ARMSTRONG

Industrial
Heating Systems

Armstrong **Industrial**

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Armstrong **Industrial** is a division of Armstrong Fluid Technology.

Our solutions embody demand-based control and digitalised optimisation to deliver superior performance and create the greatest value for customers.

We see the whole system through a distinctive lens, continually optimising performance through our Armstrong Envelope platform, creating extensive datasets of component operations for performance mapping.

ENVELOPE™
By Armstrong Fluid Technology

Driving sustainability

Armstrong **Industrial** combines core capabilities expertise to deliver leading fluid flow and gas solutions that drive sustainability by improving energy efficiency and reducing both carbon emissions and embodied carbon.

Armstrong **Industrial**: Gas focuses on gas production, gas distribution, and hot water process circuits such as communal/district heating and process heat applications, thermal power generation, industrial plant gas feeds, Industrial hot water process management and Green H2 production.

Scan the QR code to learn more about Armstrong Envelope.

Fluid Flow

Energy Transfer

Demand-based Control

Digitalisation
Optimisation and automation

Armstrong is a market leader in the design and construction of heating systems for commercial and industrial applications.

Our gas application range of solutions include high-efficiency:

- Gas fired wall and floor standing boilers
- Advanced controls
- Pumping solutions
- Pressurisation units
- Plate heat exchangers

We also build pre-packaged solutions including modular boiler systems up to 20MW for installation in existing enclosures and fully engineered to order boiler houses which can simply be delivered to site and connected up to the network.

- Pre-packaged solutions
- Energy transfer stations
- Modular boiler systems

Our proven product designs are backed by the extensive experience and expertise of our mechanical and electrical design engineers who work to the highest standards and ensure our solutions are fully factory tested and inspected prior to shipment.

Quick links...

New Armstrong High Efficiency Commercial Gas Boilers

Our new range of high efficiency boilers have been specially crafted for commercial gas applications.

Designed with efficiency and sustainability in mind:

High operating efficiency (98.2% gross when condensing) for lowest carbon emissions.

Fully modulating 6:1 turndown for optimised energy efficiency.

Highest emission classification rating - 6.

Supplied in fully reusable packaging.

Designed for durability and longevity:

Stainless steel heat exchangers for long life and durability.

Optimised heating system controls.

Wall mounted models include stainless steel gas and water pipes.

The floor standing model has an optional integral condensate neutralising tank.

Ducted air intake to minimise required ventilation suitable for C53 flue systems (reducing cold air into plant room).

Optional remote active performance management capability enables real-time performance monitoring and proactive maintenance.

Speak to our team today to see how Armstrong can help decarbonise your industrial applications.

High Efficiency Permanent Magnet Motor Pump

Mechanical room space savings

Pumps require minimal floor space or can be installed inline

Reduced vibration

Optimally-designed, dynamically-balanced impeller and shaft assembly operates with minimum vibration

Lowest installed cost and embodied carbon

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, without the need to remove the motor due to mechanical coupling

Controls

Fully automatic operation - automatic rotation of boilers and pumps with built-in redundancy.

Minimal maintenance and supervision required with auto inhibit when no heating demand to maximise operating efficiency.

P.I.D control system - efficient, accurate gas temperature control throughout the load range within ± 1°C minimising operational costs and emissions.

Extra low voltage 24vdc control system - allows online maintenance and fault finding.

Alarm system - integral monitoring of system with alarm annunciation giving local and remote alarms with remote system status available by Modbus communication.

Pressurisation Units

The Armstrong 3760 Pressurisation Unit Range offers a complete suite of products and combination of features to ensure the effective operation and efficiency of any large domestic, commercial or industrial sealed hvac system.

Pressurisation only units maintain minimum system pressure requirements whilst monitoring conditions and logging top up demand.

Pressurisation units with built-in vacuum degassing to maintain minimum pressure whilst ensuring optimum efficiency by removing unwanted air and gases from the system.

Pressurisation units with built-in automatic dosing to maintain minimum pressure whilst ensure water treatment is accurately maintains the balance of chemical additives to the correct levels at all times.

3 in 1 pressurisation units with vacuum degassing and automatic dosing for the ultimate, all in one, maintenance-free solution for HVAC system efficiency.

Speak to our team today to see how Armstrong can help decarbonise your industrial applications.

Increase project efficiency and reduce risk with pre-packaged, off-site built solutions

Modular/scalable solutions that can grow as your network (load) grows.

'Off-site' build and test to the highest quality standards.

Reduced project risk.

Minimal disruption on site.

Reduced site errors, and local interpretation errors.

Factory tested performance.

Reduced commissioning time.

Reduced installed cost.

