

TECOCHILL®

- Engine-driven chiller
- 125 refrigeration tons
- 24,000 sq. ft., 500-bed hospital
- Charleston, South Carolina



When the Ralph H. Johnson Veterans Administration Medical Center needed to upgrade its cooling system, it chose to install a 125-ton engine-driven chiller, saving the center \$8,000 to \$12,000 annually.

Management at the Ralph H. Johnson Veterans Administration Medical Center knew their cooling system was not meeting the regulations required for operating rooms, so they began researching the best alternatives. They chose to replace the existing 40-ton electric unit with a 125-ton TECOCHILL® engine-driven chiller.

The TECOCHILL® is responsible for cooling 24,000 sq. ft. of operating rooms and intensive care units inside the 500-bed medical center.

South Carolina Electric & Gas (SCE&G) knew that this chiller, which uses natural gas, would help reduce the center's peak electric demand during the hot summer

months. It would also reduce operating costs during the cooling season, and will help eliminate some of the ratchet charge penalties incurred during low demand months because of the high cooling demand peaks.

"We wanted to be able to reduce some of our electric consumption and have the ability to reduce electric demand and still cool the operating rooms," says Louis Drake, energy manager for the center.

Engineered Systems Design Inc. of North Charleston was commissioned to design the hospital's chiller upgrade.

This system works just like an electric one except it is run by an





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engine powered by natural gas. This engine supplies variable-speed operation capability, higher part-load efficiency, and efficient high-temperature waste-heat recovery for domestic water heating or steam generation.

The medical center has the potential to save \$8,000 to \$12,000 annually with the new natural gas-powered chiller. According to Westy Westmoreland, gas sales engineer for SCE&G, the system will give “an

additional capacity on the existing emergency power and generator system. This will allow for additional future loads without having to upgrade. Potential savings are more than \$150,000.”

This system was installed in the spring of 1994. Drake says that so far, this system has been “trouble-free. The maintenance people are satisfied with the system and how it works.

