



**DESIGN
ENVELOPE®**

Intelligent Variable Speed Pumps

with cloud-based
Active Performance
Management®

SOLUTION OUTLINE

FILE NO: 100.111UK
DATE: AUGUST 2021

SUPERSEDES: 100.111UK
DATE: MAY 2021



DESIGN ENVELOPE

ENGINEERED BEYOND THE OBVIOUS

Design Envelope technology is a demand-based, intelligent control solution that:

Models equipment and system behaviour

Monitors actual system conditions

Dynamically adjusts equipment operation to match system demand

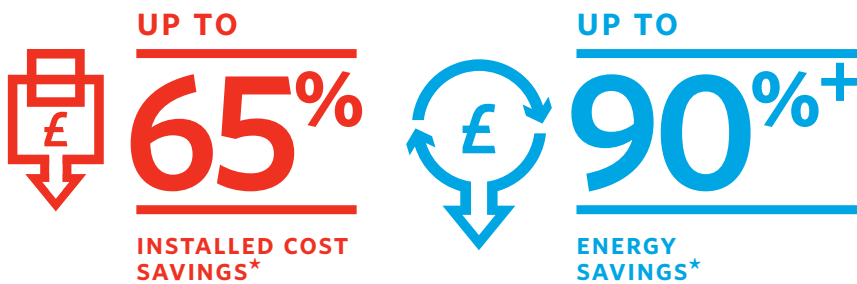


Whether driven by social, environmental or fiscal responsibility, forward-thinking organisations must embrace energy-saving technologies and practices.

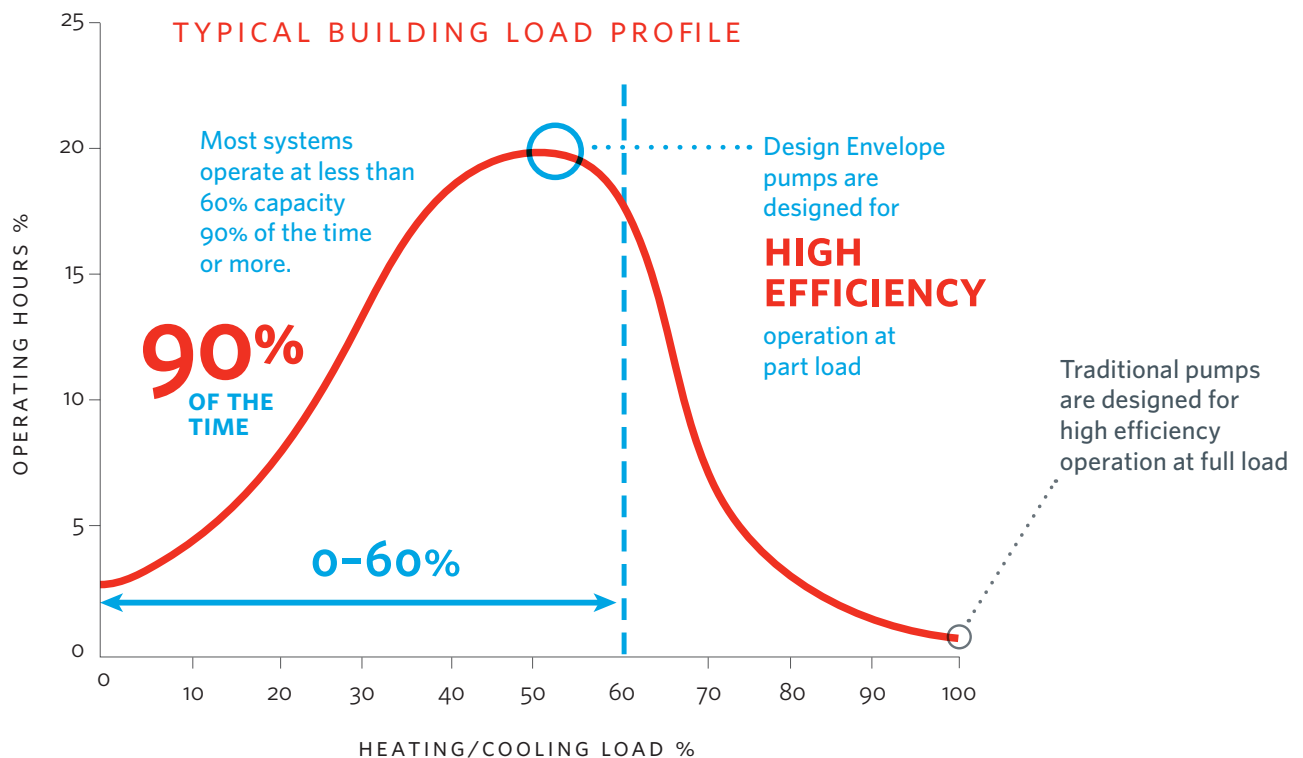


Armstrong Design Envelope pumps are a complete solution for heating, cooling and plumbing systems. The integration of a perfectly matched hydraulics, motive power and intelligent variable speed control creates the highest value pumping solution.

MAXIMUM ENERGY AND COST SAVINGS



- 1 Technology benefits
- 2 How it works
- 3 The solutions
- 4 Solutions range



Sizing and selecting for efficiency

Design Envelope solutions reduce pumping costs through variable speed, demand-based operation — consuming only the energy required, based on current system demand. Design Envelope pumps use a combination of optimised impeller size and speed control for energy efficient operation within a given performance envelope.

The performance envelopes are selected for the best pump efficiency where variable flow systems operate most often. This ensures a building's pumping system consumes as little energy as possible. It also helps to ensure that the installation meets or exceeds ASHRAE 90.1 guidelines requiring 70% energy savings at 50% of peak load.

*Compared to a fixed speed system

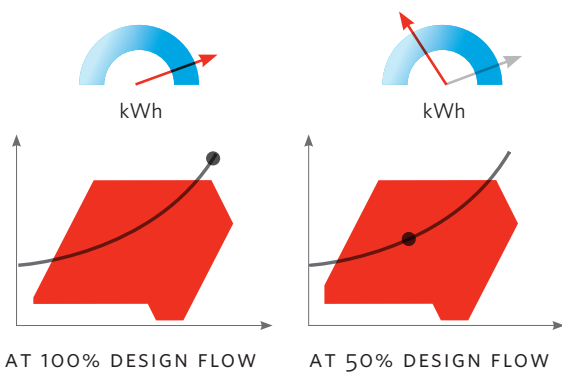
1

THE TECHNOLOGY

THE EVOLUTION OF PUMPING

Energy Savings

Armstrong Design Envelope variable speed technology fundamentally changes the operation of a pump within the larger HVAC system. The variable speed intelligence embedded in the Armstrong Design Envelope controller adjusts the pump operation to meet the immediate demand. The pump responds instantaneously and draws only the power required to meet that demand.



Eliminate cost trade-offs

Through innovation, Armstrong's Design Envelope offers the lowest installed cost and lowest life cost of any pumping solution on the market.

