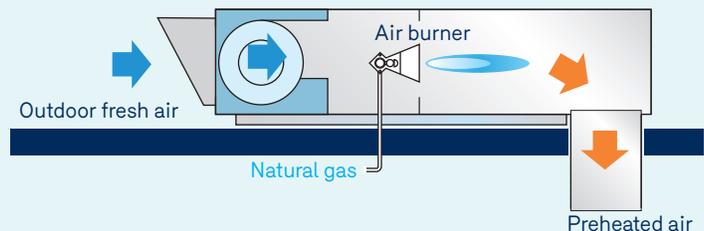


Direct fired make-up air unit

Concept

A direct fired make-up air unit is used when fresh air has to be introduced from outdoors for ventilation purposes. Its primary purpose is to ventilate the space adequately in order to preserve and maintain acceptable ambient air quality. These appliances supply heated or cooled air, depending on the building's needs.

Also called a direct hot air compensator, this appliance is distinguished from an indirect make-up air unit by combustion with the combustion air drawn from the air flow. The outdoor air entering the appliance is heated directly by the combustion of natural gas by an air burner. The combustion products are found in the heated air. This is why this appliance is better suited to certain commercial and industrial applications, and not recommended for places where people may sleep (hotels, homes, clinics, etc.).



Advantages

- Can heat large air volumes efficiently.
- Very high combustion efficiency, 90% and over.
- Eliminates problems related to negative pressure in buildings.
- Considerably reduces air infiltration in openings.
- Improves air quality.
- Improves overall heating efficiency by eliminating air stratification.
- Can be integrated into different systems of energy-saving technologies: preheating air with heat recovery, solar air preheating, installing speed variator on motors, etc.

Applications

- Industries
- Commercial kitchen
- Warehouses
- Specialized and industrial applications
- Underground parking garages
- Mechanical and boiler rooms
- Paint booths
- Sites requiring make-up air
- Laboratories

Energy Efficiency Financial Assistance*

Technology eligible for the Feasibility Studies and Implementation of Energy Efficiency Measures Grants, according to defined criteria. See energir.com for more details. The assistance is subject to a calculation of energy savings by the engineer of the customer requesting the assistance.

List of manufacturers

Here is a non-exhaustive list of manufacturers. This list may be revised and amended as needed.

- Aaon
- Airex
- Bousquet technologies
- Engineered Air
- Haakon Industries Inc.
- Master – YORK
- McQuay International
- Sterling (les agences HVAC Inc.)
- Trane

Selection criteria

- Use prohibited in places where people may sleep.
- Number of air changes required according to the Regulation respecting occupational health and safety (S-2.1, r19.01).
- Ventilation required to comply with the Building Code and ASHRAE 62.1-2007 standards.
- Air flow required to compensate for air vented through the general ventilation system or through a capture system.
- Air flow required to mitigate a building's negative pressure problem.
- Select appliances for installation either on the roof or inside the building.
- To maintain balanced air pressure, make sure there is always an interlock between the air supply and AIR exhaust.

Installation standards

- Ensure that the building structure can support the weight of the unit.
- The capacity of a direct fired make-up air unit must not exceed total exhaust capacity by more than 10%.
- This unit is not a heater; the heated air temperature is usually equal to or lower than the ambient air temperature.

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* 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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