Trane Chiller Plant Automation

It takes depth of experience in chillers and controls to make a firm well-qualified for automation of chiller plants. Trane chiller plant control capabilities are unequaled in the industry. Trane chiller plant automation software is fully pre-engineered and tested. These are standard software applications, not custom programming which can prove to be difficult to support, maintain, and modify.

Energy Efficiency
Trane chiller plant automation intelligently sequences starting of chillers to optimize the overall chiller plant energy efficiency. Individual chillers are designated to operate as base, peak, or swing units based on capacity and efficiency. Sophisticated software automatically determines which chiller to run in response to current conditions. The software also automatically rotates individual chiller operation to equalize runtime and wear between chillers.

This type of chiller plant automation enables unique energy-saving strategies. An example is controlling cooling towers, pumps, and chillers from the perspective of overall system energy consumption. The software intelligently evaluates and selects the lowest energy consumption alternative.

Swift Emergency Response
Trane understands the importance of maintaining chilled water production while protecting your chillers from costly damage. If no water flow is detected to the chiller's piping, the start sequence is aborted to protect the chiller. The next chiller in the sequence is immediately started to maintain cooling.

In the event of a problem, the operator receives an alarm notification and diagnostic message to aid in quick and accurate troubleshooting. A snapshot

report showing system status just prior to an emergency shutdown helps operators determine the cause. If emergency conditions justify an immediate manual shutdown, the operator can override the automatic control.

Integrated Comfort™ Capabilities
When integrated with a Tracer Summit building management system performing building control, Trane chiller plant automation coordinates with Tracer Summit applications to optimize the total building operation. With this system option, the full breadth of Trane's HVAC and controls experience are applied to offer solutions to many facility issues. If your project calls for an interface to other systems, Tracer Summit can share data via BACnet™, the ASHRAE open systems protocol.
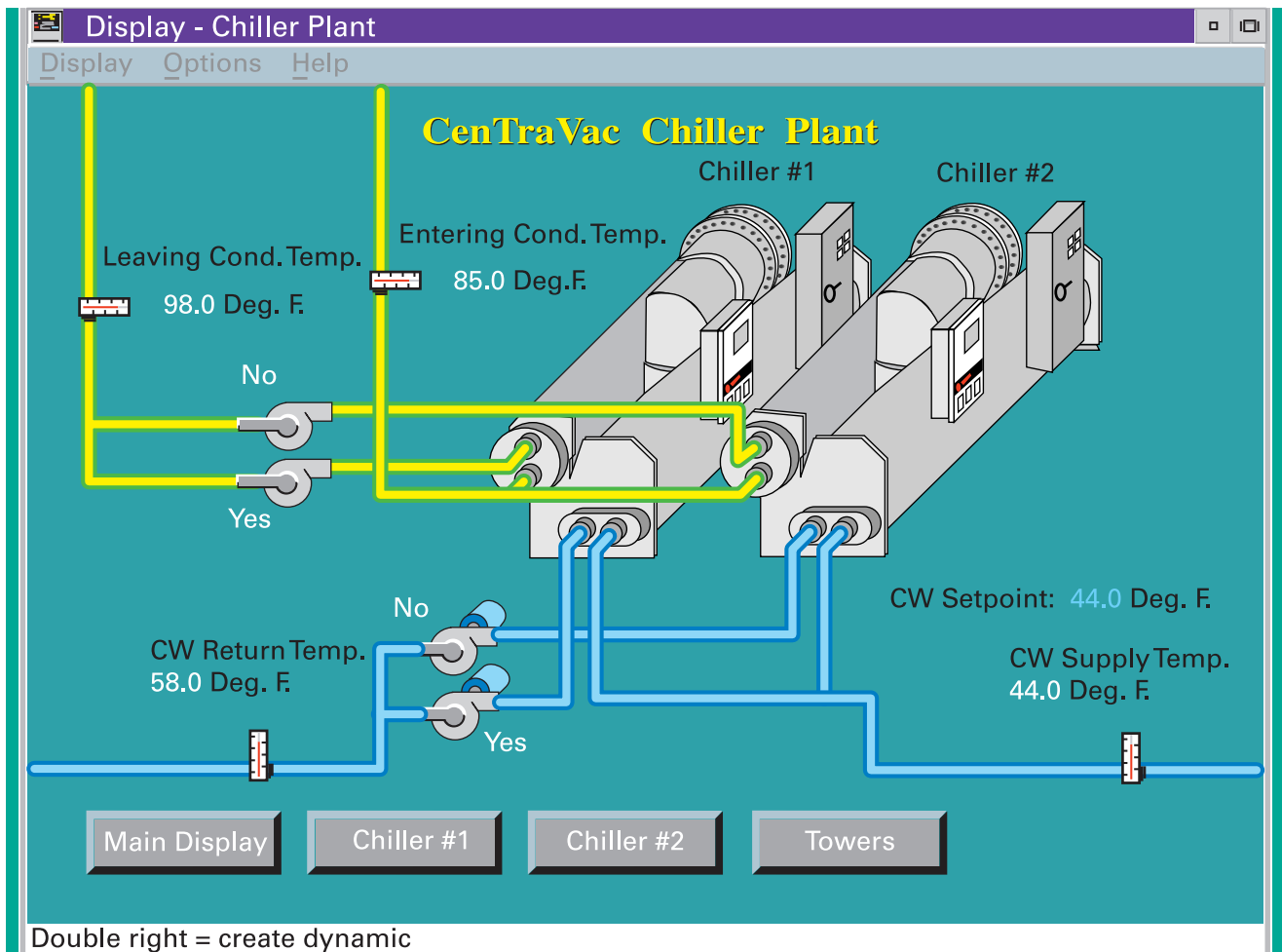
Keeping Operators Informed
A crucial part of efficiently running a chiller plant is assuring that the operations staff is instantly aware of what is happening in the plant. Graphics showing schematics of chillers, piping, pumps and towers clearly depict the chiller plant system. This enables the building operator to easily monitor overall conditions. Status screens display both current conditions and upcoming automated control actions to add or subtract chiller capacity.

Tracer Summit® features standard report templates listing key operating data for troubleshooting and verifying performance. Reports for each type of Trane chiller and three and six-chiller systems are also standard. Detailed reports showing chiller runtimes aid in planning preventative maintenance.

Easy Documentation for Regulatory Compliance
Comprehensive documentation of refrigerant management practices is now a fact of life. Trane chiller plant automation generates the reports mandated in ASHRAE Guideline 3.

Since The Trane Company® has a policy of continuous product improvement, it reserves the right to change design and specification without notice.