CONSTANT SPEED PUMP 3-WAY VALVE

VARIABLE SPEED PUMP WITH CONTROLS DISABLED (PUMP IN HAND)

- > Constant speed operation
- > Base case for pump energy usage
- > Pump runs at design point, controlled by throttling

AVERAGE 15% ENERGY SAVINGS

VARIABLE SPEED PUMP WALL-MOUNTED CONTROLLER/2-WAY VALVE

- > Constant reduced speed
- > Reduce motor speed in lieu of throttling flow

UP TO 50% ENERGY SAVINGS

VARIABLE SPEED PUMP/ WALL-MOUNTED CONTROLLER/2-WAY VALVE

- > Sensor in mechanical room
- > Maintain constant design head
- > No savings if sensor stops working

UP TO 65% ENERGY SAVINGS

VARIABLE SPEED PUMP/ WALL-MOUNTED CONTROLLER/2-WAY VALVE

- > Inefficient induction motor operation
- > Pump selected to design point
- > Sensor located at remote load
- > Maintain pressure at remote zone
- > No savings if sensor stops working

UP TO 70%+ ENERGY SAVINGS

DESIGN ENVELOPE 3.1

- > Pump speed control through Sensorless technology
- > Detailed mapping of performance curve
- > Smaller motor selection on 25% of projects
- > Integrated controller — higher motor efficiency
- > Flow measurement accuracy of $\pm 5\%$
- > Optimised selection against load profile

PERFORMANCE OF CONSTANT SPEED PUMP 3-WAY VALVE



**UP TO
80%⁺
ENERGY
SAVINGS**

**DESIGN ENVELOPE
GENERATION 5**

- > Advanced digital controls
- > Control tuned to specific motor
- > DEPM motor: IE5 efficiency rating
- > Advanced hydraulics

**DESIGN ENVELOPE PERMANENT MAGNET (DEPM)
MOTOR BENEFITS (UP TO 7.5kW)**

- > Higher efficiencies at full load and part-loads for lower lifecycle costs
- > Higher stable operating speeds for smaller pumps, lower installed costs
- > Reduced noise and vibration for quiet and stable operation
- > Reduced weight and size for easier, faster installation
- > Less heat generated for longer equipment life



**UP TO
90%⁺
ENERGY
SAVINGS**

**DESIGN ENVELOPE
GENERATION 5**

- > Multi-pump load sharing
- > Best-efficiency staging (Parallel Sensorless)
- > Onboard diagnostics and trending
- > Real-time performance management

**NEXT
LEVEL
THINKING**

**ACTIVE
PERFORMANCE
MANAGEMENT
SERVICES
DELIVER:**

Ongoing tracking, analysis and benchmarking of HVAC performance

Deeper insights into HVAC operation for informed decision making

Data-driven optimisation in response to system changes

Long-term mechanical system efficiency

Overall savings in HVAC energy and equipment maintenance costs

THE RESULTS

ENERGY SAVINGS UP TO

90%+



**HIGHEST
ENERGY
EFFICIENCY**

①

Armstrong Design Envelope Pumps provide you with highest energy efficiency.



**LOWEST
INSTALLED
COST**

②

Design Envelope Pumps provide lowest installed equipment cost, plus savings in infrastructure such as transformers, switch gear, power cables, concrete and cabling.



**LOWEST
OPERATING
COST**

③

Design Envelope Pumps provide lowest operating and maintenance cost.

CASE STUDY | National Grid

ANNUAL
ENERGY
SAVINGS



70%

Armstrong recently completed a project in the United Kingdom, retrofitting pumps in a commercial office building belonging to National Grid. The retrofit included new pump sets that reduced energy consumption by 70%, saving over £22,400 annually.

ANNUAL ENERGY COST

BEFORE

32,152

£

AVERAGE

AFTER

9,752

£

AVERAGE

ANNUAL
COST
SAVINGS

22,400 £

CO₂ EMISSIONS

BEFORE

82,309

kg CO₂

AVERAGE

AFTER

24,967

kg CO₂

AVERAGE

ANNUAL CO₂
EMISSION
REDUCTION

57,342 kg CO₂



FACILITY TYPE
Commerical
office



LOCATION
Solihull,
Birmingham



SIZE
Three-storey
building



4

Design Envelope Pumps provide buildings with the lowest carbon footprint.

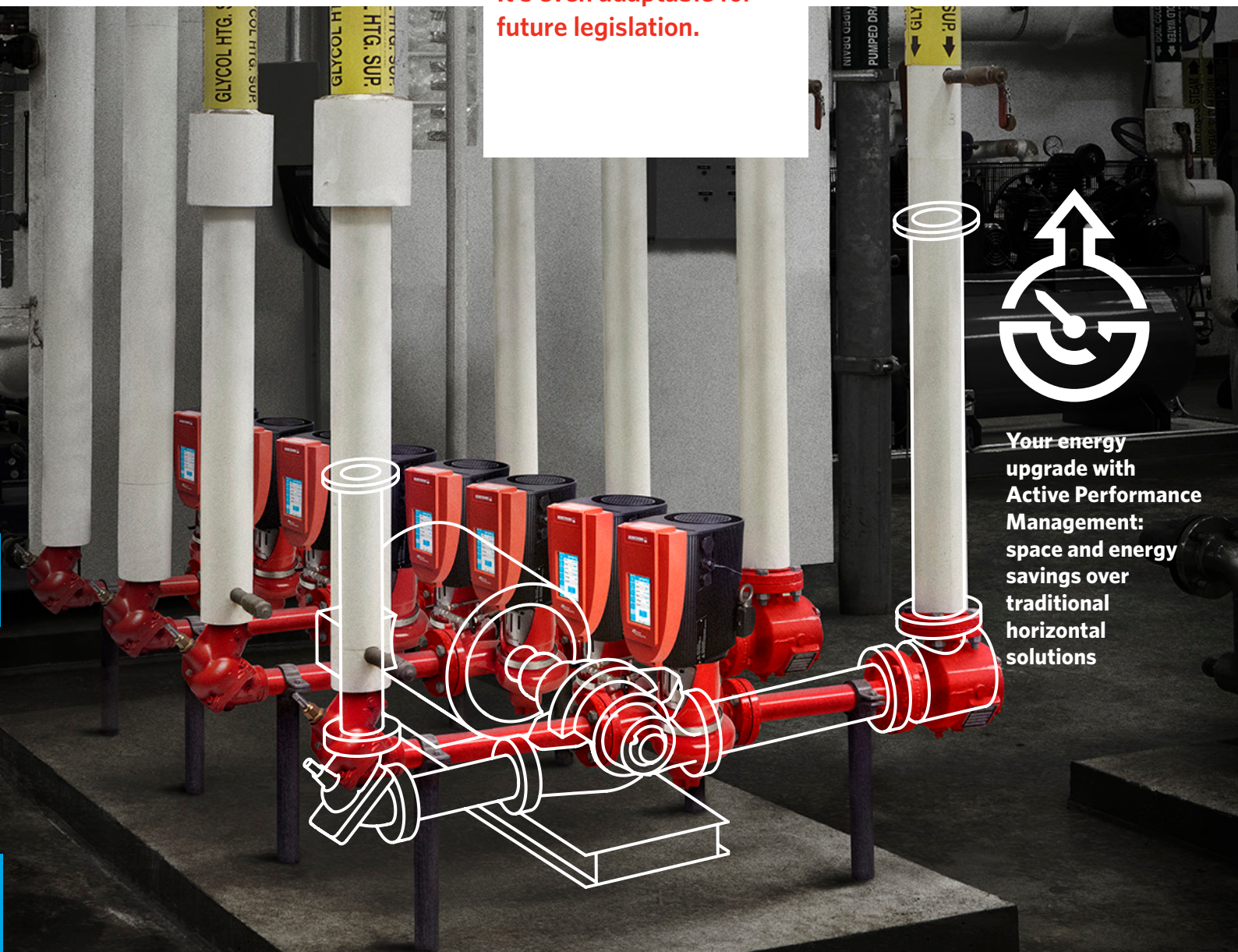


5

Design Envelope Pumps provide lowest project and operating risk, with solutions adaptable to design and building changes. It's even adaptable for future legislation.



Together, these five key benefits of Design Envelope technology provide customer value far beyond alternative variable-speed or constant-speed solutions.



