

WHY BUY A HE&M SAW?

Exclusive Features That Make a HE&M Saw Unique

Horizontal Band Saws:

- ❖ The HE&M Saw Cutting System: The HE&M Saw Cutting System uses dual controlling to achieve a near constant cutting rate (square inches per minute) with the fastest and straightest cutting possible for all conditions. The pressure control valve allows the blade to provide feedback, telling the saw how to cut. The pressure that the blade exerts on the material is controlled. As the material cross section increases, the rate that the saw arm moves decreases and vice versa. The result is a constant cutting rate in square inches per minute and a much straighter cut. In addition to the pressure control, the HE&M system has a feed rate control to regulate the maximum rate at which the blade travels through the material. The control regulates the rate at which the blade enters the material and prevents the blade from moving too fast through thin sections. The entire machine is designed to make a precise force cutting system work, from the bearings, to the cylinders, to the hydraulic circuit; this is the primary goal in this aspect of the machine design process.
- ❖ Triple Link Bar Feed System: This insures positive indexing for absolutely straight and parallel feeding of material through the saw base for accurate cutting. The shuttle vise has a built-in, side-to-side movement which prevents vise drag on bent or curved bar stock, thus eliminating unnecessary wear to the vise, and length inaccuracies due to the vise hanging on the material and moving it. The shuttle vise assembly travels on precision ways via two pairs of rollers. These support the material slightly above the vise to reduce friction.
- ❖ The Pivot Point: The pivot pin is located above the vise way at the end of the arm, away from the work and runs on zero clearance bearings on both sides of the pivot, holding the arm tighter than our competition, while the lift cylinder is located close to the work. The result? Straight cuts under the most difficult conditions, because the angle that the saw arm moves through is very small; therefore, the guides are closer to the material being cut, making the blade more rigid. The pivot location also allows the phenomenon of “weight shift” to be corrected very easily.

Double Column Machines:

- ❖ The Saw Head: The saw head is guided via roller bearing guides on two independent rails on each square guide column. The use of play-free guides minimizes friction and wear, and affords a smooth and even traverse as the arm raises and lowers. The Double Column design and heavy saw base provide a rigid, stable, and rugged cutting platform for any application. The hydraulic system is specially designed to maximize cutting performance and reduce cycle times.
- ❖ Hydraulics: Hydraulic units are well laid out with fully labeled valves, solenoids, and regulators. The hydraulic system is easily accessible, reducing maintenance time and expense. All gauges can be easily spotted and checked for proper pressures.
- ❖ Optional Computer Controlled Traverse System: When cutting extremely hard material and abrasive material, a constant chip load and cutting force is a necessity. The optional CCT allows the saw operator to quickly program the exact rate of traverse required for cutting a given material by entering two pieces of information into the computer: the width of the material and the cutting rate (in square inches per minute). The computer quickly determines the exact rate of traverse required for cutting. As the blade teeth get dull, the chip thickness will remain constant. The CCT also has a built-in blade break-in mode that can be activated with the push of a button. The computer also has a blade exit mode that controls the exit to prevent “punch-through” at the end of the cut. Customers using the CCT option have experienced 100% to 200% greater saw blade life.
- ❖ Double Column Machines are available with material bar feeds from 24”, 72”, and 144” stroke length.

WF Series:

- ❖ The WF Series saws are Double Column machines that have a 9.2-degree positive blade angle. Using wheels of two different dimensions creates the angle. While cutting material with wide cross sections, putting the blade at an angle allows you to get the optimum number of teeth in the cut needed for efficient cutting. This provides considerably faster cutting times as well as reducing blade pinching.
- ❖ The material is easily handled with the use of HE&M Saw's bi-directional vises. The datum line vise move away from the material approximately $\frac{3}{4}$ of an inch. This allows you to cut banded material without any binding during material indexing times.
- ❖ The standard powered guide arm is easily adjusted by the turn of a switch.
- ❖ HE&M Saw design incorporates large band wheels and the longest twist per inch in the industry. This provides for greater blade life and far less band saw blade fatigue than our competition.
- ❖ All saw function switches are mounted on a swing-away control panel that allows the operator to quickly and safely perform all saw operations from a single location. A freestanding control console is also available.
- ❖ Full stroking vises operate at the turn of a switch so the operator never has to touch the vise. Clamping pressure is easily adjusted for thin wall or shaped material.
- ❖ Long Bar Feeds: Nothing moves material faster and more accurately than the HE&M Saw 72" and 144" bar feed system. Hydraulically powered, this system moves material into the cutting zone, reducing indexing time, and speeding the cutting process.
- ❖ Roller Base: This is designed to minimize material handling with the introduction of rollers in the base of the machine for stock movement. This prevents material from being dragged across the normal vise way assembly.
- ❖ Coolant System: The WF machines are equipped with a totally built-in coolant system with a high-pressure coolant pump. The machine has a standard wash down hose for easy cleaning.
- ❖ Discharge Table: For easy material handling after the cut. The table is 24" in length and standard with rollers. The table is welded on the machine base and is fully coolant panned to return the coolant to the machine.
- ❖ 3rd Holding Vise: Works in conjunction with the main holding vise to assist in holding the material while it is being cut and also aids in aligning the material before it goes into the shuttle vise area.
- ❖ Optional Cutting Vibration Dampening System: Designed to reduce the vibrations associated with the cutting of structural material. This system consists of a hydraulically dampened blade cushion, which allows for smoother cutting, noise reduction, and increased blade life.

