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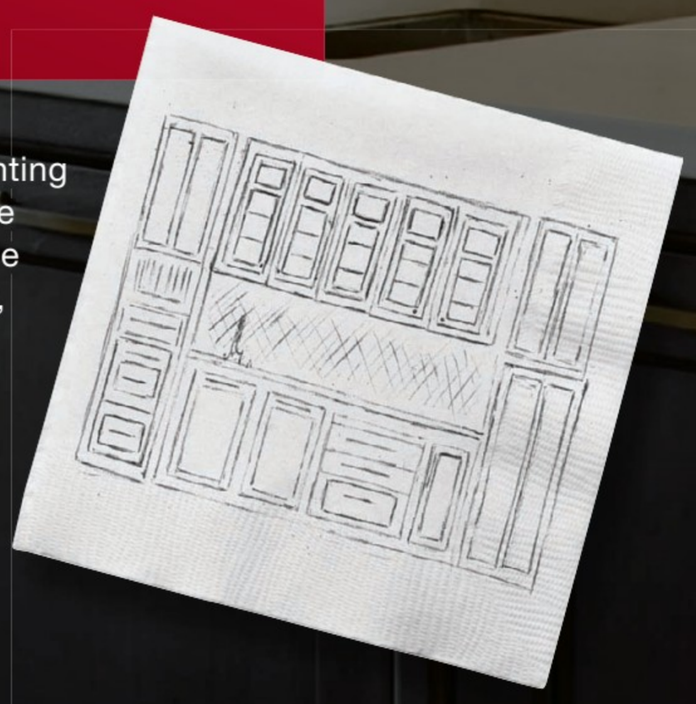

