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Jennifer Hicks (top, cover)



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SAW BLADE CUT DIFFERENCES

A question that often gets asked is *What is the difference between a standard blade and a thin kerf blade?* Any time you make a cut using a saw blade there is a certain amount of material you are removing from the workpiece. This is decided by the width of the teeth, which also determines the kerf (the width of the cut). A thin kerf blade's teeth are about half as thick as the teeth of a standard kerf blade.



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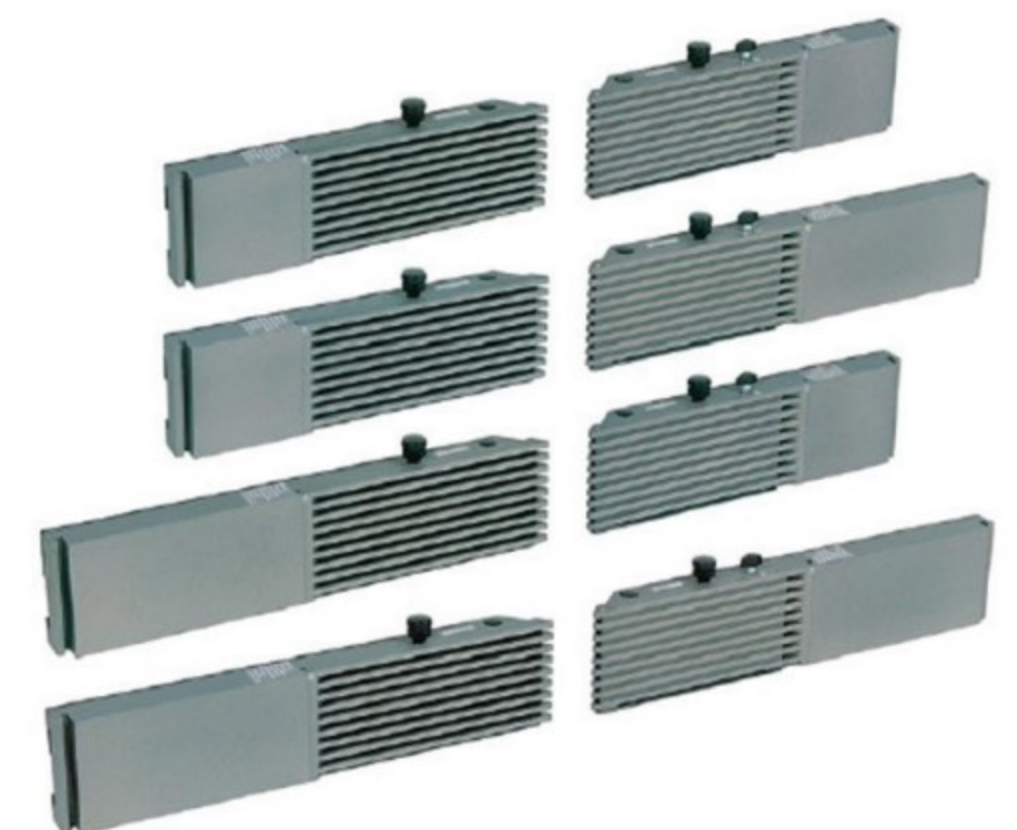
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Over the Workbench

Talkin' shop with former editor A.J. Hamler

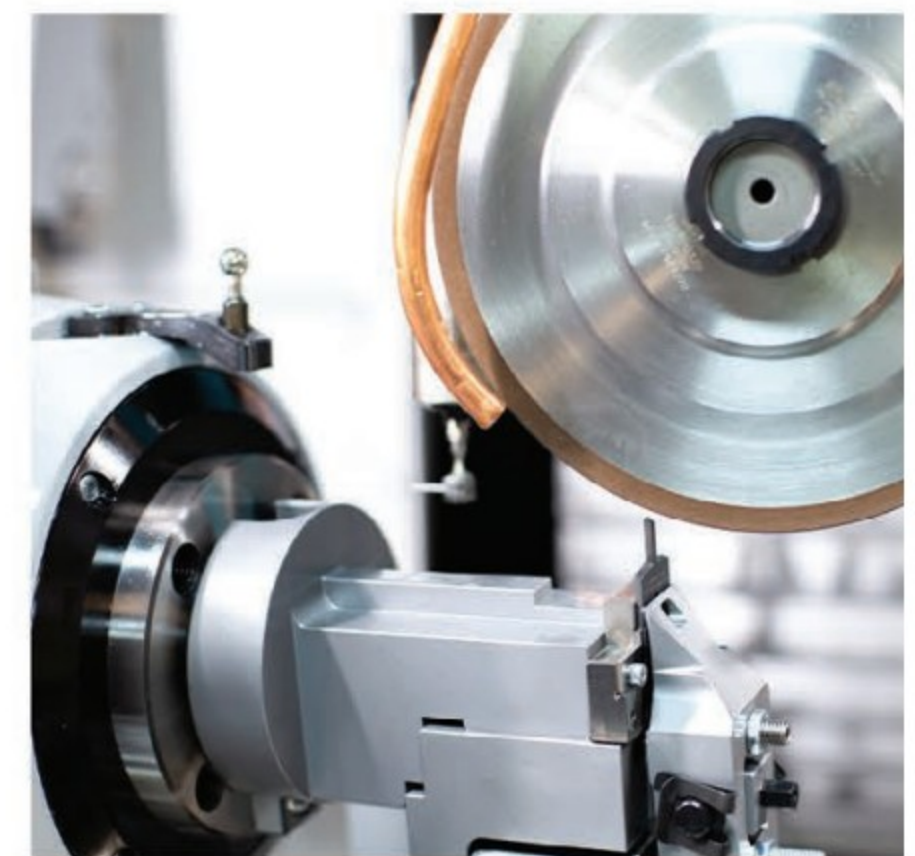
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Active Interest Media acquires Taunton Press

By Tod Riggio

I'm excited to announce that **Active Interest Media (AIM)**, the parent company of Woodshop News, has acquired The Taunton Press, a consumer media and book publisher, based in Newtown, Conn.

Taunton's titles include Fine Woodworking, Fine Homebuilding, and Fine Gardening. AIM also publishes Popular Woodworking and Woodsmith, along with dozens of boating, homebuilding, collecting, gardening, cooking, and writing titles.

According to AIM, the acquisition of The Taunton Press aligns several core markets and allows AIM to expand its mission of inspiring an ever-growing audience of enthusiasts to enjoy their hobbies and interests. This strategic move effectively doubles AIM's reach and influence across gardening, woodworking, and homebuilding.

"AIM and Taunton are closely aligned on several important fronts. While the symmetry of many of our core markets is obvious; woodworking, gardening, and homebuilding; there are many other similarities," Andrew Clurman, AIM's President and CEO, said in a statement. "Strategically, like AIM, Taunton has been aggressively pursuing the creation of new digital products, memberships, and online learning to better serve their audiences. Most importantly, Taunton shares with AIM a commitment to

growing and promoting both the communities we serve, and our fantastic teams dedicated to that mission."

"AIM will be an excellent home for Taunton," said Andrea Roman, Board Chair of The Taunton Press. "The two companies share a dedication to producing high-quality information, and inspiring enthusiasts for hands-on living. AIM's leadership, scale and resources will provide a strong foundation for the next generation of Taunton's growth, and the combined organization will provide new opportunities for our employees."

We're only about a month into this acquisition and there's quite a bit to sort out, but I can share that Woodshop News is moving from the AIM Marine Group to join Woodsmith, Popular Woodworking, Fine Woodworking, Fine Homebuilding and other titles in the AIM Home Group, led by Rob Yagid, formerly of Taunton. I'm very much looking forward to working and learning from the editors of these fine publications. Collectively, we now cater to all segments of the woodworking field - from beginners to professionals - and that's something to hang our hats on going forward.

I'll keep you posted on any future developments but for now I just want to welcome Taunton's crew to the AIM family. It's an honor and a privilege to be associated with your titles. **W**

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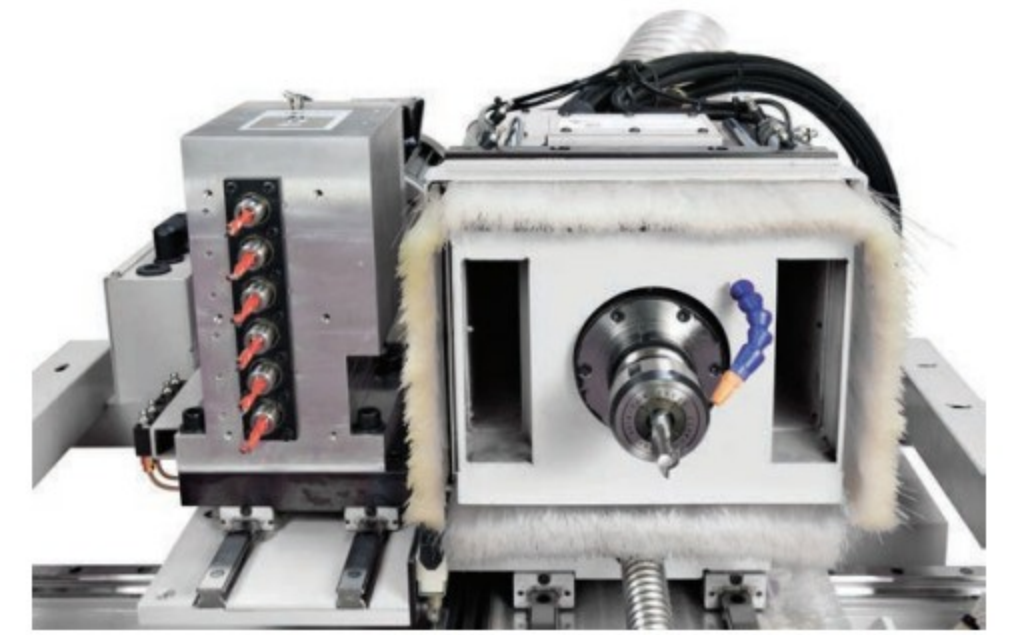
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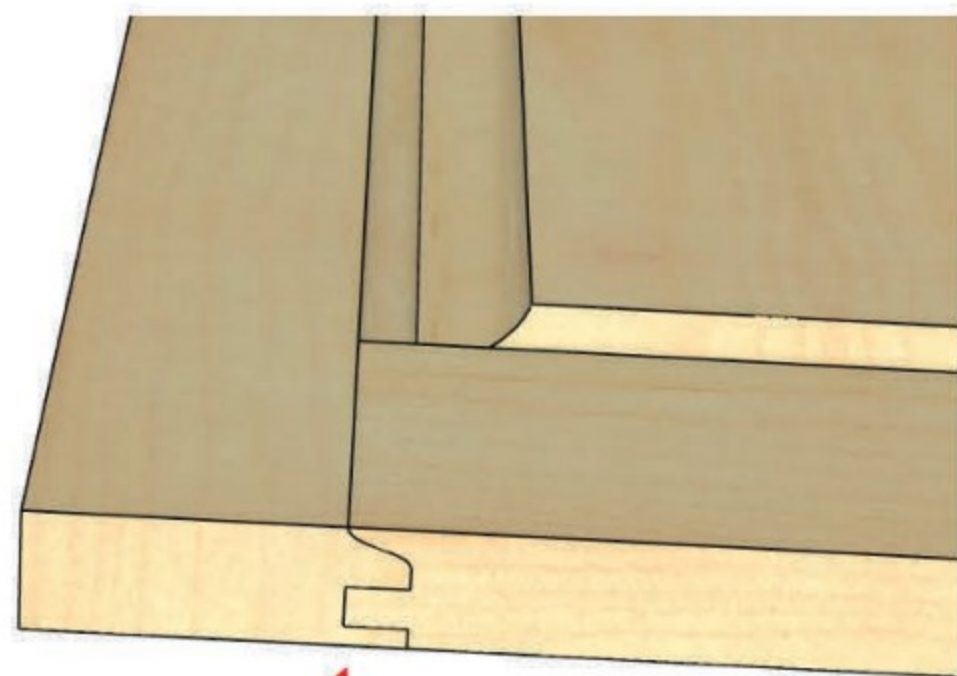
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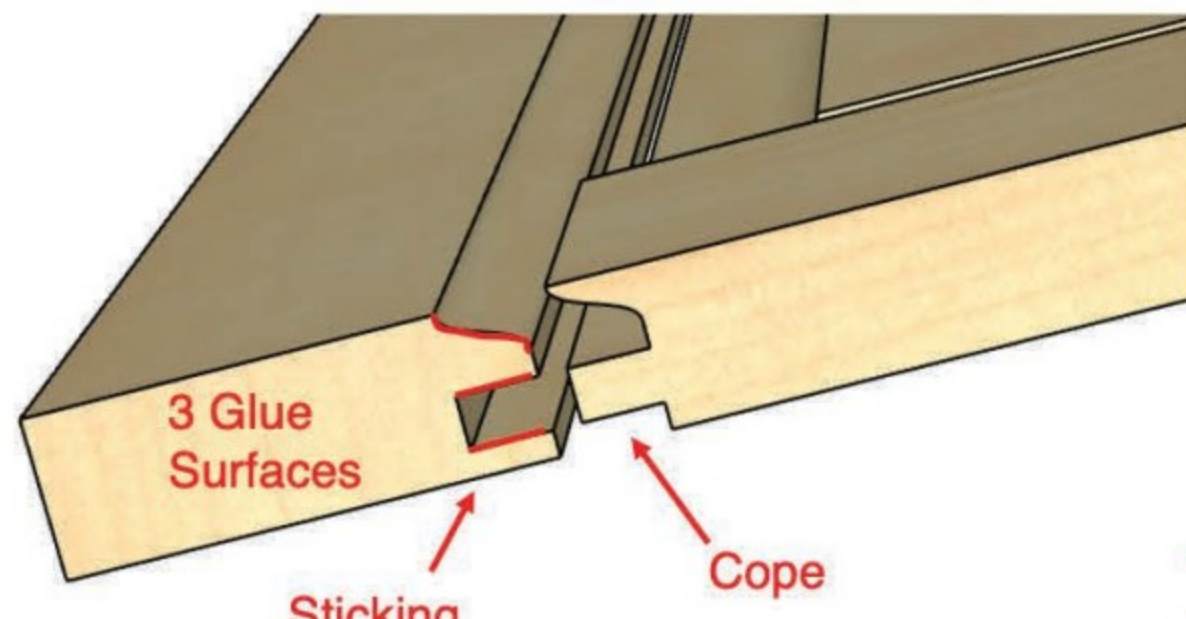


