

Whole Home Heating - Combining Ductless Heat Pump with *SolaRay* Radiant Heaters

***SolaRay* Panels Can Work Hand-in-Hand with Ductless**

Ductless systems are one of the most efficient heating systems on the market today, providing both cost effective heating and cooling. However, it is often impossible for the ductless system with a head installed in a main living area to effectively heat back bedrooms and bathrooms. Because of this and the cost associated with adding additional ductless heads in bedrooms, homeowners compromise their heating comfort by selecting inexpensive, but less desirable, electric baseboard or wall heaters, to heat their bedrooms and bathrooms.

SolaRay electric ceiling-mounted radiant panels can work in combination with a ductless heat pump system, creating a more cost effective heating system while maintaining a high standard of comfort and energy efficiency.

***SolaRay* Panels Outperform Wall and Baseboard Heaters**

SolaRay electric ceiling-mounted radiant heating panels are 35% to 50% more efficient than wall or baseboard heaters, using far less electricity to provide the same level of thermal comfort. The reason is simple. Baseboard and wall heaters take 7.5 watts per square foot to heat a room, while *SolaRay* radiant panels only need 5 watts per foot, plus there are no thermal losses from convection with radiant panels. These factors and others combine to give *SolaRay* panels their greater efficiency. In addition, *SolaRay* heaters deliver a comfortable, gentle, sun-like heat that eliminates cold spots and drafts.

***SolaRay* Beats Wall and Baseboard Heaters on Price/Performance**

While *SolaRay* panels have a slight higher initial cost their energy savings quickly repays any higher product costs. **The payback time for a *SolaRay* heater is 3.5 years compared to a baseboard heater and 7 years compared to a wall heater.** Also, *SolaRay* panels come with an industry-leading 20-year warranty, and according to the NAHB, have a life expectancy of 40 years which is two to three times the life of a baseboard or wall heater which NAHB claims to be 10 -15 years.

***SolaRay* Provides Real Heating Cost Savings**

For example, heating a typical 12' x 12' 6" (150 sq ft) bedroom with Energy Star insulation levels in the Northwest, would cost \$66 per year with a *SolaRay* panel but \$132 with a baseboard heater or \$102 with a wall heater. The cost savings of \$36 to \$66 per year gained from using a *SolaRay* panel quickly adds up such that in 10 years, the homeowner would have lowered their heating bill by \$360-\$660. And that is just for one room. **With a 3 bedroom home, the heating savings is \$1,080 to \$1,980 over the same 10-year period.**

Typical Bedroom Heating Savings				
	Energy Efficiency	Annual Heating Cost	10-Year Heating Cost	Warranty (years)
<i>SolaRay</i>	100%	\$66	\$660	20
Wall Heater	65%	\$102	\$1,020	2 to 5
Baseboard	50%	\$132	\$1,320	2 to 5

***SolaRay* Panels Offer Homeowners These Additional Benefits:**

- **Zero Maintenance** – *SolaRay* panels have no moving parts and no filters to change.
- **20 Year Warranty** – *SolaRay* heaters also have a 40-year lifetime according to the NAHB®.
- **Ceiling Mounted** – *SolaRay* panels take up no valuable floor or wall space and don't restrict the placement of furniture in a room as do wall or baseboard heaters.
- **Zone Controllable** – With thermostats in each room, heating can be controlled to an individual's preference.
- **Attractive** – *SolaRay's* ½ inch panels blend seamlessly into any room, and can be painted to match room décor.
- **Silent** – Perfect for bedrooms, *SolaRay* panels are silent unlike wall heaters wall heater fans that can disturb sleep.
- **Safe, Clean & Comfortable** – *SolaRay* panels produce an even temperature throughout the room from floor to ceiling, are completely dust and allergen free. Plus ceiling-mounted *SolaRay* panels are safe for pets and children.