

D&K Engineering Helps RIS Transform Inkjet Cartridge Refilling

Intro...

Printing is a part of our daily lives. Nearly every business and household owns at least one inkjet printer and when the ink runs out, a replacement cartridge will need to be purchased. A set of new cartridges is expensive (sometimes more than the cost of the printer itself) and a majority of the old cartridges will ultimately end up in a landfill. However, there is another option, refill the cartridge. Providing this alternative solution to inkjet cartridge replacement was the concept behind Retail Inkjet Solutions (RIS), a local San Diego-based start-up that had an idea to design and build an inkjet cartridge refilling machine for use in retail locations that is easy to use, refills various types of cartridges, and benefits the environment by reusing existing cartridges.



Successful Manufacturing Starts With Finding The Right Partner

Having deep knowledge in inkjet and printing technology, the founders of Retail Inkjet Solutions had the engineering expertise to develop the machine but as a start-up funding was tight and there was a need to move quickly to take advantage of this opportunity. The decision was made to

outsource, now RIS had to find the right partner? An initial search for a partner resulted in RIS selecting a small design firm to develop the initial prototype that allowed them to test the validity and functionality of their product concept. However, when it came to actually designing the product for manufacturability, RIS knew they needed a company that could provide a higher level of design, engineering and manufacturing capabilities.

A new search was initiated to find that company. RIS looked at various options both domestically and internationally. The complexity of going internationally with issues around travel, language, culture and time zones made the potential cost savings insignificant. After interviewing various design firms and contract manufacturers, RIS selected D&K Engineering as their local partner to help bring their product to market. Staying local would maximize development speed, enhance the ability to iterate quickly on designs and provide for the opportunity to build a strong relationship with a local partner.

About Us...

D&K Engineering is a global contract, R&D, engineering and manufacturing services company focused on developing and manufacturing complex electromechanical products and equipment. With a core set of best practices and industry knowledge that spans the entire product development lifecycle, D&K Engineering mobilizes the right people, processes, tools and infrastructure to create and deliver sustainable business value to organizations seeking to outsource the design, development and/or manufacturing of their equipment or products.

D&K Engineering enables organizations to decrease time-to-market, reduce cost and improve product quality.

Simply put, D&K Engineering bridges the gap between concept and reality.



Clearly Defined Roles and Responsibilities Leads to a Successful Collaboration

Outsourcing these functions allowed RIS to move quickly on this opportunity without having to build a large engineering team and the full design infrastructure needed for successful product development. The architecture development, product feature set, product specifications and key design decisions remained with RIS and the overall detailed design engineering function, sub-system development, test system

development and manufacturing functions were outsourced to D&K Engineering. From a manufacturing and operations perspective, RIS owned the supply chain relationships for single sourced items and critical technologies and outsourced the commodities and top level integration activities allowing RIS to maintain control of the key manufacturing elements while utilizing the infrastructure and scale already in place at D&K Engineering.

The result of this collaboration is a highly reliable (99.5% uptime performance in demanding environments), serviceable, environmentally friendly ink cartridge refilling system that provides consumers with high quality images and maximum total printed pages at huge savings. These systems are currently found in many big box retailer locations.

“D&K Engineering had the right mix of design, engineering and manufacturing capabilities that stand alone design firms and contract manufacturers did not have. We entrusted the D&K Engineering team to take on the development of our product because of their unique capabilities in handling the breadth of engineering and manufacturing challenges all under one roof. The ability to have the design engineers follow the product directly into manufacturing enabled profound benefits in reducing time to market, enabling a faster production ramp and reducing overall costs.”

—Jason Guhse, VP of Engineering, Retail Inkjet Solutions