Your energy upgrade with Active Performance Management: space and energy savings over traditional horizontal solutions

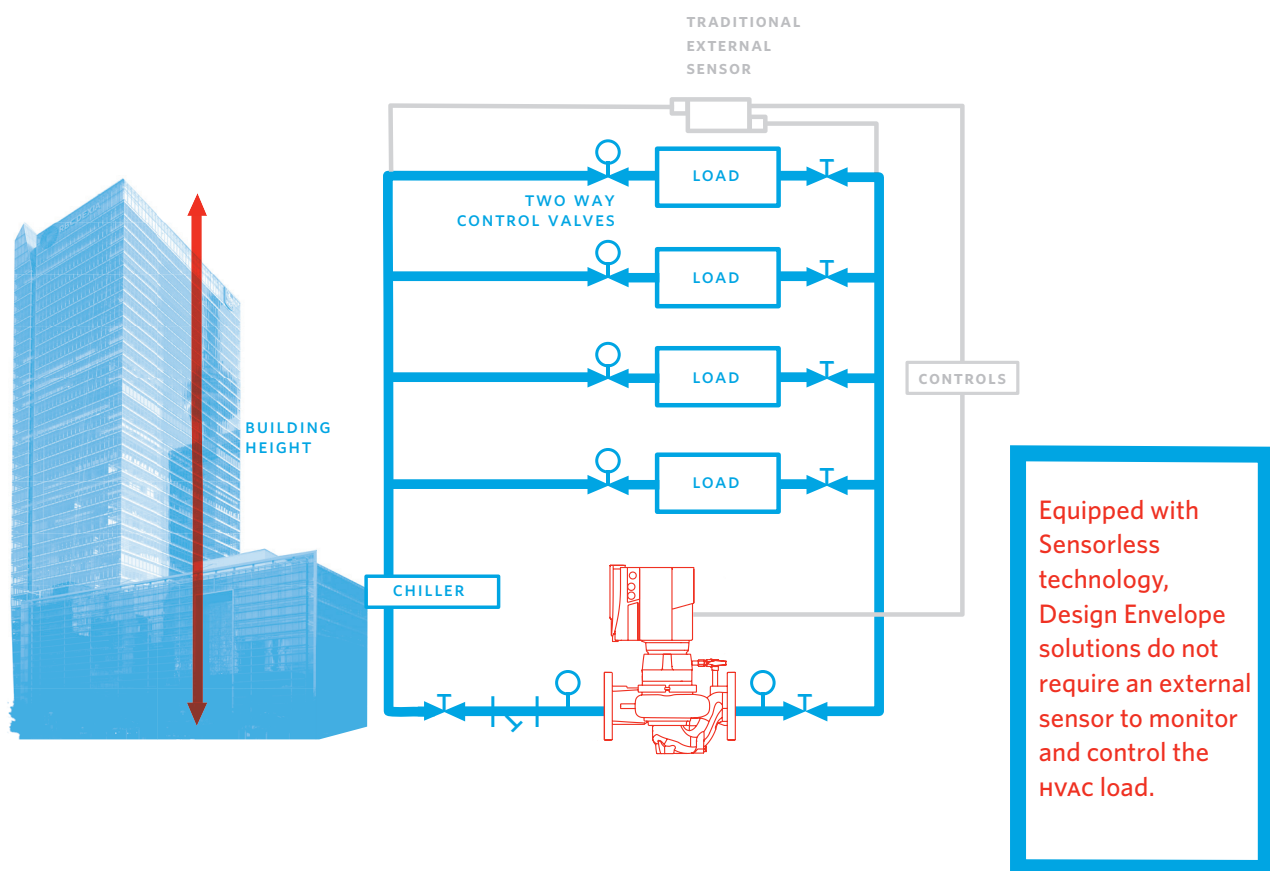
2

HOW IT WORKS

SENSORLESS TECHNOLOGY



THE SENSOR WITHIN

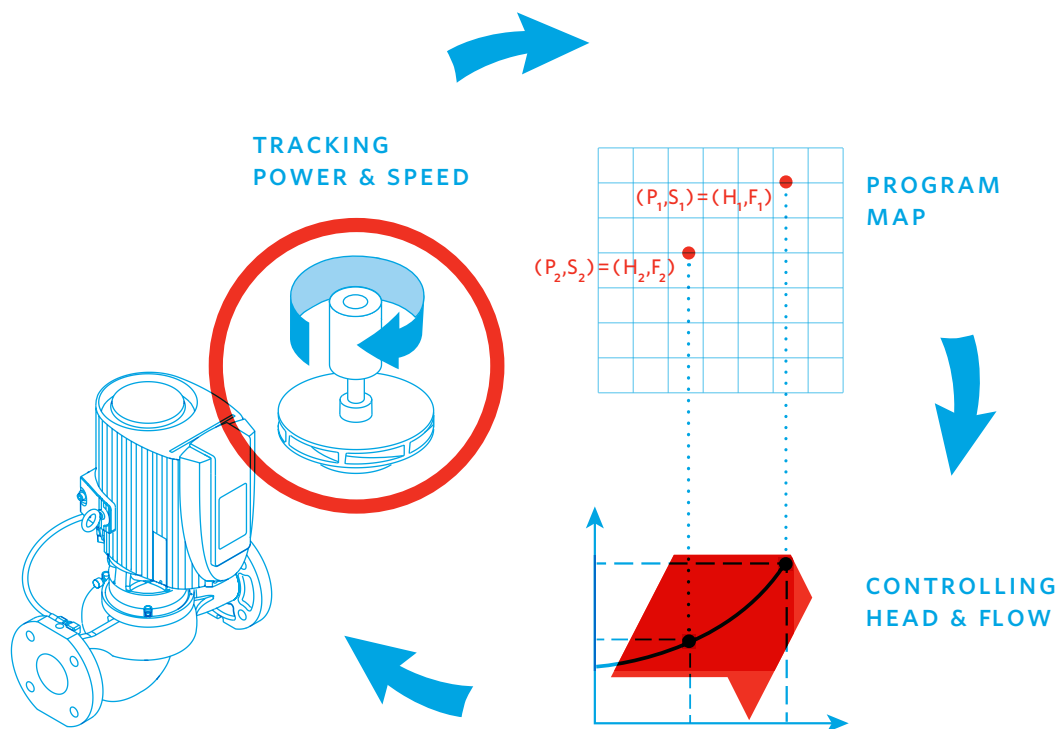


Using Sensorless technology, a Design Envelope pump's performance data (power draw and RPM) and operating curve are pre-programmed into the controller. During operation, the controller monitors the power draw and RPM of the pump and establishes the hydraulic performance and position of the pump's head-flow condition relative to the system requirements.

As the building's control valves open or close to regulate flow to the cooling coils and maintain building occupant comfort, the Sensorless controller automatically adjusts the pump speed to match the required system pressure and flow.

MONITOR POWER & SPEED

CONTROL HEAD & FLOW



Equipped with Sensorless technology, Design Envelope solutions do not require an external sensor to monitor and control the HVAC load.

In a chilled water system, a building's temperature controls influence the local flow of control valves that modulate the flow to the cooling coils (load). As the control valves open for more chilled water flow, the differential pressure across the valve decreases.

The controller reacts to this change by increasing the pump speed. If the control valves close to reduce the chilled water flow, the differential pressure across the valve increases and the controller reduces the pump speed.

PARALLEL SENSORLESS

SAVE
UP TO **30%**

ON OPERATING COSTS

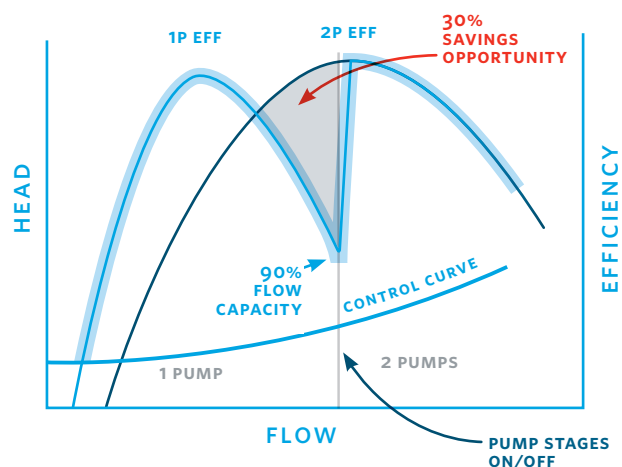
Parallel Sensorless Pump Control (PSPC) is a patented technology that improves the efficiency of a multi-pump installation through optimised load sharing.

The traditional approach to control in a multi-pump installation involves staging pumps on the basis of motor speed. Parallel Sensorless Pump Control technology stages pumps based on operating efficiency rather than motor speed and improves the efficiency of the full pump array by up to 30% over traditional multi-pump installations.

