Solar Duct Modular Rooftop Air Heating System



SolarDuct™ is based on the highly efficient and award-winning SolarWall® system. The technology has been specifically engineered for roof settings and for applications in which a traditional wall mounted system is not feasible.

Like the original SolarWall technology, SolarDuct is a solar heating system that heats ventilation air before it enters the air handling units. The patented system uses an all-metal collector panel and is suitable for commercial, industrial, and institutional facilities. Perforations in the panels allow the heat that normally collects on a dark surface to be uniformly drawn through the SolarDuct panel and then ducted into the conventional HVAC system.

The SolarDuct system is optimized to meet site conditions in terms of orientation towards the sun and proximity to rooftop air handling units. The modular arrays are sized according to the energy requirements of the building.

Features & Advantages

- Heats ventilation air using the highest performing and lowest cost solar collector on the market
- Collector efficiency up to 75%
- Easy to install modular rooftop units
- Optimized to meet site conditions
- Internally ballasted or fastened system which is quick to assemble and simple to integrate into existing air intake system
- Individual units are 6' by 4' and each produces 1000 watts of thermal energy
- Typical array length is 48 feet long (8 units) and will deliver up to 2000 cfm of heated ventilation air and 8kW of heating
- Substantial CO₂ displacement



Solar Duct™ PV/T Modular Rooftop Air Heating System with PV



The SolarDuct™ product can also be used for PV/ thermal cogeneration systems. With a SolarDuct PV/T system, the all-metal SolarWall® panels draw the heat away from the PV modules. This heat energy is then ducted to the nearest rooftop air handling unit and then into the building's conventional HVAC system where it offsets the heating load.

The removal of the heat from the back of the PV modules also enhances the electrical operating efficiency of the PV by up to 10%.

SolarDuct™ PV/T Performance

- Improves PV system return on investment
- Generates both electricity and heat energy
- Total operating efficiency above 50%
- Cools the PV cells to reduce heat related drop in output.
- Can be configured for any PV module
- SolarWall air heating panels serve as the racking system needed to mount the PV modules
- Angled at an ideal orientation for maximum solar gain
- Offsets heating & electricity costs
- Huge reduction in CO₂ emissions

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