

PC Controls Improve on PLCs

Automatic saws with PC controls give users enhanced functionality and feedback.

Sawing technology has made big advancements in recent years in regard to both band saws and saw blades, allowing users to saw faster and more accurately, while also extending the useable blade life. Some examples of these band saw advancements include the introduction of servo drive ball screw technology and automatic down feed control systems.

With these developments, and in turn the greater production, many users have been asking for a means to track data so they can measure the efficiency gains, get a better esti-

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In addition, as more service centers add miter sawing of parts to their value-added offerings, their information requirements are changing. They need a way to load new part numbers and commands for complicated cutting jobs in an efficient and accurate manner. Having a saw with this functionality and the ability to both feed material and

miter automatically is a real advantage. Whether the desire is to track detailed data or to offer superior automatic miter cutting, utilization of a PC control system is a valuable tool. Not only will a full PC control provide these efficiency gains, it will also deliver a lot of additional functionality and feedback.

To allow for these improved efficiencies, Behringer Saws has introduced a PC control as standard equipment on all of its automatic miter saws and as an option on straight cutting machines. A full PC control replaces the traditional program-

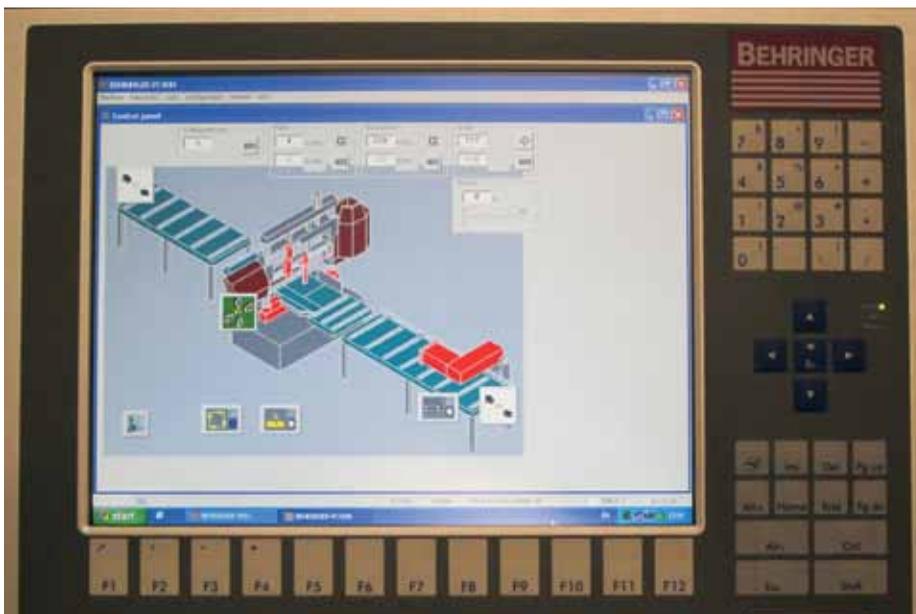
mable logic controller or PLC type, and allows for additional automation, data gathering, job management and data tracking.

In the design phase of a machine build, one of the main decisions is to select the proper controller. For the past few decades, most controllers used in service centers have been PLCs, which added some automation capabilities while withstanding the harsh shop floor environments. Even today, small-volume production runs still benefit greatly from the PLC.

More recently, introduction of more powerful PC controls offers additional advantages. The openness of a PC platform allows for use

of software that more closely integrates automation controllers. PC controls simplify operation with an ergonomic design, modern display technology and clearly arranged menus.

The PC supplied by Behringer Saws runs on Microsoft Windows with a 15-inch flat-panel LCD screen with keypad or touch screen commands to facilitate fast, accurate programming and execution of the sawing operations. The interface enables total control over turnkey solutions, while at the same time permitting machine operators to attend to other tasks. Such industrial computer technology in a compact de-



Editor's note: This article was contributed by the experts at Behringer Saws.

sign offers the flexibility of machine control and administration of orders to ensure safe automatic operation. The main menu provides an overview of the sawing system, which allows the user to control different functions such as automatic material magazines and conveyors, clamping device settings and changing of feeds and speeds.

The input of customer orders, including but not limited to material part numbers, dimensions of material, cut-off lengths, miter angles, quantities needed and drawing numbers can all be entered via the keyboard and saved. This stored job data can be recalled at a later date from the job data bank or from a remote PC location.

Another great use of the PC control is the optimization of material usage in cutting parts. For a job utilizing the same raw stock but requiring parts with numerous lengths and angles, it can be a long process for the operator to figure out the best use of material to minimize scrap. With the PC control, material can be optimized by utilizing common angles cut on various parts, which helps reduce the waste of the intermediate material. This becomes a valuable resource when preventing excess scrap from raw bar lengths.

Saws with PC controls offer the following advantages:

- A graphic surface with easy and understandable symbols.
- A touch screen for the operation of essential functions.
- An error alarm system with log and integrated cutting log.
- Calculations and display of the cutting and cycle times for pre-calculation, including data for required machine processing time.
- Automatic sorting of jobs to optimize the utilization of the length of bar.

Advancement of PC control technology has come a long way over the last decade and can now withstand the rigorous atmosphere in the metal industry where PLCs were the norm. There is a place in all indust-

Behringer Saws, Morgantown, Pa., is a manufacturer of high-performance band sawing machines, circular cold saws and structural fabricating equipment. For more information, call 610-286-9777 or visit behringersaws.com.

ries for either of the two controls, both of which Behringer utilizes, but for state-of-the-art automatic sawing equipment, a PC controller brings the system together and raises its overall efficiency. ■

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