

# MODERN ENERGY SAVING

A COMMERCIAL HOTEL  
ENERGY UPGRADE



Improved efficiency, temperature control and reliability created a luxurious environment at the Park Hyatt Doha. Combining Design Envelope technology with Parallel Sensorless Pump Control and Active Performance Management, reduced annual costs for pumping energy by over \$31,000.

Armstrong's solutions and services optimize occupant comfort and promote well-being.

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## Park Hyatt Doha

Armstrong's patented pSPC technology distributes the pumping load across multiple pumps, ensuring optimal efficiency of the entire pump array. Armstrong's Pump Manager collects performance data using cloud-based tracking capabilities and uses embedded intelligence to provide pump performance insights and recommendations.

## Background

The Park Hyatt Doha is a luxury hotel located in Msheireb Downtown - the world's first fully developed smart and sustainable city district. Seeking to improve the energy efficiency and performance of the hotel's cooling systems, management enlisted the help of Armstrong to design and deliver a retrofit solution. Armstrong recommended Design Envelope Vertical In-Line pumps, with intelligent variable speed technology supported by Patented Parallel Sensorless Pump Control and subscription to the Pump Manager service.

Because temperatures fluctuate throughout the year, 100% system output is required for only a small percentage of total operating hours. For the majority of the year, HVAC systems operate at part load. In most applications, operating two or more smaller pumps is more efficient than one larger pump.

Soon after the commissioning was completed, managers at the Park Hyatt Doha expressed concerns over the staging patterns of the pSPC technology, noting that only one pump was operating during the night-time hours. After reviewing the system data through Pump Manager, Armstrong confirmed that the pumps were all in good working condition, without any warnings or alarms. The reduced pump output reflected the lower demand for cooling.

A key aspect of ensuring long-term system efficiency and occupant comfort is Active Performance Management. At the Park Hyatt Doha, Pump Manager prevented a cooling system incident, using the Wi-Fi capabilities of Design Envelope pumps to send a real-time alert when a drop in performance was detected. A local technician had mistakenly closed a valve within the cooling system, cutting off the flow of coolant. Had

the software not alerted the maintenance team, the dead-head status could have led to seal failure, motor failure, or failure of other system components.

Through the integration of variable speed technology, Parallel Sensorless Pump Control, and active performance management, Park Hyatt Doha reduced annual costs for pumping energy by over \$31,000. In addition, the hotel has been able to maintain its promise of providing the ultimate luxury experience.

## Tech-info

- Design Envelope Vertical In-Line Pumps
- Parallel Sensorless Pump Controller (pSPC)
- Pump Manager Integrated Pumping System (iPS)