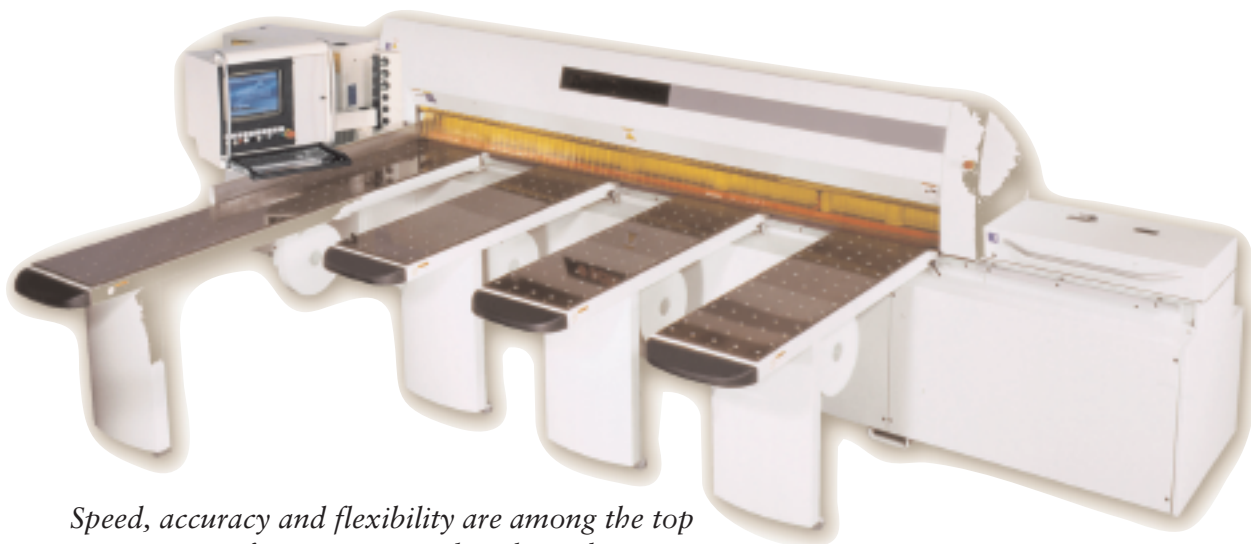


Growing Market Trends

IN HORIZONTAL PANEL SAW TECHNOLOGY



Speed, accuracy and flexibility are among the top requirements for custom woodworking shops.

By **Michaëlle Bradford**

Efficiencies of production — accuracy, speed, flexibility, ease of use and quick set-up time — according to horizontal panel saw suppliers and manufacturers, these elements are essential for custom woodworking shops to better use their saws and stay competitive in today's market.

Paul Hix, product manager at Altendorf America, says that

constant education of customers is necessary. "What we have to do when we talk about panel saws is educate people on the safety and value, ease of cutting and repeated accuracy that they will derive." Hix describes the process as a progression through four levels: 1) decision to purchase a horizontal panel saw for safety and increased production, 2) moving to digital read-out options for shops with more than one or two saw operators, 3) moving to motorized fence op-

PROS AND CONS OF NESTED BASED MANUFACTURING

Nesting is a growing trend for smaller woodworking shops. Here's a look at what a few panel saw suppliers and manufacturers have to say about the advantages and disadvantages of nesting.

Richard Hannigan, vice president of sales and marketing, Holz-Her. "We see many shops considering the options of cell manufacturing and nested-based manufacturing (NBM). The final decision is generally based on: 1) production requirements (volume), 2) available floor space, 3) financial resources and 4) need for flexibility.

"Many small shops are leaning toward NBM as a production method, which fills the requirements of small, custom manufacturers. Advances in software development and the ability to create G-Code easily have increased the appeal."

David Lillard, production manager at Delmac. "Small custom shops have been migrating more to nested-based manufacturing, where traditionally they

may have bought a panel saw first and then a point-to-point. The problem is that they are limited to the total number of sheets they can process on most nested-based machines. As they grow, they either go with another nested-based machine or augment it with a panel saw."

