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Compact ShopPro can process mild carbon steel remnants in gauges up to 2 inches thick.

Compact cutting

Customer feedback leads OEM to introduce small plate processor with industrial-sized capabilities

BY LYNN STANLEY

For nearly a century, Koike Aronson Ransome Inc. has built its reputation on the brawny shoulders of its oxyfuel, plasma and CO_2 laser-cutting equipment, waterjets, welding positioners and portable cutting and welding carriages. "We're the ones manufacturers go to when they want big, heavy-duty machines," says Ron Krasnek, manager for global sales and marketing. The company changed its M.O. slightly when it debuted ShopPro, a CNC cutter with a petite profile, at Fabtech 2017. ShopPro demonstrated its capabilities alongside sibling machines, but the larger equipment could not overshadow the compact cutter's performance. Koike landed a number of orders for ShopPro that are already in production on customers' plant floors.

"We developed ShopPro based on outreach to fabricators and metal workers,"

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>
> **RON KRASNEK, KOIKE**

Unlike other small cutting machines, ShopPro can stand up to the rigors of constant use due to features like a helical rack and pinion and dual-side drives.

said Koike President and CEO Jim McAuliffe. "Many smaller shops need a robust feature set but don't have the space, the budget or the need to purchase one of our industrial cutting solutions."

Customers did ask for a machine that can perform the same tasks as Koike's large industrial CNC cutters can do, "but with a smaller footprint," says Product Manager Tim Joslin. "We made it compact and kept the price affordable, but made it extremely strong and included the kinds of features fabricators value."

ShopPro's speciality is an ability to handle mild carbon steel plate drops and remnants—material that plate processors and service centers have far too much of and struggle to convert to sellable product.

Waste not, want not

"Plate processors try to achieve the highest material usage rate they can—90 percent—but that's not easy to do," says Krasnek. "A lot of companies are cutting a variety of different shapes from the same piece of plate. Those jobs don't lend themselves to efficient nesting patterns and some shops don't have parts small enough to fill in with." As a result, yields decrease and scrap rates increase.

If a remnant from a job is large enough, a shop might be able to use the piece of plate for a short run of small parts. Or a company can choose to sell the remnants as scrap to local recyclers. Neither solution is ideal.

"Running small parts on a remnant can create another problem," says Krasnek. "Your typical cutter isn't built to process small pieces, which fall between the slats and have to be fished out by an operator. That adds time to the job. And, if a company decides to take scrap value for the remnants, the rate is going to be less than what they paid for the plate initially."

ShopPro, he says, is designed for small parts. "The machine can be used for anything but it loves smaller plate sizes. It's a one-torch machine but its beefy parts give companies a lot of flexibility."

Most small cutting machines are designed for hobbyists, making them insufficient for heavy production environments. Koike's ShopPro comes in three sizes: 4 feet by 4 feet, 4 feet by 8 feet, and

5 feet by 10 feet.

"Sometimes people have the perception that if a machine is small it must be cheap," says Krasnek. "In many cases smaller machines are almost disposable. This is a small machine with the capabilities of a large machine. We've built features into ShopPro that allow it to anchor a small shop's production work as easily as that of a large cutter."

High-end features

ShopPro can process mild steel from 16-gauge up to 2 inches thick. A dual-side gantry with precision ground linear bearings provide smooth, accurate motion while 25 mm rails—a large machine feature—stabilize the cutting table. Helical cut gears—another high-end feature—minimize movement and backlash for higher accuracy. "Most small plate processors have a single-side drive," says Krasnek. "We designed a dual-side drive for greater accuracy."

Koike added features to eradicate maintenance worries. Linear ways are positioned at the rear side of ShopPro's beams, eliminating the need to protect components from contamination. ShopPro's torch is mounted on a carriage that rides side-to-side along linear bearings or ways. The design moves the torch back and forth across the table during the cutting operation.

Using ShopPro with remnants frees up larger production machines so that they can operate at peak efficiency. Reuse of remnants also reduces scrap.

"Other designs place the ways on the front of the machine, but this is where you get your dirt and sparks," Krasnek explains.

An E-stop button located on each saddle quickly and safely shuts off machine motion and the cutting process, and stops the flow of oxyfuel gases to the torches.

ShopPro is portable. The rigidity of the machine's unitized table allows it to be picked up by a forklift and moved into a production cell or transferred to multiple cells located throughout the shop floor.

"Factories that are making components in different areas, and then moving parts into an assembly line, are looking to put these machines into every production cell," Krasnek explains. "It allows them to control quality and production instead of relying on one cutting machine. Four ShopPros could equal the cost of one large machine and it equips an operator to place the cutting process at the point of use instead of across the building and then have to feed individual cells with cut parts."

Koike is producing and shipping ShopPros to fulfill a number of orders. The plate cutting system that was designed for small plate processors is also quickly becoming the darling of large manufacturing and metal distribution facilities. ■

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