FacilityConneX
Predictive Analytics

The Smart Chiller

Chilled Water System Reasoner Pack
Powered by GE Software

Benefits

- ✓ **A Wide Array of Chiller Detection Scenarios that Save Costs Now!**

- ✓ **Analytics Identify Probable Causes and Recommend Corrective Action – Saving up to 20% in energy and maintenance costs**

- ✓ **Increased Awareness for Opportunity Savings and Potential Loss in Comfort**

- ✓ **Chiller Information Anytime, Anywhere You Are**

- ✓ **Reduces Unplanned Downtime**

- ✓ **Facilitates Quicker Time to Resolution – Seeing Up to 40% increased operational efficiency**

- ✓ **Enhanced Decision Making through Collaboration with Notes and Tasks**

- ✓ **Cloud Based - No Hardware or Maintenance Costs**

- ✓ **Lowest Total Cost of Ownership in the Industry**

Chillers **represent a large capital investment and are a major contributor to operating costs in facilities today.** It is imperative that your Chillers are running at peak performance. For many organizations, chillers are the largest consumer of electrical energy, and comprehensive monitoring and maintenance is critical to ensure reliability and efficient operations. Do you know the wasted cost due to your Chiller issues and inefficiencies? We can help. With **FacilityConneX (FCX) Reasoners**, we can transform your chiller into a smart chiller system that identifies potential problems, alerts you to its issues, and recommends corrective actions, saving you time and money.

The Smart Chiller

Think about your chilled water system and the various equipment involved in producing the right temperature and the right comfort. The Chilled Water System Reasoner Pack brings sophisticated analytics to detect faults, improve efficiency, and prevent maintenance problems in CHW system components and controls. The analytics continuously monitor operating parameters to recognize patterns, identify issues, and determine their causes. Corrective actions are recommended to optimize efficiency and increase performance. Your energy costs are analyzed and alerted to non-optimal performance.

In order for your chiller to become **Smart**, you must continuously monitor to ensure they are operating as intended and at peak efficiency. Key performance indicators and analytic results need to be ready for viewing *Anytime, Anywhere* you are. The FCX Cloud service takes care of this for you. Not only are you armed with the right performance and status information, you have system interaction data and can trend this information on demand and help you collaborate on the solution.

What is Smart Asset Monitoring?

Smart Monitoring is the next generation connection and visualization technology designed to take the machine level state and data, and transform it into human consumable operational information anytime, anywhere. No more guessing at what is wrong with your equipment; let the Assets tell you what they need!

Can You Resolve Issues Fast? Advanced Notification

Aggregated asset and fleet health displays intelligently alert the user to a current condition or predictive issue drawing his attention to the most critical information. With advanced notifications and condition-based actions, the operator reacts to finding's state, probable cause, and alarm severity that is automatically prioritized to indicate processes or equipment in trouble.

FacilityConneX
Reasoners

Can You Detect Failure?

Our Advanced Fault Detection and Diagnostics watch your entire system and internal interactions. Here are just a few examples for a chilled water system. :

Chillers
- Scheduling
- Sensors
- Compressor Analysis
- Loading Interactions
- Flow Analysis
- Differential Pressure Analysis
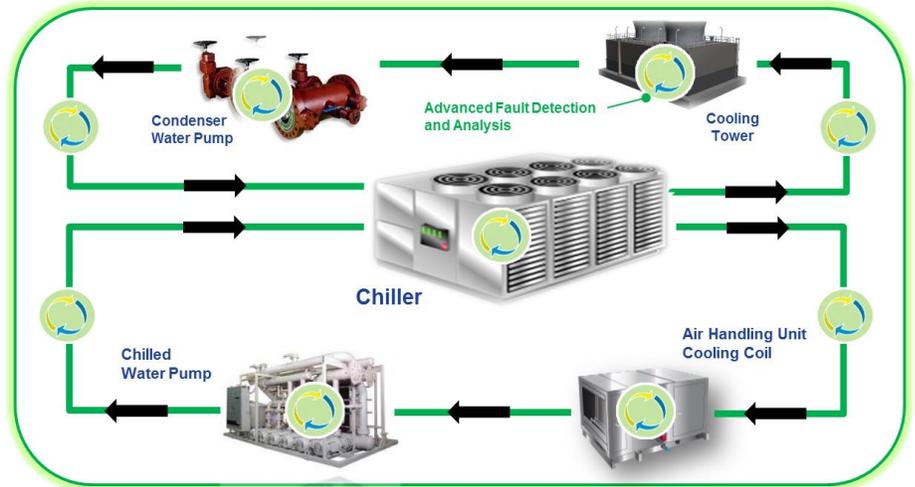- Advanced System Coordination Detections

Cooling Towers
- Sequencing Controls
- Operating Interactions
- Short-Cycling
- Basin Heating

Pumps and Loops
- Flow Analysis
- Short Cycling and Speed
- Temperature Interactions and Detection

Advanced System Detection
- Energy Cost Detection and Opportunity Savings

Condenser Water Pump

Advanced Fault Detection and Analysis

Cooling Tower

Chiller

Chilled Water Pump

Air Handling Unit Cooling Coil

Agnostic Vendor Support

We detect and predict issues based on the equipment type not the manufacturer. As long as there are sensors and data to be gathered from the machine or the building management system (BMS), we will connect and detect. We support over 200+ protocols and 100s of equipment types. Our diagnostics and advanced detection analytics cover both air and water cooled chillers and chilled water systems across your facility and geographic locations.

Integrated Reasoners and Corrective Actions

FCX Detect and Know system is designed to build the REAL relationships between upstream and downstream equipment and components. Please contact us for other Predictive Reasoners and Detections Packages available. We also offer hands-on analysis to complement our diagnostics.

www.FacilityConneX.com

Smart Chilled Water*

- ✓ Optimization
- ✓ Temperature
- ✓ Sequencing
- ✓ Efficiency
- ✓ Schedules
- ✓ Flow
- ✓ Sensors
- ✓ Tower and Fans
- ✓ Resets
- ✓ Sub-Cooling
- ✓ Compressor
- ✓ Pumps
- ✓ CHW/CW Loops

FAULT DETECTION:
Chiller is at full motor current, but not achieving design tonnage.

REDUCED EFFICIENCY DETECTION:
Evaporator Approach Temperature Too High

ENERGY DETECTION:
Condenser Water Reset Not Optimized based on Outdoor Air Conditions and Chilled Water Load

PLANT EFFICIENCY DETECTION:
Cooling Tower not meeting condenser water supply set-point.

CONFIGURATION FAULT DETECTION:
Pre-rotation varies above minimum position while hot gas bypass valve open.

15%-25% Opportunity Savings

Preventative Maintenance

Comfort Reliability

50+ Continuous Detection and Corrective Actions

GE Partner Intelligent Platforms

B2Q

AutomaTech
We Make Plant Information Flow