



Heaters and Fan Heaters

Dynamic Air has been manufacturing Heaters and Fan Heaters since the birth of the company in 1942, indeed an early fan heater was used to solve a high altitude military application for the US Army Air Corps.



Typical Fan Heater using wound coil technology as the heat source.

Fan heaters - how they work!

In the case of a Fan Heater the air is forced over a heat source. The heat energy is transferred to the airstream by simple convection. The heat source is a fixed resistive element which can come in the form of a wound coil, a cartridge heater within a heatsink, or a heater mat made with reinforced silicon or kapton. Where an airstream is already provided, typically in an aircraft duct, a simple Heater tube can be provided.

Heaters and Fan Heaters

Inquire at: <https://daesystemsnc.com>

email: cs@daesyst.com Phone: US +1-828 548-3192 _ UK +44 (0)7586 809 151



Cartridge/Rod Heater

Kapton & Silicon Mat Heaters

The fans employed are typically Mixed Flow designs which have an inherent low noise output and do not generate a discrete tonal sound. Also produce sufficient pressure capability to feed discharge duct systems. Typical airflow 80 to 300 cfm.

The heater element technology employed is designed with safety in mind and utilizes sheathed elements housed within an aluminum alloy heatsink, or insulated within silicon or kapton mats, ensuring safe running temperatures with the correct airflow. Additional safety protection cut outs are used in the event of air restriction. These can be self-resetting or manual if preferred.

The design can be customized to requirement and include such features as infinitely variable output, feedback signals, low speed warning, high temperature sensing.

Heaters and Fan Heaters

Inquire at: <https://daesystemsnc.com>

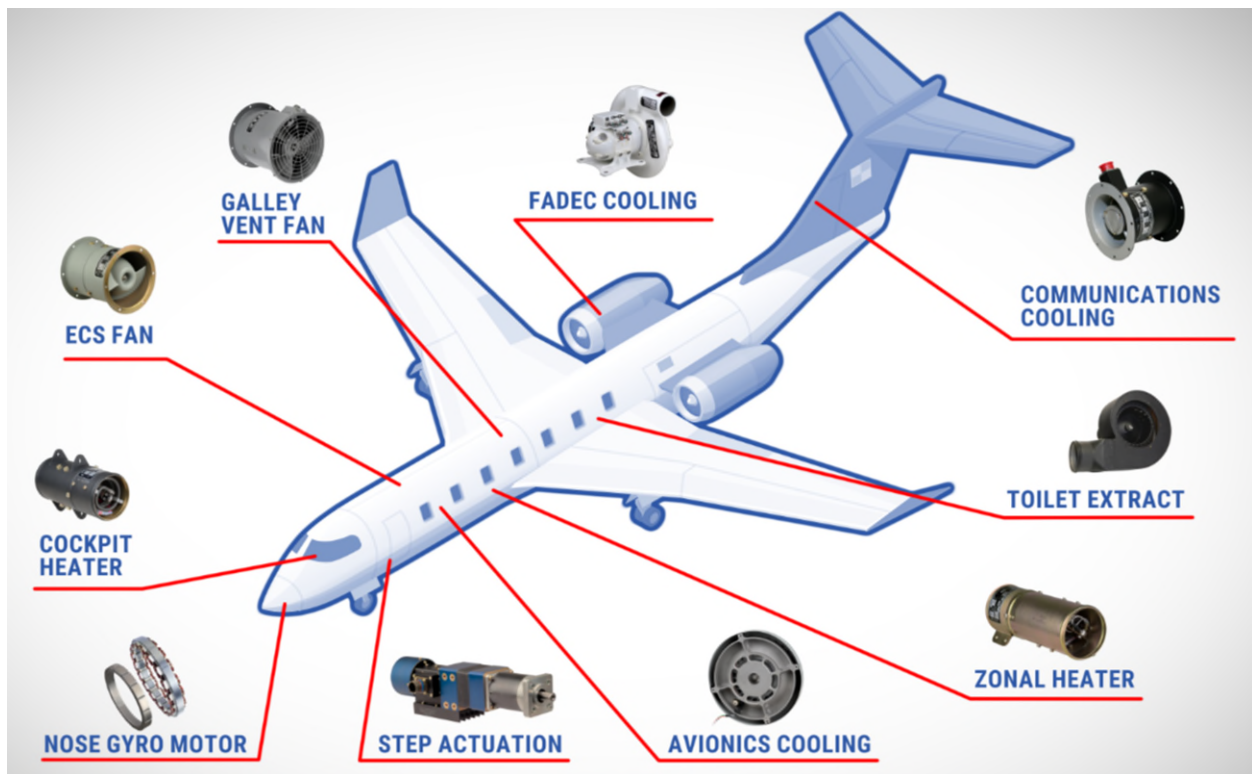
email: cs@daesyst.com Phone: US +1-828 548-3192 _ UK +44 (0)7586 809 151

Fan Heaters for Civil Aircraft Application

Dynamic Air can provide Fan Heaters or Heaters into Civil Aircraft applications. Various areas on wide bodied aircraft suffer from local cold air where normal conditioned air is ineffective or inadequate, supplemental heating provides comfort and satisfactory conditions. This applies in particular to cabin door areas, where galley installations have affected the normal flow of conditioned air, or cargo bays open to extreme freezing conditions on the ground, preventing water circuits icing.

Narrow bodied aircraft, regional jets, turbo props, executive jets; also suffer frigid conditions around doors and particularly to zonal areas where the aircraft system has been altered. Supplementary heating to cold areas and additional heating in bulk or sectionalized cargo bays.

Dynamic Air can provide solutions to retrofit applications or into new Environmental Control Systems. Whether it be a Fan Heater or just a simple Heater duct the power range can be between 200w to 3kw, powered from an AC or DC supply.



Heaters and Fan Heaters

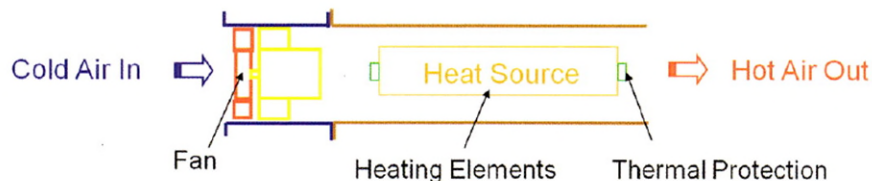
Inquire at: <https://daesystemsnc.com>

email: cs@daesyst.com Phone: US +1-828 548-3192 _ UK +44 (0)7586 809 151

Fan Heaters for Military Applications

Dynamic Air can provide Fan Heaters and Heaters into various Military applications, such as:

- Equipment bays
- UAV's
- Reconnaissance Pods
- Crew and Equipment heating.
- Camera and Laser window de-mist.
- Mil Vehicle applications - Crew compartment, equipment heating, gun sight demist.



Air temperature rise equation (°C) $\Delta t = \frac{\text{Input Power (watts)}}{\text{Airflow (l/s) X Density (kg/m}^3\text{)}}$

Example: $\frac{1000 \text{ w}}{50 \text{ l/s} \times 1.2 \text{ kg/m}^3} = 17^\circ\text{C rise}$

Heaters and Fan Heaters

Inquire at: <https://daesystemsnc.com>

email: cs@daesyst.com Phone: US +1-828 548-3192 _ UK +44 (0)7586 809 151