



THROUGH THE LOOKING GLASS

Broken Arrow's Access Optics designs, makes tiny lenses for use in medical devices worldwide



Jim Stafford
OK INNOVATIONS

Just a few weeks ago, I had the opportunity to undergo a medical endoscopy procedure. My physician inserted a tiny camera and light into my body and was able to see what was happening inside in glorious living color.

Turns out, the highly sophisticated equipment used during the procedure was likely engineered and manufactured here in Oklahoma by a Broken Arrow-based company called Access Optics.

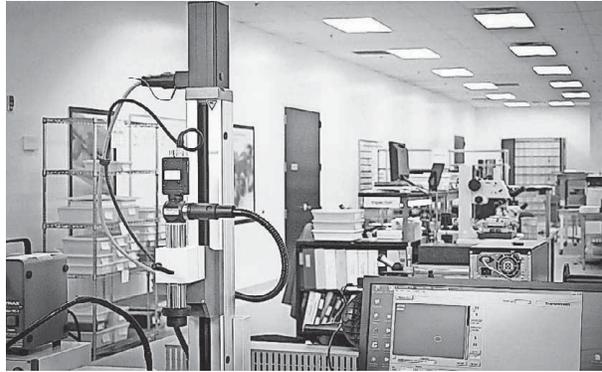
Access Optics has been perfecting its expertise in creating tiny camera lenses and medical equipment since 2000. Earlier this year, it moved into a new 20,000-square-foot manufacturing facility built specifically for its capabilities.

You won't find any Access Optics-branded equipment, however. The company applies its expertise as a contract manufacturer for what are known as medical device original equipment manufacturers.

"If you are going to go in for surgery here in Oklahoma, the prospects are really high that you are going to encounter something that was made right here," said Access Optics co-founder and CEO Bob Hogrefe. "The fact is that we are dealing with five of the top 10 companies worldwide, including the leading companies in their respective fields, including gastro endoscopy, arthroscopy, robotic surgery. That's really an achievement for us."

Hogrefe and his wife, Pam, founded Access Optics after moving to Tulsa with intentions to purchase another company. That deal fell through, but they stayed and grew their own company that today employs more than 25 engineers and technicians.

Jared Seay is a University of Oklahoma and University of Tulsa graduate who has served as chief physician for the past four years.



Broken Arrow-based Access Optics earlier this year moved into a new 20,000-square-foot manufacturing facility built specifically for its capabilities. [PHOTO PROVIDED BY OCAST]

ONLINE

Go online to Oklahoman.com to see a video about Broken Arrow-based Access Optics.



Jared Seay, Michael Paul and Bob Hogrefe of Access Optics. [PHOTO PROVIDED BY OCAST]

Seay works closely with Access Optics customers to implement optical designs, manufacturing plans and determining the role of different areas of the facility through inspection, manufacturing and assembly.

In addition, the company is involved in ongoing research and development and has several patents in various stages of approval for technology it has developed. It also assembles finished devices as a contract manufacturer for original equipment manufacturers.

"Our work is tedious and precise," Seay said. "I would describe it as tedious in the sense of quality of control and traceability that have to be maintained on devices is at a very high level throughout a device's lifetime in case there are any issues. It is meticulous from a standpoint that we have very tight tolerances."

Endoscopy devices act as an "extension of a doctor's eyes" during a procedure, Seay said. Access Optics operates with Food and Drug Administration accreditations and is certified to do design and manufacturing under international standards.

"We have lenses that we manufacture that are down to a half-millimeter in diameter, so think in

microns around here, which is a millionth of a meter," he said. "When you are thinking on a size scale such as that you are thinking of a grain of sand essentially."

From its base in Broken Arrow, Access Optics markets its technologies worldwide, said Michael Paul, director of sales of marketing.

"From a customer standpoint, they largely serve the medical device original equipment manufacturer sector," Paul said. "That would be medical device manufacturers."

The company has been supported throughout its growth by the Oklahoma Center for the Advancement of Science and Technology (OCAST). The state agency provided R&D funding in designing glass-to-metal seals that can be surgically sterilized, which are critical in instruments designed to go into the body.

"Our relationship with OCAST has been tremendously supportive," Hogrefe said. "The instruments we make here in

many cases involve these special seals that were developed initially from a grant from OCAST. We brought them into the state of being full products, and those products enable us to participate in markets at a very high level in places where very few people in the world can do what we do."

For physicians and patients worldwide, the bottom line is having confidence that the tiny cameras used to peer inside the body are safe and provide a clear picture.

"One thing I think you ought to know about Access Optics and our customer base is the contribution to society and the population they make," Paul said. "There are millions of uses of these devices on an annual basis, and that contribution, frankly, saves lives."

You have my gratitude.

Jim Stafford writes about Oklahoma innovation and research and development topics on behalf of the Oklahoma Center for the Advancement of Science & Technology.