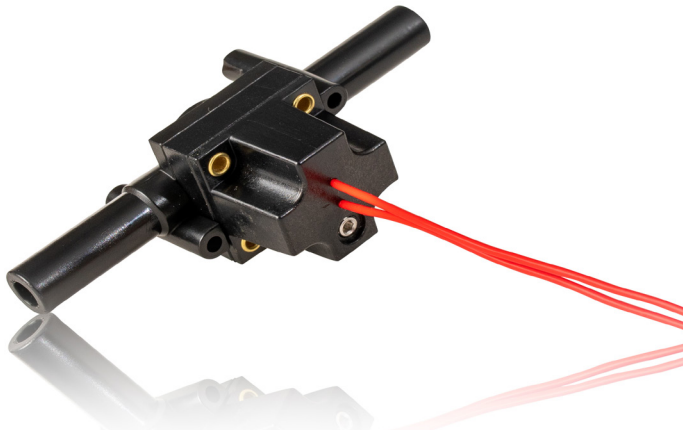
CLIENT SPOTLIGHT:

WORLD MAGNETICS

MICHIGAN MANUFACTURING TECHNOLOGY CENTER



"Being able to conceive of, design, and build custom switches quickly using 3D printing allows us to tap into the creativity of staff, more fully utilize their talents, and helps us retain them when orders are slow."

MARTIN PAUL,
Owner

APPLYING TECHNOLOGY TO INCREASE COMPETITIVENESS

COMPANY PROFILE: World Magnetics (www.worldmagnetics.com) is a complete end-to-end manufacturer of a broad range of both low and high pressure, vacuum, and differential switches, and a leading producer of magnetic heads and magnetic sensors for high-end applications. These products are designed, engineered, and crafted from its headquarters in Traverse City, Mich., and supplied to customers in the Americas, Europe, Africa, Asia, and Oceania. World Magnetics employs 34.

SITUATION: World Magnetics develops custom switches that often need to be prototyped before production orders can be secured. The cost and time of outsourcing prototypes was limiting growth and staff retention during slow volume times

SOLUTION: MMTC staff conducted an Industry 4.0 readiness assessment to help identify opportunities to reduce cost and turnaround time by adding a 3D printer for prototyping and fixturing. The assessment helped support World Magnetics' application to receive a grant from the Michigan Economic Development Corporation to match the company's investment in a production-quality 3D printer. Since World Magnetics staff already possessed technology skills from using several small cobots for switch assembly production, staff were quickly able to learn additional 3D printing skills for the specific equipment the company acquired.

RESULTS:

- Cost savings: Approximately $50,000 saved on outsourced prototypes, exceeding the cost of the equipment, installation, and training with a nine-month payback period
- Reduced prototyping time from multiple days to 24 hours, gaining a competitive advantage
- Cost savings: $10,000 by replacing hard-to-find testing meters with internally designed and 3D-printed testing switches
- Increased revenue approximately $100,000 for products currently being prototyped
- Internal fixtures, safety guards, and ergonomic devices have been created to reduce time to production and improve safety