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Environmental Systems

LARGE TURBINE-ENGINE AIRCRAFT, WITH THEIR SOPHISTICATED environmental systems, are able to isolate occupants from outside weather. Unfortunately, the light airplane traveler does not fare quite so well.

For one thing, the airlines literally have a trick up their sleeve: It's called an airport jetway. Even the most sophisticated air conditioning and heating systems can't keep a cabin comfortable if it has a door open to the world. The jetway cleverly forms a sleeve that connects the airplane to the terminal, allowing maintenance of cabin temperature.

At terminals without jetways, a quick turnaround reduces the time cabin doors are open. Then, too, airline cabins are long and have several bulkhead, minimizing the flow of air out the door. The relatively small size of the average general aviation fuselage makes the inside temperature sensitive to open cockpit doors. And the inadequacy of heating and cooling systems precludes the luxury of a stable cabin environment unless you are able to load and unload passengers in a temperature-controlled hangar.

TYPES OF AIRCRAFT HEATERS

Aircraft powered by turbine engines have a ready source of heat, the turbine engine itself. Reciprocating engine-powered aircraft do not have that available so cabin heating must come from another source. There are two types of heaters for light, general-aviation airplanes: an exhaust-manifold heater and a combustion heater.