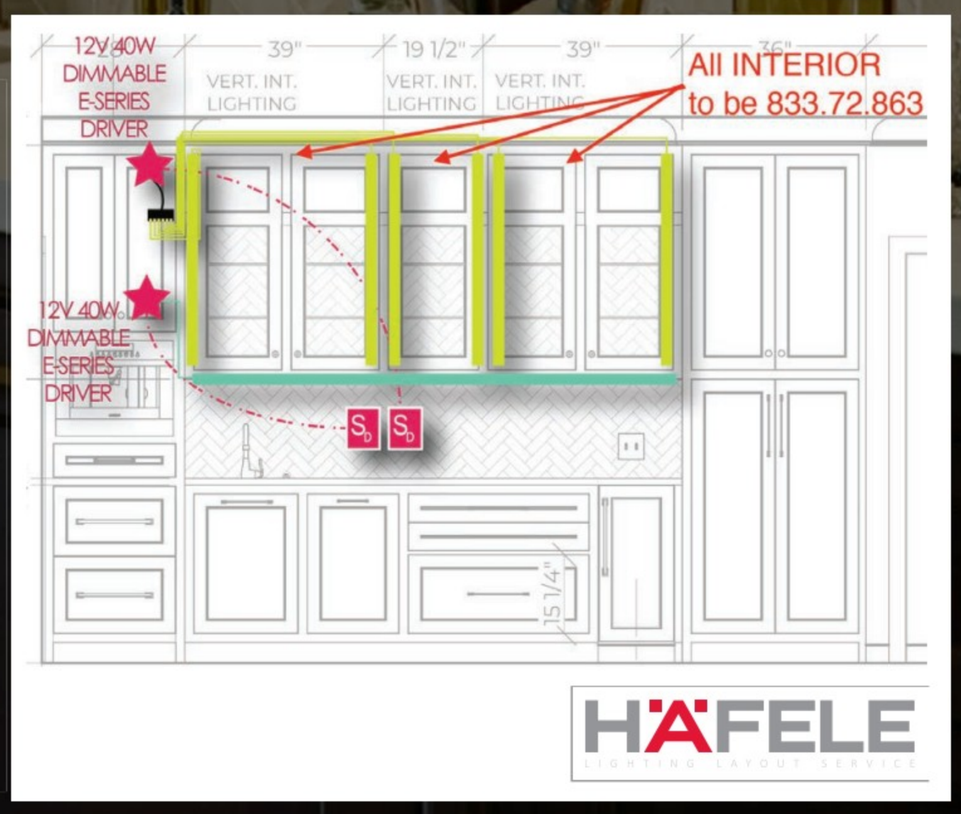

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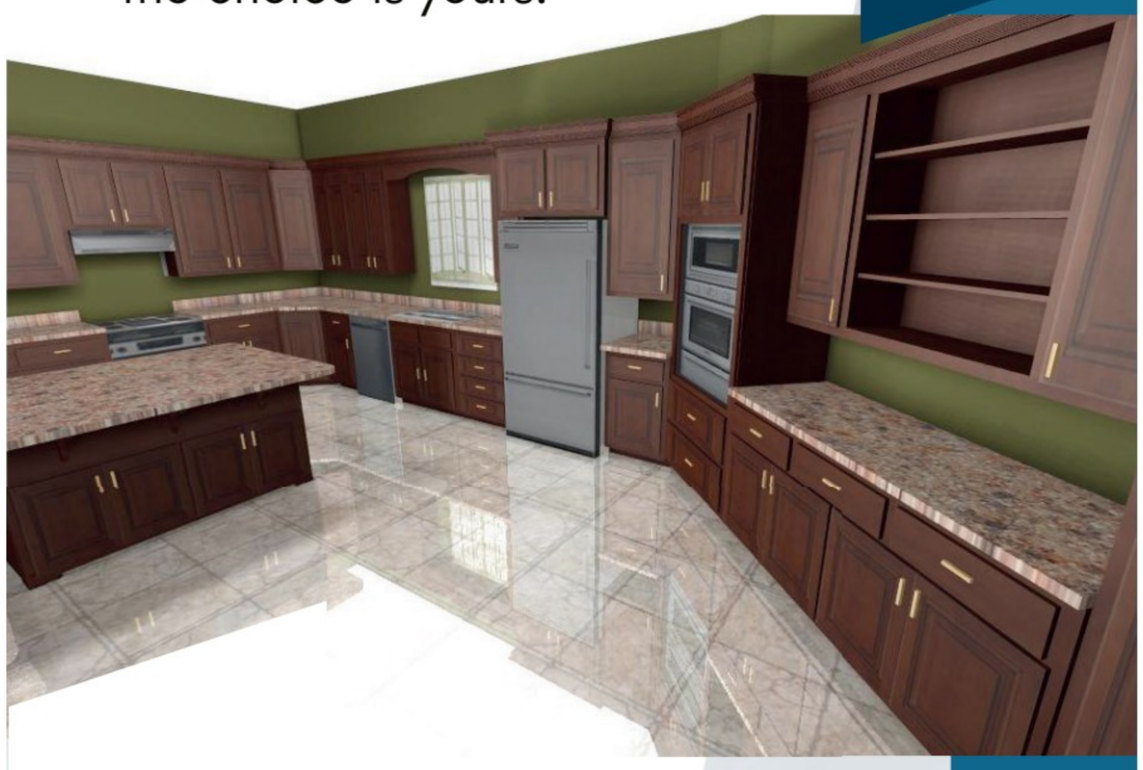

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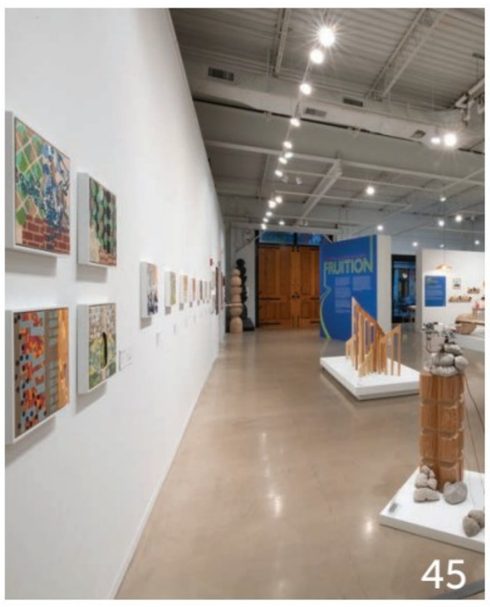

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Trying to sum up the IWF experience

By Tod Riggio

When my friends and acquaintances ask about my job, and I explain, they don't really get it. They are somewhat impressed with "I'm a magazine editor for a woodworking title", but I lose them with "It's a trade publication for professional woodworkers." Like that's really a thing.

