ARMSTRONG

DESIGN ENVELOPE

6800G boosters

WRAS APPROVED

SOLUTION OUTLINE

FILE NO: 100.14UK
DATE: FEBRUARY 2018

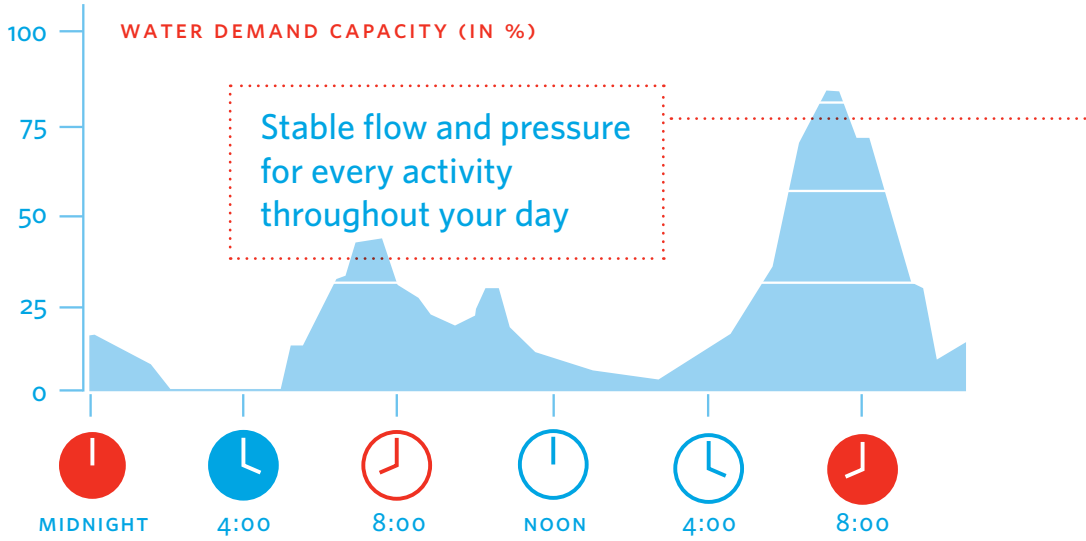
SUPERSEDES: 100.14
DATE: FEBRUARY 2015

THE CHALLENGE

The need for energy savings has led to broad acceptance of variable speed technology for use with booster systems. However, the simple inclusion of digital controllers adds complexity to commissioning and operation of boosters. Lacking an integrated and ready for operation approach to solution design and selection, booster solutions that are contractor-friendly and owner-friendly are hard to find. Lacking an integrated approach to solution design and selection, booster solutions that combine correct capacity specification, are easy to install and deliver on performance have been hard to find. Until now...

DESIGN ENVELOPE VALUE

Armstrong Design Envelope boosters address the water delivery challenges presented by high-rise buildings by combining high-efficiency vertical multistage pumps with modern variable speed controls and optimised solutions.

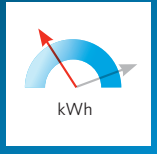


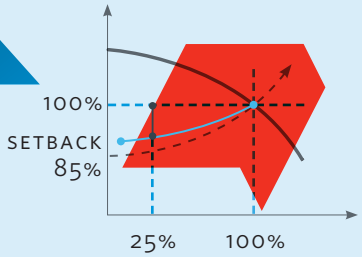
DESIGN ENVELOPE

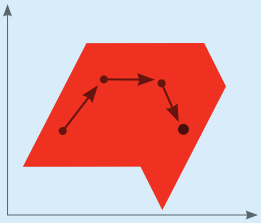
Armstrong Design Envelope solutions use variable-speed, demand-based control to minimise energy consumption in a pumping system. Design Envelope solutions are sized on the basis of efficiency across wide range of duty points. This approach to sizing protects against system rework due to:

