

New Robotic Milling System: Your Contributions at Work

Thanks to a significant gift to the Wilson Research Foundation, MRC now has a state-of-the-art robotic milling system for a variety of orthotic and prosthetic needs. The Ortis Pro Robot is a seven-axis carving system at the Flowood headquarters of Methodist Orthotics and Prosthetics Division. As part of our technology investment, our 10 clinics across Mississippi and in Monroe, La., now have 3D digital scanners and software to capture, modify, and send images to Flowood for fabrication. The scanners capture the shape of the body segment while the computer aided design software allows our staff to further modify and perfect the scanned design to achieve the desired biomechanical outcome.

The purpose of the carver is to produce models for prosthetic sockets (the part of the prosthesis that fits over the remaining limb segment) for limb-loss patients. This is arguably the most important part of the prosthesis because it must fit precisely over the remaining portion of the patient's limb to support their weight and movement.

The carver can also produce highly accurate 3D models for:

- Ankle-Foot Orthoses and Knee-Ankle-Foot Orthoses (commonly used for stroke, spinal cord, and brain injury survivors, and for children diagnosed with CP, spina bifida, etc.)
- Spinal braces (fracture stabilization, scoliosis, etc.)
- Other orthopedic bracing used to facilitate mobility or enhance function for individuals with musculoskeletal challenges.

MRC has previously relied on manual fabrication, plaster casting, carving, and sanding. The new Ortis Pro Robot produces models for prosthetic sockets and musculoskeletal bracing at least 60 percent faster compared to traditional casting and molding methods. Such a vital acquisition would not have been possible without the support of the Wilson Research Foundation.

“We are so excited to add this innovative fabrication technology to our current capabilities,” said Orthotics and Prosthetics Division Director Chris Wallace, MHS, CPO, FAAOP. “The addition of the Einstar 3D digital scanners and Ortis Pro Robot will continue Methodist Rehab’s commitment to cutting edge processes in rehabilitation. This commitment ensures the patients we serve have access to the highest levels of care for their rehabilitation needs. I want to personally thank Chris Blount and the Wilson Research Foundation, along with our CEO David McMillin, who were instrumental in supporting this effort.”