They get really confused when I tell them part of my job is to attend a week-long woodworking show in Atlanta. Since most of them have never been to a woodworking show, they're wondering if it's a craft fair or place to buy furniture. I explain that it's a trade show where professional woodworkers go to buy machinery, discover the latest technologies, and acquire the knowledge to expand their businesses. They say that it sounds like fun, and we start talking about the weather.

How do you explain the IWF to the uninitiated because "it's this really big show that happens every two years" isn't cutting it. So, I'm working on some new material:

The show is so big that some exhibitors arrive a month or two in advance to construct what amounts to a factory on the show floor.

It features over 1,100 exhibitors, enough to fill three huge halls in Atlanta's cavernous Georgia World Congress Center.

It takes me four full days to walk and experience the entire show.

While I work on that, let me share my impressions of the 2024 show. I've been to a dozen or so and this year's felt bigger than ever. 'Supersized' is how I've been describing it. Maybe it's just my advancing age, but I found it to be a physical and mental challenge. There was so much to see and remember.

I was struck by the considerable amount of automation for lifting, moving, machining, sanding, and finishing. I was overwhelmed by the beauty and abundance of decorative panels available today. There were dozens of hardware exhibitors, and each had a clever new product pertaining to storage or closing a door or drawer. Machinery was on full display, but there was also a dizzying amount CAD/CAM software, finishes, tooling, and joinery solutions to consider. And there was so much innovation, particularly with advancements in table saw safety.

The IWF is a spectacle that's hard to describe for someone who has never been. But I'll keep trying. **w**

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Shaping the Successful Shop™