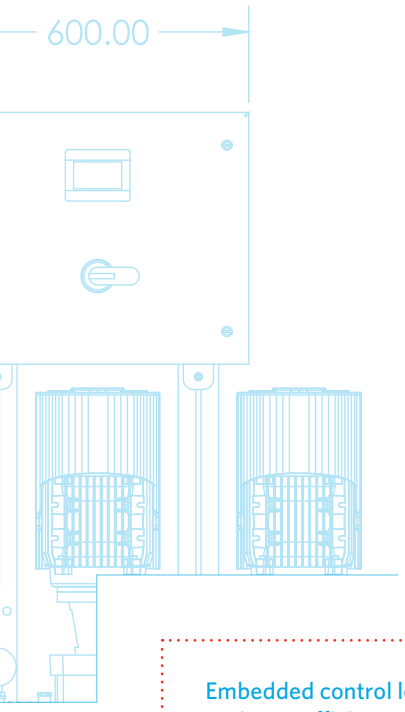
- Changes to fixtures
- Changes to building design
- Installation of backflow preventers
- Pipe corrosion and scaling

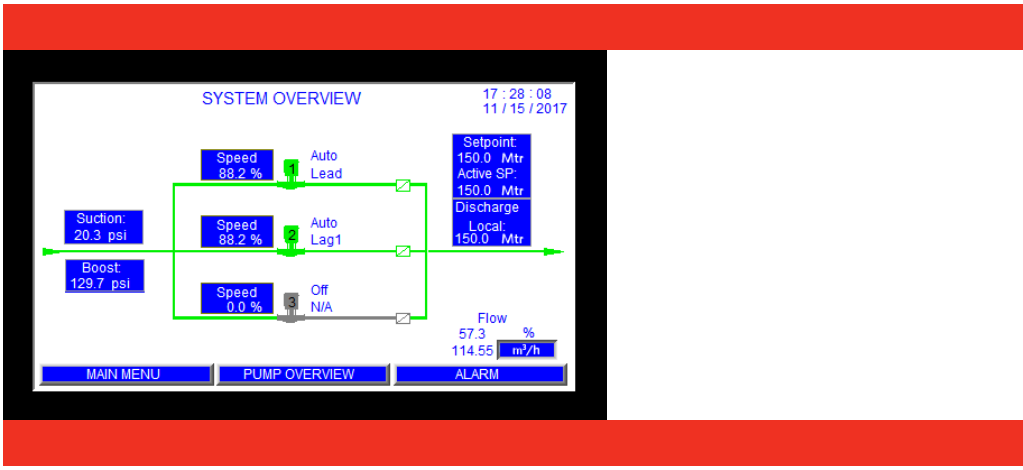
15% MORE ENERGY SAVINGS











Embedded control logic ensures optimum efficiency at all times, adjusting pump speed and staging pumps on and off as needed during periods of high and low demand.

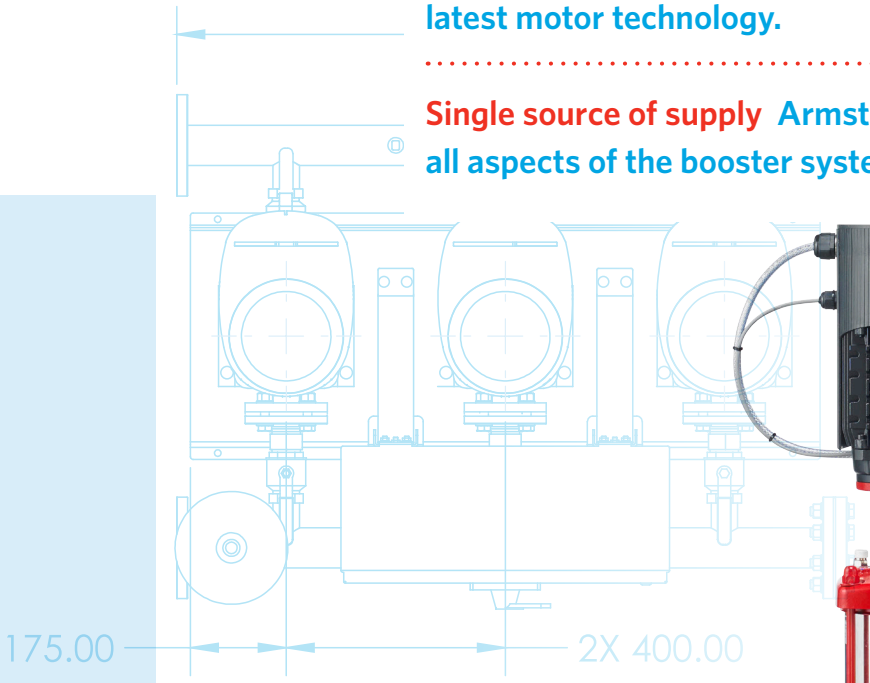
Integrated controls and advanced mechanical and digital capabilities

