

Phillips Plastics Corporation®

INTERFACE

Changing Lives, One Voice At A Time



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DynaVox Technologies

Pittsburgh, Pennsylvania-based DynaVox Mayer-Johnson is the world's leading provider of augmentative and alternative communication (AAC) solutions. Their line of speech-communication devices give a voice to the millions of people who are unable to use speech as their primary means of communication due to the effects of conditions such as amyotrophic lateral sclerosis (ALS or Lou Gehrig's disease), stroke, traumatic brain injury, cerebral palsy, Parkinson's disease, autism, Down syndrome, and mental retardation.

Children and adults challenged by significant speech, language and learning disabilities use DynaVox solutions to make meaningful connections in the home, classroom, and community.

Phillips Plastics and DynaVox

To succeed in product development, DynaVox has made a meaningful connection with Phillips Plastics, a partnership that dates back to 2005. According to Rick Severa, Director of Product Design, DynaVox, "As our company grew, we outgrew the capabilities of the molders we had been using."

"I was looking for that next tier of molder. Since Phillips Plastics is obviously a world-class injection molding company, I invited them to bid on several molding projects," says Severa.

DynaVox first hired Phillips to design and build the tooling and produce the body armor for their Palm3 unit. The experience allowed DynaVox to test Phillips Plastics' performance and see how the two companies would work together.

Phillips Plastics produced the designs on budget and on time, and Severa was happy with project outcome. "Before working with Phillips Plastics, I experienced problems with firms that would come up with designs that were interesting but had inherent flaws, requiring us to make significant changes to enable us to manufacture them."

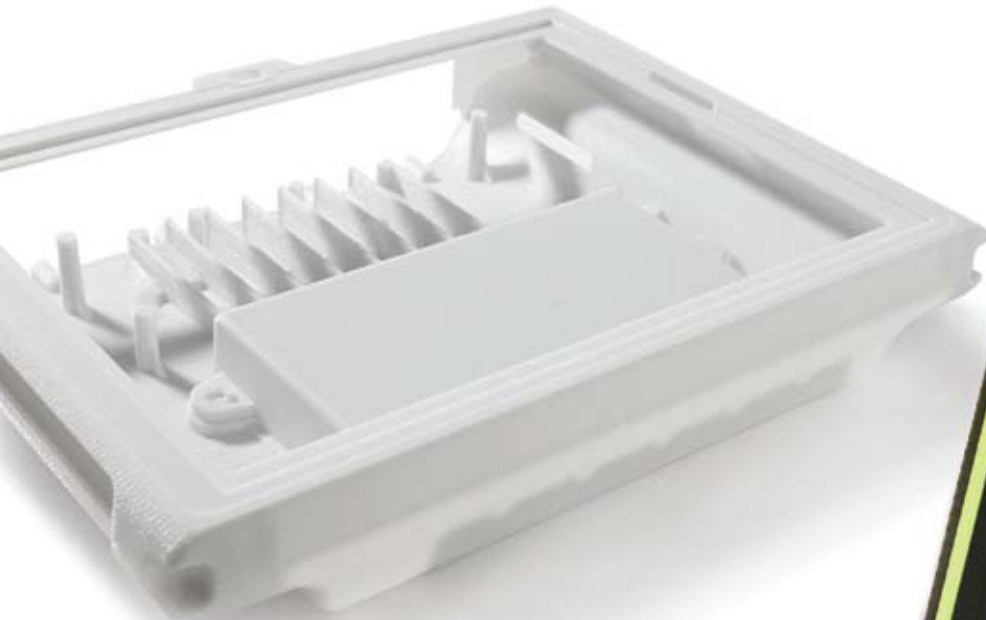
Phillips Plastics, on the other hand, offers a full range of services under one roof, explains Severa. Their Design Development Center, for example, has on-site industrial designers, design for manufacture engineers, toolmakers, and molders – all in one location.

"With Phillips Plastics, I can take a project from conception through actual production within one facility. This eliminates all of the finger-pointing and back-and-forth that can occur when working with multiple companies on a project across companies, state lines, and time zones," Severa says.

He adds, "The Phillips Plastics team works well together and with us, and everyone is on the same page. I never have to play referee with designers, engineers, and molders. And our company benefits from faster product turn-around and time to market."

Project Successes

DynaVox depends on Phillips Plastics for a number of programs. To name a few, DynaVox V and Vmax, DynaVox EyeMax System, and DynaVox XPress.



The DynaVox V comes in two sizes. The smaller unit (V) is 9" x 8" x 2.75" and features an 8.4" screen. The larger unit (Vmax) is 12.5" x 10" x 3" and features a 12.1" screen.

DynaVox V and Vmax

The V and Vmax AAC devices are designed for all age ranges, cognitive abilities, and skill levels. Both are full Windows XP computers that deliver Internet access, email, text messaging, and environmental control capabilities.

