

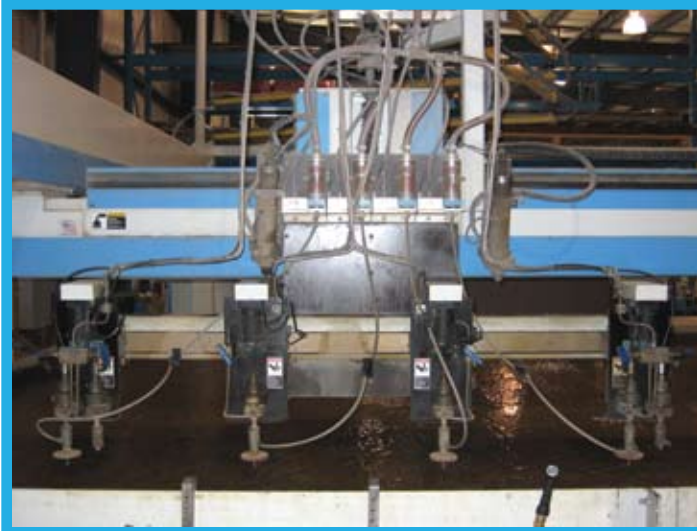
Pennsylvania Gasket Manufacturer Cuts Production Time from 3-4 Hours to 10-15 Minutes

As a manufacturer of precision gaskets and packings, AP Services processes more than 50 rush orders each day to meet the rigorous 24/7 demands of the world's crucial power generation, chemical and waste-water treatment industries.

This industrious and growing company was started in 1991 in Freeport, Pa. Since then, owners Jeff and Kenny Hemphill have taken the business global and have expanded its production facility to two plants totaling 48,000 square feet.

Until 2002, AP Services used clicker presses, "circle cutters" and knives to hand-cut gaskets from hundreds of paper templates it kept on file for repeat customers. It could take three to four hours to cut a single gasket, and as global demand for its products skyrocketed, the company struggled to maintain its important inventory.

"We needed to increase our productivity exponentially," said Mike Ehrlich, AP Services plant manager. "After researching our options, we decided waterjet was the way to go."



AP Services' third Jet Edge is equipped with six cutting heads. They configured their system to cut with either four heads or two heads using different consumables. This saves set-up time.

Ehrlich investigated two major waterjet manufacturers before deciding on a 6X10-foot High Rail Gantry manufactured by Jet Edge, Inc., of St. Michael, Minn. He had the gantry equipped with two cutting heads – capable of cutting with straight water or abrasivejet – and powered it with a 50-horsepower Jet Edge intensifier pump.

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from hours to minutes

“With the Jet Edge, we can cut gaskets in 10 to 15 minutes that would have taken us hours to cut before.”

- Mike Ehrlich

Ehrlich said he selected the Jet Edge system for its high rail design which preserves drive components by keeping the ball screws and drives “up and out of the way” of airborne particulates, as well as providing easy access to the cutting surface from all four sides. Also, the addition of cutting heads on Jet Edge’s High Rail Gantry design actually extends the overall reach, rather than limiting it.

As a hydraulics expert, Ehrlich was able to stringently examine both systems, and he determined that Jet Edge’s hydraulic system was far superior. He also was impressed that Jet Edge powers its systems with intensifier pumps rather than direct-drive pumps, and noted that intensifier pumps are capable of producing higher pressure more consistently and with less maintenance than direct-drive pumps.