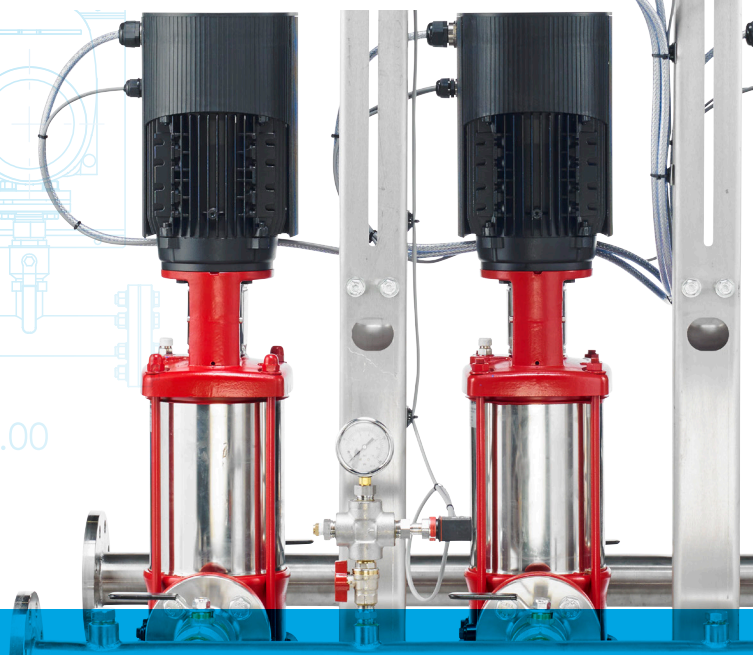
Armstrong Design Envelope boosters integrate pumping components and advanced digital controllers for:

Optimal energy savings Design Envelope control curves are pre-programmed into the controller.

Easy installation and replacement Minimal wiring and mounting is required on-site. Individual pumps can be removed and replaced as a complete unit. Lower overall weight due to latest motor technology.

Single source of supply Armstrong supports all aspects of the booster system package.





KEY BENEFITS

EASY BMS CONNECTIVITY

Supports leading communications protocols, including Modbus/BACnet MSTP/BACnet IP.

LOWER ENERGY COSTS

Design Envelope technology stages individual pumps and adjusts pump speed for optimum efficiency. Design Envelope 6800G boosters, using high-efficiency motors with IE5 ratings, save energy and minimise operating costs.