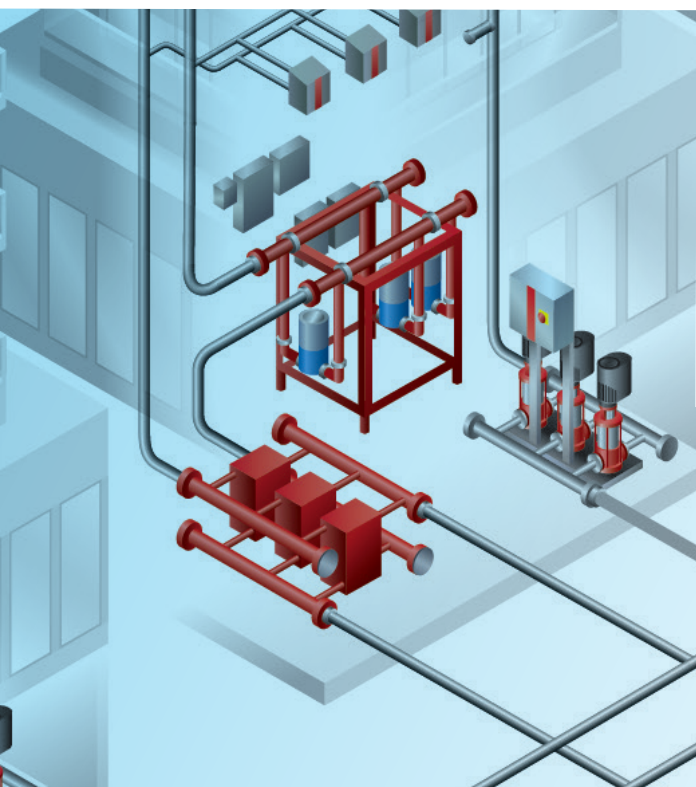
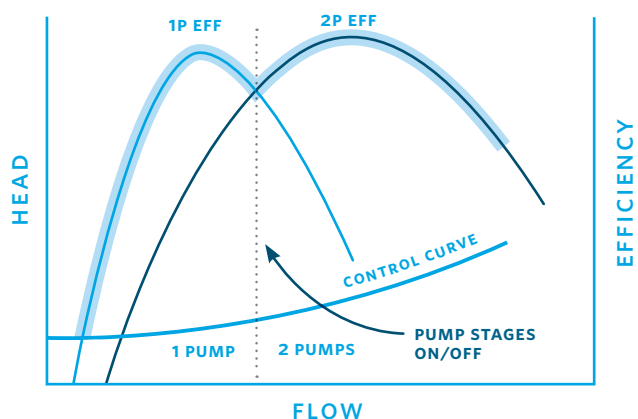
HVAC loads and flow requirements change throughout the day. In the graphs to the right, the grey dotted line intersecting the pump efficiency curves represents the flow level at which one pump in the array should be staged on or off. The solid grey line, however, indicates where staging often occurs with speed-based control, which forces the pump array to operate at efficiency levels that are less than optimal.

In an installation of (up to four pumps) Parallel Sensorless Pump Control monitors pump speed and stages pumps at the correct flow levels to optimise efficiency, as shown in the bottom-right graph.

TRADITIONAL SPEED-BASED STAGING



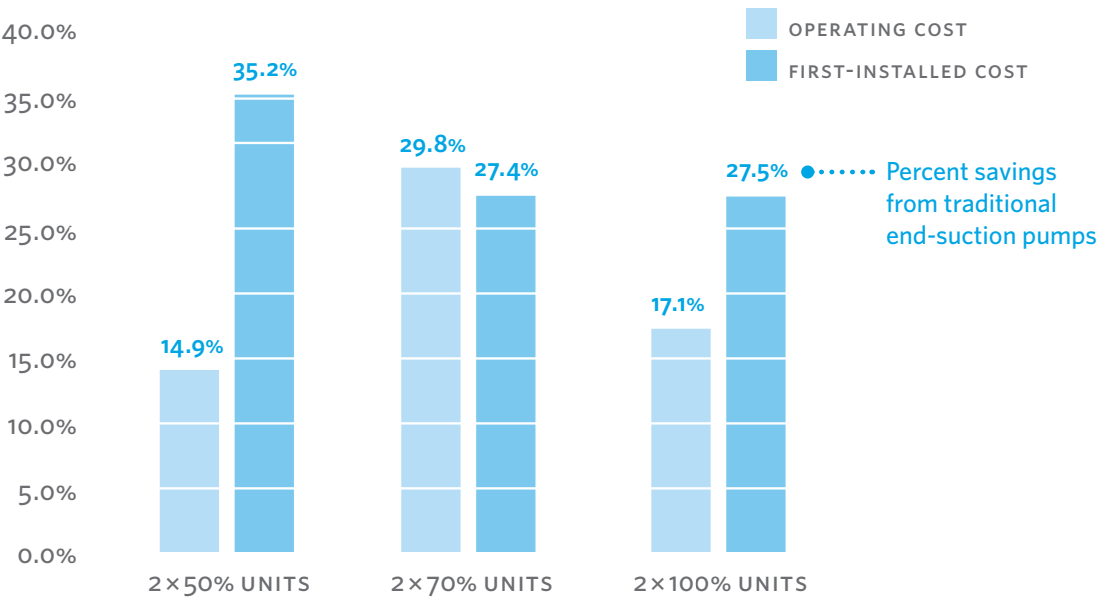
PARALLEL SENSORLESS PUMP CONTROL BEST-EFFICIENCY STAGING



Because HVAC pumping systems mostly operate at part-load, a design using two or more smaller pumps is more efficient than one larger pump. In a two-pump system, if one pump fails, the remaining pump can serve the system

requirements with up to 70% flow redundancy. The capacity split can be adjusted based on the building type and duty requirement.

REDUNDANCY AND SAVINGS WITH PARALLEL PUMPING



CAPACITY SPLIT	FLOW REDUNDANCY	DUTY REQUIREMENT	TYPICAL BUILDING EXAMPLES
Two pumps running at 50%	If one pump fails, the other will operate at 70%	Generic duty	Schools Apartments
Two pumps running at 70%	If one pump fails, the other will operate at 85%	High comfort sensitivity	Hotels Offices Outpatient clinics
Two pumps running at 100%	If one pump fails, the other will operate at 100%	Mission critical	Blood banks Hospitals Data centers

FLOW INFORMS

The rate of fluid flow in an HVAC system is crucial to understanding how the different components are operating. Without information on system flow, it's difficult to diagnose and optimise performance. With accurate flow information, the picture changes entirely. Armstrong can optimise each component and the overall system.

Design Envelope Pumps monitor flow so accurately they function as a flow meter. Industry standards recommend balancing system flows to $\pm 5\%$ accuracy. Design Envelope pumps deliver accuracy of $\pm 5\%$.

Highly accurate and reliable: no issues with fouling, so no need to service or re-calibrate.

Low installation cost: easy installation for retrofits.

Integral to pump: no additional space or wiring required.

Energy savings: accurate flow data informs optimisation of an entire HVAC system.

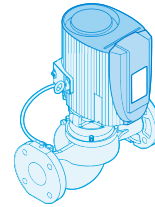
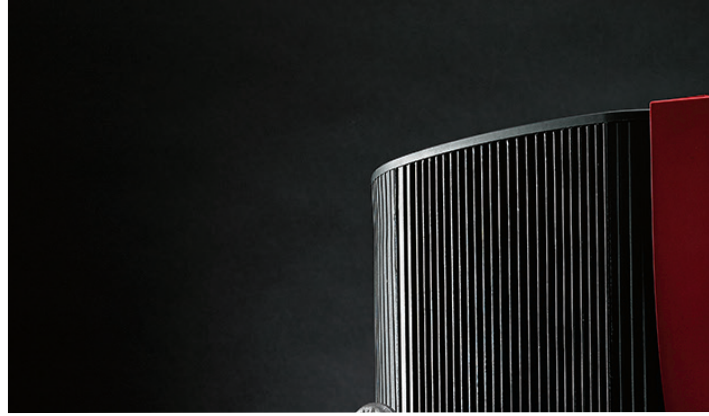
For evaluating an HVAC system, just two flow values and four temperature points provides all the data needed to understand flow rates, heat loads and operating efficiency.

