

**Problem:**

New hydronic heating and cooling systems are required for plant operation. Mechanical room equipment & components built to the owner's specifications are required.

**Solution:**

Packaged equipment from Heat Transfer Sales of the Carolinas. Install pre-assembled chilled water pump packages and a heat transfer module to create an easy installation with minimal field labor.

**Project:**

**Sonoco Spiral Plant**

**Location:**

**Hartsville, SC**

**Products Utilized:**

- **Two Pump'nFlo duplex chilled water pumping packages**
- **One Pump'nFlo Heat Transfer Module**

**PREFABRICATED PUMPING SYSTEMS FROM HTS SIMPLIFY HVAC INSTALLATION AT SONOCO PLANT**

Many customers have already realized the benefits of purchasing pre-fabricated pump systems. Al Williams, an engineer with Sonoco, has also realized these benefits. That's why Al contacted Heat Transfer Sales of the Carolinas (HTS). Sonoco's first experience with HTS was from purchasing a packaged variable speed pumping control system. This gave Sonoco confidence that HTS had a solid knowledge of packaged hydronic pumping systems & controls. This time around, Sonoco was in need of a hydronic heating and cooling system for a spiral plant operation. They recognized that the best solution to a major part of their system was to

heating system in one of the areas. Sonoco planned on installing a chilled water system in both areas as well as a second hydronic heating system. This would greatly decrease their overall utility costs. After Mr. Williams of Sonoco had done the heating and cooling load calculations, he contacted Jay Sheely of HTS to assist him in designing two chilled water pumping packages and one heat transfer module. By supplying the packaged systems pre-assembled, HTS gave Sonoco the flexibility to help design the systems without making major investments in manpower.

**Project Specifics:**

For the hot water system, HTS provided a heat transfer module since Sonoco had plant steam to use as a heat source. A TACO steam-to-water heat exchanger was used to provide hot water to the system. Other components included two TACO FI series pumps, a TACO air separator and expansion tank, a duplex condensate unit, and a master control panel which was pre-wired to the hot water pumps and the condensate pumps. Other accessories included TACO suction diffusers and multipurpose valves, isolation valves, a makeup water assembly, Weiss panel-mounted pressure gauges, and a chemical

shot feeder. A condensate line with F & T steam trap, strainer, unions, and isolation valves was pre-piped to the condensate receiver. HTS also fabricated a steam control valve (continued)



This Pump'nFlo heat transfer module was shipped complete with a duplex condensate unit and a steam control valve header.

purchase pre-fabricated packaged systems from HTS. This would allow for easy hook-up on-site and eliminate the need for field fabrication of the major mechanical room components.

**The Application:**

The Sonoco spiral plant in Hartsville, SC specializes in manufacturing spiral tubes used for rolls of tape & film as well as for concrete footings. The spiral tube plant consisted of two main areas. One area required controlled temperature and controlled humidity and the other required spot cooling. There was an existing hot water

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## CASE STUDY

### Heat Transfer Sales of the Carolinas, Inc.

PO Box 8608  
Greensboro, NC 27419-0608

4101 Beechwood Drive  
Greensboro, NC 27410

336-294-3838 Phone  
336-294-0119 Fax

Office locations:

Charlotte, NC      Raleigh, NC  
Columbia, SC      Greenville, SC  
Coastal Carolinas

Be sure to visit our website!  
[www.heattransfersales.com](http://www.heattransfersales.com)

Since 1971, HTS has been setting the standard for hydronic HVAC and engineered plumbing suppliers. HTS offers the HVAC experience and professionalism of degreed sales associates. Engineering graduates staff every sales office, helping you evaluate system requirements and select the best equipment for your job.

#### PUMP'NFLO Hydronic Packages Save Time, Labor, and SPACE!

Why invest hours sourcing components for a hydronic system when you can buy one completely pre-packaged? HTS can custom fabricate packages giving you an entire hydronic system on one skid. Each Pump'nFlo package is designed and built to your specifications. All of the appropriate equipment is assembled on one easy to ship skid, with piping connections extended to the edge for quick on-site connection.



The driving force in forced circulation.

header with a bypass, pressure relief valve, strainer, and isolation valves. This component was shipped loose from the heat transfer module to prevent damage during transit. The chilled water packages consisted of duplex TACO FI series pumps, TACO air separator & expansion tank, and a duplex control panel. They also included TACO suction diffusers & multipurpose valves, isolation valves, a makeup water assembly, Weiss panel-mounted pressure gauges, and a chemical shot feeder. During the fabrica-

### "These systems work great and they are exactly what we wanted."

tion process at HTS, Sonoco was able to source other HVAC components needed for their systems and begin work on the rest of the field piping. After the project was completed, HTS followed up with Al Williams of Sonoco to find out his satisfaction level with his packaged equipment. Al notes that a major factor in purchasing packages from HTS is that, "Pre-fabricated packages from HTS are already tested at their



One of two duplex chilled water pumping packages complete with air control, pump accessories, and control panel

facility. All we have to do is hook up the piping and power and then turn them on." Williams also added "These systems work great and they are exactly what we wanted." By the end of the project, HTS helped Sonoco save time, money, and equipment room space by providing complete packaged pumping systems which were built to the owner's specifications.

### TECH TOPIC: ARE YOU GETTING VALUE ADDED FEATURES ON YOUR PRE-FABRICATED PUMP PACKAGES ?

Just because hydronic components & accessories are packaged and pre-fabricated on a steel skid, doesn't mean that the end result is a package with *value added* features that benefit the owner. Listed below are some features that HTS uses and strongly recommends so that the end result is a pump package that gives the owner peace of mind.

1. Digital Thermometers  
HTS provides these to give an easy and accurate temperature reading.
2. Suction Diffuser Supports  
These keep the weight of the suction diffusers off of the pump casing. Neglecting to do this will result in pump *misalignment*.
3. Copper Gauge Tubing  
Plastic tubing often cracks and will not have the life or durability of copper tubing.
4. Extra Supports  
More supports and braces ensure that weight is taken off of the pumps and the package components are stable during transit.
5. Panel-Mounted Pressure Gauges  
These sturdy gauges feature glass fronts and can be easily read. No more crawling across rotating equipment to read a gauge.
6. "Grout-able" Base Skid  
Base skids that can be grouted provide additional vibration isolation and stability to a packaged pumping system.

