

ARMSTRONG



DualPak 6900 Intelligent Variable Speed Booster Systems

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The DualPak 6900 Series Intelligent Variable Speed Booster System



Description

- Fully integrated Intelligent Variable Speed (IVS) booster system (controls, drives, pumps and motors)
- Close coupled and split couple Vertical In-Line pump configurations
- Completely assembled, programmed, integrated and factory-tested turn-key booster system
- Compact headerless design

Typical Applications

- Ideally suited for retrofit applications, new construction and mid-rise projects with minimal floor space
- Hotels, motels, resorts, condos, apartments, schools, office buildings, retirement homes and hospitals

System Features

- Fully integrated demand-based control system with motor integrated drives
- Unique headerless design reduces weight
- NEMA premium efficiency motors (12.12/12.11)
- Flexible PLC control platform with BAS communication in Modbus, Lonworks, BACnet (MS/TP) or BACnet (IP/NET) protocols
- Control features eliminate the need for system bypasses and pressure-reducing valves
- Drives include dual D-link reactors to reduce input harmonics, eliminating the need for AC line reactors
- USB connection on drive allows the system to be remotely commissioned and monitored
- 3" cast iron flanged suction connection

Available Options

- 7" (178 mm) HMI color touch screen controller
- 4-20 mA remote locate pressure transmitter

Certification and Approvals

- ISO 9001 certified facility
- Panels UL508 labeled, CSA approved
- Systems UL/ULC certified/labeled

- Smallest equipment footprint in the industry less than 50% the size of many conventional booster systems
- Features the Armstrong DualArm booster pump with two Vertical In-Line pumps in a single casing
- Selections to meet 100-350 USgpm (6-22 L/s) flow and 20-100 psi (1-7 bar) pressure requirements

- Projects requiring system to be ceiling mounted
- Projects requiring the system to fit through a small door (less than 30"/762 mm)

- 1½" - 3" stainless steel flanged discharge connection
- Industry-leading control features including:
 - SoftFill
 - No-Flow Shutdown
 - Pressure set-back
 - Emergency Power failure mode
 - Overload protection
 - Best-operating-point sequencing
 - 24-hour cycling of lead pump
 - End-of-curve protection
 - Built-in run/delay timers and run meters
 - High-pressure shutdown
- Storage tank optimization
- NEMA/UL Type 12 panel enclosures

- ASME and Non ASME rated drawdown tanks
- NEMA/UL Type 3R and 4 panel enclosures

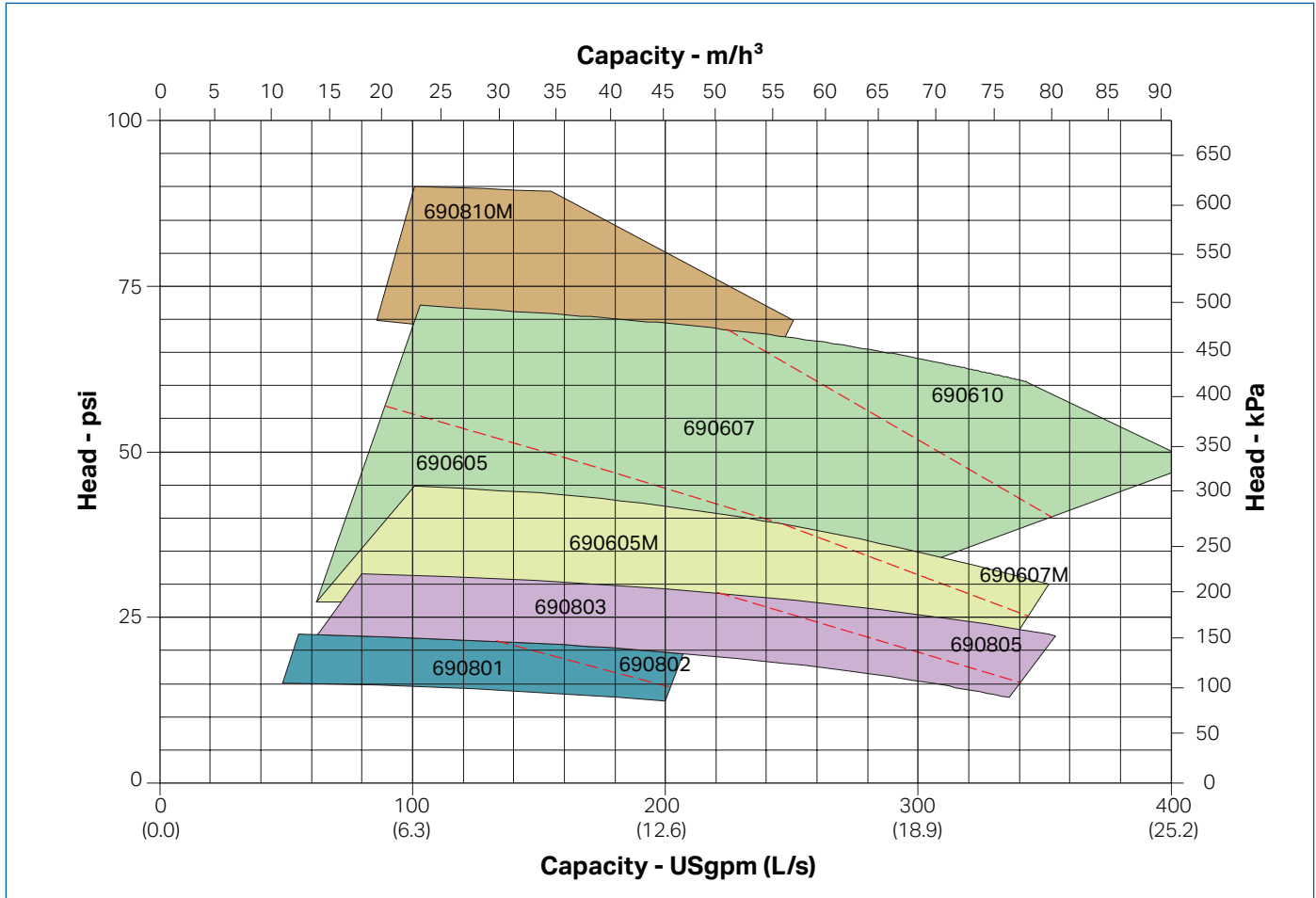
- AB1953, NSF-61-G compliant systems available
- CSA, UL/ULC certification on all electronics
- Factory test and report on every system

