

Case History No. 67

Solaronics
Gas INFRA-RED Heaters

**Infra-red Heat Is Rescuing
This Police And Emergency
Vehicles' Equipment
Manufacturer Trapped By
High Energy Costs**

Outfitting police and emergency vehicles is performed in the warm comfortable environment provided by silent, energy saving Solaronics heaters positioned high above work areas for operating efficiency.



Compact, Fuel Saving Solaronics Infra-red Heaters Boost Employee Comfort In Havis-Shields' New 88,000 Sq. Ft. Facility

When Dan Havis and Jim Shields founded their company in Philadelphia in 1928, it was as a supplier and service provider of heavy duty automotive and electrical equipment. Over the many decades that followed, the company maintained its automotive industry presence by distributing and installing emergency vehicle products.

**“Employee comfort level
is at the top of our list.”**

By the early 1980s, Havis-Shields Equipment Corporation had successfully branched into manufacturing, introducing a telescoping light product for the fire apparatus market. A full lighting products line soon followed. The company's products now include in-vehicle consoles and computer mounts, K-9 transports, motorcycle lighting systems, prisoner transport solutions and other vehicle accessories.

In 1998, Havis Shields' president Joseph Bernert predicted they would soon need more space than their existing 30,000 sq. ft. building to maintain their rate of growth



Havis-Shields' president Joseph Bernert, center, has 88,000 warm sq. ft. to smile about. His energy saving infra-red heating team of Solaronics rep Edward Gannon, Radac Sales Corp. and Dave Cooper of Guy M. Cooper Mechanical predict his heating costs to be about the same as for the old 30,000 sq. ft. building.

and keep the company's manufacturing and vehicle outfitting businesses under the same roof. A decision was made to develop layouts for a new plant, and property

was purchased for a new 88,000 sq. ft. facility "down the street" which the company would occupy in 2002.

During the planning stages for the new building, a nagging concern of Bernert's was the potentially high cost of heating almost three times more space to ensure employee comfort in Pennsylvania's typical September through April



Employees enjoy "shirtsleeve" comfort from the dry, radiant Solaronics heat that also protects parts inventories from condensation.

heating season. "Employee comfort level is at the top of our list," he says. High maintenance expenses and rising energy costs associated with the cranky and inefficient warm air blowers in a previous building were troubling. "The blowers seemed to run all the time, and still employees were not comfortable," he adds. "They might be working inside an EMS vehicle where it was too hot and then find themselves out on the shop floor where it was too cold."

Bernert brought in Dave Cooper, president of Guy M. Cooper Mechanical Engineers, whose company had performed heating service and repair work in the past. Cooper and his staff studied the new plant's layouts which included eight independent zones of manufacturing and vehicle outfitting. Not all zones would be operating at the same time, they learned, and vehicles entering and exiting the building through the large bay doors could cause significant heat loss and chilled employees working in adjacent areas. Also, as the cost of building "up" is considerably less than "out," the

building's specs called for a 30 ft. ceiling height to allow for future expansion, possibly in the form of tiered mezzanines.

"Clearly, high intensity gas infra-red heaters are the logical choice for this building," says Cooper. They direct the heat right at the level where people work. Other systems are designed to heat air, and in a workplace with over 30 ft. ceilings that makes them much less efficient. He recommended energy saving Solaronics infra-red heaters for the new facility. "Solaronics heaters have built an impressive track record with us for their quality and reliability. We've been specifying Solaronics heaters for over 20 years and we run them on their record."

Positioned high above the shop floor and out of the way of plant equipment, Solaronics high intensity infra-red heaters reach maximum operating temperature in less than 30 seconds. With no moving parts, they quietly and efficiently beam infra-red energy that becomes warm, radiant heat as it reaches floors, work surfaces, machines, and most importantly employees below — similar to the way the sun warms the earth. And even after the heaters cycle off, people remain comfortable because they retain heat longer.

According to Cooper, Solaronics heaters can be strategically installed in zones about the facility depending on individual work area's needs. Employees operating heat-generating machines (Havis-Shields manufactures some of their own patented equipment) need less heat than people in other departments, such as shipping and receiving where bay doors are constantly opening and closing.

Dave Cooper and Solaronics' representative Edward Gannon, president of Radac Sales Corp., configured the heaters to meet the needs of the eight work zones. A total of 41 individual heaters, each rated for 80,000 BTUH input, were specified. Bernert appreciates this flexibility, since his company must be prepared to adapt his product mix to future vehicle changes.

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But best of all, he anticipates that heating costs to run his Solaronics infra-reds, covering three times his previous space, will be about the same as before. Both Cooper and Gannon maintain that fuel savings of up to 75% over conventional warm air blowers can be expected.

