/1.50:1	116	160 W	1.68 [42.7]	0.8 [23]
6115	6015	1.60 – 1.70	1.5:1/1.25:1	116	160 W	1.54 [39.1]	0.8 [23]
6120	6020	1.71 – 1.85	1.5:1/1.25:1	114	240 W	1.45 [36.8]	0.8 [23]
6125	6025	2.00 – 2.10	1.5:1/1.25:1	110	350 W	1.19 [30.2]	0.7 [20]
6125-1	6025-1	2.00 – 2.30	2.0:1/1.50:1	110	350 W	1.19 [30.2]	0.7 [20]
6130	6030	2.20 – 2.30	1.5:1/1.25:1	110	350 W	1.19 [30.2]	0.7 [20]
6130-1	6030-1	2.30 – 2.40	1.5:1/1.25:1	110	350 W	1.19 [30.2]	0.7 [20]
6130-2	6030-2	2.40 – 2.50	1.5:1/1.25:1	110	350 W	1.19 [30.2]	0.7 [20]
6130-3	6030-3	2.20 – 2.40	1.5:1/1.25:1	110	350 W	1.19 [30.2]	0.7 [20]
6130-4	6030-4	2.30 – 2.50	1.5:1/1.25:1	110	350 W	1.19 [30.2]	0.7 [20]
6130-6	6030-6	2.20 – 2.50	1.75:1/1.50:1	110	350 W	1.19 [30.2]	0.7 [20]
6135-1	6035-1	3.10 – 3.30	1.5:1/1.25:1	106	350 W	1.19 [30.2]	0.7 [20]
6135-2	6035-2	3.45 – 3.55	1.5:1/1.25:1	106	350 W	1.19 [30.2]	0.7 [20]
6135-3	6035-3	3.65 – 3.85	1.5:1/1.25:1	106	350 W	1.19 [30.2]	0.7 [20]
6140	6040	4.50 – 5.00	1.5:1/1.25:1	104	1.5 kW	0.90 [22.9]	0.6 [17]
6140-1	6040-1	4.40 – 5.50	1.5:1/1.25:1	104	1.5 kW	0.90 [22.9]	0.6 [17]
6150	6050	5.40 – 5.90	1.5:1/1.25:1	102	2.2 kW	0.75 [19.1]	0.6 [17]
6150-1	6050-1	5.25 – 5.85	1.5:1/1.25:1	102	2.2 kW	0.75 [19.1]	0.6 [17]
6150-2	6050-2	6.40 – 6.60	1.5:1/1.25:1	102	2.2 kW	0.75 [19.1]	0.6 [17]
6150-3	6050-3	6.40 – 7.20	1.5:1/1.25:1	102	2.2 kW	0.75 [19.1]	0.6 [17]

- **Thermal environments: -50°C to 150°C; 300°C Transient**
- **Polarization: Linear, predominately vertical**
- **Connector: SMA (50 Ω Standard; TNC (50 Ω Optional)**
- **Required Mounting Screws: 82° Flathead #4 Standard; 100° Flathead #4 or M3 optional**
- **UHF models are available in different configurations**
- **Mechanical outline drawings are available upon request**

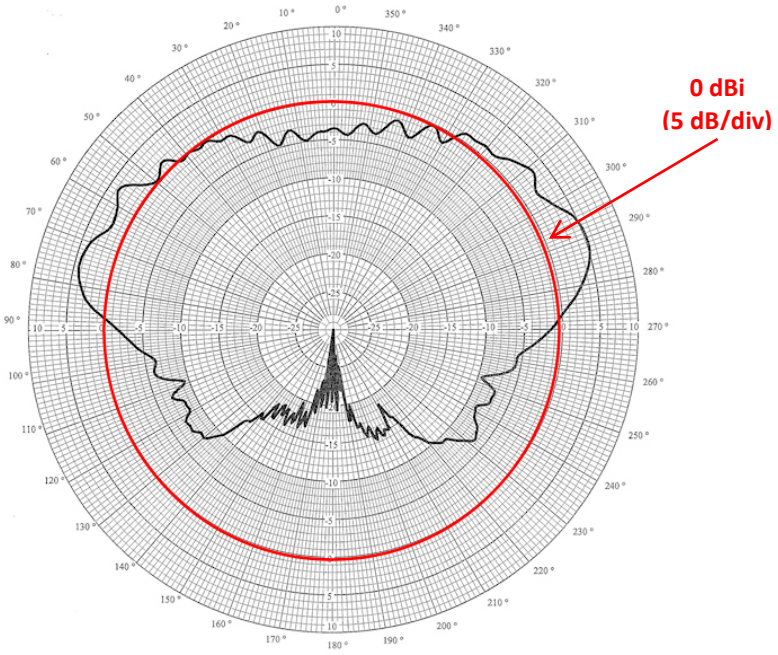
[1] The 5kW altitude (k ft) is the approximate altitude at which the antenna will experience external corona with 5kW peak power.