DualPak Series 6900

Design Envelope

Armstrong Design Envelopes are a pre-set series of the most efficient pump selections for a given capacity range. The Design Envelope approach allows you to reduce your design risk and avoid costs from equipment change orders. By calculating your preliminary design conditions, and then selecting a

Design Envelope with sufficient comfort zone around the preliminary design point, you can select a unit that allows for possible design omissions or system changes anticipated during construction and over the life of the building.



Series 6900 IVS DualPak Booster System Design Envelopes

Design Envelope Selection Procedure

- Mark your preliminary design flow and head requirements on the Design Envelope (DE) chart
- Choose the DE that best represents your design parameters, plus a safety margin in the flow and head to cover any anticipated increases or reductions in design demand from design errors or building modifications during construction
- Specify the DE model number from the chart, noting the maximum flow and boost (head) values for the selected design envelope

Armstrong's ACE Online will also help you select the most appropriate DE unit using a similar process.

Design Envelope No.	Max. Boost Rating psi (kPa)	Max. Flow Rating USGpm (L/s)
690605M	43 (296)	340 (21.5)
690605	54 (372)	240 (15.1)
690607	67 (462)	350 (22.1)
690607M	36 (248)	350 (22.1)
690610	64 (441)	400 (25.2)
690801	21 (145)	200 (12.6)
690802	20 (138)	205 (12.9)
690803	30 (207)	340 (21.5)
690805	27 (186)	350 (22.1)
690810M	88 (607)	250 (15.8)

Part Number = Design Envelope No. + Coupling Adder
 Coupling Adder: CC (Close Coupled)
 SC (Split Coupled)

What is Variable Speed?

Armstrong Intelligent Variable Speed (IVS) technology responds quickly to changes in system demand, and adjusts the pump speed so that the booster system outputs only the pressure boost that a building actually needs at any given time. The energy savings realized from reduced operating speed can pay for the initial cost of the pump in less than a year.

Why Choose the Armstrong Variable Speed Booster System?



Energy and System Maintenance

- Reduces typical energy consumption by as much as 95% depending on suction pressure conditions
- Ability to provide report detailing energy savings, payback, ROI and comparison to competing systems



Increased Comfort, Protection and System Safety

- Security of Design Envelope (engineered system, right-sizing of equipment, maximum efficiency and compatibility of components)
- Design Envelope IVS technology responds quickly to changes in system demand
- Advanced control features
- Control is demand-based and prevents over-pressurization
- UL, ULC, AB 1953, NSF-61 certified/compliant product available



Extended System Life

- Cycling of lead pump ensures even wear
- SoftFill feature reduces pressure and shock strains on booster as well as piping components
- Pumps operate only when required



Superior Performance

- Fully integrated design provides maximum performance, energy efficiency and reliability
- Quickly responds to changes in incoming supply pressure
- Most efficient booster system currently available



Reduced Equipment, Installation and Commissioning Costs

- Right-sizing of initial equipment offers potential reduction in cost
- Lighter and more compact (smaller footprint) than most competitor systems
- Turn-key system installs quickly
- dualARM pump design features allow for quick seal maintenance and service
- Flexible PLC control platform for easy integration with building management systems



Environmental

- Reduced water consumption
- Reduced energy consumption leading to reduced carbon footprint

ROI Booster Calculator

The Armstrong Design Envelope Booster calculator shows the financial benefits of installing an Armstrong Design Envelope booster system compared to an alternative constant speed or basic variable speed alternative. This benefit calculator will guide your equipment selection and help you to make the best decision based on the requirements of your project. The report details energy savings, payback and ROI.

Why Armstrong?

- Armstrong can support your installation with a sales/service network
- Engineering and technical support capabilities
- In-house quality control and test capabilities (ISO)
- Full system design capabilities
- Full range of products (complete package)
- Online tools and resources
- Project financing

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