



DESIGN ENVELOPE

IPC 9521
Integrated Plant Control
System for water cooled
chiller plant automation

SOLUTION OUTLINE

FILE NO: 90.156
DATE: JANUARY 2015

SUPERSEDES: NEW
DATE: NEW

CONTROLLING YOUR FUTURE

CONTAINING YOUR COSTS

Every stakeholder in the construction, management, ownership and maintenance of large-scale facilities is expected to control and reduce costs. They must also look for opportunities for forward-looking managers who are prepared to make educated investments in cost-saving technology.

With HVAC representing a significant portion of the cost to operate a facility, installing or upgrading to an advanced, fully automated HVAC control system can make a big difference in overall results. The right choice of control principles and equipment can help you:

Win projects on the basis of cost competitive initial bids

Offer future upgrades at minimal incremental cost

Avoid costs related to connections to a BMS system

Qualify your project for utility rebate programs and corporate sustainability initiatives

Save energy with variable primary flow or all variable speed chiller plant automation in new or retrofit projects

Meet and exceed efficiency requirements (LEED, BREAM, ASHRAE)

Surpass expectations for occupant comfort with improved system reliability and minimized downtime

Full automation of up to five water cooled chillers and cooling towers



INTEGRATION

The latest advances in control technology allow you to make the most of the efficiencies available in new and existing HVAC systems. With Armstrong's Integrated Plant Control System (IPC) 9521 we've refined the best of these control technologies into a compelling solution that will propel the success of your future HVAC projects.

BENEFITS

Minimized costs for commissioning and customization

All the energy savings of variable primary flow configuration without relying on an expensive Building Management System (BMS)

Configuration flexibility and ease of operation

Convenience and flexibility of a fully automated control solution

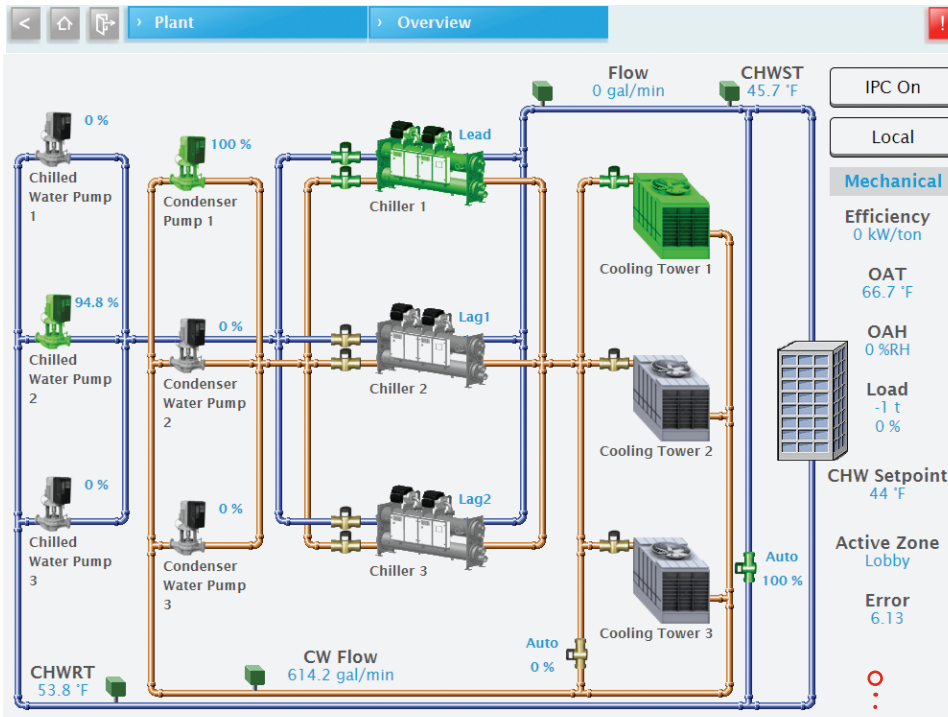
Reliable HVAC system operation with reduced reliance on manual interventions

Simple, low-cost updates to ensure that control solutions are always kept current

EASY

UPGRADE PATH

The Armstrong IPC 9521 control system leads the market with a complete feature set in an affordable package. It uses a base-level platform that can be easily upgraded as installation requirements evolve.



FEATURES

Embedded sequences for variable-primary configuration, all-variable chiller plant automation, chiller plant optimization and variable-speed cooling tower operation (ASHRAE 90.1 2013).

Standard 'out-of-the-box' plant automation capability for a variety of water cooled chiller plant configurations with up to five chillers. Includes all industry standard safety and duty cycling functions.

Resident Sensorless pump speed control maximizes the efficiency of pumps. Parallel Sensorless Pump Control optimizes pump staging. See reverse for an introduction to Parallel Sensorless >

User-friendly setup screens and pre-defined communication settings for plant equipment.

Accessibility via Internet protocol for full remote control of your HVAC system.

Hot-swap master control. No need to reset controls or restart the system.

Easy software upgrades and revisions.

Easy upgrade path to include more optimization features.

Factory configuration ready to activate the optional Armstrong ECO*PULSE™ HVAC Health Management System.

Up to 70% energy and cost savings come from installations with Design Envelope pumps operating in parallel.*

With Parallel Sensorless™ technology, the pump performance characteristics (power draw and RPM) and combined operating curve are preprogrammed into the control system. As the building's control valves open and close to regulate flow to the cooling coils and maintain building occupant comfort, the control system automatically adjusts the pump's speed. Integrating the Parallel Sensorless™ technology, the control system optimizes their staging based on their best-efficient point for the most efficient combination of operating pumps.

*compared to the standard (fixed speed) multi-pump setup

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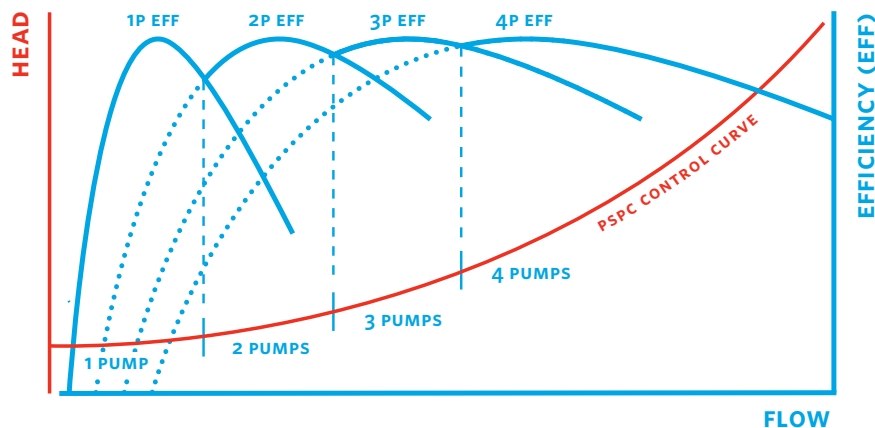
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