MINIMAL FOOTPRINT

Typical example
Design Envelope 6800G
1.720M × 1.016M

Competing models
1.956M × 1.219M

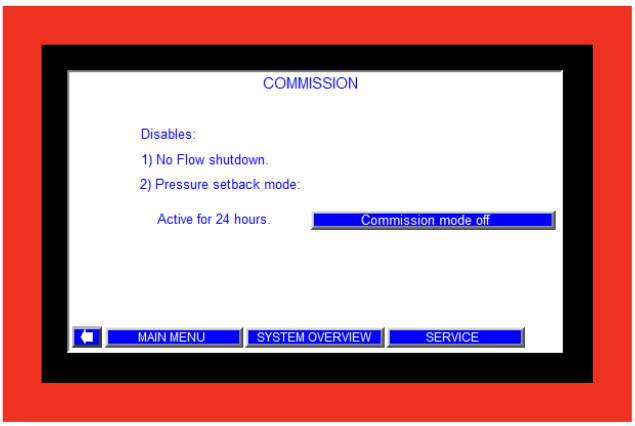
SPACE SAVINGS OF 25%

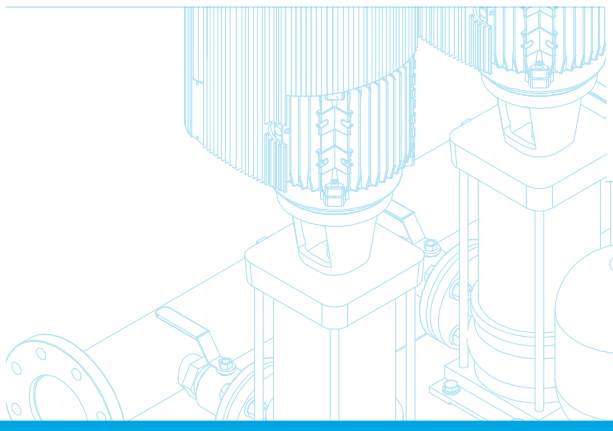
Armstrong Design Envelope boosters lead the industry with a compact package design that minimises floor space requirements and simplifies on-site delivery.

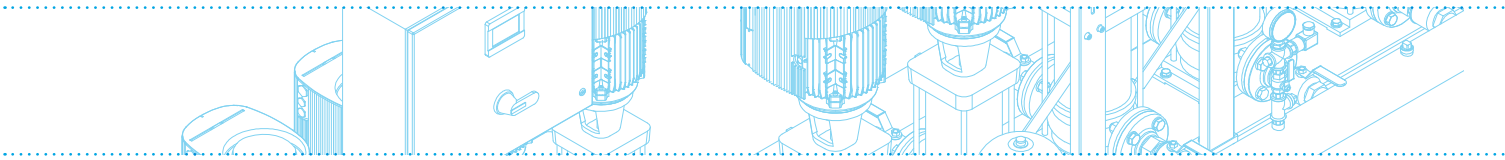
BASEFRAME ALLOWS EASY LIFTING AND INSTALLATION

EASY COMMISSIONING

Single step interface to enable/disable pressure setback and apply a 24-hour timer for an easy inspection process.

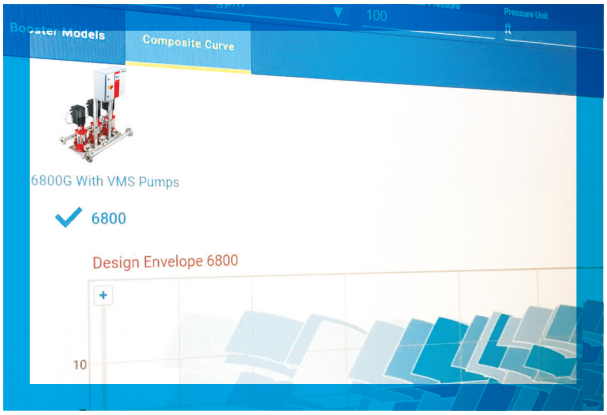


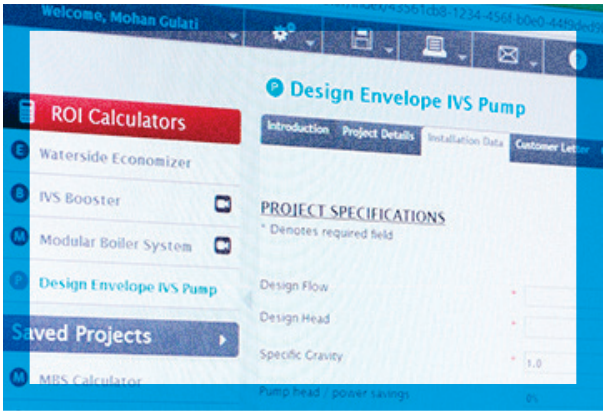




CONTRACTOR FRIENDLY

Armstrong offers easy-to-use selection tools for performance analysis and product selection.





Selection software: allows users to select products, and engage in collaborative system design over the internet.