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Door Frame Joinery



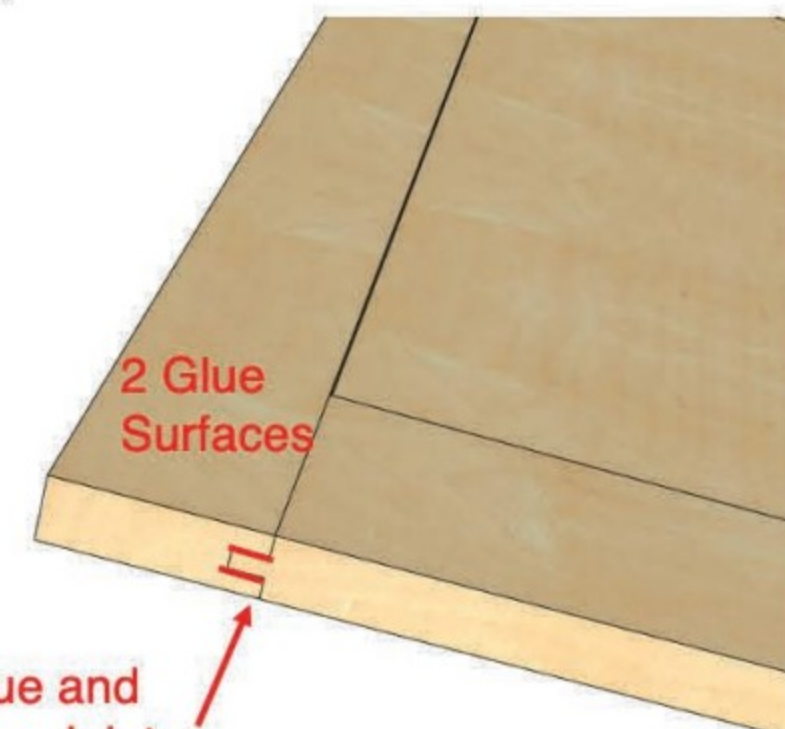
Cope and Stick Joint



3 Glue Surfaces

Sticking

Cope

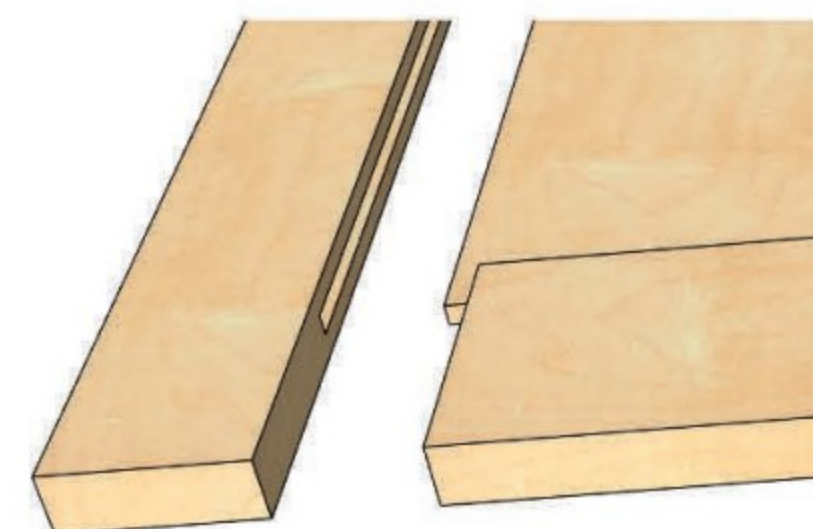


2 Glue Surfaces

Tongue and Groove Joint

- Door frames typically use Tongue and Groove, or Cope and Stick joinery.

- In addition to a groove for the panel, this type of joinery gives more glue surface that is not end grain.



End grain gluing makes a very weak joint...

FEBRUARY 2024

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WOODSHOPNEWS

WCA to offer online training courses

By Jennifer Hicks

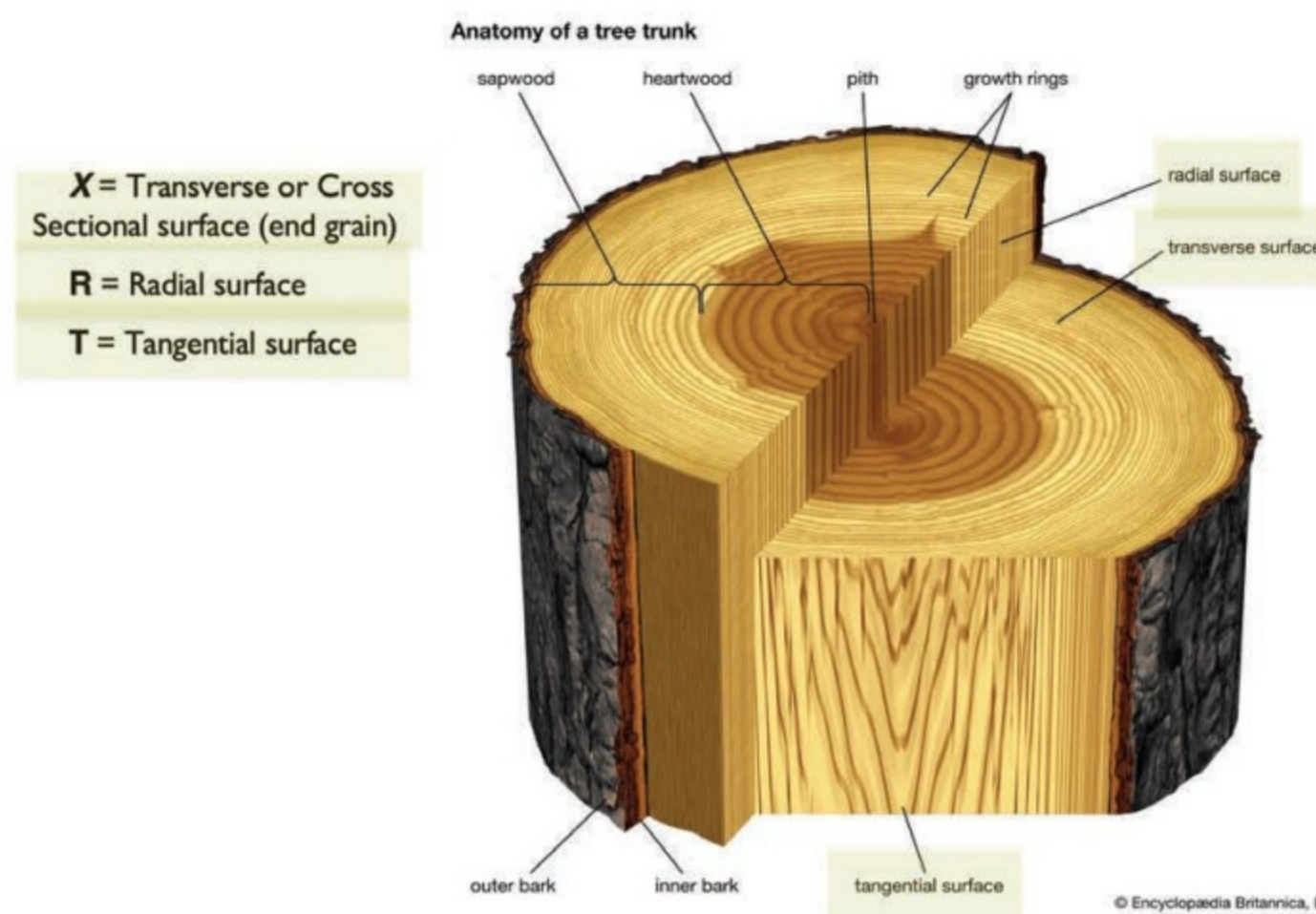
The Woodwork Career Alliance (WCA) is producing a program of online training courses for entry-level woodworkers, scheduled to debut this spring.

Greg Larson, the WCA's vice president and lead developer in the program, says employers are highly interested in such training options due to the current labor shortage, and that these courses are another way they can attract and retain employees.

"The real gist of this is it's become a crisis with hiring new employees and figuring out how to get them trained. Even bigger organizations don't necessarily have people on staff who know how to teach, and they have all this knowledge on things they never really thought about how to organize it into a coherent platform. I think a lot of people end up starting at these jobs and they just don't get properly trained and so they end up getting discouraged and quit. So, we're hoping this will help," says Larson.

Content for the courses is being developed by Larson, his colleagues and other industry professionals with extensive experience as woodworking educators. The first two courses are "Wood Theory" and "Math, Measuring and Layout". Future courses include "Woodworking Fundamentals" and "Milling and Machining".

Surfaces of Wood



Graphics from the entry-level online training courses being developed by the Woodwork Career Alliance.

"We want to offer basic knowledge that doesn't get taught on the shop floor. This would be a resource so theoretically you can hire somebody and have them do basic tests while they're taking an online course," says Larson.

"We're not planning to teach everything there is to know about woodworking. It really is designed to bootstrap these new people and get them up to where they can be trained internally on the more advanced stuff."

There will be a fee for the courses. Larson says the WCA is still working out price structure, but that course costs will probably be on a per module, per employee basis.

The WCA (woodworkcareer.org) is a non-profit organization dedicated to developing and administering a unified set of Skill Standards for the wood products industry. **W**

Courtesy of WCA

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Team Villalobos with its white oak bar cabinet.

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WOODSHOPNEWS

Build-off held to support women in woodworking

By Jennifer Hicks

Rubio Monocoat USA, in partnership with Festool USA, recently sponsored the 2023 All-Women's Build-Off at the Florida School of Woodwork in Tampa, Fla. The event included two all-female teams that competed to build two pieces of furniture for a raffle to support women in woodworking.

"The 2023 All-Women's Build-Off was a special, inaugural event. Not only did many talented women from across the country join together to build furniture in such a short amount of time, but all proceeds from raffling off the furniture they crafted will also go towards scholarships to help educate more women wanting to get into woodworking," say Rubio Monocoat's content marketer Natalie Dove.

During the two-day event, the teams were led by Alma Villalobos of Pink Soul Studios and Amanda Russell of Sawdust Woman. Each team consisted of seven total team members from across the U.S.

Team Villalobos crafted a white oak bar cabinet that featured a clean, modern design with mosaic cabinet door fronts. The mosaic wood pieces composing the doors were finished in a variety of colors to add interest to the cabinet.

Team Russell crafted a contemporary bar cart made from walnut that features brass detailing on the cart's handle, lower storage shelf, as well as on the castors.

The pieces were raffled off to benefit the Florida School of Woodwork's non-profit Friends of the Florida School of Woodwork, where all proceeds will go towards scholarships for women wanting to learn and develop in the woodworking trade. Wood for the projects was provided by Devika Maharaj of Central Wood Products in Winter Garden, Fla.

Learn more at rubiomonocoatusa.com. **W**



Furniture Safety Week begins in October

By Jennifer Hicks

The American Home Furnishings Alliance (AHFA) will sponsor an annual Furniture Safety Week beginning in October. The initiative is designed to engage all segments of the home furnishings industry in public conversation about furniture and home safety, and will have three key objectives, according to Andy Counts, CEO of the AHFA.

"First, the effort will improve consumer awareness of home safety issues that involve our industry's products, including furniture tip-over hazards, recliner safety and bunk bed risks," Counts said in a statement.

