ARMSTRONG

DESIGN ENVELOPE

Integrated Pumping System (IPS 4000)

Automation solution for commercial HVAC pumping stations

SOLUTION OUTLINE

FILE NO: 90.104
DATE: JANUARY 2019

SUPERSEDES: 90.104
DATE: DECEMBER 2015

Industry professionals are always searching for ways to improve their results. Reducing project costs, minimizing risk and improving occupant comfort are top priorities, and the pressure to meet all of these objectives at the same time is a constant reality.

Armstrong's control technologies allow building equipment and control networks to meet and exceed industry codes for variable speed pump operation. The convenience and cost savings achieved, depends on the choice of control strategies. The more advanced the strategies, the easier it is to meet all of your objectives. Available pump control solutions are not all alike, and involve varying levels of cost, risk and performance.

A key opportunity for savings involves choosing a system that does not rely on remote sensors. Avoiding the costs to purchase and install remote sensors reduces the time and material requirements to control a system, and can also improve lifetime system efficiency.

As experience has shown, optimizing the performance of the pumping system reduces pumping cost by 30-70%. Leveraging your existing investment in Building Management System (BMS) and taking full advantage of the pump efficiencies available can save even more energy than you might think.

Upgrading to variable speed technology offers tremendous opportunities for energy savings, and the change to variable speed is easy to manage, regardless of whether the building already has a BMS system installed.

BEST EFFICIENCY STAGING

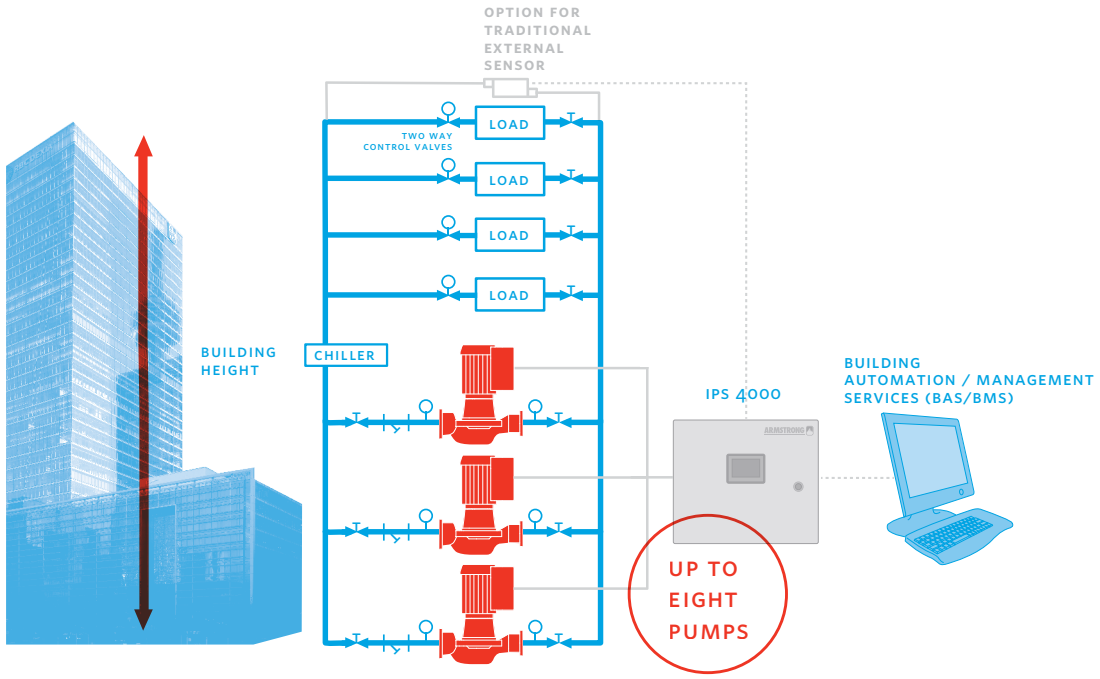
PRE-PROGRAMMED AUTOMATION SYSTEM

CONTROLS UP TO 8 PUMPS AND 16 ZONES

A comprehensive control solution can help you make the most of the improvement potential in your mechanical system. The ideal choice will add value through :

- A pre-engineered control solution offered as a complete package for variable primary or secondary pumping applications
- Maximizing the performance profile of the pump
- Operation in either a standalone mode or networked through the BMS
- Lowest installed costs
- Reduced installation time by intuitive on-site configuration

THE SENSOR WITHIN



Armstrong Design Envelope pumps are equipped with Sensorless Technology and do not need external sensor to satisfy the HVAC load demand. Parallel Sensorless technology in the IPS optimizes pump operation to use the lowest possible pump energy.

BENEFITS

- Guaranteed upfront equipment costs
- Lowest first installed costs
- Ongoing diagnostics with Active Performance Management
- Energy savings under most operating conditions
- Performance efficiency exceeding ASHRAE 90.1 2016 standards
- Easy installation and integration with existing HVAC systems
- Easily configured via the screen

FEATURES

- Patented Parallel Sensorless Technology
- Enhanced Control Capabilities and performance data for optimized staging of pumps
- Easy selection of a pre-engineered catalog offering
- Serial communication using industry standard protocols
- Integration with a new or existing HVAC system, operating either in a standalone mode, or through a BMS.
- Multi zone control

IPS 4000 APPLICATION RANGE AND FEATURES

- Variable primary pumping control in a headered or dedicated configuration, or secondary/tertiary pumping control in a headered configuration
- Up to 8 pumps, 16 zones and 8 flow sensitive equipment (variable primary)
- Responds to cooling or heating zone demand via :
  - return temperature sensors,
  - dP sensors,
  - cooling zone valve position,
  - sensorless technology,
  - hybrid (sensorless with instrumented critical zone(s))
- End-of-Curve protection based on Parallel Sensorless™ technology (sensorless pumps) or pump operating speed (non-sensorless pumps)
- Flow verification capability
- NEMA 12/4X or IP54/55/65 enclosure rating
- UL, CSA, CE panel approval available
- BACnet™ MS/TP or IP, Modbus RTU communication protocols

No other pump control solution available offers you the same combination of control capabilities, low installed cost, easy selection and BMS integration.

ADEPT™ SELECT

SELECT & CONFIGURE

Use ADEPT Select to quickly and easily select Armstrong products that are right for your projects. Visit adept.armstrongfluidtechnology.com to learn more

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