The V and Vmax are durable units that feature a molded magnesium outer shell and a water-resistant front surface. Phillips Plastics manufactured the magnesium cases for both devices.

"Ever since DynaVox started using magnesium for the V and Vmax enclosures, they have significantly reduced the number of broken cases sent back to them for replacement," says David White, Corporate Sales Representative, Phillips Plastics. Magnesium protects the V and Vmax units, while saving DynaVox money and time required to replace broken cases.



An accessory to the Dynavox Vmax, the DynaVox EyeMax System weighs 2 lbs., 4 oz. It comes fully enclosed in durable, molded polycarbonate and attaches to the Vmax easily, securely, and without the need for tools, which supports changing access needs.

DynaVox EyeMax System

The DynaVox EyeMax System is the newest, most advanced access method available to communicators who use the Vmax. It is comprised of two parts: a Vmax and an EyeMax Accessory. The EyeMax System allows augmented communicators to access the powerful features of their Vmax with a simple blink, or by dwelling on a desired area of the screen.

DynaVox turned to Phillips Plastics for industrial design and mechanical engineering on the EyeMax System case. In addition, Phillips Plastics performed the mechanical design, design for manufacture, project tooling, and production molding.

According to Mike Horvath, team leader of industrial design, Phillips Plastics, his challenge was multi-faceted. He and his industrial design team needed to create a plastic injection-molded enclosure for a pre-determined set of internal electronic components, find a way to attach the EyeMax System to the Vmax, and ensure the design was both rugged and integrated with the existing Vmax device.

“As an industrial designer, it is always nice to work with clients that understand the value of industrial design. Throughout the entire process, it was great to work with Rick at DynaVox. He gave us the flexibility to push the boundaries of our concept-exploration effort,” says Horvath.

Severa says, “The challenge presented by the EyeMax was twofold. One: to design an enclosure that housed the electronics and had the appearance of an integrated system, rather than just an add-on accessory. Two: to have the ability for users to retrofit the accessory to the existing Vmax, which was already out in the field. Several concepts were explored before we came up with a final design. The design of the EyeMax now accentuates and complements the Vmax, while allowing the user to install the EyeMax by merely swapping the battery doors and plugging in two cables. The resulting system has an overall integrated look and has maintained its portability as well.”

DynaVox Xpress

DynaVox recognized the need for a smaller, lighter-weight device to be used by ambulatory individuals, including those with autism, Down syndrome, stroke or brain injury. After extensive customer research, the DynaVox Xpress was conceived.

The Xpress is a powerful, handheld augmentative communication device. Portable, discreet, and easy to use, it fits in a pocket or purse and delivers full communication capabilities previously available only in larger devices.

According to Severa, the Xpress needed to be compact, yet have great sound and allow web access, email, and many of the features of the V and Vmax.



The DynaVox Xpress is a powerful, portable handheld augmentative communication device. It offers optional web capabilities, and at 1.5 lbs. fits in a pocket or purse.

DynaVox collaborated early on with Phillips Plastics to develop an enclosure for the Xpress device's internal components. Phillips Plastics industrial design team researched optimal product weights, dimensions, and designs in order to make the product as lightweight and portable as possible.

In addition to remaining small, the design also needed to be hi-tech, with crisp edges and transitions, a contrast in shiny and matte material, and chrome accents, according to Horvath. Phillips Plastics was able to deliver on both design requirements to create an enclosure that would fit in the hands of both children and adult users.

From there, DynaVox partnered with Phillips Plastics to complete the mechanical design, tooling, and production processes. According to Larry Stichter, Senior Design Engineer, Phillips Plastics, all of the up-front work completed by the Phillips Plastics industrial design team resulted in a smooth transition into the mechanical design phase. Engineers from Phillips Plastics production facilities reviewed the designs at multiple stages during the mechanical design process and provided input to enhance the design from the manufacturing point of view.

"Since the Phillips industrial and mechanical design groups work closely together in an open work environment, any problems encountered during the mechanical design phase were able to be quickly resolved so that the program could continue moving forward and stay on schedule," says Stichter.

Severa adds, "By working with both Larry and Mike early on the Xpress project, we were able to specify the necessary electronic and mechanical components upfront and model them in while continually refining the industrial design. This saved us a tremendous amount of time as we maintained manufacturability and a state-of-the-art design."

Partners for Success

Over the years, DynaVox has progressed from using Phillips Plastics for just molding to whole-project completion, from conception to production. The relationship frees DynaVox to focus on creating products that enhance the lives of augmented communicators and their loved ones.

"Our working relationship with Phillips Plastics is great. Their team is so responsive, I feel like I'm their only client. For support from design through production, Phillips Plastics has been an excellent partner," says Severa.