$\pm 5\%$

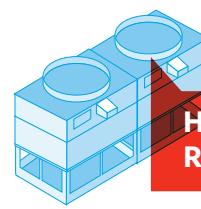
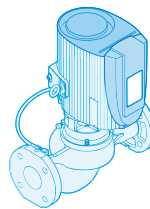
FLOW MEASUREMENT
ACCURACY

ARMSTRONG 

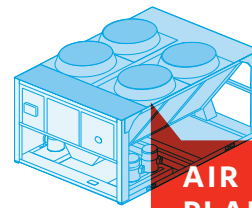
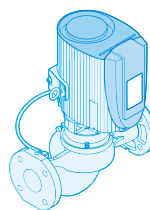
Flow 34.70 l/s



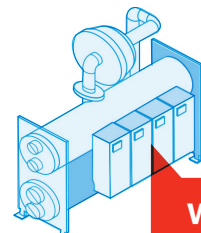
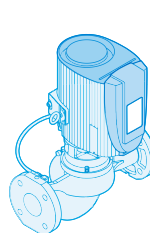
PUMPING
SYSTEMS



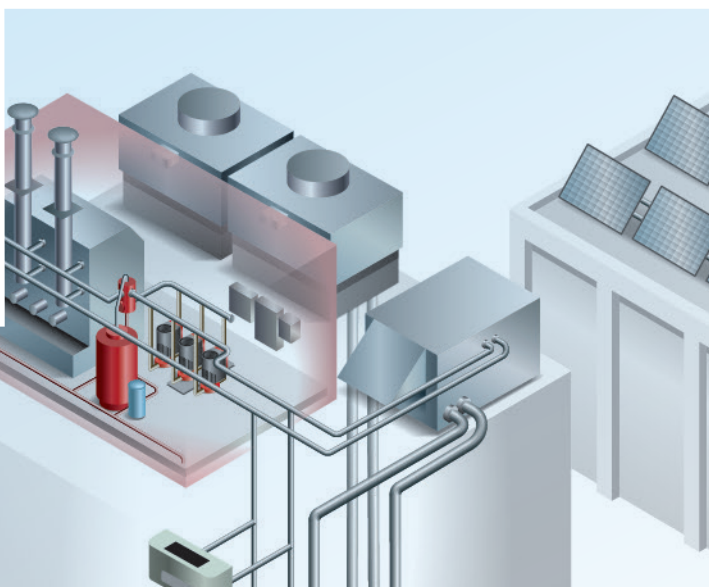
HEAT
REJECTION



AIR COOLED
PLANT



WATER
COOLED PLANT





ACTIVE PERFORMANCE MANAGEMENT™

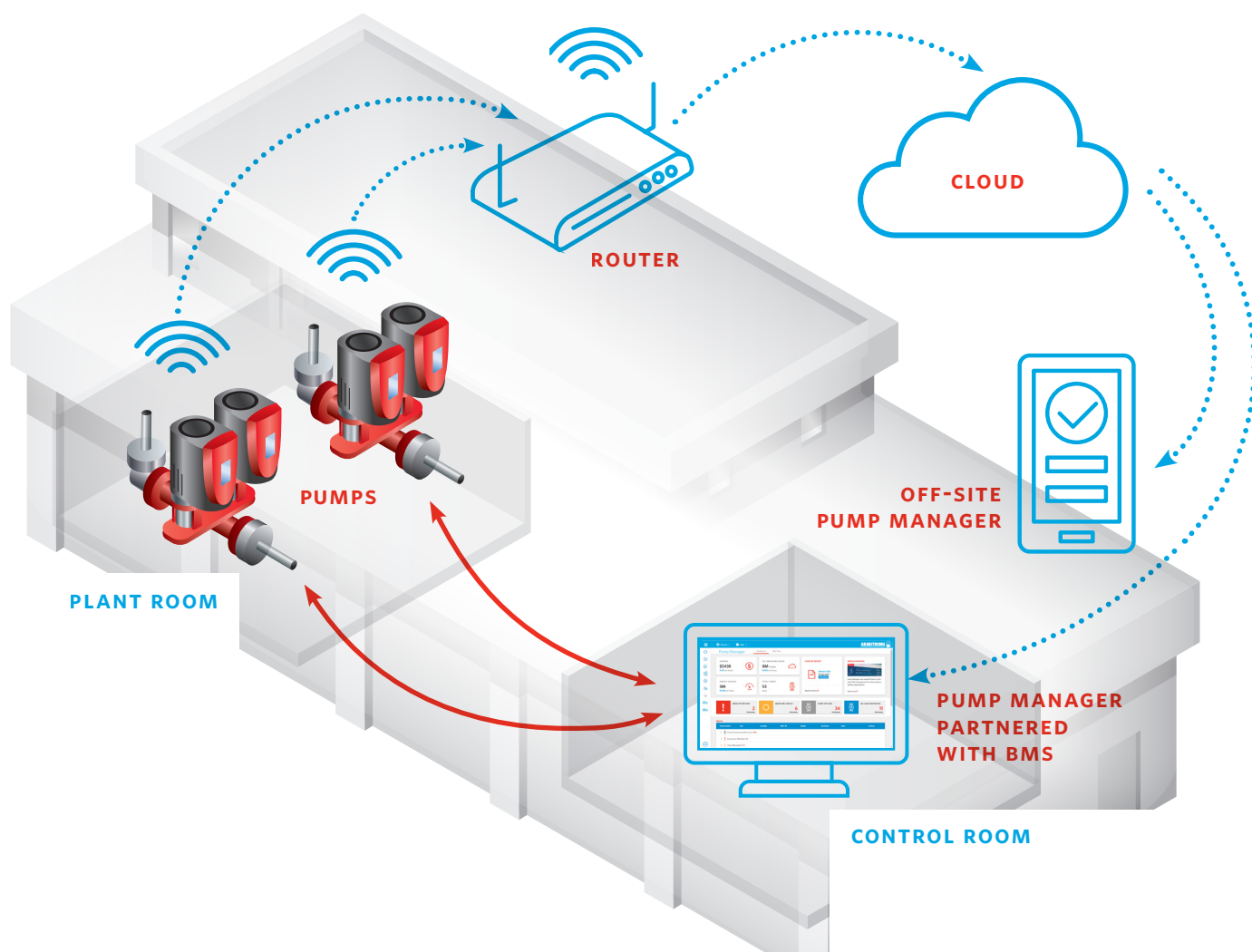
Active Performance Management is a systems management approach that optimises HVAC systems at any stage of a building's life-cycle by continually learning from a broad network of installations and responding to changing HVAC requirements.

The combination of smart commissioning with real-time alerts and system transparency addresses performance drift and maintains occupant comfort.

Bring performance drift under control

With Active Performance Management at the plant level, you can save up to

40% Annual cost savings



3

THE SOLUTIONS

TANGO

DESIGN
ENVELOPE

TECHNOLOGY

UNMATCHED ENERGY EFFICIENCY

Advanced hydraulic design supports industry-leading flow efficiency

Built-in Parallel Sensorless pump control saves up to 30% more energy

Armstrong DEPM motor technology delivers an additional 6-20% efficiency, meeting IE5 efficiency standards

Control algorithm constantly reviews operating conditions and adjusts output to meet immediate flow requirements at minimum energy consumption

ALWAYS AVAILABLE

Most building HVAC systems operate at the design point (100% load) less than 1% of the time. Traditional system design applies 100% redundancy and duplication of components to ensure that the design point can always be met.

This creates huge over capacity and higher costs.