Paul Hix, product manager, Altendorf America. "There is a market for nested manufacturing just as there is a market for a work cell environment. It all depends upon the volume, number of employees, how technically savvy the person is and the amount of money they want to spend. When you look at nesting, it's very heavily-laden in software and programming and that's not right for everybody. Plus, if you look at nesting, it may not be the right solution for smaller shops that want to have a versatile set up from the standpoint of doing anything from restoration work to architectural millwork all the way through store fixtures. If that's their scope, nesting is not the right solution."

Panel Saw Technology

tions to aid in setup and productivity and 4) incorporating software.

When purchasing panel saws, "the overriding factor is cost and value for small shops," says Keith Jackson of Tech Mark. "[They want to] spend as little as they can and still get as much functionality as they can." With panel saws today ranging from a basic saw with a big slider to one that's almost a CNC machine,

Jackson says, "Right now, it's getting to where there is something for everyone."

The type of saws small shops purchase is dependent upon the amount of space and the amount of work they have, and their budget. The more cost-conscious will opt for a basic saw for processing panels, "a cost-function trade-off," Jackson says.

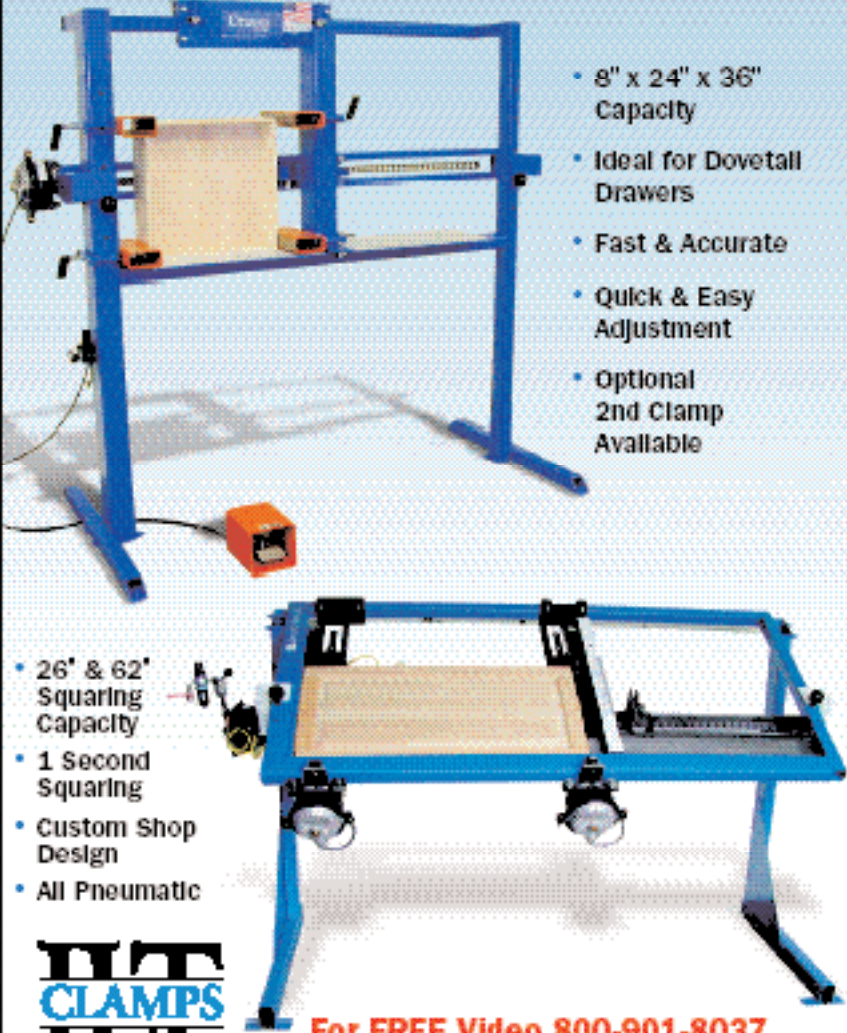
Although price is important, Andreas Schwarz, executive vice president of Schelling America Inc., says that "pur-

'Technology that wasn't available to a smaller shop in the past today gives that customer faster speeds, more accuracy and more control of the workflow.'