Single source supply.

Systems Envelope: Energy Transfer Station

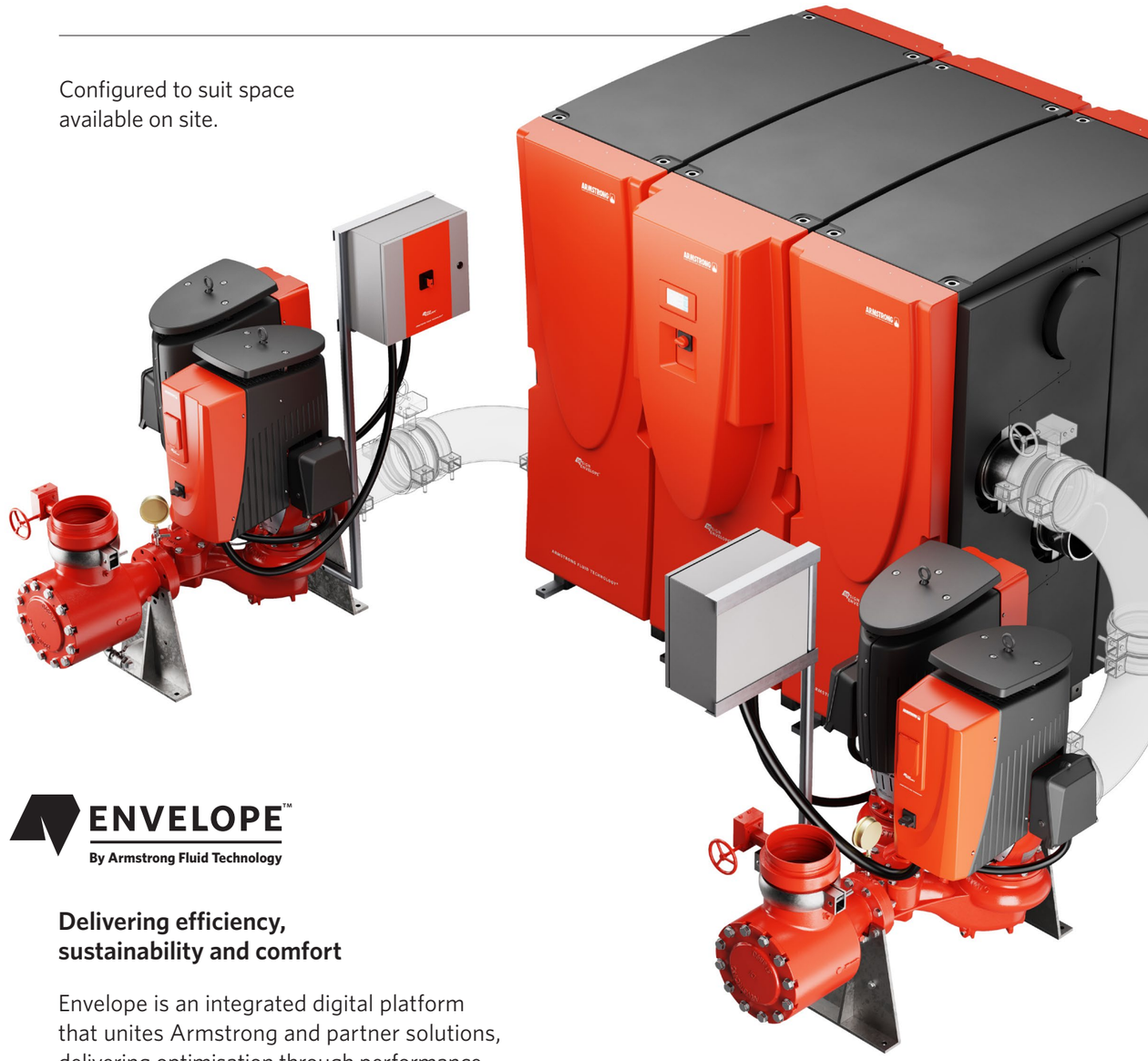
Armstrong's **System Energy Transfer Station** is a factory-assembled and fully tested packaged system, complete with integrated system controls for seamless operation It consists of a single, twin or triple heat transfer module that incorporates up to three brazed plate heat exchangers and pumping modules (with pumps or pump-and-pressure independent control valve options) which can be configured to suit space available on site.

It has exact heat transfer mapped curves embedded in its control software to enable the system to proactively optimise flow, and reduce energy consumption by more than 30%.

Reduce energy consumption by more than 30%.

Integrated system controls for seamless operation.

Configured to suit space available on site.