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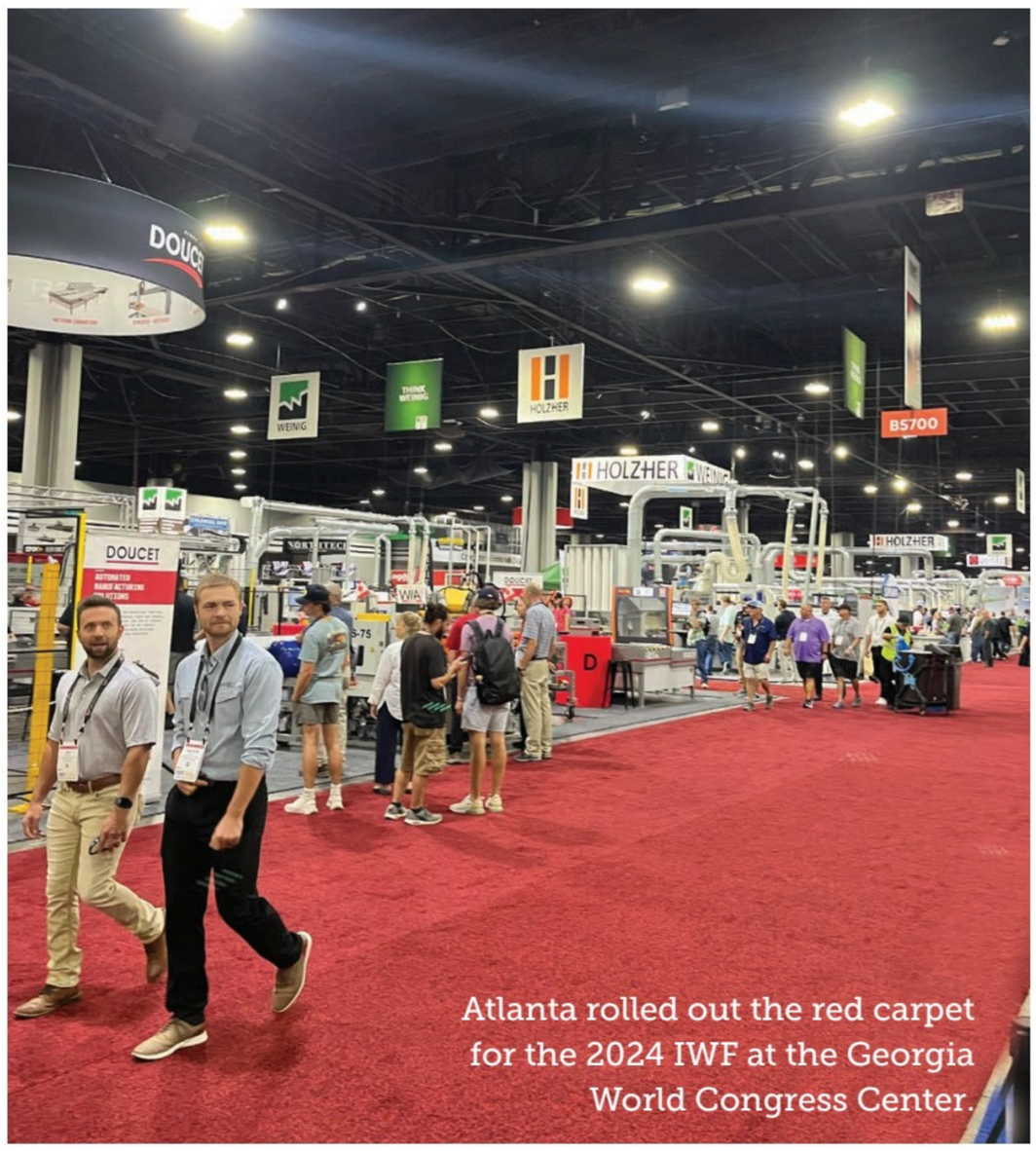

Atlanta rolled out the red carpet for the 2024 IWF at the Georgia World Congress Center.

IWF pleases exhibitors and attendees

By Jennifer Hicks

The 2024 International Woodworking Fair (IWF), North America's largest woodworking trade show and conference, featured over 1,100 exhibitors and an estimated 26,000 attendees Aug. 6-9 at the Georgia World Congress Center in Atlanta.

"As the first IWF under the newly formed Wood Industry Association (WIA), it was exciting to see the collaboration and partnership between the exhibitors this year, more than ever," Fred Stringfellow, CEO of the WIA, tells Woodshop News.

"You could see all parties working toward the same goal — to truly make this year's IWF the best show experience for all attendees. The show's focus on innovation and future trends seemed more pronounced than ever, from the educational programming to the displays in exhibitor booths, to the Design Emphasis and Challengers Awards. We're already looking forward to coming back to Atlanta for IWF '26."

HAPPY ATTENDEES

Jerry Vlacich, COO of New Wave Custom Woodworking in White Mills, Pa., is a regular attendee and was eager to look at machinery on the first day of the show with several of his co-workers.

"We're looking at five-axis CNCs, conventional table saws, a laser engraver, and possibly a band saw. We want better efficiency and the latest and greatest up-to-date equipment and tooling," says Vlacich.

"Here we get a chance to meet up with other vendors that we've had a good relationship with over the years. It's important that it's face to face."

The IWF has also become a regular stop for Neal Smith of RS Kitchen & Bath in Grantville, Ga.

"My dad started our cabinet shop in 1972, and I eventually came on board. I don't know what year IWF started but I remember going with my dad every two years for many, many years. It became a tradition for us," Smith said following the show. "We have made many equipment and supply contacts and purchases there that remain key, all the way up to today.

