



Predictive Free Cooling

Extending the power of the OptiCx® platform

The OptiCx platform, in conjunction with the OptimumLOOP® operational module, delivers continuous, system-level optimization of centrifugal chilled water plants. Through machine learning, web and mobile apps, and world-class support, the OptiCx platform provides a complete energy optimization and performance management solution that learns and adapts over time. The benefits of the platform can be extended through Predictive Free Cooling, which is available for purchase as an add-on to an OptiCx platform subscription.

Free cooling (water-side economizing) is an effective tool for reducing overall energy consumption in complex cooling systems. In practice, however, it can be difficult to implement effectively, and often involves guesswork in determining when to turn on and off. Due to lack of precise information, operators tend to avoid using free cooling to minimize the possibility of expending the extra energy consumed by suddenly restarting chillers. When free cooling is used, it is often inefficiently implemented and fans are overrun — again, due to lack of precise data.

OptiCx Predictive Free Cooling eliminates this guesswork through incorporating weather forecast data that accurately predicts free cooling availability based on outside air wet bulb threshold. When the weather is below the threshold for the minimum free cooling window period, and current plant conditions permit free cooling operation, OptimumLOOP informs the operator that free cooling is available. This process can also occur automatically, through OptimumLOOP triggering free cooling mode on and off without

operator intervention: the choice is up to the customer. Predictive Free Cooling is configurable, allowing for both the outside air wet bulb threshold and the minimum free cooling window period to be adjusted based on a site's specific requirements. Monthly reports are available to subscribers, giving insight into the free cooling hours available, free cooling hours activated, and free cooling hours missed.

Predictive Free Cooling Benefits

- Automated and configurable based on your site's unique needs
- Seamlessly communicates with OptimumLOOP and the OptiCx platform
- Enables efficient and accurate use of free cooling windows
- Provides visibility into accuracy of your outside air and humidity sensors
- Both automatic (closed-loop) and manual (information sent to operators) options are available

