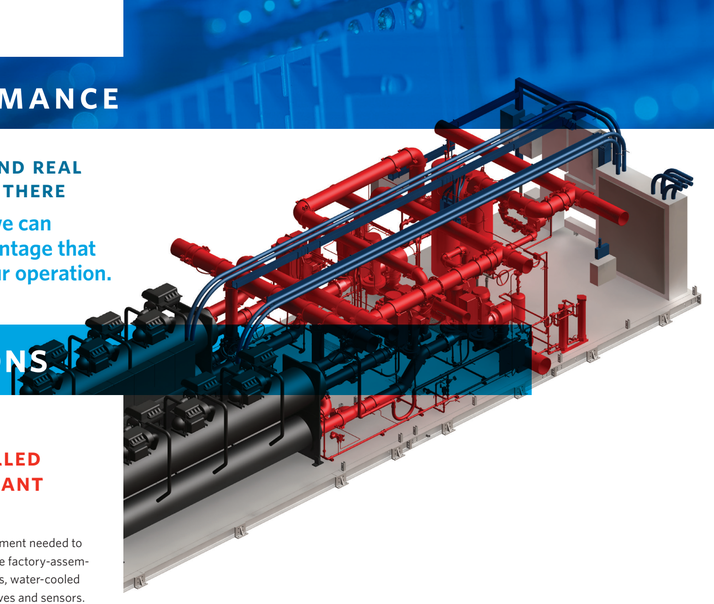
TRUE PERFORMANCE

AGGRESSIVE TARGETS AND REAL SOLUTIONS TO GET YOU THERE

Working in partnership, we can create a competitive advantage that benefits all aspects of your operation.



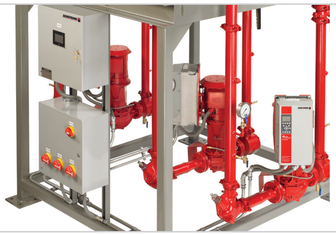
KEY SOLUTIONS

DESIGN ENVELOPE CHILLED WATER INTEGRATED PLANT PACKAGE (IPP)

This packaged system combines all the equipment needed to deliver chilled water at superior efficiency. The factory-assembled plant includes pumps, integrated controls, water-cooled chillers and the requisite instrumentation, valves and sensors.

DESIGN ENVELOPE INTELLIGENT FLUID MANAGEMENT SYSTEM (IFMS)

The Armstrong iFMS integrates pump and control technology into a single solution. iFMS is ideally suited for variable speed chilled-water plant applications. In combination with Parallel Sensorless control an iFMS saves 30% or more in energy over any other parallel pumping configuration available today.



DESIGN ENVELOPE 4300 PUMPS

Pipe-mounted Vertical In-Line pumps with integrated, intelligent controls for space-saving installation and superior energy performance. Save up to 75% in energy over comparable traditional constant speed or variable frequency operated pump installations. Vertical orientation and split-coupled design make service easy, minimizing downtime for repair or replacement.

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For more information, contact your Armstrong representative or visit us at ArmstrongFluidTechnology.com/datacentre

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MAKING ENERGY MAKE SENSE™

ARMSTRONG

DESIGN ENVELOPE | DATA CENTRE

OPPORTUNITIES TO EXCEL

Taking data centre performance and profitability to the next level

SECTOR EXPERTISE

FILE NO: 8.10
DATE: NOVEMBER 2015

SUPERSEDES: NEW
DATE: NEW

WE COOL
DATA CENTRES

Data center owners and managers face a host of daunting market forces that demand expertise and decisive action. Armstrong has helped data centers at all Tier levels to address these challenges and succeed in a hyper-competitive environment.

POWER UTILIZATION (PUE)

You know your numbers, and you know the industry metrics. There are still opportunities to improve the efficiency of your cooling systems and reduce your costs.

For an average data center, the cost of just one minute of partial downtime is over

$6000

ENERGY SAVINGS | DESIGN ENVELOPE

HIGHEST	LOWEST	LOWEST	LOWEST	LOWEST
ENERGY EFFICIENCY	INSTALLED COST	OPERATING COST	ENVIRONMENTAL COST	PROJECT & OPERATING RISK

Design Envelope technology replaces mechanical components with electronics and software intelligence in order to:

- Boost energy efficiency
- Downsize equipment
- Optimize part-load performance

ENERGY SAVINGS

UP TO 70%

COST PERFORMANCE

With increased confidence in your demand-response cooling capacity, you could reduce cooling costs by raising your server room temperature.

Studies suggest that every degree of increased temperature reduces cooling costs by

4.0%

Reduce your cooling costs by as much as 50%:

- Boost your cooling efficiencies by 25% to 50%
- Save 25% to 50% on your utility bills
- Reduce your carbon footprint

Your key solution: demand-based, high-efficiency cooling enabled by Design Envelope technology

TIME-TO-MARKET

Every day added to your construction schedule is costly. Changing your construction process can shorten project timelines and reduce your time-to-market.

Estimated revenue losses for every day of construction delay

>$19,000

Packaged system assembly at our factory shortens your time-to-market. The completed system is factory pre-commissioned, reducing site commissioning time. You get single source responsibility. And your new facility will be up and running sooner than you thought.

Your key solution: Factory assembled packaged systems

COMPLIANCE & PUBLIC AFFAIRS

Data centers may soon be asked to report on energy usage and carbon footprint. Get ahead of legislative requirements by taking a leading role in both operating efficiency and reporting practices.

Data centers are one of the largest and fastest-growing consumers of electricity. In the US alone, data centers use over

91 BILLION kWh PER YEAR

Maintain the efficiency of your cooling system and drive your key metrics with insightful and informative reports on cooling operations to help you reach your targets for efficiency and sustainability.

- Maintain and protect your cooling efficiency
- Document your performance and operating practices

Your key solution: ECO•Pulse™ HVAC health management

SCALABILITY

Invest upfront in adaptable, high-efficiency systems, so you can position your facility for sustained competitive advantage and better long-term financial performance.

RELIABILITY

Redundancy is a key strategy for reaching your reliability and uptime metrics, but product quality and ease of maintenance reduce your maintenance work and increasing stability.

Design Envelope technology, combined with our industry-leading packaging capabilities gives you the performance and vendor support you need.

- Maximize cooling system availability
- Respond quickly to changing capacity and cooling requirements
- Achieve high performance reliability and fast maintenance turnaround

Your key solution: Performance reliability and modular design