

AOMS Capabilities

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AOMS (Automated Orthotic Manufacturing System) is an integrated system that assists the users to design and fabricate foot molds, orthotics, and/or insoles with the CAD/CAM (Computer Aided Design / Computer Aided Manufacturing) technology.

The system can be customized to a mold system, and/or an orthotic system, and /or an insole system. The methods of fabricating the final products (orthotics and insoles) vary with these systems.



By estimate, the mold system is set up most often. This is because:

- ✓ It is easy to learn
- ✓ It costs less to set up
- ✓ It allows all materials to be used

Figure 1 illustrates the milled molds without processing and the milled molds that have been processed. These processes include grinding, buffing, etc.



Figure 1. Positive molds that have been milled and processed

The directly milled orthotics are considered to be the most laborsaving. The rearfoot post can be designed within the software. Figure 2 demonstrates the plates that have been milled. The orthotics have not been cut out. The right hand side illustrates the topside of the orthotics and the left hand side illustrates the bottom side of the orthotics (some have rearfoot posts and some do not have posts).



Figure 2. Orthotics plates that have been milled

The orthotics are cut out and grinded on the edges. Some customers use a tumbler to smooth out the grooves on the surface. Some customers use a grinder or buffing wheel to smooth the product. Some customers leave the grooves as it is.



Figure 3. Orthotics that have been processed

The disadvantage of milling orthotics is that there are not a lot of materials to choose from, except polypropylene. The colors may vary. The natural color is used most often because its availability. US patent #5054148 covers the directly milled orthotics. You may need to pay royalties to the patent holder.

Insole systems were set up less often. Some insoles can be fabricated through milling molds and thermo-forming. Directly milled insoles are usually made from EVA, although other materials can be used. The bottom insole illustrated in Figure 4 has not been processed. It is milled from a pre-cut blank. Some grinding work needs to be done. The upper insole illustrated in Figure 4 has been processed and covered with another material.



Figure 4. Insoles that have been milled and processed

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