Hot Nose

Target augmentation

Our Hot Nose is a black-body infrared (IR) enhancement system that provides a proven IR source for IR tracked, guided or fused weapons. It is easily fitted to the Banshee target without affecting its performance or the installation of other enhancements such as miss distance indicators or pyrotechnic stores. The nose cone is compact, safe and reusable and is not required to comply with the restrictive regulations governing the transportation of traditionally used pyrotechnic IR sources.

The system comprises two major assemblies: the heated nose itself and a reservoir for the propane fuel. The nose comprises a forward looking 8.5" diameter hemisphere heated by a propane burner and mounting interface. The propane burner is equipped with a remote ignition system that allows it to be ignited on command from the target control ground station either before launch or during flight. In use, the exhaust gases from the burner are directed over the fuselage so increasing the overall size of the heated area.

Safety of the system is provided by a number of electrically operated solenoid valves, which initiate shut-down of the system on either loss of aircraft command link, or on demand, or on parachute deployment, allowing all of the heated surfaces to cool before recovery.

The easy to install system achieves an IR signature that is proven against such weapon systems as Mistral, Stinger, Stinger RMP, Igla, Strella and AIM 9. It provides a higher constant skin temperature than typical exhaust enhancements due to the direct heating of the outer skin, resulting in temperatures in flight of 600°C. For use with the latest weapon systems, which require a lower IR signature, the temperature of the hot nose may be adjusted on command through the control ground station, whilst the target is in flight.

Independent measurements by MBDA indicate that the Hot Nose has outputs of:

- 65 W.sr for 2 - 3 µm band;
- 30 W.sr for 4 - 5 µm band; and
- 16 W.sr for 8 - 11.5 µm band

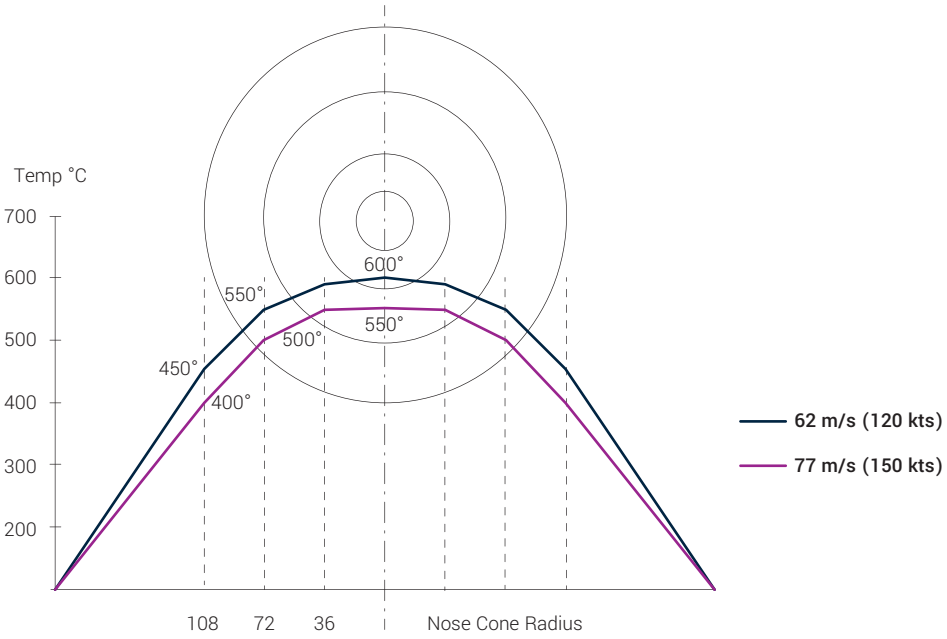
Key features

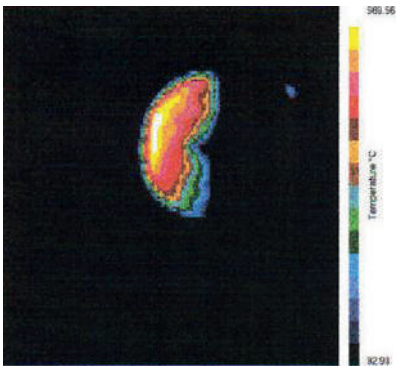
- Proven capability against Mistral, Stinger, Stinger RMP, Igla, Strella and Aim 9
- Outputs of:
  65 W.sr for 2 - 3 µm band;
  30 W.sr for 4 - 5 µm band;
  16 W.sr for 8 - 11.5 µm band
- No restrictive transport regulations
- Compact and reusable

Hot Nose specifications

Diameter	215mm (8.5″)
Length	254mm (10″)
Weight	3.2kg
Power source	Propane gas contained in a refillable pressure vessel >1hour
Endurance	>50 minutes continuous operation on high burn with a standard pressure vessel
Operating temperature	-30°C to +50°C

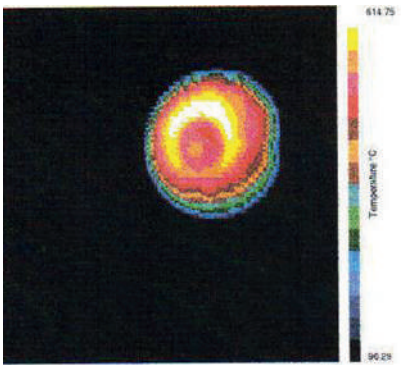
Maximum skin temperature	600°C at 120 knots indicated airspeed 550°C at 150 knots indicated airspeed
Typical IR output	65 W.sr for 2-3 µm band; 30 W.sr for 4-5 µm band; 16 W.sr for 8-11.5 µm band





Agema MWB Radiometer image at 90° AON and 4.5m range and 150 knots

Lens: 7″	T-Atmos (°C): 5.9
Aperture: 14	T-Amb (°C): 5.9
Filter: T/F	Transmission: 0.97
Emissivity: 1	



Agema MWB Radiometer image at 18° AON and 4.5m range and 150 knots

Lens: 7″	T-Atmos (°C): 5.9
Aperture: 14	T-Amb (°C): 5.9
Filter: T/F	Transmission: 0.97
Emissivity: 1	

Note: Due to continuous process improvement, specifications are subject to change without notice.

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