"A second objective is to elevate the home furnishings industry's integral role in developing and maintaining effective product safety standards. Under the leadership of the AHFA, our industry advocates for product regulations that provide the greatest degree of safety for the greatest number of American consumers.

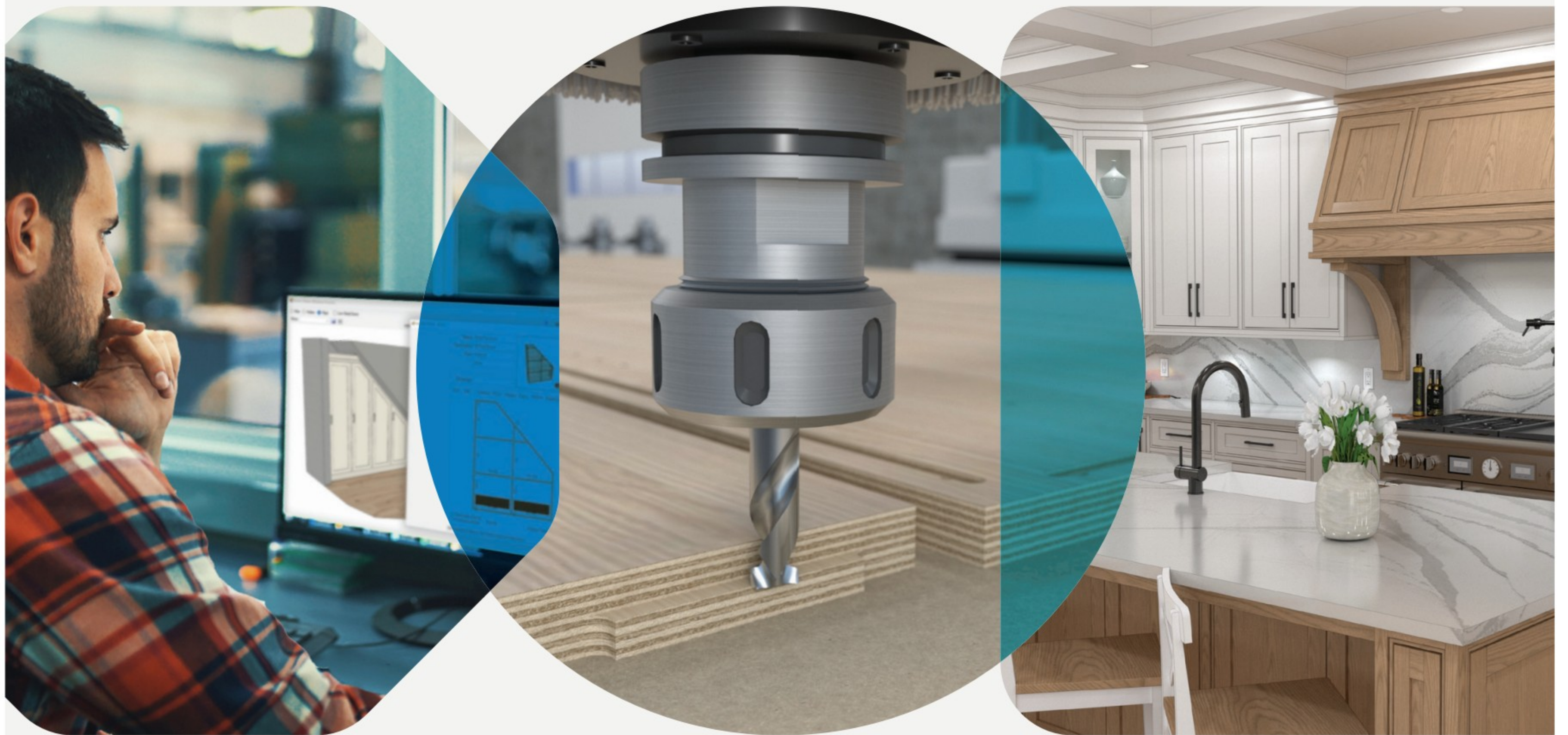
"AHFA research, cooperative task group activity, collaboration with outside stakeholders and constant compliance guidance has resulted in continual improvements in product safety and declining incidents involving our industry's products."

The third goal is to embrace collaborative relationships with consumer safety organizations, particularly those dedicated to protecting children.

A task group including retail, manufacturer and importer members of AHFA is currently working to develop details for the inaugural event. Learn more at ahfa.us. **W**



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Olive wood is ripe for the picking

By Jennifer Hicks

Olive trees are dying by the millions in southern Italy from an outbreak of *Xylella fastidiosa*, which has increased the supply of olive wood.

"There is a bacterium that is infecting the olive trees and they're cutting down more of the trees, so we're seeing more of the olive wood coming onto the market which is good for us but not good for the trees," says Carl Mahlstedt, owner of Goosebay Lumber in Chichester, N.H.

"Our olive wood specifically comes out of Italy, but it grows all over the Mediterranean area and it's been very popular. It's been popular for a while because of how much character it has with the live edge [from] the tops of the trees. They don't cut down the whole trees unless they're dying or they're dead or stop producing for whatever reason, so you're getting a lot of the more interesting figure where there might be some knots or some crotch figure."

Olive wood (*Olea europaea*) is native to the Mediterranean region, but is also cultivated in many subtropical regions worldwide, according to the Wood Database (wood-database.com). The trees grow to approximately 25' to 50' tall with a trunk diameter of 3' to 5'. The heartwood is yellow to light reddish-brown with contrasting darker brown to black streaks and veins, and the sapwood yellowish in color.

Olive wood is often used for bowls, utensils, furniture and chest sets, for example. The trees have more value producing fruit and olive products, so before the outbreak, few were harvested for their wood. Most of the supply came from pruned or storm-damaged trees, and getting big slabs wasn't a common occurrence.

"It seems like we're getting a lot of nice wider boards that we don't normally see," says Mahlstedt. "It's always been a higher end species because of the fact they don't



cut them down, so it's always been a little harder to get in these quantities."

Olive wood is also readily available on the veneer side, according to Greg Engle of Certainly Wood in East Aurora, N.Y.

"I was in Europe in December and there was close to 100,000 sq. ft. of new olive wood production," says Engle. "It's regulated and there aren't a lot of these trees that come to market, but when they do, the bigger ones are generally taken and set aside for veneer or lumber production."

"It's a dense hardwood veneer, oily as well, but has a beautiful golden-brown luster with barricaded lines and streaks running through it. A very classical looking veneer especially for furniture and interior design specifications." **W**

Courtesy of Goosebay Lumber

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WOODSHOPNEWS

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REHAU EXPANDS IN MEXICO

REHAU has opened a third facility in central Mexico to manufacture edgeband for the North American market.

The new facility, Plant Celaya 3, is next to the company's two existing plants in the municipality of Apaseo el Grande, Gto. With an investment of \$25 million, the plant adds 172,000 sq. ft. of manufacturing and warehouse space and is projected to create 300 new jobs when it reaches full production during 2024, according to the company.

"REHAU is known throughout the woodworking industry for our superior ability to produce edgeband that perfectly matches the surface laminate," Thomas Troeger, CEO of REHAU Americas, said in a statement. "This proprietary technology is labor-intensive and requires significant skill. Once again, we turn to central Mexico to find the exceptional skilled labor force we need to support our customers as they grow their businesses."

E-Z LOK ADDS ONLINE CATALOG

E-Z Lok, a manufacturer and master distributor of threaded inserts for metal, plastic and wood, has recently launched an online CAD library to showcase a wide selection of its products.

The online catalog allows viewers to access robust product information anytime, anywhere through the E-Z Lok website (ezlok.com).

"Customers can view 3D models and visualize the products as well as download PDF datasheets for quick information. Once a product is chosen, OEMs and other engineering buyers can download the CAD file in a variety of native and neutral formats," the company said in a statement.

NEW DATES FOR LIGNA

LIGNA, an industry trade show in Hannover, Germany, announced changes to its traditional show schedule that will begin in 2027.

The new dates are May 10-14 for LIGNA 2027 and May 14-18 for LIGNA 2029. LIGNA 2025 remains on the schedule for May 26-30.

This was a joint decision by the LIGNA organizers, Deutsche Messe AG and VDMA Woodworking Machinery.

"The decisive factor for LIGNA's rescheduling from 2027 is the change in visitor behavior on Ascension Day and the following Friday as a bridge day," Stephanie Wagner, head of LIGNA for Deutsche Messe AG, said in a statement.

"The leisure behavior of visitors has changed significantly in recent years. Thursday as a national public holiday and the following Friday as a bridge day are very popular as an extended vacation weekend, particularly by German visitors from the skilled trades sector, but also from the industry. Our visitor analyses clearly confirm this. As the world's leading trade fair for the woodworking and wood processing industry, we want to present our exhibiting companies with a high quality and quantity of national and international visitors on all five days of the fair – from all visitor target groups. From our perspective, this will only be possible if LIGNA leaves the Ascension week in future."



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Stromab presents the Matrix

By Jennifer Hicks

The new Stromab FAST500 Matrix is a high-speed cross-cutting saw with an innovative electronic push feed system that will significantly increase the production of flooring, window and door frames, and the like, according to its distributor, Akhurst Machinery.

"Typically, what most companies will have is a manual saw, like a chop saw, or they'll use a system where they're setting lengths manually," says Ryan Akhurst, vice president of Akhurst Machinery. "But a lot of customers need to speed up product production and they're looking for high accuracy. [The Matrix] scans the lengths of the board and will optimize and determine cuts from a cutlist."

The Matrix boasts a 10-hp motor and a cutting cycle of about two seconds. It accepts a 500mm TCT blade and offers a range of cutting capacities depending on the machine's settings. A heavy-duty rack and pinion material pusher system offers fast and accurate positioning with repeatability, according to Akhurst.

The Matrix is available in Base, Opti, and Opti Plus versions. Base offers three uniform-length optimization options, while Opti has automatic board length detection and full optimization.

Akhurst says the third option, Opti Plus, is designed for advanced mark detection and ensures complete optimization while eliminating knots and defects.

"If there's a defect on the board, usually the operator marks it with a fluorescent crayon, and the scanner will actually scan it and look for those defects and optimize between those defects," he says.

Standard features include a Beckhoff touchscreen interface with a Windows operating system. Learn more at akhurst.com. **W**



Courtesy of Akhurst Machinery

FEBRUARY 2024

14

WOODSHOPNEWS



The Direct Drive dust collector gets the dust out of the work area and into the hopper where it belongs. [Since the stand is] bigger, it's easier to pull that hopper in and out from underneath.

- Gary Bajus, President
Beaver Creek Industries



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The Stromab FAST500 Matrix cross-cutting saw, available from Akhurst Machinery.

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Laguna offers bandsaw for wood & metal

By Jennifer Hicks

Laguna Tools, in collaboration with its metalworking division Dake, presents the new 14CX bandsaw for shops that need to cut wood and ferrous metals.

The model is loaded with features, including a two-speed pulley system, digital readout of the blade's speed, electronic speed control, and an enhanced foot brake system.

"The 14CX bandsaw sets a new standard in traditional bandsaws with its newest features that now allows it to take on metalworking applications," says Laguna marketing manager Marcos Alderete.

"With a simple change in blade, our 14CX bandsaw can transition from cutting wood to metal when paired with the all-new speed control knob and digital readout, allowing users to see precise blade speeds for various metalworking applications."

The speed control knob allows users to adjust speeds on the fly, optimizing blade performance during the cut.

The Laguna 14CX bandsaw sells for \$2,499. Learn more at lagunatools.com. **W**



PaintLine's new hinge hooks feature a sharp point to hold doors by their hinge cup holes.

New hinge hook from PaintLine

By Jennifer Hicks

PaintLine offers a new hinge hook for hanging cabinet doors in the finishing room. The hook features a single, high carbon steel wire with a sharp point to securely hold doors by their hinge cup holes.

"Other clips use a double wire, spring-like hinge cup connection which often creates the need for touch-up or a second pass after adjusting the clips," says Kyle Robinson, PaintLine's CEO. "With our new, single wire design, none of that should occur."

Each hinge hook has a weight capacity of 25 pounds. A set of 100 sells for \$147.

