



- Direct-fired double-effect absorption chiller/heaters
- 100 total refrigeration tons
- 22,127 sq. ft. headquarters
- Thorndale, Pennsylvania



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**Employees keep their office machines humming without interruption all summer now that offices are consistently cool.**

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At the offices of G.O. Carlson, office machines began to jam from the heat and humidity every time the air conditioning ground to a halt. For several years, about 50 employees found themselves sweltering during 90°F summers, sometimes for two weeks at a stretch. Then the company installed two Yazaki gas-fired chillers.

G.O. Carlson is a small enterprise in Chester County, Pa., which produces stainless steel and nickel alloy plate products for fabricators. Two years ago, the company's old Carrier absorption air conditioner, which had reliably cooled the offices for three decades, was failing rapidly and replacement parts were becoming difficult to find.

Company officials settled on two

50-ton CH-V50 Yazaki gas absorption chiller/heaters. Their other options were a freon-based chiller system that would have been cheaper to install but \$32,000 more to operate annually and would not have provided heat, and a 120-ton chiller/heater that was more tonnage than the company needed and much more costly to install.

Charlie Short, Carlson's manager of engineering, is pleased with their choice of Yazaki. The headquarters' offices are located in a two-floor main building with a connecting bridge to the two-floor executive wing and lobby. Short figured that only one 50-ton chiller/heater would be needed most of the time. The other serves as a backup during extreme heat. Sure





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enough, a single Yazaki chiller has proved adequate except for a week or two during the hottest period of summer. "It's been running great," Short says.

Short should know. He installed the Yazaki chillers "by acting as our own general contractor and with the help of a local HVAC contractor for piping. We did it at a third of the cost of an outside firm, but a lot of seat-of-the-pants engineering had to be done," Short confesses with a chuckle.

First the old unit, along with the boiler from the basement and an underground oil tank were removed. "In

the same amount of space that the old cooling tower took, we now have two new cooling towers, a blinder wall to separate off the equipment room, and the two Yazakis," says Short. PECO paid for and installed a new gas line from the highway to the building.

With the new equipment, which was installed in 1994, heating and cooling costs are about \$10,400 a year, which means the Yazaki units will pay for themselves by 1999.

Short is quick to point out that the gas-fired units are "a lot cleaner — environmentally it's no risk at all. So it works out very well."



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