



Hypertherm®

Hardox wear parts distributor increases productivity by 33% with ProNest® and True Hole® technology

Industry: Metal Fabrication and Machining

Equipment: HPR400XD®, EDGE Pro® CNC, ArcGlide® THC, ProNest® with True Hole®

- SureCut™ technology increases productivity 33%.
- ProNest® improves efficiency with fast and easy nesting of parts.
- True Hole® technology streamlines hole cutting processes by reducing the need for drilling and punching.
- HPR400XD® HyDefinition® plasma delivers better cut quality on Hardox with 30% longer consumable life than the conventional plasma it replaced.

The company and products

Quality Machine is a third generation job shop with 45 employees specializing in custom design-and-build projects for the oil and gas industry. Founded in 1975 as a service provider for the surface mining industry, Quality Machine was later expanded into a parts business and now focuses on large custom and proprietary jobs, often in the \$100K range. Products include oil and gas booms, skidded and trailer mounted oil field units, Marcellus Shale fracturing fluid systems, and Hardox extreme duty buckets. In addition to warranty work, Quality Machine provides a wide range of services as the only independent track repair facility in West Virginia. Services beyond design and repair include on-call service and Hardox distribution.

The problem

Ineffective integration of components and lack of product support from several different manufacturers brought Quality Machine's production to a near standstill. Programming inefficiencies and subsequent poor cut quality reduced their ability to produce the range of products that had built the company's reputation. "As a Hardox wear parts distributor, we need good cut quality at the highest possible cut speeds, and we were getting saw tooth cuts with negative angles, even with consumables that were almost new. We gave up on plasma cutting any holes and used punching or drilling," comments Business Manager and Safety Director Christian Marsh.

The poor results and extended down time caused by the conventional plasma system impacted even minor parts of their production. "We mark the equipment numbers on the parts and cut nametags to be welded onto products. Seemed simple enough, but the

machine couldn't do it. The programming trouble had gotten so bad we had to do manual nesting at the controller. We had a lot of problems and no support. The components were not connecting together right and everyone was pointing fingers at each other. It was a ring of excuses and no one would help us. Our machine was down and we were left high and dry."

The solution

Quality Machine had been considering waterjet as an option for better cut quality, but concerns about the operating cost, garnet hassle and higher maintenance costs led them to reconsider and learn more about recent advancements in plasma. They sought help from their cutting machine manufacturer to provide a solution that would include efficient nesting software, superior service, and greatly improved cut quality and productivity with precise motion. Quality Machine chose a cutting machine with Hypertherm's SureCut technology, including a HyPerformance® Plasma HPR400XD, EDGE Pro CNC, ArcGlide THC, ProNest software and True Hole technology.

The benefits

"True Hole technology is great. It has reduced the need for drilling and punching, and we use it every day. It's wonderful," comments Christian. "Buying all the components from one manufacturer was the biggest seller for us because we wanted everything to work together seamlessly, and it does. Software capability alone is leaps and bounds above what we had before, so our efficiency has improved. ProNest has totally changed our productivity and nesting abilities. The negative angles with Hardox that we experienced with the old plasma system are gone, and the consumables last 30% longer. The HPR400XD is instrumental in cutting all our



Hardox parts, and it delivers significantly improved cut quality. Everything is working the way it is supposed to, and that is what we wanted. We needed the HPRXD's speed and True Hole cut quality, and the support has been terrific."

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