Learn more at paintline.com. **W**

Castle USA adds SideShift auto positioner

By Jennifer Hicks

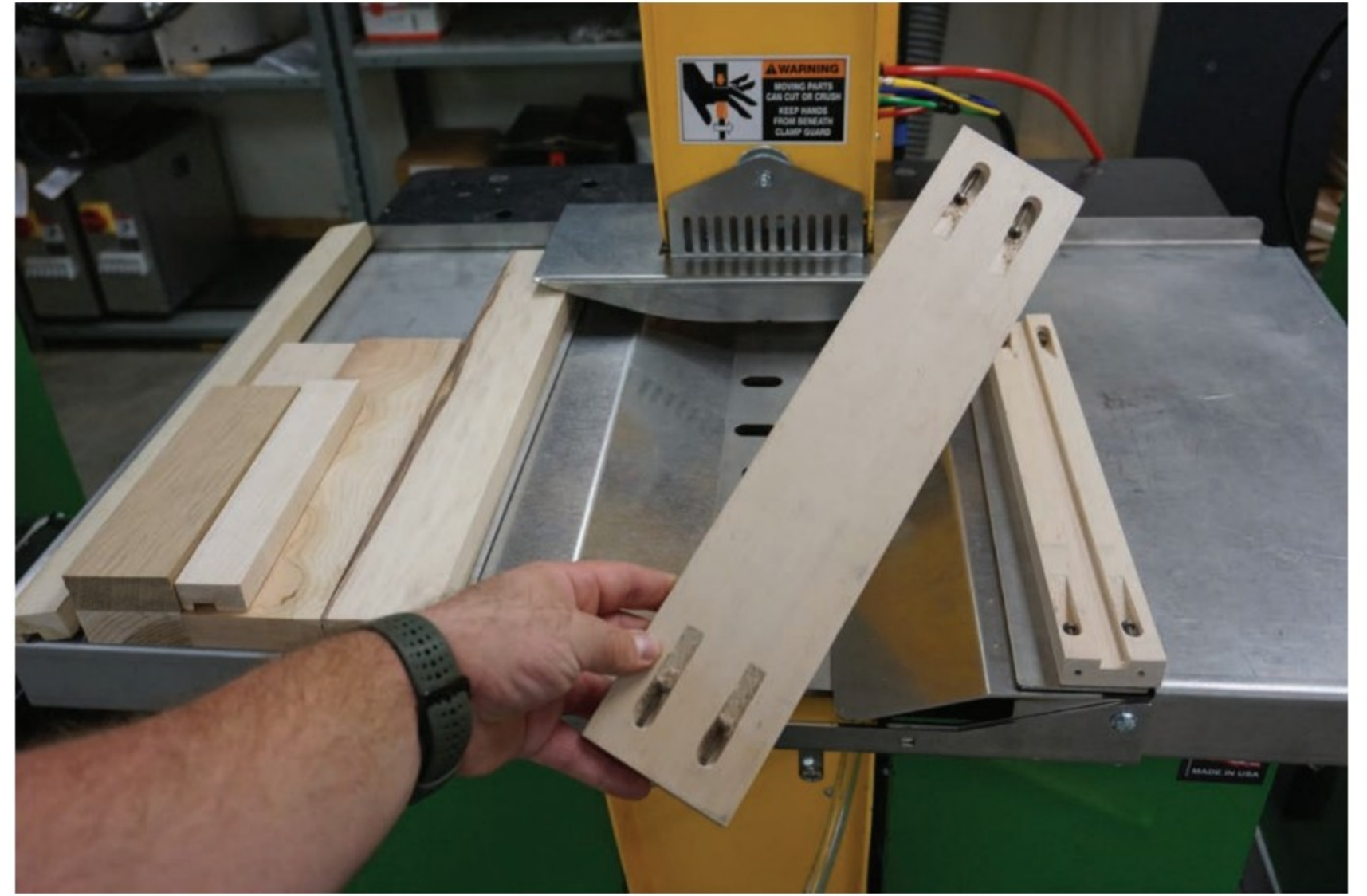
Castle USA introduces the SideShift, a double pocket auto positioner for its CSI 1.5D pocket cutter/screw inserter machine for face frame production.

SideShift automatically positions the stock, from 1-1/4" to 3" wide, while the CSI creates two low-angle, 6-degree pockets with screws in a single step.

"The SideShift gives the operator, with one press of a foot pedal (it's a press and hold) really accurate pockets with perfect spacing," says Mathias Forsman, CEO of Castle USA. "The end result is two perfect pocket screws already inserted."

"Prior to this, we've always had flip stops available in varying sizes and varying distances for the CSI. But with those in place, operators working fast to get piece quotas were not paying attention to the orientation of the part. So, this really takes that out of their hands."

The SideShift is controlled by the CSI's PLC (Program-



The SideShift automatically positions stock for Castle's CSI 1.5D to drill two pocket holes and insert the screws.

mable Logic Controller) and can be easily removed from the CSI when not in use, according to the company.

The SideShift sells for \$6,999.

It is available on the new CSI 1.5D and can be added to CSIs with a PLC.

For more product details and customer support, visit castleusa.com. **W**

Courtesy of Castle USA

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The Revolution miter gauge from SawStop.

For those special occasions

These commercially available jigs just might earn a place on your wall of fame

By John English

Half the fun of woodworking is building jigs, and many shop owners have a wall where they store their best ones – just in case they’ll ever be used again. While many are one-off pieces of art, some jigs see regular use and become essential to processing and joinery.

Most of us have built a cross-cut sled or a box-joint jig and still use it, and YouTube is rich with ideas for making such aids. But sometimes we need something special, or don’t have enough time to experiment or invent. That’s where commercial jigs come in.

TOOL HELPERS

FastCap (fastcap.com) has added an aluminum sled for Festool’s DF 500 Q Domino joiner to perfectly align face cuts in one board with side cuts in another.

SawStop (sawstop.com) is introducing the new Revolution miter gauge with a geared dial system for setting angles. Available in early 2024, the Revolution lets the user dial in fine adjustments and features a telescoping fence that offers a maximum crosscut of 37-1/2” using an included flip stop. The stop includes mounting holes for adding jigs or

locking into the wedge system. The miter bar also has three adjustable pucks to eliminate side-to-side wiggle in the miter slot. The heavy-duty gauge may seem a bit pricey at \$449, but will probably be the last one a shop ever buys.

At the other end of the spectrum, the new MatchFit Jig Handle from **MicroJig** (microjig.com) is a clever way to add an ergonomic handle to any jig that uses the company’s dovetail-grid base to make or build jigs. MatchFit is a system that adds clamping options to sleds and workbenches, and the handle makes it

much easier to move sleds across a machine such as a table saw or shaper.

SAW GUIDES

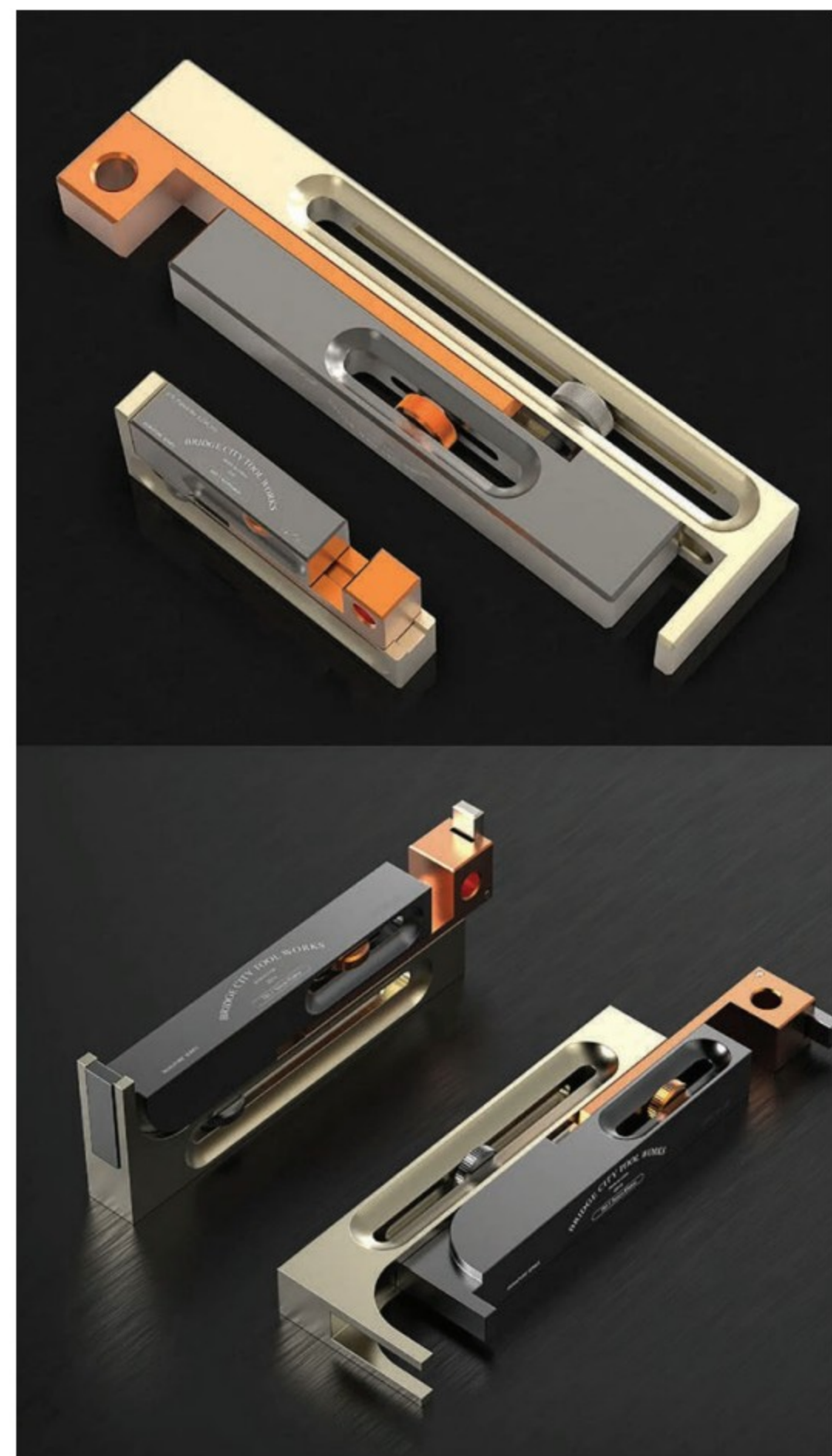
Kreg Tool (kregtool.com) offers the Rip-Cut and Accu-Cut circular saw guides, along with standard straight-edges. The Rip-Cut follows the edge of a sheet being cut and can be set for rips up to 24" wide. It has a built-in measuring device, which eliminates the need for laying out a cut with a tape measure. The sled accepts most left- or right-handed circular saws, except worm saws. The Accu-Cut rips, crosscuts and makes angled cuts up to 50" long in sheet stock. It works on sheets that don't have a straight, flat edge. No clamps are required to hold the track in place thanks to dual guide strips that have an anti-slip coating, and an anti-chip feature to prevent splintered cuts.

Bora Tools (boratool.com) makes 36", 48" and 96" long clamping guides, and has just added a plastic saw plate that rides along all three.

Milwaukee Tool (milwaukeetool.com) makes a 106"-long guide rail that is compatible with the company's 6-1/2" plunge track saw. It features anti-slip strips to keep the track from moving during cuts, and an anti-splinter edge strip. It's also compatible with Milwaukee's rail clamps, rail connectors, and track bag.

Pony Jorgensen (ponyjorgensen.com) makes a 50" long guide for use with jigsaws, circular saws, routers, and other portable power tools. It clamps to the work surface with a handlelocking mechanism, and has a ruler on top. For workpieces longer than 50", there's an extension rail and connector that doubles the length and handles the full length of a sheet of plywood.

The universal base on the Track-



The Kerfmaker (top) and Tenonmaker from Bridge City Tools.





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A cutting rail guide from Pony Jorgensen comes in a standard 50" length, but can be extended to handle full-length sheet goods.

SawGuide from **Milescraft** (milescraft.com) fits most circular saws with up to 7-1/4" blades, except worm drive and rear-handle models. Its aluminum construction and low profile, with bottom-mounted clamps, let a saw cut through stock over 1-3/4" thick. It will handle sheets up to 50" long, plus angle cuts. And it can be made to any length required with the addition of optional GuideRail extensions. Milescraft also offers the inexpensive Edge&MortiseGuide, which is a universal router base that works with an edge guide to make straight cuts, and the CircleGuideKit that lets a router cut circles from 1-1/2" to 52" in diameter.

ONE-STOP SHOPPING

HValley Tools (hvalleytools.com) is the new name of the MLCS and Eagle America brands, and the catalog carries a good variety of jigs

and cutting guides. HValley's router straight-edge guides come in 24" and 36" options and have a one-handed ratchet clamping system, jaws that automatically adjust to the stock size, and more than 100 lbs. of clamping pressure.

Magic from the mind of celebrated tool designer John Economaki has combined with the entrepreneurial skills of Jack Xu at **Bridge City Tools** (bridgecitytools.com). Along with some beautiful hand planes, the company also makes exquisitely engineered gauges, scribes, squares and specialty jigs such as the Tenonmaker and Kerfmaker. These are tools for setting up perfect tenons and saw cuts without all the measuring, or suffering through endless trial and error.

Texas-based **Incra Tools** (incra.com) makes a full catalog of jigs and cutting guides that are designed to

bring a high degree of precision to woodworking. Included are miter gauges, sleds, fence systems, joinery jigs and a cornucopia of fixture parts. The company's new Build-It System is a modular, highly customizable kit for creating common and special purpose jigs, fixtures and one-of-a-kind work helpers. It includes adjustable aluminum runners that slide in miter gauge slots, plus pre-cut and drilled panels, along with T-slot panel connectors and clamps.

