

PLM Components

Armstrong Pumps

Pumping up customer satisfaction

Industry

Industrial machinery

Business challenges

Seizing the opportunity to rapidly respond to global demand for fast-track, cost-effective fluid flow equipment

Achieving growth by providing more engineered-to-order, prefabricated systems

Managing large increases in order volume without adding engineering resources

Keys to success

Provide custom-designed, packaged systems, fully assembled for delivery to each customer's site

Implement efficient production capabilities and engineering processes

Employ efficient change order request/response approach

Armstrong Pumps significantly improves customer collaboration with Rulestream; technology enables same-day quotes and responding to change orders within 24 hours of manufacture

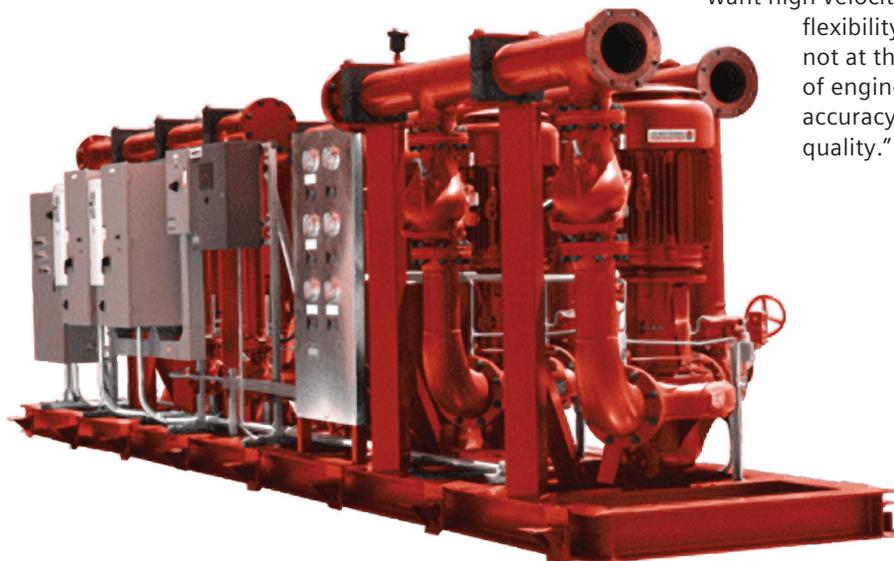
Seizing today's opportunity for growth

Armstrong Pumps Inc. is a leading supplier of high-quality fluid flow equipment for the heating, ventilating and air conditioning (HVAC) industry. Armstrong products and systems are installed in some of the world's largest office buildings, on complex offshore platforms and in a wide variety of residential, commercial and industrial settings around the world.

The worldwide demand for fast-track, cost-effective fluid flow equipment for commercial applications is rising dramatically. This changing of customer priorities has created significant growth potential. Armstrong has recognized the opportunity to respond more quickly to the customer segment by deciding to produce more engineered-to-order, prefabricated systems.

According to Peter Thomsen, marketing manager at Armstrong, "There is a growth opportunity. However, the challenge for us is to achieve growth with increasingly efficient production capabilities and engineering processes, so that we can deliver our offering in a manner that is above and beyond our customers' expectations. We

want high velocity and flexibility – but not at the cost of engineering accuracy and/or quality."



Results

Fully engineered quotes in hours instead of days

Customer change orders that once took one to two weeks now accepted in 24 hours or less before manufacture

Compelling visualizations aid in converting the customer to a packaged solution

“With Rulestream, we have automated the engineering design process for our packaged pump assemblies. We can now present detailed engineered solutions at the sales stage, rather than in post-sales engineering and that gets our prospects interested in our innovative systems early in the game. Rulestream makes it easy to bring new innovations to the commercial construction community.”

“With Rulestream automating the design of our engineered-to-order packaged pump assemblies, we can present detailed engineered solutions at the sales stage, rather than in post-sales engineering.”

Peter Thomsen
Marketing Manager
Armstrong Pumps Inc.

HVAC specialists

Armstrong Pumps Inc. manufactures a broad range of HVAC products, including residential and commercial hot water recirculation systems; specialty flow control valves, tank fittings, air chargers, tank drainers, circuit balancing valves and suction guides, combination check/throttling/shut-off valves, space-saving expansion tanks and computerized flow meters, as well as a variety of heat exchangers and horizontal and vertical pumps.

Armstrong is also one of the world's leading suppliers of pressure booster systems and fire pump systems, and an extensive line of turbine systems, sewage and sump systems for industrial and commercial application, and cast iron submersible electrical pumps.

Rulestream enables site-specific variances

HVAC systems have typically been designed to be built onsite, but each site has its own unique configurations and legacy systems to be accommodated. This makes site assembly cumbersome and inefficient for most customers' schedules since these complex systems require the participation of multiple vendors. In addition, this work is often performed by contractors in the field.

“We are always looking for better ways to serve our customers in a collaborative fashion,” says Thomsen. **“And we are always on the lookout for tools that will help us do that.”**

With Siemens' Rulestream™ software, Armstrong developed a unique, prefabricated fluid management package design that allows the pump system (which is engineered, designed and built before delivery) to incorporate site-specific variances. Perhaps most importantly, the packaged systems can be pretested before they are shipped.

Armstrong is known for offering some of the industry's most advanced pump technology. **“But,”** says Thomsen, **“we wanted to raise the bar by providing custom-designed, packaged systems, fully assembled for delivery to a customer's site. These packages accelerate the construction process for the building's HVAC system. It is part of our commitment to advancing our level of service to the customer and our community.”**

Slashing design time from days to hours, hours to minutes

Armstrong uses Rulestream to reduce the time needed to produce fully engineered quotes and complete BOMs, 3D drawings and manufacturing routings. What once took days is now completed in hours, and in some cases minutes.

Customer specifications and design parameters are entered into the Rulestream system, which applies Armstrong's design rules and works seamlessly with popular CAD design software to quickly produce accurate pricing and compelling, concise visualizations that increase the sales win rate and customer confidence.

Solutions/Services

Rulestream
[www.siemens.com/
plmcomponents](http://www.siemens.com/plmcomponents)

Customer's primary business

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www.armstrongpumps.com

Customer location

Toronto, Ontario
Canada

No more re-inventing the wheel

"In the past, each project configuration was calculated and had to be drawn by an engineer," according to Thomsen. "It was a slow, manually intensive process that would quickly become the bottleneck for growth. It was also 'out of touch' with the real world, where change orders are commonplace. The traditional approach offered little flexibility and scant room for mid-stream design changes or adjustments."

With Rulestream, there is less need for time-consuming engineering reviews and approvals because many components have already been designed for other pump systems. Also important is the ease with which Rulestream interfaces with other design software.

"Other systems simply weren't very compatible with our existing software, and would have required extensive reworking of our information infrastructure," says Thomsen. "Thanks to the ability of Rulestream to integrate with other software, we were able to keep our own systems in place."

A significant competitive advantage

"With Rulestream automating the design of our engineered-to-order packaged pump assemblies, we can present detailed engineered solutions at the sales stage, rather than in post-sales engineering," says Thomsen. "We can also make design changes as late as the final 24 hours before an engineering drawing's release, instead of one to two weeks out. This lets us incorporate last-minute changes and improvements – without impacting delivery deadlines – and that brings our customers great satisfaction."

Siemens Industry Software

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