— Aaron Biddar

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chasing cost is only one aspect of [the] formula" when analyzing cost for panel saws. "The lifecycle of the machine should be considered." Schwartz believes that customers are looking for a "heavy-duty machine that will work reliably and accurately for 15 plus years."

The good news is that in today's market, getting state-of-the-art features on a horizontal panel saw no longer puts the price out of the range of small to medium shops. Aaron Biddar, product manager at SCM Group, says that saw manufacturers are "bringing a lot of technology from larger machines down to entry-level and mid-size models. Technology that wasn't available to a smaller shop in the past today gives that customer faster speeds, more accuracy and more control of the work-



'Modern saws are now much easier to operate and require less operator skill than in years past.'

— Rick Hannigan

flow. Essentially, better cutting capability and higher speeds for companies that want to do just-in-time production."



'When cutting up a panel into given shapes and given parts, there are only so many ways that it can be done, and the software actually anticipates how you may want to cut the panel based on some given parameters'
— Larry Tolbert

Biddar says that many shops today are typically cutting one or two sheets at a time. In the past, entry-level saws were slow, so the operator had to sit and wait on the machine. Now, the machine is waiting on the operator. Bill Pitt of Holzma U.S., div. of Stiles Machinery Inc., agrees that more companies are going to a just-in-time profile or a very short delivery time profile that mandates smaller run quantities and smaller book heights. "The accent is on speed to make sure that the saw is not a bottleneck in the production operation," says Pitt.

"Today's demanding market and production requirements have forced panel saws to evolve from high-stack workhorses into quick set up, quick cycling and flexible panel sizing cells," says Max Salmi of Biesse America. "Panel saws must have the capability to cycle through numerous types and quantities of materials in various batch sizes."

Jackson says there are several options and features that cabinet shops and commercial shops tend to want such as power lift on the blade, power tilts, digital readouts on the tilts and overhead controls. "These things make processing a little more streamlined and easier for mass production," Jackson says.

Other features available today on the newest panel saw models include:

- CNC-controlled grooving functions that allow the operator to program

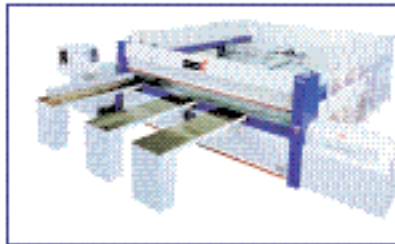
grooves of any width, length and depth in any spot on the panel. This feature also allows window cutting and corner notching.

- Linear guides for the saw carriage and program fence that enable smoother operation, higher cut quality and faster production speeds.

- Post processors that to print graphic labels that are later needed on the point-to-point or router.

- Mechanical tools that enable the

Options to Fit Your Needs...



For the Small Shop – FXH

Book Cutting Height: 77mm (3")
Positioning Fence Speed: 80 m/min
Max. Cutting Speed: 90 m/min
Max. Saw Carriage Speed: 120 m/min
Main Saw Motor: 20 HP
Scoring Saw HP: 3.5 HP



For the Medium Shop –FMH

Book Cutting Height: 102mm (4")
Positioning Fence Speed: 80 m/min
Max. Cutting Speed: 90 m/min
Max. Saw Carriage Speed: 120 m/min
Main Saw Motor: 26 HP
Scoring Saw Motor: 3.5 HP



For the Large Shop – AS

Book Cutting Height: 216mm (8.5")
Positioning Fence Speed: 80 m/min
Max. Cutting Speed: Up to 100 m/min
Max. Saw Carriage Speed: 120 m/min
Main Saw Motor: 100 HP
Scoring Saw Motor: 6 HP

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Rick Hannigan, vice president of sales and marketing at Holz-Her, also has praise for the features available on today's saws, as does Larry Tolbert, technical support manager at Richard T. Byrnes. "Advances in machine component technology and construction techniques have improved the efficiency, speed and accuracy of the CNC horizontal panel saw," says Hannigan. These features allow operators to keep up with the faster speed

of panel saws.

