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precision MAGAZINE

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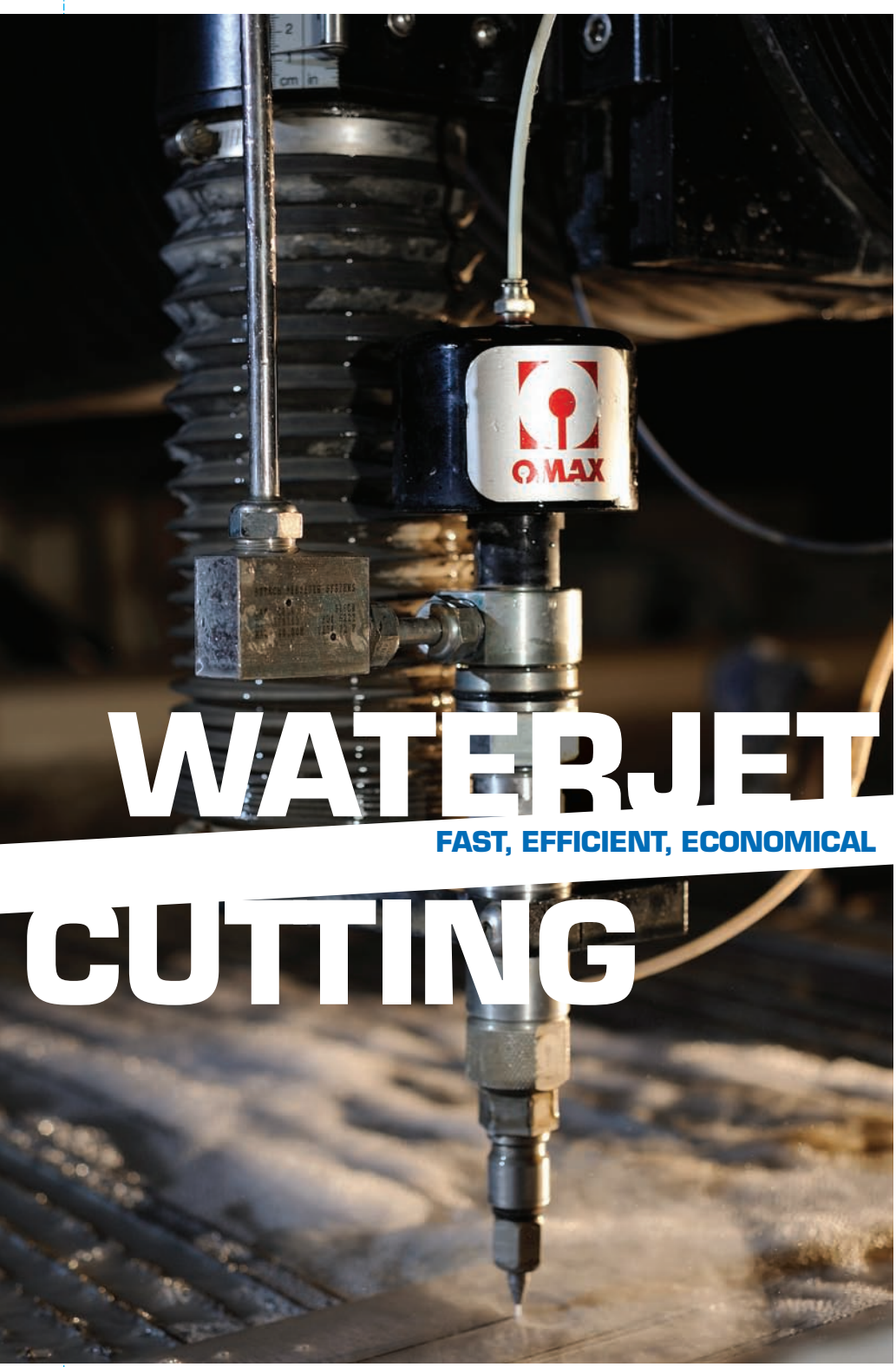


