



# COOLING SYSTEM TRANSPLANT

A HEALTH CARE  
FACILITY CASE STUDY



After a retrofit installation of updated HVAC equipment, Methodist Dallas Medical Center reduced their cooling costs by \$107,000 in just five months.

“Armstrong makes the best chilled water pumps in the world. I’ve used them for years, and for HVAC installations, we prefer them over any other brand.”

**Tim Rusher**  
RushCo Energy Specialists

## Methodist Dallas Medical Center

Armstrong chilled water and condenser water pumps, controlled by an Integrated Plant Controller (IPC)11550 in addition to a new chiller and cooling tower converted this healthcare facility cooling system to an all variable speed format.

### Background

The Methodist Dallas Medical Center has served North Texas since 1927. The hospital includes a Level III Neonatal Intensive Care Unit, and is also home to the Methodist Dallas Transplant Institute, one of the largest and most active multi-organ transplant centers in the southwest United States.

The facility recently underwent a transformation as a result of a retrofit HVAC project. When the retrofit project was first proposed, the legacy mechanical system included a 30 year old cooling tower, and a 25 year old chiller. The original solution also included some piping irregularities that led to inefficient operations.

### Project details

RushCo Energy Specialists, a contractor in the region, met with facility managers from the hospital to discuss a new design proposal. The facility managers were interested in the proposed energy savings, but at the same time were concerned about the upfront costs of the equipment, and sceptical that any new technology could provide the proposed improvements.

This was the customer’s first exposure to variable speed technology. To address their concerns, Armstrong provided a written commitment regarding the performance of the system. With that assurance in hand, the hospital agreed to the proposed system.

The facility managers had also never worked with Vertical In-Line pumps, but on the recommendation from RushCo Energy Specialists they agreed to design the system around the Armstrong VIL. Tim Rusher of RushCo explained how he had supported the use

of Armstrong pumps in discussions with hospital officials. “I told them that Armstrong makes the best chilled water pumps in the world. I’ve used them for years, and for HVAC installations, we prefer them over any other brand of pumps.”

The retrofit project involved several weeks of work on-site, as the old equipment had to be removed and preparations made to accept the new equipment, including cutting a hole to install the new chiller. The final system included a new cooling tower, a new chiller, improved piping as well as key components provided by Armstrong:

- 3 × 250 hp VIL pumps to serve the chilled water system
- 5 × 100 hp VIL pumps to serve a condenser water system
- Integrated Plant Controller (IPC)11550

### Results

The installation was completed in late March 2012, and the system performed beautifully from the outset. In April, the first month of operation, the hospital saved over \$15,000 compared to April 2011, through reduced energy costs that could be directly traced to the upgraded HVAC system. In June, they saved another \$15,000. Through the month of July 2012 which included a heat wave in the Southwest, the hospital saved \$50,000. In August, they saved another \$27,000. Understandably, the hospital officials were delighted with the results.

The new system not only saves energy, but also creates a more comfortable environment for staff and patients. The hospital has experienced sharp reductions in ‘hot’ calls, and maintenance staff have commented that the new system is far easier to operate, monitor and adjust.

TORONTO  
+1 416 755 2291

BUFFALO  
+1 716 693 8813

BIRMINGHAM  
+44 (0) 8444 145 145

MANCHESTER  
+44 (0) 8444 145 145

BANGALORE  
+91 (0) 80 4906 3555

SHANGHAI  
+86 21 3756 6696