

## *Floyd Medical Center Opts for the PINNACLE of Surgical Environments*



The unyielding demands for accurate dew point, humidity, and temperature control in surgical suites creates a challenge for any engineer aspiring to deliver efficiency and optimum space conditions. It's a challenge that the Phoenix Design Group has faced many times since hospital work constitutes approximately 90% of the firm's business.

### ■ FACTS

**Customer:**

Floyd Medical Center in Georgia, USA

**Need:**

Energy Efficient Ventilation System that could maintain 62°F at a relative humidity of 45%.

**Solution:**

Pinnacle® primary ventilation system with integral energy recovery.

# “It’s a really good economic decision for a hospital”

According to John Wade, Senior Mechanical Engineer for the Phoenix Design Group, the low temperature and relative humidity needed in surgical suites makes it difficult to rely on conventional refrigeration alone. That is why his firm opted for SEMCO’s Pinnacle® system when designing the mechanical system for a new surgical suite at the Floyd Medical Center in Rome, Georgia.



The Phoenix Design Group consulted with surgical staff before setting the design parameters for the new suite. Based on the feedback they received, they set out to design a system that could maintain 62°F at a relative humidity of 45%.

Surgical suites have to be kept cool and dry, not only for the comfort of the surgeons and staff, but also for procedural efficiency and patient safety. Dew points must be kept very low in order to avoid condensation or “fogging” on any metal surfaces, surgical equipment, or optical equipment. The space must also be kept dry to prohibit bacterial growth. Some medical procedures even require low space temperature to help slow the metabolic rate of the patient during specific procedures.

Meanwhile, surgical staffs are covered from head to toe in multiple layers for infection control. Depending on the procedure, a surgeon might be outfitted more like an astronaut than a doctor, wearing face shields and even lead aprons if x-rays are being performed. The 62°F space temperature and 45% RH requirement at Floyd Medical necessitated a dew point of 41°F.

This dew point could not be achieved with traditional chilled water equipment, which typically involves overcooling the air to remove moisture and then reheating it to a suitable supply temperature. Instead, the Phoenix Design Group opted for a dual wheel Pinnacle unit that pre-treats 100% outside air, lowering both latent and sensible temperature before the air ever reaches the main air handler or VAV boxes serving the surgical suite.

“It’s a really good economic decision for a hospital,” says Mr. Wade. Clearly there are operational savings associated with this design approach: Improved chiller efficiency, higher supply temperatures, and reduced fan power just to name a few; but in a surgical application, this is secondary to the high level of environmental control that the Pinnacle provides. Surgical comfort and functionality is enhanced, which is Floyd Medicals Center’s greatest asset when it comes to the health and welfare of their surgical patients.

## SEMCO

SEMCO is a unique indoor environment products manufacturer serving the key disciplines of air distribution, noise abatement, temperature, and humidity control in the commercial and industrial building markets. SEMCO was acquired by Fläkt Woods in 2007.

## Fläkt Woods Group

Fläkt Woods is a global company providing solutions for ventilation and air treatment for buildings as well as fan solutions for Industry and Infrastructure applications.

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