"Dad passed away this year, so it was the first IWF without him. He was definetely there with me in memory. My wife and son are now also in this family business and have been attending IWF with me the last several times. We normally attend two to three days each time. IWF has always been a big plus for our business, and I would consider it time well spent."

First-time attendee Larry Blanchet, CEO of Coastal Construction & Engineering of Broussard, La., was taken aback by the magnitude of the show.

"The show was simply amazing and exhausting. I never dreamed there could be so much excitement at one event. Thank you to all the people that put it together and all the vendors. No one in wood today should ever miss this event," Blanchet said.

Photos: Jennifer Hicks

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HAPPY EXHIBITORS

Of course, a well-attended show made exhibitors equally enthusiastic.

"It was a very productive show for us," says Jason Ellis, vice president of sales for CabBuilder Software. "It was great meeting so many veteran cabinet builders as well as those new to the industry. We were pleased to hear a lot of positive feedback from both."

On the first day of the show, Mathias Forsman of Castle USA, an exhibitor of pocket-hole machinery, was eager to hear directly from existing and prospective customers.

"To me, sales are secondary to the information I'm getting from the people who are out actually working in their shops. This is one opportunity that I have to talk to a lot of people from all over the place and really get a feel for what they're seeing out there. I do travel to individual shops and individual areas doing installation and training service, but that only gives me a local view on the industry," Forsman said.

Maksiwa sales director Vitor Saar said attendees were highly impressed with the company's new machines.

"The IWF was a tremendous success for Maksiwa, marking our largest booth to date with live demonstrations of our top-selling machines. Although we saw a slight decrease in foot traffic at the fair, likely due to the nearby hurricane affecting travel plans, the number of visitors at our booth increased compared to the previous event, as did our overall sales. Our newest and most powerful 10-hp sliding panel saw, the BMD.3200.IR, garnered significant attention with its advanced CNC rip fence," Saar said post-show.

The show featured the Challenger's Distinguished Achievement Awards, which honored seven winning products from six exhibitors, the Design Emphasis student design competition, and extensive educational program. Seminars included "Profit First for Cabinetmakers" with Greg Paolini of Gregory Paolini Design of the CMA; "Robotic Applications for Small to Large Companies" with Jimmie Hall of SCM North America, and "Cutting-Edge Care: Your CNC Router Maintenance Blueprint" with Jim Paden of Diversified Equipment and Supply.

The next IWF is scheduled for Aug. 25-28, 2026. **w**



At the Shaper Tools' booth, visitors could test drive the Shaper Origin.

Photo: Tod Riggio



“We started with 3 PivotLine® mobile rails and it wasn’t unusual for us to finish 200 doors in a day. Both sides – primer, paint, and clear.”

Dion Richins, Owner
Richins Carpentry, North Salt Lake, UT
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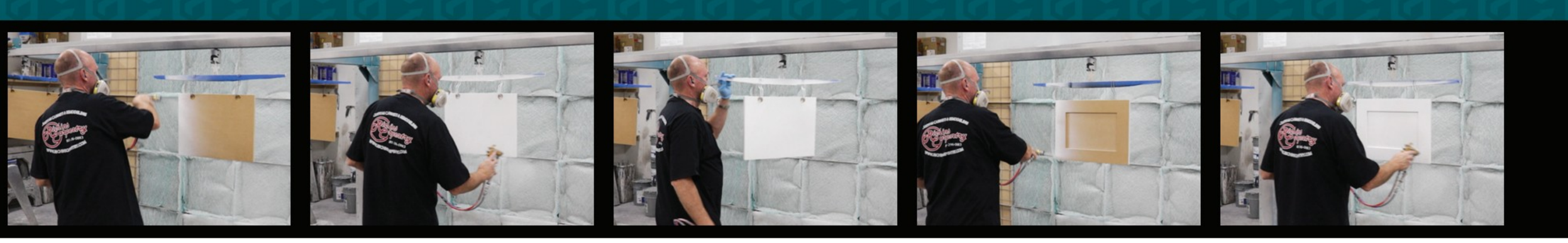
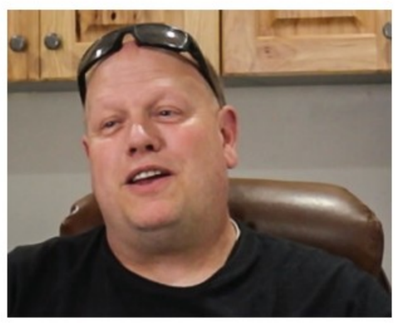


Watch the video to see a Richins Carpentry finisher demonstrating the ease and speed of using the PivotLine System.