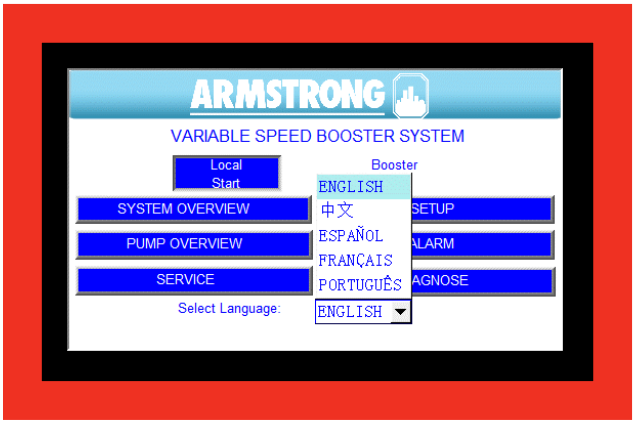
ROI calculator: displays your savings and ROI based on real data from your installation.

Interchangeable inlet sides: on models with flanged connections, installing contractors can adjust the suction and discharge inlet orientation by moving end caps to accommodate site conditions.

KEY FEATURES

INTUITIVE INTERFACE

4.3-inch colour touchscreen with 128MB flash memory supports multi-languages.

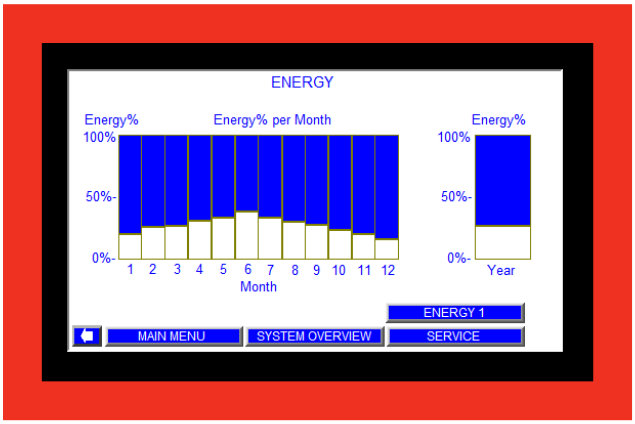


ENERGY & WATER CONSUMPTION DATA

Armstrong Design Envelope boosters provide data storage and detailed reports on operation.

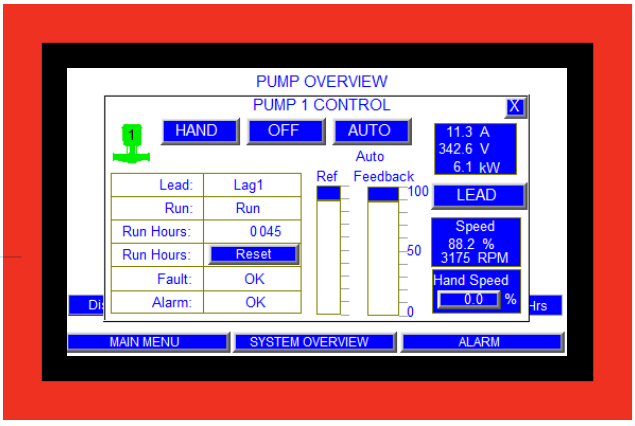
Energy profiling capabilities include:

- Monthly/yearly kWh consumption reporting
- Instantaneous kW readings
- Data storage reset
- Detailed data charts illustrating energy consumption patterns



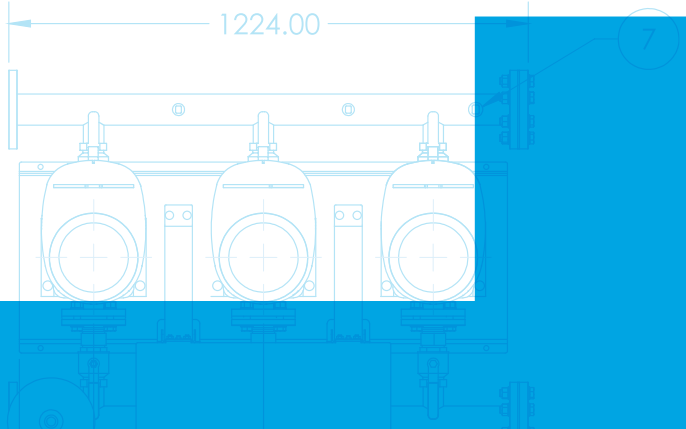
Flow estimation includes:

- Maximum flow
- Current flow
- Data charts



REAL-TIME PUMP DATA

Stores and present current performance data for individual pump. Allows user to manually control pump operations.