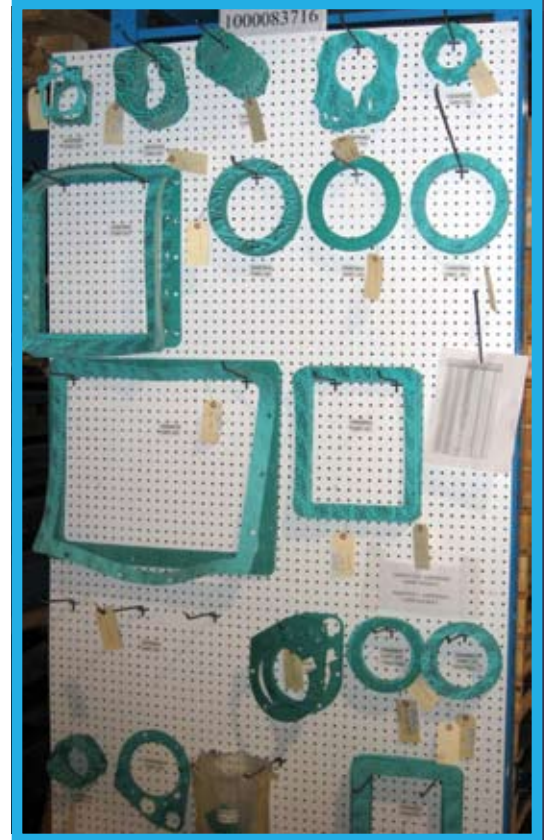
He emphasized that this reliability is very important to a service-oriented business that absolutely must meet the demands of the power generation industry during its high cycles.

“Our business revolves around service, service, service – 24/7, 365 days a year,” Ehrlich commented. “When a rush order comes in during the morning, we have to have it shipped that afternoon.”

Acquired in 2002, AP Service’s initial Jet Edge system was only intended to supplement the company’s production line, but its high productivity, superior cut quality and consistent tolerance capabilities quickly made the old clicker presses and circle cutters obsolete. The reams of paper templates also became things of the past, replaced by electronically stored and easily retrievable CAD files that are capable of achieving far more complex shapes than a paper drawing.

“With the Jet Edge, we can cut gaskets in 10 to 15 minutes that would have taken us hours to cut before,” Ehrlich said. “In fact, we had to transfer our five clicker press operators to the shipping department just to keep up with the stacks of parts coming off the waterjet.”

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Customer Success Story

AP Services Inc.
AP Services Increases Productivity 95 Percent with Jet Edge Waterjet

AP Services was so impressed with the Jet Edge system, they bought a second 6X10-foot High Rail Gantry in 2003 and began offering abrasive waterjet cutting services for machine and fabrication shops as well as mold and die shops.

They equipped the second machine with three cutting heads and powered it with a 50-horsepower Jet Edge intensifier pump. This proved to be such a lucrative investment that, in 2006, the company bought a third – and much larger – 12X10-foot High Rail Gantry system. This third system is equipped with six cutting heads and is powered by a 100-horsepower intensifier pump. The unique design of the Jet Edge High Rail Gantry with a 6-foot spreader bar has provided AP Services with a 12x16-foot total reach, critical for some of the large parts they produce for some customers.



With their Jet Edge systems, AP Services has been able to take on numerous challenging projects that would be difficult, if not impossible, to accomplish without waterjet. In one application, the company used its Jet Edge system to cut a mammoth 12-foot diameter circle out of one-inch thick stainless steel. The circle featured round holes throughout its interior. With a special fixture, the company utilized the machine's first cutting head to start around the perimeter and then picked up where the first head left off with a second cutting head to finish out the perimeter. They used both heads to cut out all the holes in the interior.

In another project, AP Services cut out (14) 2.125" squares out of each side of a 6-inch diameter by 10-foot long 304SS pipe with a 5/8" thick wall. They cut the squares 180 degrees apart to a +/- .010" positional accuracy. To accomplish this, they used special fixtures that also were cut on the waterjet. They also utilized two cutting heads so they could produce the product in half the time, to tolerance.

Overall, Ehrlich said he has been very impressed with Jet Edge's performance. He is getting thousands of hours out of the diamond orifices in Jet Edge's cutting heads and has experienced, on average, an 800-1,000-hour interval between seal changes on the intensifier pumps.

Ehrlich also praised Jet Edge's fair and reasonable sales practices and its excellent service following the sale.

"While needs for service calls are very infrequent, Jet Edge's response and expertise has been exceptional," he said.

Ehrlich also noted that the Jet Edge systems are very easy to learn and operate. He originally trained two operators and they, in turn, have trained six more.

Asked if he would buy another system from Jet Edge, Ehrlich responded, "Well, of course."

[About Jet Edge](#)

Jet Edge is a world leader in precision ultra-high pressure (UHP) abrasivejet and waterjet technology. It manufactures complete systems and related products for precision cutting, surface preparation and coating removal.