[2] Peak power indicates the maximum power that may be radiated without experiencing external corona at any altitude. Sufficient airflow is required at the higher power levels. These antennas handle average power in the 25-30W CW range but sufficient airflow is required at these higher power levels for the antennas to perform properly. A static ground test will not provide the adequate airflow required. Haigh-Farr offers both a 60XX and 61XX High Power version of all the above listed blades. These are manufactured with Ultem material and have been tested at 100W CW at 70°C for 60 minutes without any issues.

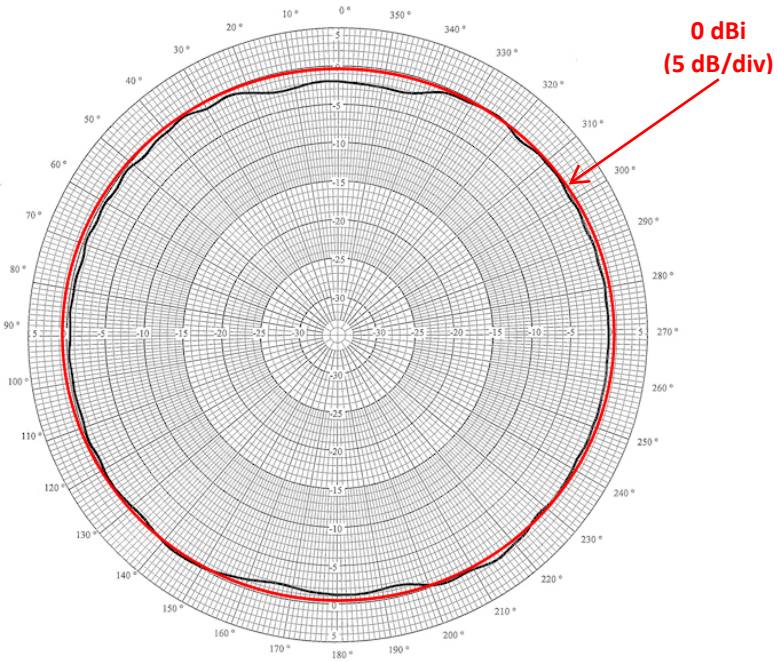
Note: Haigh-Farr Rounded Blades (61XX) are identical in performance to our Straight Blades (60XX). We recommend the use of Round Blades for applications where safety concerns exist.

Rev 1 01/18 approved for release

Haigh-Farr, Inc. 43 Harvey Road, Bedford, NH 03110
sales@haigh-farr.com | 603-644-6170 | Fax: 603-644-6190



ELEVATION (PITCH)
2.250 GHz



AZIMUTH (YAW)
2.250 GHz

Note: The patterns shown above were measured with model 6130 on a cylindrical ground plane but are typical of the other Blades used. Fins and other protrusions on the vehicle will perturb the radiation pattern. The extent of any perturbations cannot be fully determined until radiation patterns are either calculated or measured on a model of the vehicle. Haigh-Farr offers engineering services, which include the calculation of radiation patterns on a specific vehicle.

Haigh-Farr, Inc. 43 Harvey Road, Bedford, NH 03110
sales@haigh-farr.com | 603-644-6170 | Fax: 603-644-6190