



One of the two Behringer HBE411A Dynamic automatic horizontal band saws Walter Metals purchased to replace four manual band saws.

A PROGRAMMED FIX

Metal distributor switches from manual to automatic band saws and realizes significant gains

Innovation is at the heart of the metalworking industry, and it takes center stage at Walter Metals LLC. Nonetheless, the Stow, Ohio-based tool steel distributor for Ellwood Specialty Steel in New Castle, Pennsylvania, was experiencing bottlenecks because its four manual band saws were inefficient and required a significant amount of operator interaction to handle material, says General Manager Mike Kaufman. “They were in need of replacement because of the age of the equipment as well.”

To reshape its sawing operations, Walter Metals researched the offerings from various

saw machine builders, Kaufman says. “We started exploring options for how do we do things better, faster and safer.”

The company eventually purchased two HBE411A Dynamic automatic horizontal band saws from Behringer Saws Inc. in Morgantown, Pennsylvania, he notes. “We looked at three or four other manufacturers, but none of them had the level of automation on the handling system that we saw with the Behringer.”

Behringer also reportedly presented the lowest total system cost when compared to the other competitors being considered. The saw builder’s extensive parts inventory and

enthusiastic team of technicians further solidified the decision to partner with Behringer.

“They have a large amount of supplies and spare parts on the ground in the United States,” Kaufman says. “As far as service goes, typically we get resolutions in under 24 hours.”

The parent company’s familiarity with Behringer sawing systems also played a role, he notes. “We have a long-standing relationship as an organization, and they’re applied at several different divisions within Ellwood Group. I would guess in excess of 30 Behringer saws.”

The automated band saws are equipped with a PC operator control, an automatic

loading magazine and an outfeed sorting unit to set a new standard for efficiency and precision, Behringer reports.

STRICTLY SOLIDS

Installed in August 2022, Kaufman says the horizontal band saws exclusively straight cut solid round bar from 2 to 10 in. in diameter. The workpiece materials are tool and die steel, such as D2 and S7, and most of the steel is annealed with a hardness up to 42 HRC. The steel primarily comes from Ellwood City Forge Group in Ellwood City, Pennsylvania, in addition to other suppliers. When a round bar smaller than 2 in. needs to be cut, Walter Metals does it on the one manual saw it kept. The new saws can cut material down to 0.39 in. in diameter, but the loading magazine limits the system to 2 in.

With the introduction of the Behringer saws and their automated systems, Walter Metals witnessed remarkable improvements, according to Kaufman. Efficiency soared as the company reduced material handling time by 50 percent, which previously caused bottlenecks. “We don’t have those bottlenecks.”

The 18-employee company operates two eight- to 10-hour shifts, depending on the workload, at its 40,000-sq.-ft. facility, and Kaufman says two saw operators and one material handler were required each shift previously and now each shift has one operator and one material handler. “We do almost two times the amount of production on two saws than we did on four.”

Walter Metals loads up to eight bars into the cassette for each saw and the cassette indexes the material into place for sawing, Kaufman explains. The saw’s programmable logic controller knows the number of pieces required for each bar, when a cut is completed and where to send the remnant so the next bar indexes in and sawing continues.

The automation enabled the company to make “lights out,” or unattended, machining a reality. The band saws can run up to eight hours unattended, which generally occurs every workday. If the company is especially busy, it will perform lights-out production on a Friday night, which would require a Saturday shift. “We don’t set it up Friday evening and walk away until Monday.”

The lights-out capabilities presented an unexpected windfall, he adds. “We have had



The Behringer automatic band saws reduced material handling time by 50 percent at Walter Metals to eliminate bottlenecks.



Automation on the HBE411A Dynamic band saws enables Walter Metals to perform unattended machining.

SAWING TECHNOLOGY

challenges keeping up with the machines, which is a good problem. The PC operator controls have been pivotal in this transformation, allowing the programming of multiple different orders to run overnight.”

SPOTTING CONCERNS

Having PC operator control also provides diagnostic and fault-logging features to give Walter Metals a roadmap to quickly troubleshoot an issue, Kaufman says. “The faults that come up are easily diagnosed, whether it’s a safety circuit issue or other.”

In addition, accuracy improved, and customer warranty claims decreased significantly, he says. The repeatability of the cut length allows Walter Metals to tighten the tolerance from 1/8 in. to less than 1/16 in., and the machine can achieve even tighter tolerances. “The yield has improved.”

Because gauges on the saw detect band wear, along with other conditions, speeds and feeds are automatically adjusted, Kaufman says. “It tries to optimize the cut while it is

“We’re busier putting material into boxes to ship to customers than we typically used to be.”

Mike Kaufman, Walter Metals LLC

in the cut.”

The HBE411A Dynamic features a servo down-feed system in which the saw feed is carried out by means of a ball screw and servomotor, Behringer reports. This arrangement results in significantly shorter idle times and more precise feeds to boost sawing performance and extend blade life.

Kaufman says Walter Metals uses bimetal blades because they are suitable for sawing the variety of different tool and die steel that it handles. “We don’t see a huge advantage in going to carbide.”

The company follows a regular preventive maintenance schedule, which includes daily cleaning of proximity switches, sensors and similar components, he says.

The 50 percent increase in capacity that these automatic horizontal band saws provided has not only improved productivity but also opened opportunities for growth, according to Kaufman. Walter Metals can now take on additional customers, contributing to the fulfillment of corporate goals for expansion and success. “We are looking at adding a significant customer,” Kaufman says.

Behringer’s reputation, cost-effectiveness and customer service have reinforced the decision to purchase the HBE411 A band saws, and Kaufman sees this as a significant leap towards a brighter, more efficient future in precision metal cutting.

“Our operators speak highly of the saws,” Kaufman says, “and we’re busier putting material into boxes to ship to customers than we typically used to be.” **FFJ**

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