MicroJig is currently offering a free Miter Stop when woodworkers buy one of the company's 360 Sled Kits. This is a jig-building base that lets the operator clamp and secure material virtually anywhere on its surface using a dovetailed track system. The free stop can be paired with a Zero-Play miter bar to limit sled travel and allow repeatable cuts.

Rockler (rockler.com) has dozens

of proprietary jigs and cutting guides in its catalog, including a new one for creating a continuous drainage groove in the top face of a cutting board. The adjustable jig handles boards up to 18" x 18" and includes attachments to create corner radii, and also to rout channels around square, circular or triangular through-handle openings.

Klingspor's Woodworking Shop (woodworkingshop.com) has a Jigs & Fixtures section that includes tracks, stops, drilling jigs, pocket hole and doweling jigs, T-slot clamps, and more.

MISCELLANEOUS

Among the more unusual new layout tools at **Lee Valley** is a pair of washable tape measures (item No. 99W2016 at leevalley.com). They "combine all-stainless-steel inner parts and a sturdy plastic housing with a pattern of openings, so you can simply rinse or vacuum out any grit and debris that gets inside. This means you can use them outdoors, around sawdust, or in other less-than-ideal conditions without worrying about jamming the smooth action of the auto-retract mechanism," according to the company. They have both metric and standard inch measurements, and the tape is a full inch wide.

DeWalt (dewalt.com) has introduced a 25' tape measure with an LED light.

A new gauge for setting up cutting tools is just beginning to roll out the doors at the **JessEm** (jessem.com) factory in New Brunswick. The height and depth gauge comes in two sizes and is made from 14-gauge stainless steel with a brass tightening wheel. Either of the units can be used vertically or horizontally to set the depth of cut for table saw blades, router bits, drill press bits, and the fences on various power tools. Micro-detents allow adjustments to 1/16".

TigerStop (tigerstop.com) offers a handy tool on its website where woodworkers can configure their own solution for accurate, precise cutting. Called the Product Configurator, it lets a shop choose a basic caliber, fence or automated stop and then build in features that are very specific to the needs of the shop. For example, a woodshop making mitered cabinet

doors or perhaps window parts can program the system with several different measurements and cut parts accurately as needed.

Another tool that crosses the line between machine and jig is the **Shaper Origin** (shapertools.com) which can be set up to deliver CNC quality repetitive cuts and joinery. The router-like tool can also be mounted in a fixed 'workstation' that turns a

portable tool into a stationary machine for aligning, clamping and cutting with speed and precision.

And if all that isn't enough to keep you out of trouble, spend an hour or two on the Woodpeckers' website, woodpeck.com. It's a treasure trove of jigs and cutting guides, and some very innovative ideas for bringing a greater level of accuracy to almost any aspect of woodworking. **W**



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The Exxact Duo series from Anderson America comes with two tables, two spindles, 14" of Z travel, and an optional fourth (C) axis.

Adding axes

The decision to upgrade to a 4- or 5-axis CNC starts with answering a fundamental question

By John English

What do you want to do with your CNC?

That's the core question when considering an upgrade to more axes. Going to a 5-axis machine won't necessarily speed up production, although it can. If the shop just needs to make more flat doors and boxes, or make them faster, adding another 3-axis machine might actu-

ally make more sense. If, on the other hand, a shop needs to increase accuracy, versatility, and the ability to machine complex shapes, then an upgrade may be the answer.

There's a perception in the industry that 4- and 5-axis machines are only necessary for carving, sculpting and shaping, but that's no longer true. Software has made those limits

obsolete. But before we get into the capabilities of added axes, let's lay a little groundwork.

UNDERSTANDING AXES

A standard 3-axis machine will operate in three directions: X (left-right), Y (back-forward) and Z (up-down). Despite that, it's essentially only capable of creating parts in 2D, and



that's the first confusing issue for new CNC owners. The parts aren't two-dimensional, but the machine's movement is. A cabinet door obviously has three dimensions – width, length and thickness. But a 3-axis CNC cuts from above, so it can only move in two planes. Travel in X and Y is all on one lateral plane, and Z is in a second, vertical dimension.

Even though it's limited to vertical and horizontal travel, and is itself locked in a vertical orientation, the spindle on a 3-axis machine can handle an amazing number of tasks. Depending on the tooling (cutters), it can move sideways into a part and then travel up and down to cut re-

cesses such as biscuit hardware slots or mortises. It can even undercut cantilevered parts, and when an aggregate head is added, it can work at angles between zero and 90. Those kinds of operations can involve quite a bit of set-up time and some imaginative fixturing (clamping). The alternative is to mill all the parts in standard 2D, and then rotate them and mill a second face. Unfortunately, accuracy becomes an issue when parts are moved and re-set. Even a tiny bit of residual dust or a rough surface, burr, or uneven face can throw off alignments.

That's where a fourth axis (called the A-axis, which rotates around the X) can come in handy. It rotates parts, most often doing so slowly to position a new face for routing, but sometimes quickly to address the part to a cutter, where the A-axis can replicate the action of a wood lathe. So, a 4-axis CNC can make 3D parts easier than a 3-axis machine, and can do so with less set-up, fewer tool changes, and often without an aggregate head.

When used to position a part, the 4-axis CNC can save a lot of time and money on fixturing, as the part only needs to be locked in place once for multiple processes. It also cuts down on rework and rejects, as the repositioning is mechanical so it's very precise. It allows no possibility of human error or debris throwing off the alignment. A fourth axis also lets a router create more complex curves than a 3-axis machine, as the part can revolve while the cutter travels along its length. Think cabriole (Queen Anne) legs here, or spiral (helix, or helical) shapes. But the most practical uses for an A-axis are simply to rotate parts so they can be milled for assembly hardware pockets, recessed for decorative hardware such as lock bores or cabinet connectors, or spun between centers to make round parts such as balusters, spindles, and newel posts.

A 5-axis CNC is even more precise, and although it sounds quite complex, it's really just an extension of the fourth axis concept. The fifth axis rotates either around an imaginary line on the Y (where it is called a B-axis),

or else around the Z (which makes it a C-axis). Those rotations can be achieved by either rotating the part or the spindle. So, in the case of a baluster, the wood can spin, or the wood can be stationary, and the router travels around it, or both can move simultaneously.

With all those action choices available, a 5-axis machine can mill, shape or form any face of an object except one – the facet that is used to secure the part. Well, except for parts between centers, where there are two unavailable faces (usually the ends of a wooden turning).

This versatility makes it ideal for creating decorative furniture elements and complex wooden parts for jobs such as, say, RV or boat consoles and controls, or perhaps intricately carved corbels. A 5-axis CNC can cut anywhere in the 360 degrees around a part, while also moving up and down as it travels – and the part can be moving, too.

In the simplest terms, a 3-axis machine is an excellent choice for relief carving, while a 5-axis CNC is the best option for 3D sculpture, and a 4-axis machine is a good choice for making rotational parts such as spindles, finials and the like. These descriptors suggest possible usage: they don't define the capabilities or limits of each type of machine, because a little inspired fixturing can change all the rules.

WHAT'S TO GAIN BY UPGRADING?

A 5-axis CNC is not just more expensive, but generally it will have a larger footprint and require more infrastructure requirements such as 3-phase power, dust collection, compressed air, and vacuum draw. However, it will also reduce set-ups and production steps, so there can be a substantial saving in the time used to process parts. The more complex the part, the truer this becomes.

Five-axis spindles are generally heavier than 3-axis versions, and because of enhanced versatility and reach, the larger machine can remove more waste and reveal more of the final shape in a shorter period of time. It can also work in an equal-



The Accord 50 FX, a 5-axis CNC from the SCM Group, has a mobile gantry and can manufacture complex and large objects.

ized mode for parts that are not balanced for weight, removing waste in a synchronized sequence that helps to support the safety and rigidity of the fixturing.

Shops that move up to a 5-axis CNC tend to discover that they use far fewer fixturing and clamping

jigs. Shop time to design/build and test new jigs is rarely required with a 5-axis machine, as the tools can reach into so many previously unreachable areas.

Because of its high degree of precision, parts made on a 5-axis CNC generally require less sanding and

post-processing handwork or further machining. And its agility can move a woodshop into production choices that were once out of reach. It can do things that 3-axis machines simply can't negotiate, so it may open the door to new markets, new clients, new products, and new processes.

As with all high-level technologies, input is critical. Owning the machine means nothing if the woodshop's design and operating personnel don't understand how to take advantage of its advanced features. Training the existing staff, or hiring somebody who understands the technology and its possibilities, is part of the package. There's no point in buying a sports car if you never learned how to drive.

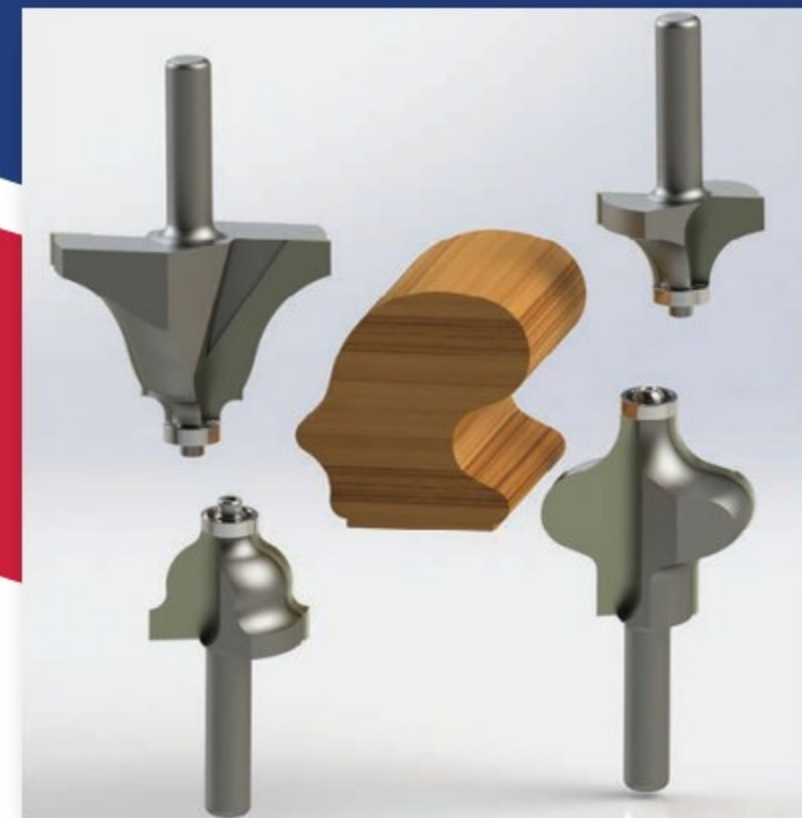
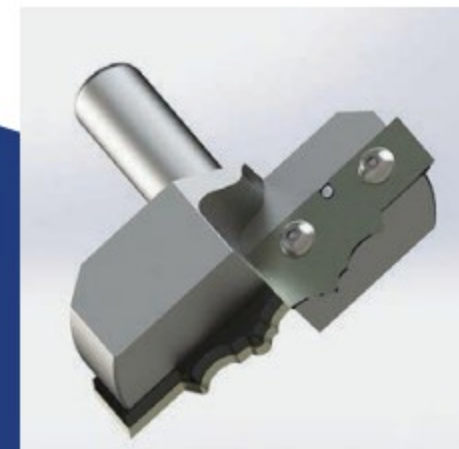
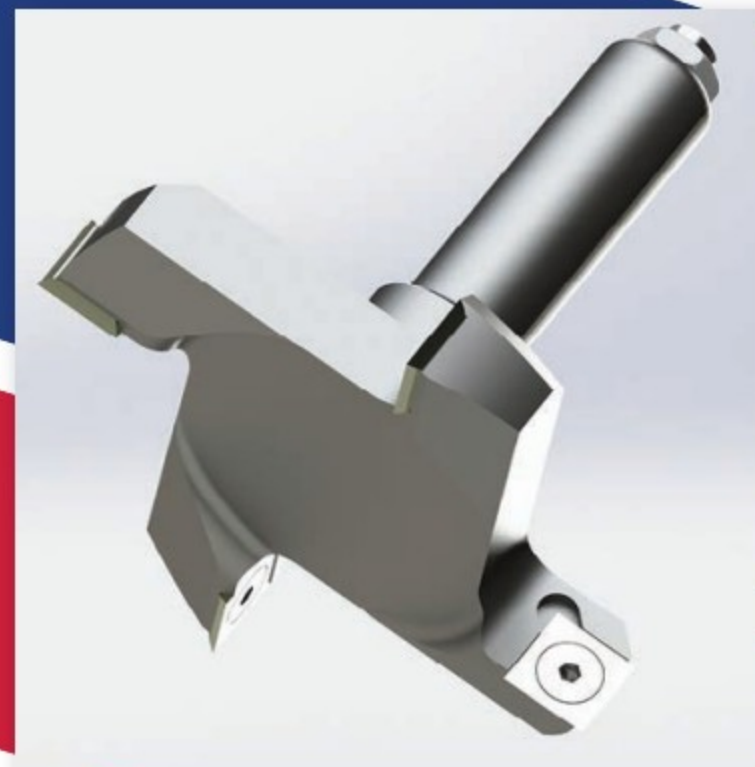
IS THERE A DOWNSIDE?

