

Seeing is Believing

Avedro Offers Next Level of Vision Correction Technology with Equipment that Seamlessly Fits into existing Medical Suites.

Challenge

Avedro's President and CEO, David Muller, PhD, is an entrepreneur and visionary in the field of laser vision correction surgery. With the founding of Avedro, Dr. Muller has turned his focus to advancing novel research conducted at Dartmouth College into a new platform technology for non-invasive vision correction. Within twelve months of securing a Series A round of funding, Avedro quickly went from an ingenious idea to finished device when the company introduced its Vadera™ KXS System for performing the Keraflex® procedure. Keraflex is performed by ophthalmic surgeons and involves gently reshaping the cornea's surface without removing any tissue. Because it is non-incisional and preserves the biomechanical integrity of the cornea, Keraflex is anticipated to substantially broaden the surgical vision correction market by appealing to people who have never considered, or opted out of laser vision correction. Keraflex is the first technology that Avedro has developed from its Thermo-biomechanics platform.

Part of this start-up's quick development cycle meant finding the right partners to work with the aggressive time schedule. Along with product development, consideration had to be given to the environment where the product would be used. The goal was to produce a device that would fit seamlessly into existing medical office suites and refractive surgical centers using existing equipment like a microscope and patient table.

Solution – The Right Partner, The Right Parts

Avedro turned to Continuum, a design consultancy firm for the engineering, software development, and exterior industrial design of the device. Avedro's management team had worked with Continuum in the past and considered the company a trusted partner with an excellent track record. As the product design evolved and the project progressed, Continuum contacted several vendors to discuss the enclosure for the system. ThermoFab seemed the natural choice, based on its close location and prior project collaborations with Continuum. Evan Sherr, VP of Avedro Operations, said, "Continuum recommended ThermoFab, and after looking at other vendors, we realized they were pretty unique. They are doing enclosures in ways no one else is doing them."





ThermoFab's engineers knew that their unique thermoforming approach would enable the system to have a technically sophisticated look. The fact that the system would be in full view of patients meant extra care and detail had to be included in the enclosure. Working closely with Continuum, ThermoFab went through the CAD renderings for the dozen parts that comprised the enclosure. "Michael Wahl made further suggestions and refinements based on ThermoFab's expertise for enclosures of this scale and the results were excellent," stated Tom Parent, Senior Mechanical Engineer for Continuum.



Result

Clinical trials are currently underway in Europe, and Avedro anticipates CE Mark approval early in 2010. Although not currently for sale in the US, Avedro plans to file for an FDA IDE in mid-2010. "ThermoFab was an excellent resource for us," stated Sherr. "They were creative in their approach and very elegant in their design. We haven't come across anyone like them. They were committed heart and soul to this project."

Quick turn around on enclosures, collaborative partnership, sleek and sophisticated enclosures, what more could you ask for?

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