

Customer Success - O'Brien Engineered Products Inc.

Since 1997, O'Brien Engineered Products has focused on the development of new products for emerging technologies. The company offers engineering and design services including design enhancement, prototype assembly, feasibility studies, quality checks on existing designs, ANSI (Section 156.xx) cycle testing, short run assembly, and research and development.

"We take raw ideas and convert them into products," states president James A. O'Brien. "Our customers range from small venture capital-funded or angel-funded companies who don't have their own engineering capabilities to tier-one automotive suppliers. A typical project for us is something that has moving parts."

O'Brien is one of the USA's most experienced and respected exit device design engineers. He holds numerous patents related to hardware design and was formerly associated in a senior design and consulting capacity with several major hardware manufacturers and with one of the three leading automobile manufacturers.

KeyCreator is the only design tool O'Brien uses on a regular basis. KeyCreator allows O'Brien to create geometry quickly, working with the data the way a sculptor works with a piece of stone, whittling away what isn't needed. O'Brien says that he finds that "when I'm in a hurry, I go back to a simple sphere or block and 'hack' the profile to get what I need." This method produces extremely complex shapes very quickly. It also keeps O'Brien from making parts that are impossible to be manufactured.

Design Innovation for the Greater Good

ERVOS, Inc. innovator of advanced technology exit devices, partnered with O'Brien Engineered Products to design and manufacture a new product line. Its flagship X61 Series was the first of several door hardware innovations coming from the company and would represent the first substantive change in exit device technology in more than 30 years.

The ERVOS X61 project began as an exit device designed with life safety in mind, but it had to be workable with the door preparation most commonly used in the US, called a "161." It also needed to be handicap friendly which requires a different kind of trim called an "active pull." The benefit of the active pull gives a person grabbing the door the ability to feel it move in their hand. The customer also wanted to incorporate future electronics into the new devices.

The O'Brien design team went through eleven major revisions of the device for styling. O'Brien noted that, "KeyCreator functionality allowed the team to create shapes that their suppliers couldn't create in their CAD tools." After designing the geometry, O'Brien created wooden models of the device, which the customer took to architects for review.

The robust X61 door latch is very ADA-friendly (American Disabilities Act), available for single doors and pairs of doors. The X61 is a totally new concept -- fewer parts, exceptional ease of installation into a 161 cut-out, one motion pull, no wrist-twist mechanism and extra-heavy duty latching assembly.

O'Brien originally expected the process to take three weeks or more, but the task was completed in 22 minutes. "When we sent the drawing to the suppliers, they couldn't figure how we did it, so we sent IGES files of the design. Even with the models in hand, they still couldn't figure out how we did it. That makes me feel good -- being able to design something so easily that no one else can achieve."