The machine isn't the only thing that's more expensive. So are the accessories, installation, operating cost, staff-



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The new Profit H350R Format4, a 5-axis CNC from Felder USA.

ing, and software. The code can be more complex and harder to grasp, too, so most operators find themselves relying more on the software to self-proof, rather than on their own experience and knowledge. In some situations, more machine means a bigger chance of collision. On the other hand, the fact that the machine is doing due diligence and handling the more complex simulation data means that overall, 5-axis machines are becoming easier to operate.

There is the option of adding two axes to an existing 3-axis machine, and performing what the industry calls 3+2 machining. It's not quite the same as true simultaneous 5-axis machining, but it's close. The additional axes can take the form of rotating tables or trunnions that can both tilt and rotate, so that new facets of the part can be presented to the vertical spindle on a 3-axis CNC. The two new axes aren't necessarily operational: they are used to position the part and then lock it in place for 3-axis machining. The 3+2 option lets the operator access all parts of a workpiece except the face being held. It reduces set-up times and the number of positional changes and jigs. It also allows the spindle to operate with shorter tools, which can reduce run-out and vibration to deliver

a cleaner cut.

On the other hand, a 5-axis CNC can maintain continuous contact between the tool and workpiece by simultaneously moving the part as well as the tool. And it, too, can use shorter tool lengths for greater accuracy.

So, while they require a higher investment and usually cost more to operate, 5-axis machines can be faster, more accurate, and a whole lot more versatile than a 3- or 4-axis machine. Plus, a new machine will probably have faster travel times and tool changes, and perhaps better vacuum holding and dust collection, too. There's even the possibility of saving on materials, as the acrobatics of a 5-axis machine may need a smaller blank to start with, and in

some cases may be able to save material that might otherwise have been turned into sawdust.

Shopping for a new machine might be a good time to think about table sizes other than 4x8 or 5x10. Many manufacturers can build a customized table and provide customized vacuum sectioning. For woodshops that supply components to another industry such as aerospace, marine, or audio-visual manufacturers, parts don't always fit the traditional nesting dimensions. Depending on optimization, another few inches in one or both directions might save a lot of material over the years.

Again, it all boils down to that initial question: what will you ask your particular CNC to do?



Casadei-Busellato offers the 5-axis Jet Master T with a panel processing table.



28 The Laguna SmartShop 5-axis CNC offers an all-steel frame, HSD 2-axis articulating head, and Fanuc 31i-B5 controller.



Teton, a 5-axis moving table CNC from DMS, with options for single or twin tables and single or multiple spindles.

MILLING FOR NUMBERS

A 5-axis machine combines the ability of the spindle to move in three directions with the option of rotating in two planes. A CNC isn't limited to just five axes: there are metalworking machines that have as many as 12. But five axes is enough to mill virtually any shape in wood. And because of the agility those multiple approaches deliver, tools are constantly addressing material at different angles, depths and speeds. That variance means that the tools wear differently than those in a standard 3-axis machine, and they tend to retain their edge longer. The constant tilting of the tool or the table means that there are fewer tool changes, so there's less downtime changing them and less cost in renewing or replacing them.

That is one part of the essential equation to consider when upgrading to a 4- or 5-axis machine. One needs to discover the optimum relationship between cost, time and quality. If the parts that a woodshop needs to make can be completed on either a 3-axis CNC with lots of fixturing, on a 4-axis machine with less human involvement, or on a 5-axis with virtually no set-up beyond the original clamping, then each of those processes needs to be subjected to cost-benefit analysis. The only true way to extract meaningful values is to physically run the parts on each of the three machines, and record time and material costs for each, along with overhead.

The CNC manufacturer or sales agency will most probably comply with such a request, as most of the larger suppliers have active models available, or they can access machines in operation at clients' shops.

Batch sampling will be far more accurate than running a single piece. The woodshop could bring several parts in differing dimensions and complexity to the test, all the while acknowledging that even a large sample doesn't replicate the norms in a day-to-day high production environment.

For more precise data, all aspects of the process should be recorded, from time spent designing and programming toolpaths to loading the

CAM software, prepping and fixturing the part, milling, unloading, and post-machining. After the run, the quality of cuts and surfaces needs to be compared, and the time involved in taking down the set-up and restoring the machine for its next task is also a factor. The more aspects of each process that are timed and cost evaluated, the more accurate the picture will be. It's impractical to achieve a complete comparison, but it's imperative to get as close as possible, within reason. Even tangential factors can be weighed, such as the reduced time required to sand parts that are machined with cleaner surfaces, and the unrelated tasks that can be performed by employees who currently tend to the existing 3-axis machine, but will have extra time available with the new machine because of fewer tool changes, less fixturing, and so on.

This is also an ideal time to factor in further automation such as loading, placement, and unloading options that the shop has not yet put in place on the existing machine.

If the woodshop is making relatively simple parts, it will quickly become obvious if the 3-axis machine holds an investment cost advantage, and maybe even an operational one, too. However, as more and more parts are made and repositioning/fixturing becomes a cumulative activity, the chances of errors and inaccuracy increase, and the amount of downtime may become a bigger factor.

These are aspects that won't become obvious in a limited test but will emerge in longer runs. So, it's a good idea to also visit shops that have recently upgraded and talk things over with both the owners and the machine operators. Upgrading is a big decision with large numbers and heavy impacts on a business, and it's worth taking every small step possible to paint a complete picture of exactly what is involved. Finding woodshops that have already walked down this road can be a matter of contacting fellow members of business or trade associations or asking machine suppliers for direct access to some of their existing clients.

Choosing a shop outside one's own immediate geographical market is advisable: the close competition may be a little reluctant to reveal all aspects of their experience. The large trade shows are good places to start the quest for upgrade info, as are online forums. One can also visit the Resource Guide at woodshopnews.com and search under CNC Equipment & Services.

If a woodshop currently owns a specific brand of 3-axis machine and the operators are comfortable with its controls, mechanics and software, it might be worth checking to see what 4- and 5-axis options that manufacturer offers even if the prices are a bit higher than some new competitors' offerings. The existing brand familiarity might shorten the learning curve on a new machine, and the shop's personnel may already have established relationships with tool suppliers, spindle maintenance providers, and tech support options that can transfer to a new machine. **W**



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Doug Fauth (left)
and Ryan Beachley.



FOLLOWING A PLAN

Doug Fauth set out to build a business that someone would want to buy, and someone did

By Jennifer Hicks

Doug Fauth founded Carriage Hill Cabinetry & Millwork in Frederick, Md. in 1999. With retirement on the horizon, Fauth sold the business to Ryan Beachley on Dec. 1, 2023.

Both gentlemen feel the agreement will bring the company to a whole new level of growth.

"I'm excited to be handing Carriage Hill off to Ryan and his team to help the business grow as I transition to the next phase of my life after working for myself 42 years," says Fauth, who will remain with the company through the transition.

Beachley also owns Sixth Avenue Custom, a woodworking shop in nearby Hagerstown, Md.

"I think it's a good fit," says Beachley. "We've got big plans for Carriage Hill, and I think we're definitely going to expand on what Doug has done. He's built a great business and a great reputation, and those are some big shoes to fill."

A MAN WITH A PLAN

Fauth grew up in Pittsburgh and has been in Frederick since 1973. He studied chemical engineering at the University of Maryland and worked his way through school doing home improvement and remodeling.

"I enjoyed what I was doing, so when I got out of school, I kept doing it. I've been working for myself since '81. I worked for a professor in college, and you couldn't pay me enough to work in a lab all day long. Sometimes going to college is learning what you don't want to do," says Fauth.

Fauth started as Douglas Builders designing and constructing 22 houses. But while he was building a successful business, and transitioning to cabinets and millwork, he was also thinking about an exit plan.

At 38, he made a fresh start, changing the name of Douglas Builders to a more marketable Carriage Hill. He set out to make the best product, earn a stellar reputation, and develop a turnkey operation.

"You can go to the library and get all kinds of books on how to get into business, but nobody tells you how to get out. So, my goal was to build a business that someone would want to buy. And they don't have to know how to make a cabinet. The guys in the shop know how to make cabinets. I've been working the last 18 years on that," says Fauth, who turned 65 in December.

Beachley's family has been involved in the fur-



From kitchens to closets (right photo), Carriage Hill has been serving its residential market since 1990.

niture manufacturing for six generations. He started out making beer tap handles for breweries in 2008.

"I knew that was not going to pay the bills, so I started making cabinetry and a little bit of furniture. That grew and evolved," says Beachley, who started Sixth Avenue Custom about five years ago.

"Because we were continuing to grow, we felt the need to expand and started looking at acquiring a shop and found Doug. Once I met

him and saw the team, we went down that road.

"What Doug and his team do here, and what Doug cares about, is exactly the same work that we like to do. We like to take on projects that a lot of people would run away from because they're difficult. Most of the time we're making things that have never been made before."

THE ROAD AHEAD

Beachley says he and Fauth are still

navigating what things will look like moving forward, but his intent is to keep Sixth Avenue Custom active on the commercial side of things while keeping Carriage Hill dedicated to high-end residential work.

"In my opinion, both companies have very strong brand recognition, so I want to keep both going," says Beachley.

"Sixth Avenue Custom has been focusing heavily on the commercial side of the industry, especially



over the past two years. We have been active in the Palm Beach area, Atlanta, as well as the Delaware, Maryland, Virginia and New York markets. We have done banquette seating, commercial millwork, and custom tables for clients including restaurants, medical offices, night clubs, retail stores/boutiques, and lobbies for hotels and apartment complexes."

Fauth has compiled an extensive network of architects, designers and



clients over the years. Carriage Hill will remain in its 10,000-sq.-ft. facility and the employee count has already jumped from six to 10.

Fauth is particularly proud of the shop's work for the Pope's visit to the Basilica of the National Shrine of the Immaculate Conception in 2015.

"We were asked by the archdiocese to make all the fixtures for the mass. We did 14 pieces (including) the Pope's chair, alter, ambo, and the Bishop's benches. And they had a contest at Catholic University in D.C. to design the fixtures for the mass, so we built it the way they designed it. The winning group came up here and got to experience it. It was pretty neat," says Fauth.

Beachley is appreciative Fauth is

staying with the company.

"We're going to try to learn as much as we can from him. We're very lucky to have someone that knowledgeable. That was one of the reasons I was drawn to Carriage Hill.

"Carriage Hill will continue to be one of the market leaders in the high-end custom residential markets. In my opinion, their work was some of the best I have seen, and it was a major factor in my decision. You can clearly see the care and meticulousness of our artisans in every project. The attention to detail and dedication of the team cannot be missed. I went with Doug and the guys to help install countertops my first week. I was blown away when I saw the kitchen." **W**



Tuggers from MasterMover.

Material handling solutions

Options range from time-tested carts and dollies to cutting-edge systems

By John English

There's a difference between the way materials are handled in a larger woodshop and how things are done in a one or two-man shop. High production outfits are looking at automation and software, while smaller businesses are more interested in gaining a little manual advantage. There, the woodworkers want to be able to handle sheet goods or heavy boxes of hardware, or even assembled cabinets, without having to call for help. In a one or two-man shop, production can grind to a halt when something needs to be moved. But there are some low-tech, relatively inexpensive ways to avoid that situation.

SMALL SHOP SOLUTIONS

New products from **Grizzly Industrial** (grizzly.com) include the Lumber/Plywood Cart (T34007, \$650) and the Mobile Lumber Rack (T34006, \$499). The former is designed to hold both sheet goods (full and partial), plus boards, timbers and long lengths. It has large 5" casters, is built with 18-gauge steel, and can handle up to 990 lbs. of material. There are safety pins to stop wood from falling off the arms, and the dimensions are 59" wide x 43-1/4" deep x 50" high. The taller but more slender Mobile Lumber Rack (47-1/4" wide x 39-1/4" deep x 59" high) can carry 1,110 lbs.

Grizzly also makes a handy Panel

Lifting Cart (T33312, \$164.95) with locking casters that can be used to move materials, and the top tips so that sheets can be loaded into a storage rack, machine, bench, or sawhorses.

Tractor Supply has just added the Super Handy material lifter, which is perfectly sized for moving cabinets about the shop (item TRI-GU0097 at tractorsupply.com). It has a foot-operated brake and a winch to lift the load. There's also a forklift mode for handling bulky materials on pallets.