"Positioning controls have advanced quite well, becoming faster and much more accurate," says Tolbert, adding that each run has to be faster than before. "So positioning and cutting speeds and all these things have been increased, as well as the accuracy," he says.

According to David Lillard, production manager at Delmac, "The main thing is that people want a very flexible and a very accurate saw. Cut quality and flexibility are very important."

USER-FRIENDLINESS IS KEY:

"Another emphasis is on the continual evolution of controls for user-friendliness and away from function-type commands," says Pitt, "and to alter graphics so that the operators are interacting in a much easier way with the machine control. Operators have a shorter learning curve, and they adapt to the machine much faster than in previous years because they are all graphics-based."



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— David Lillard

Hannigan agrees. "Modern saws are now much easier to operate and require less operator skill than in years past."

According to Hix, this will benefit many companies because companies today are looking for ways to reduce man-hours. They are having difficulty finding qualified labor, who will stick with them for a long period of time, at the price point they can afford to pay.

With the newer saws, "You don't have to have as skilled an operator," says Biddar. "It keeps the pay level down."

Also adding to the user-friendli-

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ness of the saw is the trend towards optimization being done in the office instead of on the shop floor, Biddar says. "It minimizes waste because everything is being controlled from the office," he says. "Without having to have someone at the saw to figure things out, you're going to have an accurate product mix or part mix."

The integration of the PC into panel saws, advances in software and Windows compatibility also has increased flexibility for shop owners. "You're seeing more reliable saws than you did a few years ago just because the ability of the PC has pretty much become a mainstay on most panel saws," says Lillard. "It's allowing more networking and software integration into the machine."



'Options purchased almost all the time include online diagnostic, optimization and label printing, as well as the grooving function.'

— Andreas Schwarz

Tolbert says that software has become almost intuitive for the operator. "When cutting up a panel into given shapes and given parts, there are only so many ways that it can be done, and the software actually anticipates how you may want to cut the panel based on some given parameters," which makes it easier for the operators.

Panel saw suppliers and manufacturers view software and software integration as critical to success. It is important for shop owners to look at

how well a saw will interface with their office software; if it can't communicate or be downloaded, then it won't be effective. Hannigan says that "the dramatic increase in optimization software has created a demand for high-technology saws. Modern saws now utilize Windows-based control systems that allow for easy, seamless transfer of cutting pattern information from the office to the machine."

Minimizing the non-value-added

time required in cutting panels and maximizing the amount of time the blade is actually cutting, is very important to shop owners, says Pitt. Since controls can be downloaded, it eliminates the non-value-added set up time at the machines, he adds.


Label printing also has become a more important feature in recent years. Pitt also says, "As more people are cutting in smaller job lots, label printing, synchronized with the machine, has