WATERJET CUTTING

FAST, EFFICIENT, ECONOMICAL

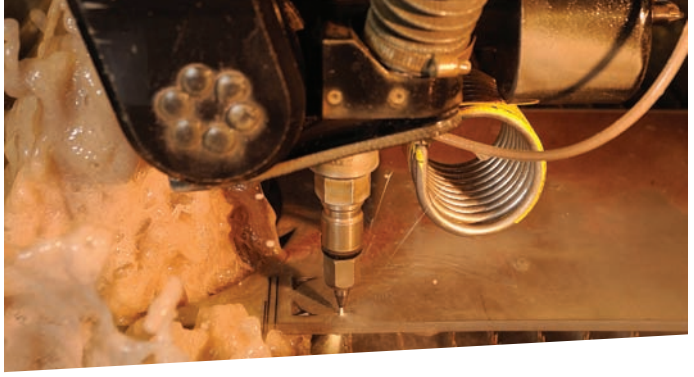
MarZee Inc. of Phoenix, a Southwest industrial leader in waterjet cutting, has developed its business around the high-precision abrasive waterjets, which have revolutionized production and prototype accuracy for major industries.

Waterjet machining is widely popular in fields such as automobile, environmental, aerospace, architecture, medical and entertainment firms where it is vital to have every piece of equipment fit perfectly with no margin of error. MarZee has become the best in creating precision parts because they are able to successfully cut metal, glass, plastic, granite and composites to meet specific requirements and environmental responsibilities.

The process works this way: A waterjet pressurizes water up to 55,000 pounds per square inch, or 379,000 kilopascals (kPa), and then forces the water through a small diamond orifice at 2,500 feet (762 meters) per second—about two and a half times the speed of sound. Hard garnet abrasive is introduced into this high-speed stream of water. A stream of abrasive-laden water moving at 1,000 feet per second (305 meters/sec) exits through a ceramic tube. This jet of water and abrasive creates controlled erosion that is then directed at the material to be machined. Abrasive waterjets can cut and process materials from .001 inches to 13-plus inches in thickness.

MarZee is family-owned and operated by three generations of the Wenz family. It was founded more than a decade ago by Cornelius "Neil" G. Wenz, the current president and a former local building contractor, and his son, Ed. The company's general manager is Ed's son, Christopher. The production facilities have grown from an initial 2,400 square feet to 10,000 square feet to meet demand.

> "We make sure our customers get their products and parts as efficiently and inexpensively as possible."



"We have a 'cut-anything-anytime' attitude with value-added services, which has paid off in satisfied customers and continuing growth to meet constant demand," says Edward Wenz, vice president of MarZee. "We own more waterjets and have more capabilities than most any other shop in this part of the country."

For production purposes, MarZee relies on waterjet machines designed and manufactured by the OMAX Corp. The largest is the fabricator, which can cut standard metal sheets up to 80 wide and 240 inches long. It can be adjusted to increase its cutting length and enable the machining of even larger materials. All machines have user-friendly software that simplifies traditionally challenging and complex cutting projects. For prototype and research and development work, materials can be machined directly from existing CAD drawings or DXF files.

Wenz notes that with an extensive in-house inventory, MarZee stocks and sells a wide selection of materials from light gauges to 1-inch-plus thick aluminum (including but not limited to 6061 and 5052), stainless steel (such as 304 and 316), steel (A36,AR,CRS,HRS) and many other materials. MarZee can also quickly duplicate original one-off parts that may be obsolete. Although waterjet may not be cost effective in some areas when compared with the laser, a waterjet can cut all the same items plus work with materials that are affected by heat, such as titanium and aluminum. It can also cut materials laser can't cut, such as thicker metals or composites.

"Our commitment to service is shown with our satisfied customers providing our largest and best form of advertising via word of mouth," Wenz says. "We make sure our customers get their products and parts as efficiently and inexpensively as possible to meet their deadlines and specific needs." ■

MarZee specializes in production and prototype accuracy for major industries including aerospace, architecture, entertainment and environmental design, and is the industry leader for waterjet cutting with CNC-controlled state-of-the-art cutting machines. For more information, call 602.269.5801.
infolink: **www.marzee.com**