Topper Industrial in Sturtevant, Wisc. (topperindustrial.com) makes several heavy-duty hand carts with rotating tops. The platforms have de-

tents that lock in at certain angles, which can be quite useful when loading sheet goods onto machines. Topper also makes a rotating platform cart that could reduce the need for bending and lifting in a finishing booth.

One of the most common material handling challenges in small shops is where and how to store partial sheets of plywood and MDF. **Saw Trax** suggests making it mobile. The Georgia manufacturer (sawtrax.com) makes a Rack & Roll cart (\$689), a low-profile dolly with a zero turning radius that's easy to load and easy to maneuver through a crowded shop. It has 4" locking casters that are mounted right at the corners of the dolly, giving it good ground clearance even on uneven surfaces. The small footprint lets it roll up or down most rental truck loading ramps, and an interchangeable post system means the shop can organize cut-offs according to size or type.

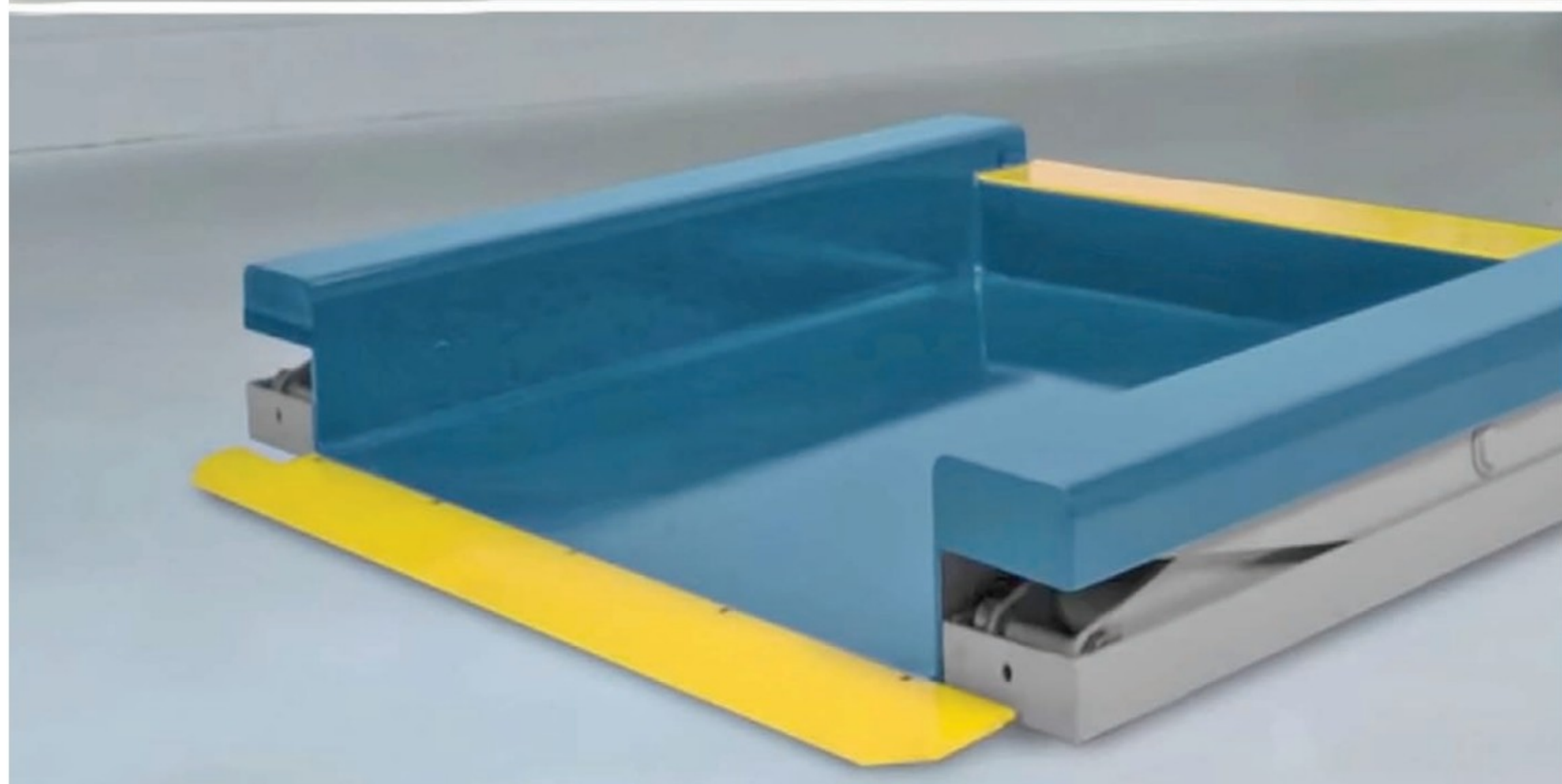
It has been around a while, so the Material Mate from **Rockler** (rockler.com) is certainly shop-tested. This is a budget-conscious way to move large materials around a woodshop without asking other employees for help. It's a rolling cart with a tilting top that can go vertical to slide plywood through a 30" doorway or lie horizontal when loading sheets out of the back of a pickup. And when it's not hauling materials in or out of the shop, it makes a dandy outfeed table.

For loading heavy goods onto benches or saws in a higher production environment, **Southworth Products** (southworthproducts.com) makes lift tables that have a steel tray that sits right on the floor, so a pallet truck can roll right on and deposit a load of plywood. Then the truck is pulled out and the table's scissors lift mechanism raises it to workbench or machine-top height, all the way up to 35-3/8" or anywhere in between. The lifting or lowering is controlled by either a footswitch or a pushbutton pendant. The lifts operate on 115-volt power and can be equipped with a wide range of safety and convenience options.

U-Line (uline.com) has a comprehensive selection of material handling equipment that could solve problems for small woodshops, including



The Troll 49 Panel Handler from Paragon.



Southworth Products makes a lift that's low enough to accept a pallet truck and can raise materials like sheet goods high enough to load onto machines.



Rockler's Material Mate pulls double-duty as a panel cart or a shop stand with a tilting top.

electric forklifts (items H-5439 and H-5440), scissors lifts, pallet movers and dollies.

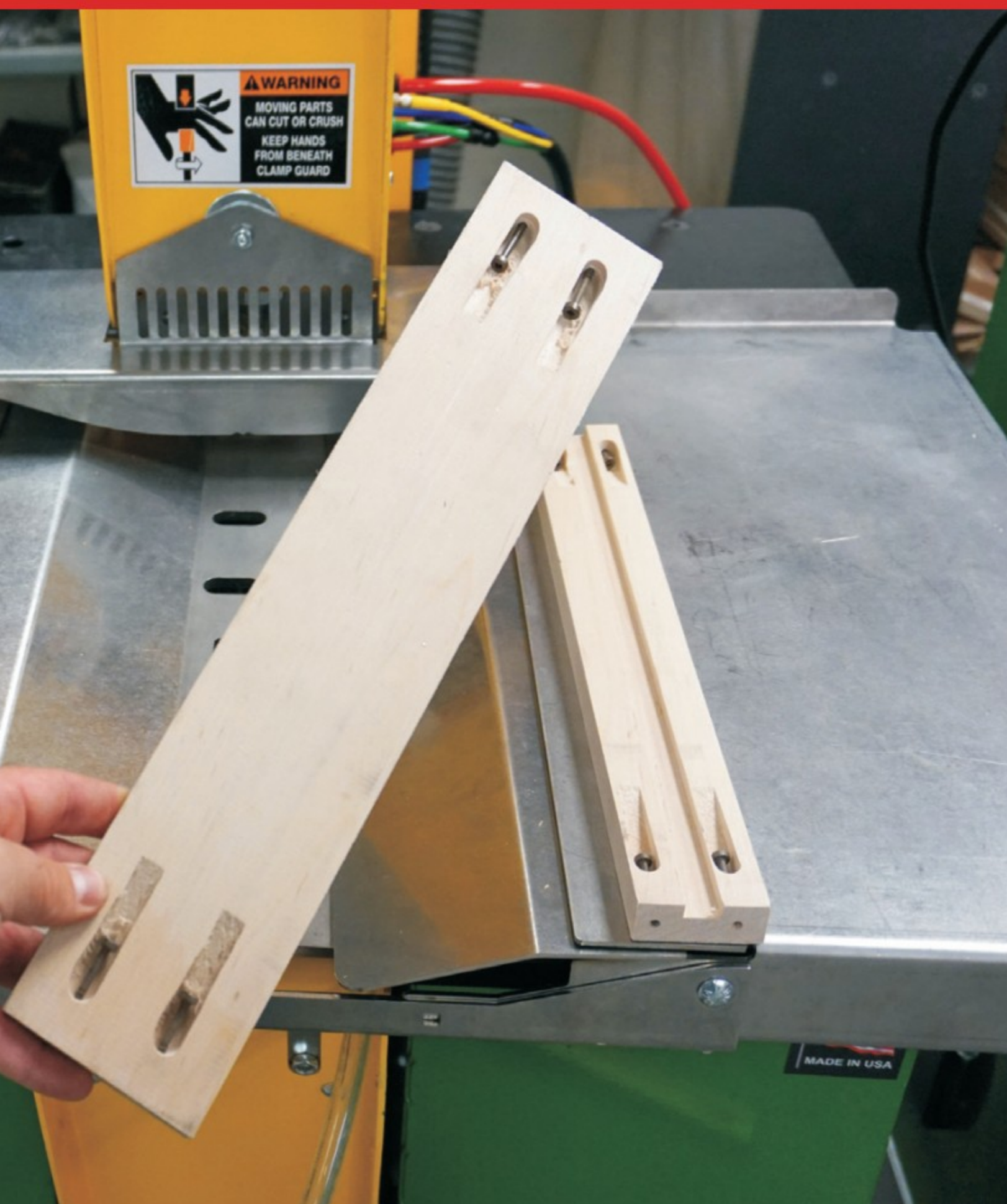
The Home Depot (homedepot.com) carries a large selection of dollies with casters, many of which are designed to move large pieces of furniture, so they work well for completed cabinets or cartons of parts and hardware.

MasterMover (mastermover.com) in Charlotte, N.C., offers 'tuggers' in a wide range of sizes. These are battery-powered machines that let a single employee move large and heavy loads around the shop, such as pallets of plywood.

The Troll 49D Panel Handler from **Paragon Pro** (paragonpromfg.com) allows the easy movement of multiple sheet goods by placing wheels underneath them. The 49D has a 300-lb. load rating and can eliminate the need to carry awkward, large sheets from one work site location to the other.



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BIGGER SHOP SOLUTIONS

Moving materials around a big shop can involve return conveyors, vacuum lifts, CNC loaders/unloaders, forklifts and robotics, to name a few options.

James L. Taylor Mfg. (jamestaylor.com) in Poughkeepsie, N.Y., makes a selection of automated return conveyors for edge banders, shaper/sanders, straight line rip saws, and wide belt sanders. A number of models are available to handle different sized panels, cabinet doors and other parts, all the way up to 50" wide by 96" long.

Stiles Machinery (stilesmachinery.com) offers everything from simple lift tables to entire panel storage and retrieval systems. Among the options are manual and automated conveyors, panel vacuum lifts, case clamps, stackers, and feeders. Stiles also carries artificial intelligence applications such as Kentwood rip saws and profilers that include board sensing, de-



The Store-Master from Holz-Her is built around an automated retrieval-placement arm and can be custom configured.

fect scanning, infeed and outfeed automation, and optimization software.

Biesse (biesse.com) offers a full complement of large-shop material handling equipment, including

Winstore panel management, four Winner loading/unloading panel systems, and lifters and turners for production lines.

The Store-Master from Holz-Her

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Flexstore from SCM Group uses beams and arms to place and retrieve sheet goods.



The new Super Handy material cart from Tractor Supply has a forklift function.

U.S. (holzherusa.com) is a panel storage and retrieval system that is designed to reduce the man hours involved in material handling. It can position sheets in a customized as well as a sorted, standard mode. In each case, exactly the right panel is se-

lected by a computer during retrieval. **SCM Group** (scmgroup.com) offers a range of material handling solutions from stackers to storage modules, including Flexstore which is a panel moving system that can be integrated in production lines for

nesting and/or sizing cells. Flexstore manages homogeneous and mixed stacks made of different dimensions and colors.

Tracking materials can be a challenge, and various software publishers have developed programs that are either stand-alone or part of a shop-wide ERP package. For example, **Global Shop Solutions** (globalshopsolutions.com) offers inventory software that provides automated purchasing, real-time inventory data, inventory tracking and optimization, cycle counting and physical inventory, multi-bin and multi-location tracking. And it ties material management into an overall picture that includes every other aspect of the business.

While we took a brief look at some of the industry leading systems here, and explored some new and familiar small shop options, the bottom line with material handling is that it is a very subjective area.

Every shop has different spaces, different materials, and different needs. There is no one-size-fits-all solution, and asking the people on the shop floor is often the best place to start developing a plan. They know what they need, and where it needs to be. **W**



The exhibit features Talasnik's sculptures and work from the museum's collection.