15 minutes to replace the mechanical seal —
no need for realignment; **saves up to £500**

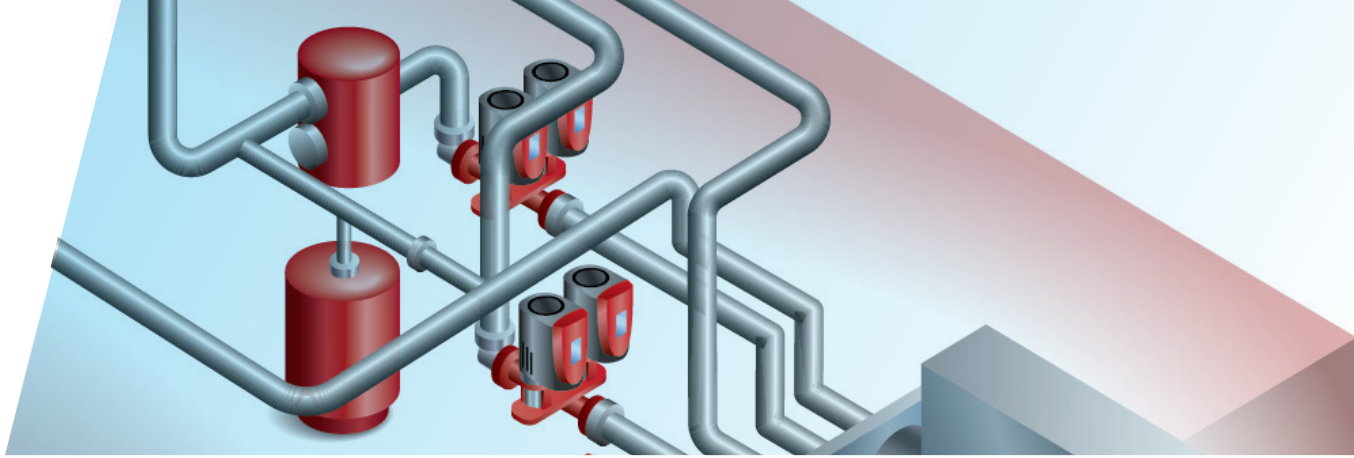
Available for
outdoor operation



The traditional duty/standby approach to redundancy in HVAC systems inflates the installed costs for equipment and labour, and adds to the carbon footprint of the building. Tango's dual-pumping configuration modernises the approach to redundancy. Pumps and motors are selected from a range of sizes to achieve a level of redundancy that matches the requirements of the application.

With the proper approach to redundancy, HVAC requirements can be met for all but the most extreme days of the year; and for those few days, variation in temperature will be minimal.

For pumps larger than 7.5kW use dualArm pumps for lowest installed cost, lowest life cycle operating cost achieved with Parallel Sensorless, and increased serviceability with built-in isolation valves.



ENERGY EFFICIENT PRODUCT OF THE YEAR

**CIBSE BUILDING
PERFORMANCE
AWARDS 2019**

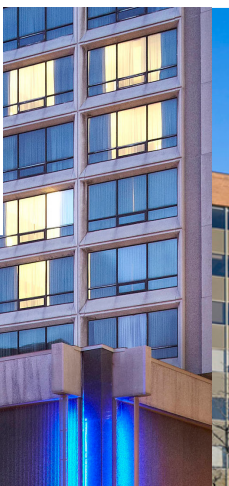
"Armstrong has made significant commitments to reduce its own carbon emissions in its manufacturing locations. Donating the proceeds from recycling aged pumps, via their sustainability initiative Planet Proposition, to charitable causes also impressed us greatly."

JUDGE'S COMMENTS

CASE STUDY | Delta Hotel

ANNUAL
ENERGY
SAVINGS

40%



The Delta Hotel commissioned an upgrade of one of their existing pumps to a new Tango. New control algorithms and performance management of the Tango pump proved that the upgrade was the right choice.

The total annual energy cost savings amounted to over \$2,295 with a total kWh savings of 22,957 kWh: a 40% savings overall.



FACILITY TYPE
Hotel



LOCATION
Toronto,
Canada



SIZE
300,000 ft²

ANNUAL ENERGY COST

BEFORE	AFTER
5,659	3,364
\$ CAD	\$ CAD
AVERAGE	AVERAGE

ANNUAL
COST
SAVINGS **\$2,295^{CAD}**

CO₂ EMISSIONS

BEFORE	AFTER
7,923	4,709
kg CO ₂	kg CO ₂
AVERAGE	AVERAGE

ANNUAL CO₂
EMISSION
REDUCTION **3,214 kg CO₂**

VERTICAL IN-LINE PUMPS (VIL)

DESIGN
ENVELOPE

TECHNOLOGY



Available for outdoor
operation

For a 7.5 kW pump, save £1,500
with pipe mounting and no
inertia base

THE HEART OF YOUR BUILDING

Mechanical room space savings

Pumps require minimal floor space or can be installed overhead

Reduced vibration

Dynamically balanced impeller and shaft assembly operates with minimum vibration

Lowest installed cost

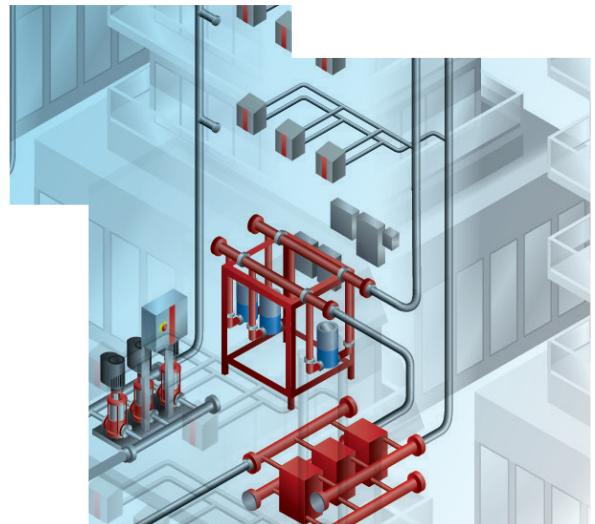
Component, Material and Labour savings — fewer fittings and no inertia base required

Reliability

Vertical In-Line design requires less maintenance, at a lower cost, than any other pump configuration

Easy maintenance

15 minutes to replace the mechanical seal — no need for realignment; saves up to £500



FOR ALL DESIGN ENVELOPE SOLUTIONS

Advanced performance control

Armstrong has reinvented and redesigned pumping solutions to include connectivity and performance management services. Design Envelope Pumps provide optimal lifetime efficiency through:

Expanded performance range (and options)

One-touch auto-flow balancing

Pump speed modulation based on an adjustable quadratic control curve for better part-load efficiency

Flow monitoring accuracy (+/- 5%)

Operating data and notifications to support diagnostics and service

Advanced onboard control functions

PERFORMANCE PACKAGES

FUNCTIONS INCLUDED



Sensorless Bundle
(standard)

- Sensorless control
- Flow meter
- Constant flow
- Constant pressure



Parallel Sensorless
(standard on Tango and dualArm)

- Parallel Sensorless control



Energy Performance Bundle

- Auto-flow balancing
- Maximum flow control



Protection Bundle

- Minimum flow control
- Bypass valve control



Zone optimisation

- Accept up to two dP sensor control signals



Dual-season setup

- Pre-set heating and cooling parameters for two-pipe systems

CASE STUDY | Carlson Court

ANNUAL ENERGY SAVINGS

87%



Armstrong replaced six constant speed pumps with new Vertical In-Line pumps. Combining Design Envelope technology and Pump Manager, Armstrong optimised pump operations for annual energy savings of 87%.



FACILITY TYPE
Large Office Complex



LOCATION
Toronto, Canada



SIZE
300,000 ft²

ANNUAL ENERGY COST

BEFORE

AFTER

\$140,072

CAD

\$18,380

CAD

AVERAGE

AVERAGE

ANNUAL COST SAVINGS

\$121,692 CAD

CO₂ EMISSIONS

BEFORE

AFTER

150,847

kg CO₂

19,794

kg CO₂

AVERAGE

AVERAGE

ANNUAL CO₂ EMISSION REDUCTION

131,053 kg CO₂

END SUCTION

DESIGN
ENVELOPE | TECHNOLOGY

NO INERTIA BASE NEEDED*
= SAVINGS OF

£ 1,500 *7.5kW or smaller



HVAC pumping systems are expected to operate smoothly and quietly.

Although it's practical to mount pumps on the floor, this practice can also transmit noise or vibration to the rest of the building. Concrete and inertia bases have traditionally been used to mitigate vibration, but this adds excess weight and cost to the installation.

