Case Study: A Tight Squeeze

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Long time distributor and Eagles Club member Joe Williams was desperate. A key customer of his had purchased standard Penco lockers for many years but was now looking for alternatives due to a problem they were experiencing.

The problem was the customer's own making. They had switched from 12" wide lockers to a 9" wide to squeeze more openings into their locker rooms but this resulted in numerous complaints from users who couldn't easily get purses and other bags in and out of the locker. With an opening so small the door frame became a serious point of pain for the end users of the narrow lockers. The customer had literally scoured the world to find a design that would work for them. Faced with losing a significant amount of business Joe turned to the Penco Center for Design Excellence (PCDE) for help.

Even with a staff dedicated solely to development of new products the PCDE still has to be selective in the projects we take on to best utilize the resources we have. This project exceeded our minimum revenue requirement and had potential for an addition to our current product lineup. With these qualifications we agreed to submit this to our product development process.

Our next step was to sit down with the customer to find out what they really wanted. This was an interesting discussion. We followed up with a three dimensional concept drawing proposing a solution but found it took two more meetings before they were able to come to a final decision on the specifications for the project.

Our design team then went to work on creating a design, building prototypes, and testing theories. Throughout this process we kept in constant contact with the customer bouncing ideas around and discussing details. Design engineer Calyn Clements provided some very innovative solutions the customer was very pleased with. Using 3D printing technology to model parts that would require tooling to fabricate from steel we were able to present a working sample of the final design for the customer's approval before production started.

Early in the design process we determined this project was best suited for manufacture through our Penco China facility. A major factor in the decision for this product was the complexity of some of the components in the product. Some were not well suited for manufacture at our Hamilton facility where they are currently focusing on optimizing production of Penco's core product line. Our offshore partners run a modern, efficient factory. It is ISO9001 registered, meets the Operating Code of Conduct of the Fair Labor Association and has a business model well suited for processing this type of customized product. James Ding, a member of the PCDE staff, is based at our Nanjing facility and did a great job of managing the project on that end.

Collaborating with our engineering resources in China on manufacturability issues we were able to complete the design, produce samples, and produce the first order of parts to meet the very tight timeline requirements of the customer.

At this point our work was still not finished. The PCDE design team then met with the installer, on site, to see how the parts were fitting together and to look for any further improvements necessary in the design or fabrication process. While some minor modifications to the hinge design are being implemented on future orders the installer was ecstatic about how well the parts fit together during the install.

One of the things that excites us most about this project is we followed one of our prime directives: *to listen to our customer*! In this case, we not only met, but exceeded our customer's expectations in the product design. This was because we first listened, the helped them define the scope of the project, and finally gained an understanding of their needs. As a bonus, we were able to save the customer a considerable sum of money with our design versus the competitive offering they were ready to use.

Another very satisfying aspect of the project is that we were able to help out one of our top distributors solve a problem that would have been crippling to his business. We're here to help you! Please let us know if you have a vexing problem and let's see if we can find a solution that works for our customers, distributors, and Penco.