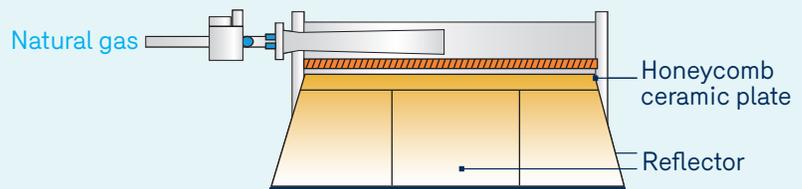


High intensity infrared unit

Concept

A high intensity infrared unit heats by radiant heat. The energy is spread by radiation: its effect on the human body is rather like being exposed to the sun. Like the light from a lamp, infrared radiant heat is directional and warms every object in its path, depending on the nature of its surface. The infrared radiant heat traverses the ambient air without losing its energy until the moment it meets an object.

The appliance is comprised of a plate covered by a reflector that orients the radiant heat. The emitting surface, usually made of ceramic, is pierced with finely calibrated passages in which combustion takes place.



Advantages

- Economical; the units can achieve annual savings of up to 25-35%, depending on the heating system they replace.
- No need for a heat-distribution system.
- High comfort level (recommended even in very draughty places with high ceilings).
- Easy maintenance.
- Simple to control with a commercial or digital thermostat.
- Wide power range, from 21,500 Btu/hr to 200,000 Btu/hr (compared with electric infrared).
- Superior efficiency thanks to direct heating: no loss of heat through piping.
- No need for an electric current to distribute the heat.
- Reduced air stratification.
- Sensation of instant heat.
- Quiet.

Applications

This appliance can heat buildings with large spaces to be heated, as well as those with high ceilings. Since the infrared does not heat the ambient air, it can warm people exposed to cold and wind in places like outdoor sports stadiums.

Some industrial processes use it because of its intensity and power. The appliance can preheat or de-ice materials and raw materials. Here are the most frequent applications:

- Stations
- Auto repair shops
- Gymnasiums
- Car washes
- Churches
- Fire stations
- Aviation companies
- Indoor/outdoor exercise facilities (e.g. golf driving range)
- Outdoor grandstand seating
- Industrial assembly plants
- Aircraft hangars

Energy Efficiency Financial Assistance*

The financial assistance offered is based on the capacity of the appliance:

- Capacity from 20,000 - 99,000 Btu/hr:
\$200 per appliance;
- Capacity of 100,000 Btu/hr or more:
\$500 per appliance.

List of manufacturers

Here is a non-exhaustive list of manufacturers who are registered with and subsidized by Énergir. This list may be revised and modified when necessary. Please check its accuracy on our Web site, energir.com.

- Chore-Time
- Infra-Save
- Modine
- Omega II
- Reflect-O-Ray
- Re-Verber-Ray
- Reznor®
- Roberts-Gordon
- Schwank
- Space Ray
- Sterling
- Superior Radiant Product
- Synergy

Selection criteria

Heating power:

Type of building	Heating power
Warehouse	25-35 Btu/h per ft ²
Mechanical shop	40-60 Btu/h per ft ²
Aircraft hangars	100-120 Btu/h per ft ²

Combustion:

Non-sealed combustion (the combustion air is taken directly from the space to be heated and the combustion products are released into that same space).

Venting:

The combustion products are vented indoors.

Installation standards

- Minimum height to be respected, according to each manufacturer.
- Installation is not recommended in places where there are chlorine products, solvents or explosives, but certain models are suitable for that type of environment.
- The combustion products are vented indoors with additional ventilation. Usually, this calls for an interlock between the appliance and a mechanical extractor fan. A fresh air supply unit needs to be installed in order to maintain an acceptable level of CO₂ (5,000 ppm). For more details, consult the manufacturer's Installation Guide.
- The ventilation rate stipulated in Code B 149.2 is 300 ft³ of air per minute per 100,000 Btu/hr of high intensity infrared installed.

* Certain conditions apply. The financial assistance is subject to change without prior notice.

These data are provided for guidance only. This Information Sheet is for general use and must not be considered advice. Please ask for assistance on the questions that concern you and do not rely only on the text in this Information Sheet.

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