The new Design Envelope End Suction pump with integrated vibration isolation:

Eliminates the need for inertia bases

Reduces installed costs and operating cost

Adds more value than any other horizontal pump

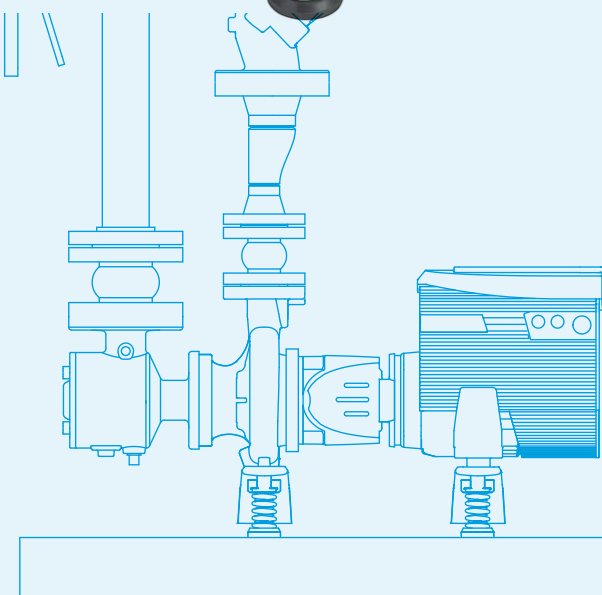
EQUIPMENT AND MATERIAL SAVINGS

No inertia base, concrete and curing time required

Rigid pump design needs no steel baseplate

No differential pressure sensors required

Less concrete means a lower carbon footprint



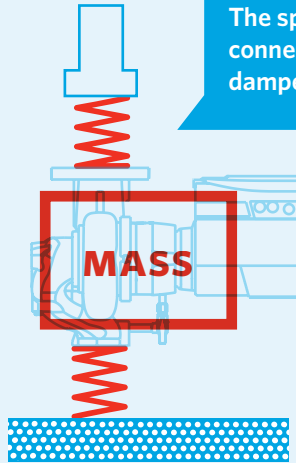
Integral vibration isolation eliminates the need for inertia bases or baseplates. The following features minimise the transmission of vibration:

Balanced rotor design

Soft start controls

Direct coupling to motor

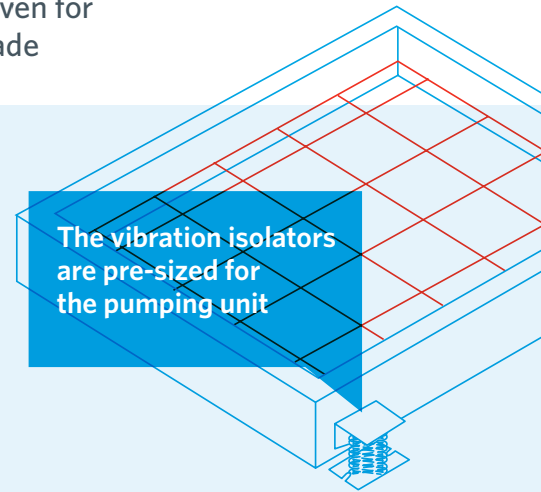
Reduced overall weight



With flex connectors separating the pump from the piping, and vibration isolators between the pump and the ground, the pump floats in an isolated spring system.

The ASHRAE handbook recommends the use of inertia bases even for pump installations on grade

In pumps over 7.5 kW the integrated design with baseplate has a lower installed cost than a traditional pump with a wall-mounted drive



CASE STUDY | Texas Christian University

ANNUAL
ENERGY
SAVINGS



63%



In 2018 Armstrong upgraded three constant-speed pumps in the Recreation Center. As a result of the retrofit project, TCU is saving over \$7,500 per year.



FACILITY TYPE
Recreation
Centre



LOCATION
Fort Worth,
Texas



SIZE
179,831 ft²

ANNUAL ENERGY COST



BEFORE

\$12,106
USD

AVERAGE

AFTER

\$4,525
USD

AVERAGE

ANNUAL
COST
SAVINGS **\$7,581** USD

CO₂ EMISSIONS



BEFORE

80,792
kg CO₂

AVERAGE

AFTER

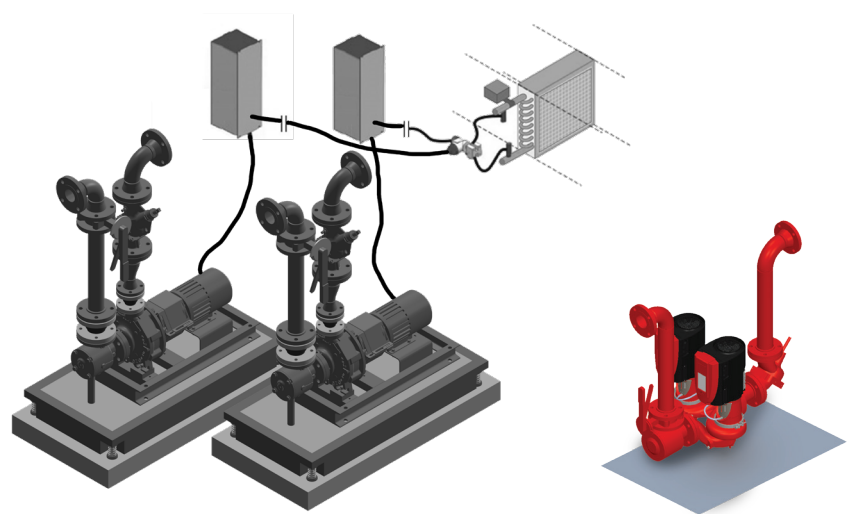
30,193
kg CO₂

AVERAGE

ANNUAL CO₂
EMISSION
REDUCTION **30,193** kg CO₂

CHOOSE YOUR CONFIGURATION

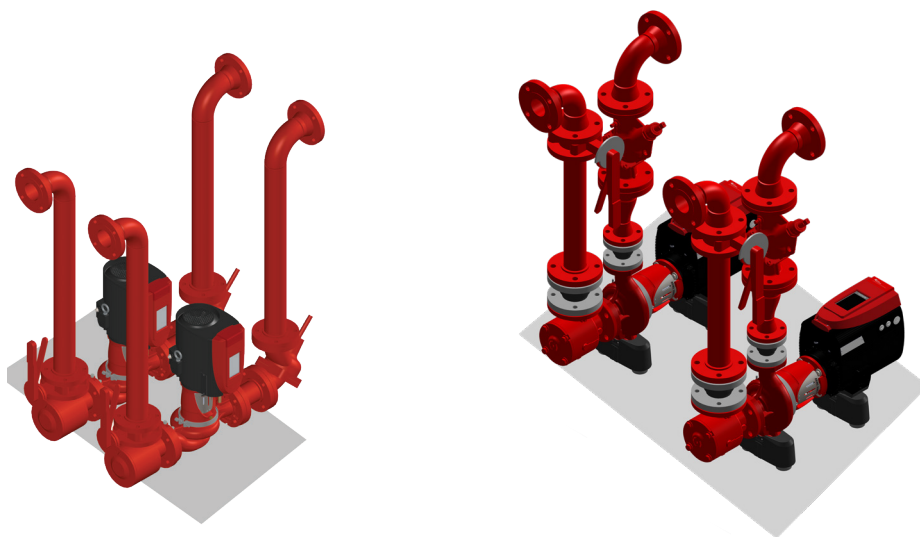
INSTALLATION COST COMPARISON



	2 × End Suction with drive on wall and remote pressure sensor 100% duty/standby	1 Tango pump with sensorless and parallel sensorless control 2 × 50% capacity split, parallel operation
 Total pump weight	309.3 kg	41.3 kg 87% savings
 Installation weight	1007.4 kg	236.3 kg 76% savings
 Installation footprint	2.47 m ²	0.54 m ² 78% savings
 Installation cost	£ 7,163	£ 1,455 80% savings
	▪ Legacy design ▪ Base case for comparison ▪ Time-intensive seal change	▪ Managed redundancy and parallel operation replaces duty/standby ▪ Smaller units are easier to handle ▪ Two rotating devices sharing one casing ▪ Reporting and proactive management ▪ Optimised lifetime performance

Complete integrated solutions offer the lowest installed cost and add value in lifetime energy and maintenance savings

