Re-imagining a family of products for Armstrong

How an 80 year global enterprise refreshed a family of building fluid flow products by collaborating with a product design company.
THE CHALLENGE

Founded in 1934, Armstrong Fluid Technology is a world leader in fluid flow pumping equipment with more than 1,000 employees spread across the globe. For eight decades it’s been at the centre of automating building fluid flow systems and continues to shape the future of intelligent fluid systems through engineering and design.

In 2013 Armstrong began a global brand refresh, uniting all its various entities under a new brand: Armstrong Fluid Technology. It was a massive undertaking, touching existing brands in residential, commercial, and industrial fluid-flow equipment, which is at the heart of HVAC, waste and water pumping systems in most buildings.

To tackle this challenge, Armstrong approached Design 1st for help. The goal was to refresh the visual language for all of the company’s equipment while maintaining the functional engineering integrity of the designs. Doing so would create a recognizable product and brand identity across Armstrong’s entire line of equipment.
This initial project took big, bold, disruptive visual design concepts and put them through a pragmatic design process to reimagine Armstrong’s family of commercial pump equipment.

Armstrong emerged with a new visual identity with an innovative parabolic shape that made Armstrong’s new global brand come alive with a recognizable product identity and brand language. The next step was to translate the design across an entire product line, which meant retrofitting existing equipment and influencing the development of new fluid technology.

“Design 1st should be commended for contributing to the overall vision of all lines of Armstrong product. The parabolic whiplash shape is coherent, innovative and embedded in the idea of science versus design,”

says Neil Halverson, Corporate Identity.

Eight years later, Design 1st continues to be Armstrong’s Industrial Design innovation partner, providing creative firepower and a predictable recipe to commercialize design innovation whenever new product design challenges come up.
As Armstrong’s engagement with Design 1st continues to evolve, so have the projects. From helping design disruptive pump equipment features to refreshing legacy equipment with the latest digital pump technology and streamlining production methods to cut costs, Design 1st continues to help Armstrong innovate.
Design 1st takes the decades of experience of developing product solutions within numerous industries, and applies “out of the box” thinking to resolve client identified issues. In this case, Armstrong identified assembly, installation and maintenance issues with regard to the traditional collar adaptor connection method across their pump equipment. The traditional method uses bolts to secure pump collar adaptors and has been the industry standard for over 100 years.

“The non-traditional solution is now the standard connection method across our entire line of “Design Envelope” pump equipment”

Turning to connection solutions in other industries Design 1st identified several alternate connection methodologies for securing the two large casting components together. After reviewing with Armstrong, the result was the selection of a collar clamp not traditionally used for collar connection application. The solution solved a number of issues including quicker assembly time, lower part costs and infinite position orientation - all while maintain the sealing and clamping pressures.
Design 1st helps Armstrong create major cost efficiencies by solving tough design challenges. For example, when Armstrong was looking into how to support existing pump equipment with its new design envelope pump controller (DEPC), Design 1st brought multiple mechanical design concepts to the table.

It led to a retrofit solution that breathed new life into existing pump equipment with a low installation cost, all while maintaining Armstrong’s strong visual identity.

“What I am most impressed with is D1’s Industrial Design and Mechanical Engineering ability to converse around fairly complex design concepts.”
Developing custom parts for Armstrong’s products can be expensive. Every step from material selection, to production process and final assembly can increase cost and time. So, when Armstrong began looking at ways to optimize the production of a custom pedestal adapter used in multiple pump products, the company asked Design 1st for help.

“We saw an opportunity for Armstrong to maximize the gains for the common pedestal parts they had across the family of pump equipment,” said Tim Hatts, Senior Industrial Designer.

Armstrong were using an existing lost foam casting for producing complex forms and designs without requiring complex molds. Design 1st optimized the design to allow for changes to wall thickness, pipe fittings and casting sequences to lower overall costs.