

**SPECIAL
INSERT** P.22

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ADAPTING TO CHANGE

Experts advise fabricators how to rethink **managing the shop floor**

PRESS BRAKE

Technology makes bending thick or thin material easy

BENDING/FOLDING

Pint-sized machine shoulders big jobs



Trilogy's Sunrise HBM can be used to bend pipe.

Packing a punch

Distributor's pint-size, CNC-controlled bending technology shoulders the workload of larger machines

Trilogy's Sunrise Horizontal Bending Machine (HBM) may be the best-kept secret weapon for fabricators who need equipment that can pack a wallop in a small space. "When you talk about bending and folding operations, people tend to associate those processes with larger machinery, like press brakes, panel benders or section bending rolls," says Trilogy Vice-President Beej Flamholz. "Fabricators don't realize there is a smaller alternative that can handle some of the same operations."

The Belcamp, Maryland, company was formed in 2009. It supplies ironworkers, single-end punches, horizontal benders, as well as a range of plate, angle and section bending rolls from its 65,000-ft. facility. Trilogy is the exclusive U.S. distributor for the Sunrise HBMs. A booming economy and tight labor market compel manufacturers to look for ways to get the most out of their equipment and their floor space.

"We've brought the horizontal bender to Fabtech several times and heard people ask, 'What is that?' 'What does it do?' Once

they see it demonstrated, the typical response has been 'That's the machine I've been looking for, I had no idea it existed.'"

New market space

Education and exposure have helped to open a niche space where the horizontal bending machine is coming into its own. "Over the past few years, we've seen a significant uptick in sales," says Flamholz. "Our horizontal bender is no longer an afterthought. It definitely has a place in most fab shop environments."



Amerex produced these parts on the Sunrise HBM using the machine's press brake tooling capability.

The HBM is available in 45-ton and 80-ton models. Both use CNC-machined one-piece table designs for added strength. Leading electric and hydraulic components ensure reliability. A digital linear encoder and proximity sensors provide an accuracy rating of ± 0.01 in. for a repeatable stroke. An optional CNC-controlled backgauge can be programmed to retract slightly just before bending to prevent damage from material movement. Control memory can store up to 99 programs with 10 bends each for quick, easy recall of a large variety of jobs.

"We're one of the few distributors that have an HBM that is programmable," notes Flamholz. "An operator just has to install tooling and call up the job from a list, instead of manually adjusting the machine for every bend. This increases productivity dramatically."

Trilogy offers a wide range of tooling options for the HBM that can punch, shear and bend flat bar, tube and pipe. Fabricators have to consider their part volume and part sizes to determine if the HBM is a good fit.

"To bend a 10-in.-wide, 1/2-in.-thick piece of flat bar takes a lot of tonnage," notes Flamholz. "The conventional approach was to buy a large hydraulic press brake for parts like this, but the HBM's CNC control has many of the same features as a full-size press brake, so we can do the same job with a very small footprint."

“ We found that the sample run on the machine nearly doubled our capacity on average. ”

Joseph Rashleigh, Amerex Corp.

The HBM's CNC control has many of the same features as a full-size press brake.



Bang for your buck

"The customers we've talked with tell us they can set up multiple HBMs in the same space they would have had to dedicate to one press brake," he continues. "Multiple machines in the same space can double or even triple production with minimal setup time. Manufacturers who already have press brakes can still benefit by transferring some of their product mix to the HBM and creating additional ca-

capacity on their press brake. Who wants to occupy a 12-ft.-long press brake bending 6-in.-wide flat bar? There's a lot of inherent value there."

Applications for the HBM include fixture plates and small parts that require three to five bends for assembly into an end product. Industries range from bus-bar and prefabricated metal buildings to ornamental hand rails. Any job that fits the HBM's work envelope is a candidate.

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Bending/Folding

Customer experience

Amerex Corp., Trussville, Alabama, uses Trilog's Sunrise HBM to bend parts for the fire protection industry. Established in 1971, Amerex is the largest manufacturer of hand portable and wheeled extinguishers for commercial and industrial applications.

Amerex asked Trilog to make a couple changes to the HBM model it purchased. "Programmable memory was increased four times and engineering control modifications were made to the HBM's backgauge," says Amerex Plant Engineer Joseph Rashleigh. "We found that the sample run on the machine nearly doubled our capacity on average. Trilog was able to meet our commitment to excellence."

Manufacturers are also finding other uses for the HBM. Companies that are bending material are also punching holes. Trilog's Sunrise Automated Punching System (APS) complements the HBM.

"Recently we've had companies purchase our Sunrise APS automated punching and shearing system that can process flat bar up to 12 in. wide and up to 40 ft. long," says Flamholz. Because the HBM can accommodate 12-in.-wide material, some customers are shearing and punching metal with the APS, then bending it with the HBM. "We're selling the horizontal bender in a package with the automated shearing and punching system," he says.

This combination can replace a drill or stand-alone punch, a saw or stand-alone shear and/or a plasma cutter, the latter of which includes the cost of consumables. Consumable and operational costs on the APS and HBM are minimal.

Consolidating processes

"Companies are able to consolidate multiple processes into a compact two-machine cell. The production times we've achieved with these two machines grouped as a manufacturing cell have beaten forecasted time studies," Flamholz says.

Fabricators that previously were outsourcing their bending operations for thicker flat bar can bring those parts in-house with an APS anchored by an HBM.

The automated system has generated another question that is not part related. "When people ask me what will happen to the jobs and the workers running manual machines," he tells them, "I have not worked with a single company that has let people go by investing in these machines. Instead they are using employees in different capacities where they can be more efficient and productive. It can also create a safer work environment."

Whether fabricators have part volumes in the hundreds or the thousands, the HBM is an "intriguing product," says Flamholz. "When you see what it can do, you realize you don't need to buy another large press brake at the hefty price tag that comes with it."

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