Vertical Band Saws:

- ❖ Gear Box: The motor and gearbox are mounted in a single unit at the top of the saw arm, away from chips, debris, and coolant. The gearbox is a worm gear type, probably the most rugged design going.
- ❖ Counter Balance Weight: The only vertical machine builder to use a counter weight in the lower part of the arm used for head balance and more accurate tilting and feeding.
- ❖ Arm Carriage: The arm carriage is designed to ride on free rolling ball and linear bearings, creating the smoothest and strongest cutting system in the industry. This design keeps moving parts away from the cutting zone, by having the support bearings well behind the cutting area, allowing trouble-free operation for years. By locating the bearings on top of the saw frame, any service or maintenance problems are easy to handle. The feed cylinder for the head is located directly behind the massive arm weldment, for more accurate feed rates and cutting pressures.
- ❖ Guide Arm: The guide arms are the toughest in the business. The fixed lower guide is mounted directly to the massive arm weldment. The adjustable guide slides along precision ways on the arm providing a rigid mount for accurate cuts in any material. The moveable guide arm has its greatest strength and rigidity in the direction of cutting.
- ❖ Arm Tilting System: An hydraulic tilt motor (or cylinder, depending on the model) moves the arm for precise angle cuts. A disc brake system locks the arm rigidly in position on the top of the arm and the bottom.
- ❖ Saw Table: The table is precision machined on CNC “state-of-the-art” milling machines. The table also has industry standard T-slots for any additional clamping. The table is equipped with fully replaceable wear plates so, if cut into or damaged by any material, they can be replaced easily and inexpensively.

Plate Saws:

- ❖ Rugged Construction: The PS and PM Series of HE&M Saws combine simplicity with rugged construction to create a machine with outstanding speed and accuracy.
- ❖ Tough, heavy-duty guide arms hold the blade in perfect position for straight cuts.
- ❖ The arm design keeps the saw chips and material debris away from moving parts, which are located out of the cutting zone. The gearbox is located on the top of the saw arm, free and clear from saw chips and cutting fluid.
- ❖ Saw Control: The control panel is centrally located and swings in a full 90-degree arc, allowing the operator to move the console to the position most comfortable and productive for the job.
- ❖ Computer Controlled Traverse: The CCT takes the guesswork out of cutting. The operator simply enters two pieces of information into the keypad, material thickness and the desired cutting rate. The CCT computes the exact traverse speed. This allows the blade to take a consistent chip load, prolonging tooth life and increasing production rates.
- ❖ PM Table Carriage: The plate saw table carriage design rides on free ball and linear bearings and is driven by an Acme Screw with a with a vector drive motor. This has created the smoothest and strongest cutting system in the band sawing industry.
- ❖ PS Blade Change System: Installing a new blade on the PS Series Plate Saw is easy with HE&M Saw's patented SWING OUT ARM. When removing the blade, the arm is moved to the end of the saw where it swings out and open, exposing the band wheels. Blades can be changed in minutes. This design also allows for easy clean up and maintenance.
- ❖ Chip Conveyor: The automatic chip conveyor is the widest in the industry. The wide track design allows you to remove more cutting debris than the old auger design. The height of the discharge neck combined with the adjustable track timer allows for a more efficient return of the coolant.
- ❖ The HE&M Plate Saw lets a company reduce the variety of steel bar sizes in their inventory.

General:

- ❖ All machines are designed with fully bolt-on, replaceable wear surfaces that are easily and inexpensively replaced
- ❖ Non-Cocking Vises: This system holds and pulls the material down with the same force being used to clamp side-to-side, helping to prevent the material from lifting.
- ❖ Twist Per Inch: This is calculated by the angle the blade is twisted, divided by the distance of the guide arm from the wheel. The smaller the twist per inch, the better the blade life. We have the smallest twist per inch and a far less twist angle than anyone in the industry.
- ❖ Guides: Flat carbide guides with a radius ground into each one relieve the stress of making a sharp, 90-degree bend. HE&M Saw uses zero clearance adjustments after each blade change, which provide more contact area equaling less stress on the saw blade. The guides provide the most accurate system for blade alignment in the industry. The guides are precision-ground, zero clearance carbide guides that provide exact blade alignment and support for consistent, reliable cutting.
- ❖ The heaviest saw arm in the industry eliminates vibration. The large diameter band wheels provide smooth cutting and extended blade life.
- ❖ Optional Shadow Light: A high intensity light that casts a shadow of the blade on the material being cut, indicating the exact spot where the blade enters the material.
- ❖ Chip Brush Assembly: The Chip Brush Assembly runs by tracking off the drive wheel at the correct speed to remove chips more efficiently. NO cable, extra motor, or nylon wheel. It is made of a solid steel “u” coupling and a steel wheel.
- ❖ Saw Base: A curved chip pan allows for easy chip removal unlike other models where the machine bases are boxed off, making chip removal very difficult.
- ❖ Coolant System: The Coolant System is not attached to the saw. It is a stand-alone unit for easy cleaning, using a Little Giant submergible pump.
- ❖ Parts: We have designed HE&M Saws with OFF THE SHELF PARTS. You can get many of your parts at a local supply house. We are not in business to sell replacement parts; we would prefer to sell you your second and third band saw machines as your business continues to grow. Remember, since we are located in the United States, any part you need can be on your doorstep within 48-hour period.
- ❖ Service: We have the largest service staff in the industry located throughout the United States in the event that it is needed. We also have a very large inside Technical Support Staff that is just a phone call away to assist you, if needed.
- ❖ DESIGNED AND BUILT WITH QUALITY IN THE U.S.A.