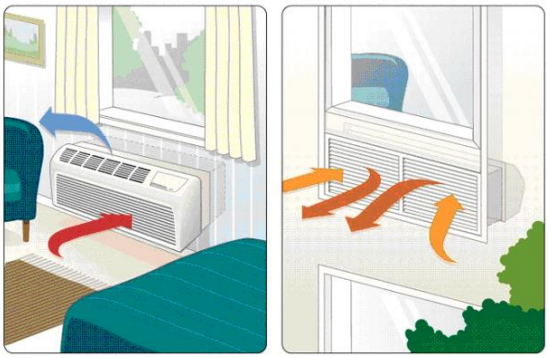
PTAC Training Flyer: Introduction

PTAC:

- A PTAC (Packaged Terminal Air Conditioner) is a type of ***self-contained heating and air conditioning system*** installed through the wall of rooms with an exterior wall.
- Commonly found in hotels, motels, senior housing facilities, hospitals, condominiums, apartment buildings, add-on rooms & sunrooms.
- PTACs are used mostly to heat or cool a single living space ***using only electricity*** with resistive and/or heat pump heating (PTHP).
- There are many advantages to using PTAC units. This flyer will serve to detail some of them.

Benefits of PTAC's:



- ***Inexpensive to purchase per unit:***
  - Because PTAC Air Conditioners are purchased on a per-room-needed basis, you need only buy the units one at a time.
- ***Inexpensive to operate:***
  - Because PTAC Air Conditioners are self-contained units that heat each room individually, you only use the amount of energy that it takes to ***heat or cool a room*** unlike other heating systems, such as central heat and air that heat or cool an entire house.
- ***Energy Efficient***:
  - No wasted energy by heating/cooling rooms that are not being used.
- ***No drain piping necessary:*** The condensate water pulled from the air by the evaporator is directed by the condenser fan to the surface of the condenser coil, where it evaporates outside the building.

Disadvantages of PTACs:

- Purchasing can be costly if buying several units at a time to heat/cool the entire house.
- PTACs are often noisier than comparably powerful mini-split air conditioners.

Where PTACs are typically sold:

According to an Energy Star Report,

- Replacement and renovation of hotel room's accounts for 50% of sales of PTAC units
- Newly constructed hotels account for 40%
- The remainder being installed in multi-family dwellings, nursing homes, and other small buildings.

**Last year approximately 9000 PTAC units were sold in Indiana.

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PTAC and PTHP:

A PTAC will typically heat air with one of two different methods:

Electric Resistance heating:

- This is achieved by running an electrical current through a resistive metal (such as an element). The resistance causes the electricity to be converted into heat.

Heat Pump heating:

- This method is achieved with an electric motor to drive a refrigeration cycle that draws heat energy from a source such as the outside air and directs that heat into the space to be warmed.
- PTACs using this method can also be referred to as a PTHP. This just means Packaged Terminal Heat Pump.
- These models are approximately $100 more than Resistance models but have advantages and cost savings that the Resistance models don't. These are discussed below.

Advantages of Heat Pump PTACs:

When discussing the difference between the two methods we must look at the ***Coefficient of Performance***: This is the amount of heating/cooling energy created for the amount of electric energy supplied. (How many dollars' worth of heat do you get for how many dollars you spend on electricity to run the unit)

- ***Electric resistance PTACs have a COP of 1***. This means 100% energy efficient in the sense that all the incoming electric energy is converted to heat. *(Spend $1 get $1)*
- ***Heat Pump PTACs have a COP of anywhere from 3 to 4***. For every unit of electric energy supplied there are 3 to 4 units of heating/cooling energy created. *(Spend $1 get $3-$4)*

***Also rebates are available for heat pump units in some areas.

In this region a heat pump PTAC will pay off the additional upfront cost in ***around than a year.

What do we have Available?

We have both GE and Frigidaire PTACs available. GE PTACs are thought of as our "***best***" option and the Frigidaire models are thought of as our "***better***" more cost conscious models.

When selling a PTAC, the GE models need the unit, a wall sleeve, a power cord, and an exterior grille.

GE® Zoneline®

packaged terminal air conditioners and heat pumps