DESIGN ENVELOPE CONFIGURATION OPTIONS

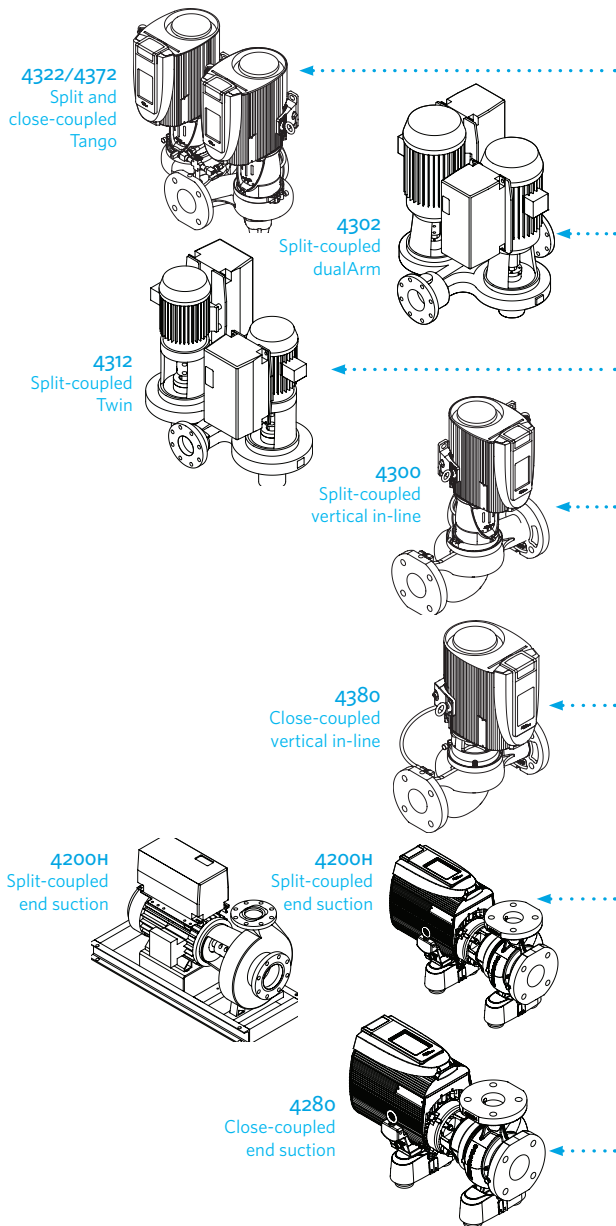


2 × Design Envelope Vertical Inline with sensorless control 100% duty/standby*	2 × Design Envelope End Suction with sensorless control 100% duty/standby*
98.0 kg 68% savings	89.8 kg 71% savings
339.3 kg 66% savings	435.9 kg 57% savings
1.14 m ² 54% savings	1.68 m ² 32% savings
£ 3,312 54% savings	£ 3,903 46% savings
Eliminates the need for: housekeeping pads, inertia base, flex connections, grouting and alignment • Reduced installation labour costs • Smaller mechanical room footprint (50-75%)	Eliminates the need for: housekeeping pads, inertia base, flex connections, grouting and alignment • Reduced installation labour costs • Smaller mechanical room footprint (50-75%)

*May also be sized
2 × 50% parallel

4

DESIGN ENVELOPE PUMP RANGE



INDOOR	OUTDOOR
0.25-7.5 kW	0.25-7.5 kW
11-75 kW	11-75 kW
11-30 kW	0.75-30 kW
0.25-335 kW 355 kW - 932 kW with Standalone control	0.25-90 kW
0.25-7.5 kW 0.75-1.5 kW in Stainless Steel	0.25-7.5 kW N/A
0.75-7.5 kW with integrated vibration isolators 11-90 kW	N/A
0.75-7.5 kW with integrated vibration isolators	N/A



DEPM SINGLE PHASE PUMPS

ALL RANGES AVAILABLE IN 3 PHASE 380-480V
SINGLE PHASE 200-230V UP TO 1.5kW

**PUMP MODELS
DESIGNED AND
ENGINEERED
FOR OUTDOOR
OPERATION**

IP66 rated controls enclosure

Equipped with overhead weather shield to prevent pump from icing in cold weather conditions and overheating when exposed to direct sunlight



OUR SERVICE TO THE PLANET



PLANET PROPOSITION

Through our Planet Proposition charter, Armstrong has committed to minimising our impact on the environment. Around the world, Armstrong's Planet Proposition teams have taken on projects that are helping us meet our targets. Two examples of ongoing projects are:

2 BY 22

Armstrong is committed to helping existing customers reduce green house gas emissions of installed equipment by 2 million tons by the year 2022. Under this initiative, Armstrong works with customers to upgrade existing installations and continues to develop new energy-savings solutions.

NET ZERO CARBON BUILDINGS COMMITMENT

The Net Zero Commitment positions energy efficiency as a central component to achieving decarbonisation globally. In signing the Net Zero Carbon Buildings Commitment, Armstrong has pledged to ensure our entire portfolio of buildings operates at net zero carbon by the year 2030.



TORONTO

23 BERTRAND AVENUE
TORONTO, ONTARIO
CANADA, M1L 2P3
+1 416 755 2291

BUFFALO

93 EAST AVENUE
NORTH TONAWANDA, NEW YORK
U.S.A., 14120-6594
+1 716 693 8813

DROITWICH SPA

POINTON WAY,
STONEBRIDGE CROSS BUSINESS PARK
DROITWICH SPA, WORCESTERSHIRE
UNITED KINGDOM, WR9 0LW
+44 8444 145 145

MANCHESTER

WOLVERTON STREET
MANCHESTER
UNITED KINGDOM, M11 2ET
+44 8444 145 145

BANGALORE

#59, FIRST FLOOR, 3RD MAIN
MARGOSA ROAD, MALLESWARAM
BANGALORE, INDIA, 560 003
+91 80 4906 3555

SHANGHAI

UNIT 903, 888 NORTH SICHUAN RD.
HONGKOU DISTRICT, SHANGHAI
CHINA, 200085
+86 21 5237 0909

SÃO PAULO

RUA JOSÉ SEMIÃO RODRIGUES AGOSTINHO,
1370 GALPÃO 6 EMBU DAS ARTES
SAO PAULO, BRAZIL
+55 11 4785 1330

LYON

93 RUE DE LA VILLETTE
LYON, 69003 FRANCE
+33 4 26 83 78 74

DUBAI

JAFZA VIEW 19, OFFICE 402
P.O.BOX 18226 JAFZA,
DUBAI - UNITED ARAB EMIRATES
+971 4 887 6775

MANNHEIM

DYNAMOSTRASSE 13
68165 MANNHEIM
GERMANY
+49 621 3999 9858

JIMBOLIA

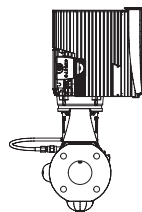
STR CALEA MOTILOR NR. 2C
JIMBOLIA 305400, JUD.TIMIS
ROMANIA
+40 256 360 030

ARMSTRONG FLUID TECHNOLOGY
ESTABLISHED 1934

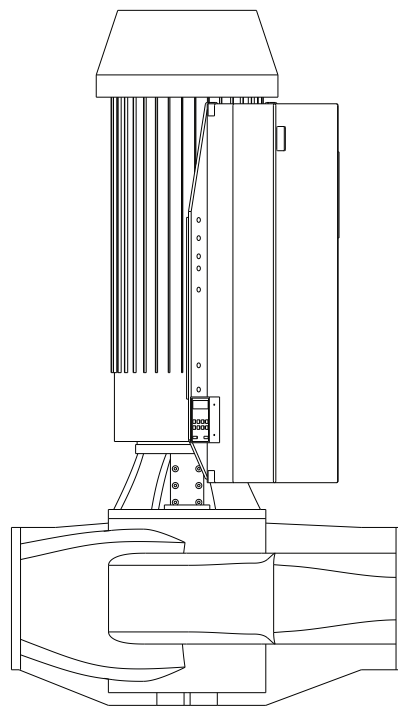


THE QUEEN'S AWARDS
FOR ENTERPRISE:
SUSTAINABLE
DEVELOPMENT
2021

ARMSTRONGFLUIDTECHNOLOGY.COM



0.25 kW



Up to 932 kW available

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