COMPLIANT WITH INDUSTRY ASSOCIATION CODES

WRAS
APPROVED PRODUCT

Up to 16 bar Armstrong Design Envelope Booster solutions are WRAS approved.

No-flow shutdown
Senses when there is no demand in the system and puts the booster into sleep mode.

Pressure setback
Built-in logic that adjusts pressure setpoint proportional to flow to account for lower friction losses lower flows. This is an alternative to installing a remote sensor.

No-flow pressure optimisation
The system generates an additional boost of pressure prior to shutdown, allowing the use of a smaller drawdown tank.

WRAS approval for high pressure boosters requires that a water fitting must not cause waste, misuse, undue consumption or contamination of the water supply and must be 'of an appropriate quality and standard'.

SOFTFILL

Allows building managers to recharge the system with water after maintenance with no risk of damage to system components.

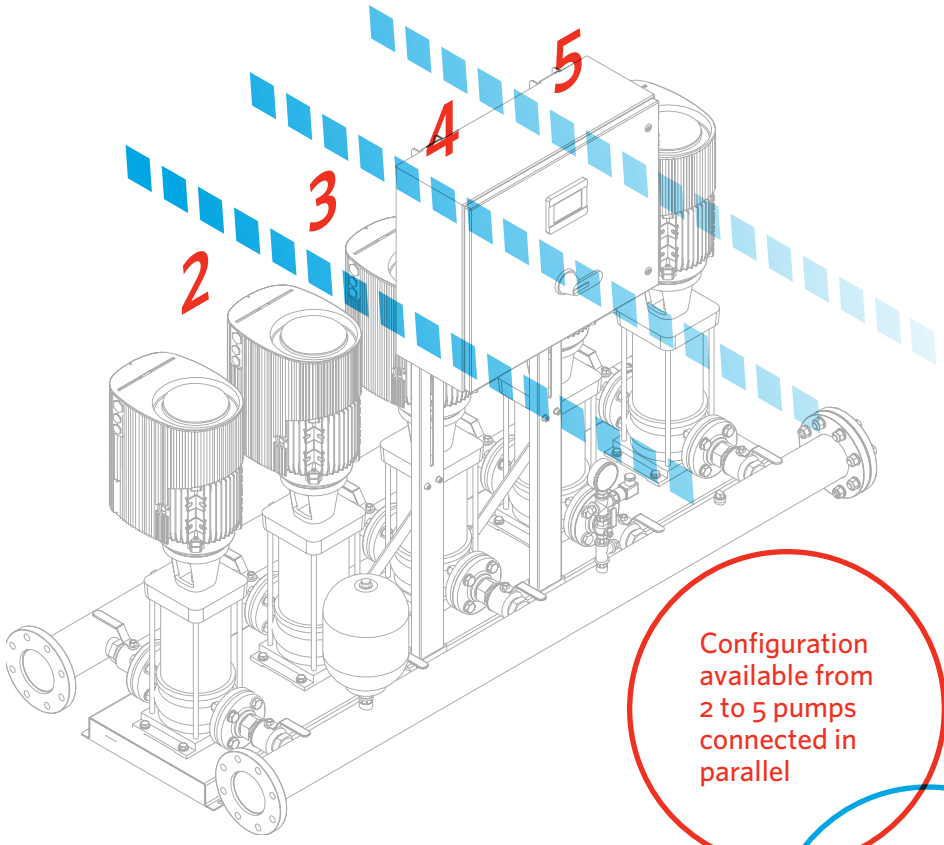
ALTERNATE SET POINTS

Allows users to select different operating setpoints for different seasons through the interface (HMI) screen.

EXTENDED WARRANTY

All Armstrong Design Envelope pumps and booster systems are supported by a 24-month warranty and an additional 6 months with registration

BOOSTER APPLICATION RANGE



Configuration available from 2 to 5 pumps connected in parallel

Options available:
- Overhead break tank
- Anti-vibration kit

PERFORMANCE 6800G

2 - 5 UNITS

FLOW RATE	320 MAX m^3/h
PRESSURE	25 MAX Bar
TOTAL	120 MAX kW

For more information, contact your Armstrong representative or visit us at:
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