With the high intensity heaters, employees work comfortably in shirts and move from area to area with ease. The goal of energy efficiency is easily met with the eight

ing U.S. based manufacturer of gas fired infra-red heaters for commercial, industrial, recreational and agricultural buildings. Applications for the company's high intensity single-stage and 2-stage heaters include: Aircraft Hangars; Loading Docks; Manufacturing Plants; Car Washes; Sports Arenas; Warehouses; Auto Dealerships; Golf Driving Ranges; Fire Stations; Tennis Courts.

According to the manufacturer, Solaronics high intensity heaters operate economically on natural gas and propane gas and are CSA International Design Certified to ANSI/CGA Standards. Optimal combustion is achieved by precisely matching air and gas ratios for fuel efficiency. All heaters are supplied factory wired, piped and fully tested and carry a limited one-year warranty. Highly polished Mirror Brite



The Havis-Shields 88,000 sq. ft. facility was configured into 8 separately controlled heating zones, allowing heat to be turned off in a particular zone if work is completed. A small weekend crew working in one area, for example, can get the heat they need without heating the entire building.

different zones. For example, heaters may be turned off in a particular zone if work is completed, or a small weekend crew may only be working in one part of the building. They get the heat they need to stay comfortable and don't have to heat the entire building.

Continuous research and innovation has made Solaronics, now celebrating its 40th anniversary, the lead

aluminum reflectors assure maximum heat dispersion. "Event controlled operation" is available by thermostat or other sensors for sound, motion and light.

The company maintains a custom computer-supported design service that provides comparative fuel costs, life cycle costs and heat-loss data to ensure the most economical heating system for a given structure.

*For Performance,
Reliability And Value
Solaronics High Intensity
Heaters Provide Energy
Efficient Total Building
Heating Solutions*

HIGH INTENSITY HEATER APPLICATIONS

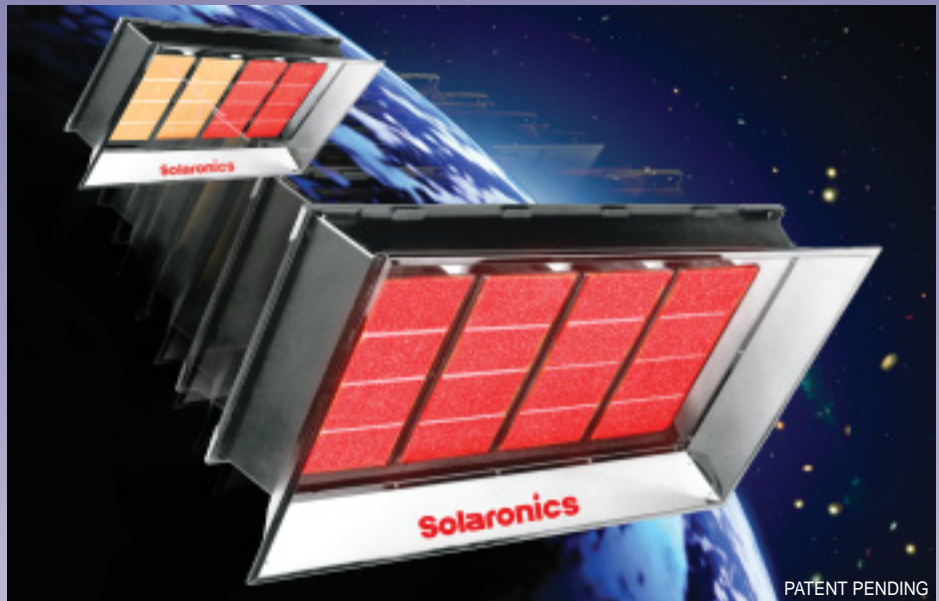
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- Limited one-year warranty



New SunTwin 2-Stage “Optimal Combustion” Series Now Available

- 2-Stage operation based on ambient temperature variations. Eliminate excess heat when not needed. Capable of fast recovery when temperatures fall.
- “Optimal Combustion” in both operating stages—Air & Gas Ratios precisely matched. for efficient, fuel saving operation
- Solaronics exclusive digital 2-stage, 24 volt thermostat results in fewer on-off cycles for improved comfort and longer heater life.
- **Event Controlled Operation—Activate Solaronics SunTwin Heaters by thermostat or other sensors for sound, motion and light.** At golf driving ranges SunTwin heaters activate automatically when golfers step up to tee-off. **Other events may include:** Opening & closing doors; Entering & leaving rooms; Starting/stopping conveyors; Moisture or humidity rising; Exhaust fans coming on.

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