

The *Fine Art* of Welding



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The gleaming, 23-foot-high, stainless-steel sculpture at the University of New Mexico in Albuquerque isn't just art—it's an engineering marvel. Designed by Gary Beals, the award-winning sculpture is the result of the artist's vision, combined with finishing, welding, cutting and technical expertise from stainless-steel fabricator K-Zell Metals and Praxair.

To make the piece's sleek, seamless sides, Beals turned to K-Zell's owner, Don Kammerzell, who contacted Praxair Distribution's* **Territory Manager Jamie Botson** and **Weld Productivity Specialist Jim Kelley** in Phoenix, Arizona. "Gary told us what he wanted to see, and we helped him get there," Kammerzell said.

"A piece seldom turns out the way you envision, but the finish on this work surpassed our expectations," Beals said. "My fabrication shop only handles up to 10-foot projects, but K-Zell has the machinery and skills capabilities for large-scale jobs. Don and his team are geniuses—their plans worked brilliantly. I've been a customer for the past 10 years, because Don provides the highest quality of craftsmanship available in this area."

K-Zell specializes in stainless-steel fabrication, primarily unusual projects such as metal sculptures, horserace starting gates, roll-up doors and countertops for school cafeterias, massive air filters for gas turbines on offshore oil rigs and water filters for automotive plants. Praxair's team of



welding and cutting specialists supplies the cylinder gases, related hardgoods, equipment and technical support to help meet K-Zell's challenges.

"This sculpture was a joint project with the artist, K-Zell and Praxair to get the welding parameters right," Kammerzell said. "We chose the material thicknesses—10-gauge steel for flat surfaces and 12-gauge for the curves—and the joint designs that would make the piece look as smooth and glistening as an ice sculpture."

Achieving "invisible" external welds on thin-gauge steel required an extremely uniform

contour on the weld bead, predictable weld performance and little to no spatter. At Praxair's suggestion, Kammerzell purchased the Miller XMT304 pulse Mig welding package with four-roll, solid-wire feed and Praxair's new *HeliStar[®] SS gas*. This combination not only provided high quality, but also helped K-Zell increase welding speed, reduce cleanup and complete the project under budget.

"Jim came down a number of times to help us fine-tune the welding variables, such as wire size and electrical settings," Kammerzell noted. "When the welds were complete, Praxair supplied us with a cleaning system to dissolve any surface discoloration and leave the swirl pattern intact. Because we do unusual projects that demand precision, Jamie and Jim always bring me new products to try. They're constantly helping to find ways to improve productivity, quality, cost savings and safety."

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