Philly museum features Stephen Talasnik

By Jennifer Hicks

The Museum for Art in Wood in Philadelphia is hosting a new exhibition, "FLOE: A Climate of Risk, The Fictional Archaeology of Stephen Talasnik", through Feb. 18.

The exhibit underscores the looming effects of climate change and incorporates the use of bamboo, wood and composite materials.

"FLOE emerged from the imagination of Stephen Talasnik, an artist known worldwide for his hand-built structures installed in natural settings," Jennifer-Navva Milliken, the museum's executive director and chief curator, said in a statement.

"The exhibition is based on a story created by the artist but touches on the realities of climate change, a problem that exposes the vulnerability of the world's most defenseless populations, including the impoverished, houseless, and stateless. Science helps us understand the impact through data, but the impact to humanity is harder to quantify. Stephen's work, through his complex 'fictional architecture' and organic, fragmented sculptures, helps us understand this loss while encouraging us to consider the truth behind storytelling."

In FLOE, Talasnik returns to his hometown to build a fictional narrative of a shipwreck carried to Philadelphia by a glacier. As global temperatures warmed, the glacier melted and surrounded the ship's remains, which were discovered by a group of curious children. The centerpiece of FLOE is a monumental, large-scale sculpture made from a half mile of bent bamboo on pine wood frame.

The exhibition also includes works from the museum's permanent collection, curated by Talasnik. Learn more at museumforartinwood.org. **W**

Photos: John Carlano

NEW PRODUCTS



HÄFELE has added Onrax Ceiling Storage Systems, including a stationary rack and motorized version. The Onrax Stationary Rack can be mounted over a garage door and has a weight capacity of 800 lbs., according to the company. The Onrax Motorized System features a descending shelf that lowers with the touch of a button, a 400 lb. weight capacity and optional safety netting. Learn more at hafele.com.



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THE DUST COLLECTOR HERO solves the irritating task of dust collector bag changes. Invented by Bert Rabbe, owner of a small woodshop in Arlington, Texas, the Hero is an air-tight chamber that connects to a dust collector and has a hatch for easy access to the collected sawdust. The Hero comes as a kit that replaces the legs on most single-stage dust collectors. Models are available for collectors that use the external metal band clamp as well as the internal snap rings. Learn more at dustcollectorhero.com.

THE RAPID RAFTER is a new double-sided speed square developed by Peter Toomey, a building contractor with 40 years of experience in the construction industry. The Rapid Rafter performs as a traditional speed square in the closed position. But it can be placed over a board in the open position for marking all three sides at once from the same location. The Rapid Rafter sells for \$24.99 at rapidrafter.com.



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DESIGNS OF DISTINCTION (DOD) by Brown Wood Inc. is introducing new base shapes that can be used with tambour panels. They include angled, rectangular and cylinder shapes inspired by key findings from the National Kitchen & Bath Association's 2024 Kitchen Trends Report, including multi-functional islands designed for seating and gathering, incorporation of natural and organic materials, and geometric shapes reminiscent of Art Deco design styles, according to the company. Learn more at brownwoodinc.com.

GRIZZLY INDUSTRIAL presents a new 8" jointer with a spiral cutterhead, model G0490ZX. The jointer features a 3-hp motor, precision-ground cast iron table, and four-row spiral cutterhead equipped with 40 carbide inserts that can be rotated to maintain a sharp cutting edge. Model G0490ZX sells for \$2,150 at grizzly.com.



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SCAN ME

Organizations sponsoring meetings, classes or shows of interest to professional or hobbyist woodworkers are invited to submit items to editorial@woodshopnews.com.

Include name, dates, location, description of event and a contact address or telephone number. Calendar items, which should be typed or printed clearly, must be received a minimum of 60 days before the event.

Please note that fees, as listed, might not include materials or shop fees. Check with a specific class for further details.

— Compiled by Jennifer Hicks

CALIFORNIA

Monthly — Society of Wood Manufacturing, a chapter of AWFS consisting of educators, manufacturers, hardware and industrial suppliers, and machinery dealers, meets during the second week of each month. For location and dates, visit awfs.org

April 10-12 — International Wood Products Association's World of Wood, an annual convention featuring seminars and networking opportunities. Location: Hard Rock Hotel in San Diego. iwpaewood.org

FLORIDA

March 8-10 — The Tampa Woodworking Show, featuring exhibitors, educators and local clubs, guilds and

more. Location: Florida State Fair in Tampa. thewoodworkingshows.com

April 9-11 — Woodworking Industry Conference, an opportunity to connect with fellow woodworking machinery importers, manufacturers, distributors and suppliers. Learn more at woodworkingindustryconference.com.

GEORGIA

Aug. 6-9 — International Woodworking Fair, North America's largest woodworking technology and design trade show. Location: Georgia World Congress Center in Atlanta. Learn more at iwfatlanta.com.

IDAHO

April 6-7 — Idaho Artistry in Wood Show. Location: JUMP (Jack's Urban Meeting Place) in Boise. Learn more at idahoartistryinwood.org.

MISSOURI

March 15-17 — The Kansas City Woodworking Show, featuring exhibitors, educators and local clubs, guilds and more. Location: Hale Arena at the American Royal Center in Kansas City. thewoodworkingshows.com

NEVADA

Feb. 26-29 — Design & Construction Week, featuring the International Builders' Show and the NKBA Kitchen & Bath Industry Show. Location: Las Vegas Convention Center. Learn more at buildersshow.com.

NEW JERSEY

Monthly — The North Jersey Woodworkers Association meets the third Monday of every month in. Learn more at njwawoodworkers.org.

Monthly — The Professional Woodworkers Guild of Upper New Jersey meets the third Wednesday of every month. njwoodguild.com

NEW YORK

Monthly — The Woodworkers of Cen-

tral New York hold meetings on the first Thursday of each month at 6:30 p.m. at the Belgium Cold Springs Fire Department in Baldwinsville. Learn more at woodcny.org.

Monthly — Northeast Woodworkers Association meetings held on the second Thursday of the month at various locations in the Albany area. Learn more at woodworker.org.

Monthly — The Long Island Woodworkers meet on the first Wednesday of each month at 7 p.m. at the Frank Brush Barn of the Smithtown Historical Society in Smithtown. Learn more at liwoodworkers.org.

May 19-21 — International Contemporary Furniture Fair, a trade show focused on contemporary furniture design. Location: Javits Center in New York. icff.com

NORTH CAROLINA

Monthly — Triangle Woodworkers Association meetings held on the third Tuesday of each month at 7 p.m. at Klingspor's Woodworking Shop in MacGregor Village in Cary. Learn more at trianglewoodworkers.com.

Monthly — Charlotte Woodworkers Association meets the third Tuesday of each month at 6 p.m. at MakerSpace Charlotte. Learn more at charlottewoodworkers.org.

April 13-17 — High Point Furniture Market, Spring Show. Learn more, at highpointmarket.org.

OHIO

Ongoing — Cincinnati Woodworking Club meets the second Saturday in the months of Jan., March, May, Sept. and Nov. from 8:30 a.m. to 12:30 p.m. at the E.B. Mueller Co in Reading. cincinnatiwoodworkingclub.org

PENNSYLVANIA

Monthly — Lehigh Valley Woodworkers Guild meets at 6:30 p.m. every third Wednesday of the month at the Woodcraft in Allentown. lvwwg.com

WISCONSIN

Feb. 15-18 — The Milwaukee Woodworking Show, featuring exhibitors, educators and local clubs, guilds and more. Location: Milwaukee Sports Complex in Franklin. Learn more at thewoodworkingshows.com. **W**



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The Nordic Village display from 2021 and volunteers delivering the new chapel.

FEBRUARY 2024

Crafting holiday cheer

48 **The woodshop program** at the StoneRidge retirement community in Mystic, Conn. has gained momentum in recent years by attracting new members wanting to make everything from small gifts to elaborate projects.

"One of the big things we're involved with here is training," says lead carpenter Ron Hunter, a StoneRidge resident. "A lot of [members] had shops at home before they came here but they really didn't have many skills, so we're teaching them. We also help them if they're physically unable to do a certain part of a project. For example, we can help do the lathework for someone with Parkinson's disease. It's really a big part of our success here and we enjoy it very much."

"The woodshop has been here for quite a while. I've been here about three and a half years, but when I came, the woodshop did not have good equipment and they did not have a lot of members. So, I brought most of my own equipment, which is pretty high-end stuff. That made a big difference, and we got interested people and now we've got a very good number of people involved."

The members have been busy since 2020 producing an annual Nordic Village display. What started as a small project has evolved into a chapel, four houses, a train station with a functioning train, a mill, a skating pond, and much more.

"This Nordic Village now has over 30 people involved. They're not all part of the woodshop program. Many are artists, and some just do it for fun, so we find ways to use them. Everyone collaborates on the designs," says Hunter.

"We've also started adding animals and people to the display. We now have about 70 people and critters. It sounds like a lot, but we could use about 70 more."

-Jennifer Hicks



60 Grit

Rough humor by Steve Spiro



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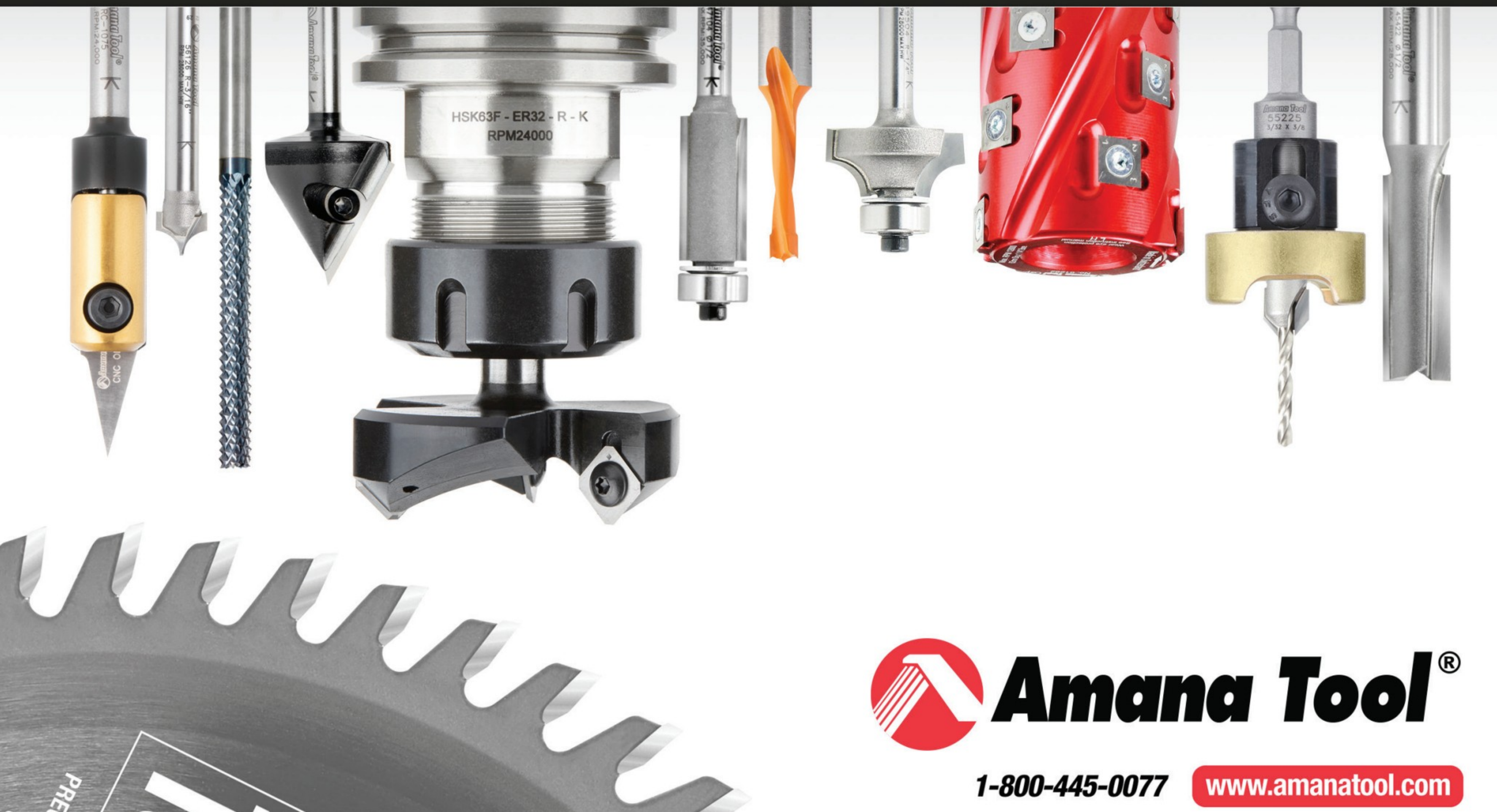
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