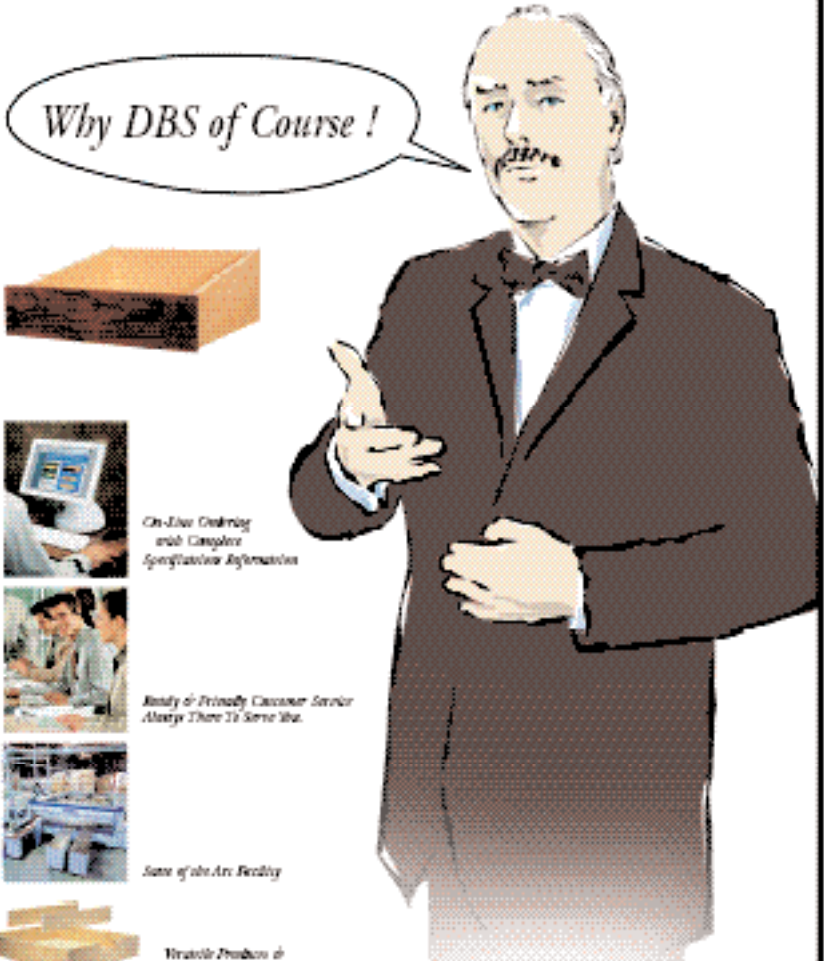
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become increasingly essential to every operation. Operators have more to keep track of than they did in an environment when they would cut 100 of this or 200 of that. Synchronized label printing is driven by the machine controls," he says. Although label printing as been around for years, Pitt says that it just keeps "evolving and getting better."

Diagnostics has also grown in importance today. Because the use of software has increased and become integral to improved efficiency and productivity, it is critical that the machine is up and running without glitches or mechanical problems. Consequently, online and graphics-based diagnostic options for panel saws are becoming increasingly popular with shop owners.

The use of Windows-based PCs aid in troubleshooting. According to Lillard,

"Another thing that PCs offer is that you can hook it up to the Internet for online diagnostics. It has been around, but it has just become very easy nowadays." Machines must be reliable from day-to-day.

Schwarz says that at his company, "Options purchased almost all the time include online diagnostic, optimization and label printing, as well

'Flexibility, ease of use and ease of setups are paramount in today's environment.'
— Paul Hix

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as the grooving function."

Another trend noted by several saw suppliers is that many small shops are migrating to nested-based manufacturing. Nesting allows an operator to do everything at once, from routing to cutting, on one machine. According to Biddar, this has caused a shift in equipment usage away from the panel saw.

However, panel saw suppliers and manufacturers say that nesting is not a solution for everyone, and it really depends upon individual shops and their end products as to whether it is a good option. (See sidebar on page 77 for pros and cons of nesting).

However, the market for panel saws is still strong, thanks in part to the increase in purchases by the small- to mid-sized shops, which are doing well because of the housing boom and strong kitchen remodeling market. "They are the ones who are experiencing the growth right now, so they are the ones who are buying panel saws to do just-in-time production," says Lillard.

Ultimately, what they seek most is flexibility. "[Panel saw] customers are the most technologically savvy in the marketplace and also the most demanding, because they have to do it all. They expect the greatest level of technology for the best value in the market," says Hix. "Flexibility, ease of use and ease of set ups are paramount in today's environment." ■

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