ENVELOPE™
By Armstrong Fluid Technology

Delivering efficiency, sustainability and comfort

Envelope is an integrated digital platform that unites Armstrong and partner solutions, delivering optimisation through performance mapping, cutting-edge analytics and lifecycle services.

Nobody sees the whole system the way Armstrong does

Performance mapping is a core element of Envelope. We create extensive datasets of component operations to continually optimise performance.

Speak to our team today to see how Armstrong can help decarbonise your industrial applications.

Modular Heating System

The Armstrong Modular Heating System is designed for new and replacement boiler applications. It is a complete heating system including boilers, pumps, valves, pressurisation system, controls, electrical isolators and electrical containment.

Key features of the Modular Heating System

Modular format - the system is supplied as individual modules to allow easy installation on site into existing enclosures.

The compact and flexible design - minimises space required and flexible configuration to suit site requirements.

Available for use with open and room sealed flue systems with horizontal and vertical terminations available.

Manufactured from corrosion resistant materials including galvanised mounting frames and zinc plated pipe work to ensure whole life benefits.

Intelligent pumping - electronic pumps provide soft start and allows flow rate to be adjusted to match system requirements.

Optional intermediate water to water heat exchanger module where the boiler system is to be connected to an existing heat exchanger to hydraulically separate the new boilers from the old system.

The heating systems can be supplied with the following standard options:

Gas fired generator for provision of standby power for the site.

Combined heat and power systems for emission reduction.

Gas fired heat pump technology for low carbon solutions.

Compartmental battery room for ups applications.

Wind turbine and solar panels for eco-friendly power systems.

Security systems gas and fire detection systems, integral instrument compartment with the option of welfare facilities (wc and basin).

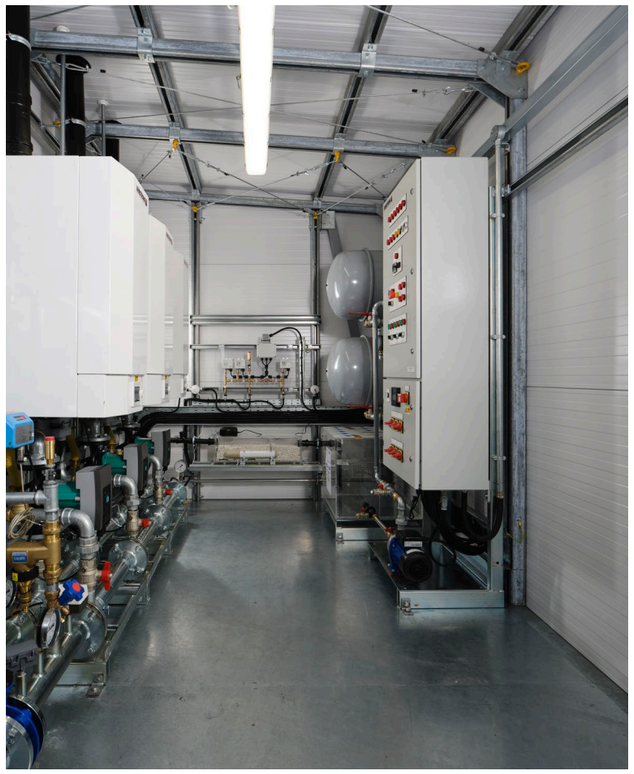
Fully Packaged Heating Systems

Our modular heating systems can also be delivered to site in a factory fitted enclosure.

Architectural steel building panels or grp building options.

Integral or standalone instrument room.

Integral generator.



Structure

Structural mild steel base frame.

Hot hip galvanised base to BS EN 1461.

Mild steel galvanised superstructure.

Unique slotted super structure system for rapid assembly and providing integral fixture system for installed equipment.

Cladding system

Architectural composite insulated cladding panels.

Warranted for up to 30 years.

Thermal transmittance value of 0.43 W/m2K hcfc free urethane foam core. Ozone Depletion Potential (odp) of zero.

External pre-coated steel sheet 0.6mm thick finished with a plasticol coating. Internal liner pre-coated steel 0.35mm thick.

Inner and outer facings, Class 1 surface spread of flame to BS476: Part 7: 1987, and are Class O, as defined by Building Regulations.

360

Service and Technical Support

Armstrong can provide a full installation service for the heating system including supply of the water to gas heat exchanger, interconnecting pipe work, flue system and commissioning.

Our dedicated mechanical and electrical field support engineers can also provide commissioning, service and maintenance on the complete pre heating system to maintain maximum system efficiency and reliability throughout the life of the installation.

Commissioning

Genuine spare parts

Servicing and overhauls

Full technical support packages including a comprehensive operating manual, operator training and out of hours telephone technical support are available and can be tailored to suit your sites exact needs.

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