“Now we have 9 mobile rails. I think if we pushed it, we could finish 300 – 350 doors in a day.”

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PivotLine, from Guffey Systems, is a manual-rail vertical finishing system that delivers the speed of an automated line without replacing the skill, art, and craftsmanship of the finisher.

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Watch the full interview with Dion Richins



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Best in Show: DLW Station by Orko Sen.

Students show, compete at IWF

By Jennifer Hicks

Students from 18 colleges and universities entered the Design Emphasis juried furniture competition at the 2024 IWF. Finalists had their work displayed in a gallery setting on the trade show floor, and five were awarded blue ribbons for their outstanding work, including Michael Aehle from Kansas State University,

"When I heard my name announced as the winner for the accent furniture category at the 2024 IWF Design Emphasis student furniture competition, I was surprised because I never would have known a few months earlier, when submitting my table, that I would win," says Aehle. "Knowing that my coffee table, inspired by my grandma Sonia, was admired by others made the piece even more sentimental to me and my family.

"Most importantly, I am grateful for the opportunity provided by IWF to show my design to other designers, as well as interact and become acquainted with them while admiring their beautiful furniture pieces. Receiving the award meant a great deal to me because, as I'm sure other designers can relate, the trials and tribulations that come with designing furniture, from conceptualization to final craftsmanship, can be discouraging at times. The other designers inspired me to possibly pursue furniture design as a career because of how satisfying building the final piece can be and how tight knit the furniture community is. This experience was a great opportunity to network, and the rewards of winning my first competition made all the blood, sweat, and tears worth it in the end."

Orko Sen of Appalachian State University won Best in Show and the Design Creativity category for two separate pieces.

The other winners were Jen Schmidt of Haywood Community College in the Case Goods category; Grayson Hall of Purdue University (Commercial/Office/Hospitality Furniture), and Katie Sturm of Appalachian State (Seating).

The winners are selected by industry professionals in the design, manufacturing, marketability and workmanship criteria. **W**

Photo: Jennifer Hicks

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The VD Simple Dynamic Reciprocating Sprayer from Total Finishing Solutions.

IWF Challengers Awards: Total Finishing wins twice

By Jennifer Hicks

Six exhibitors won seven Challengers Distinguished Achievement Awards at the 2024 IWF in Atlanta. The winners were selected from 20 finalists, narrowed from a field of 92 entries.

The awards recognize innovation in products, services or manufacturing techniques that will advance the woodworking industry overall.

The exhibitors described their winning entries as follows:

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Learn more at *snappytools.com*.

Northtech Machine for iGlue

The iGlue by Northtech is a new dovetail glue applicator that requires no complicated setup or training for any shape or size dovetail drawer. Simply stick your dovetail drawer side into the machine, and the iGlue automatically and quickly compensates for part thickness, width and dovetail pattern while applying glue where needed. A single servo-driven glue-head passes over the part, scans and precisely applies glue in seconds. Currently offered in an 18" working width, it can glue over 100 dovetails per minute. Learn more at *northtechmachine.com*.

Timber Wolf Forest Products for Fast-Snap

Fast-Snap by Timber Wolf is an interchangeable metal inlay product designed for quickly and easily changing the visual effects of cabinetry and furniture. The metal inlays can be securely attached to your wooden component with a magnetic system. They are offered in various design styles and metal patinas, and can be purchased alone or with the corresponding components offered, which include corbels and island posts.

Learn more at *timberwolfforest.com*.

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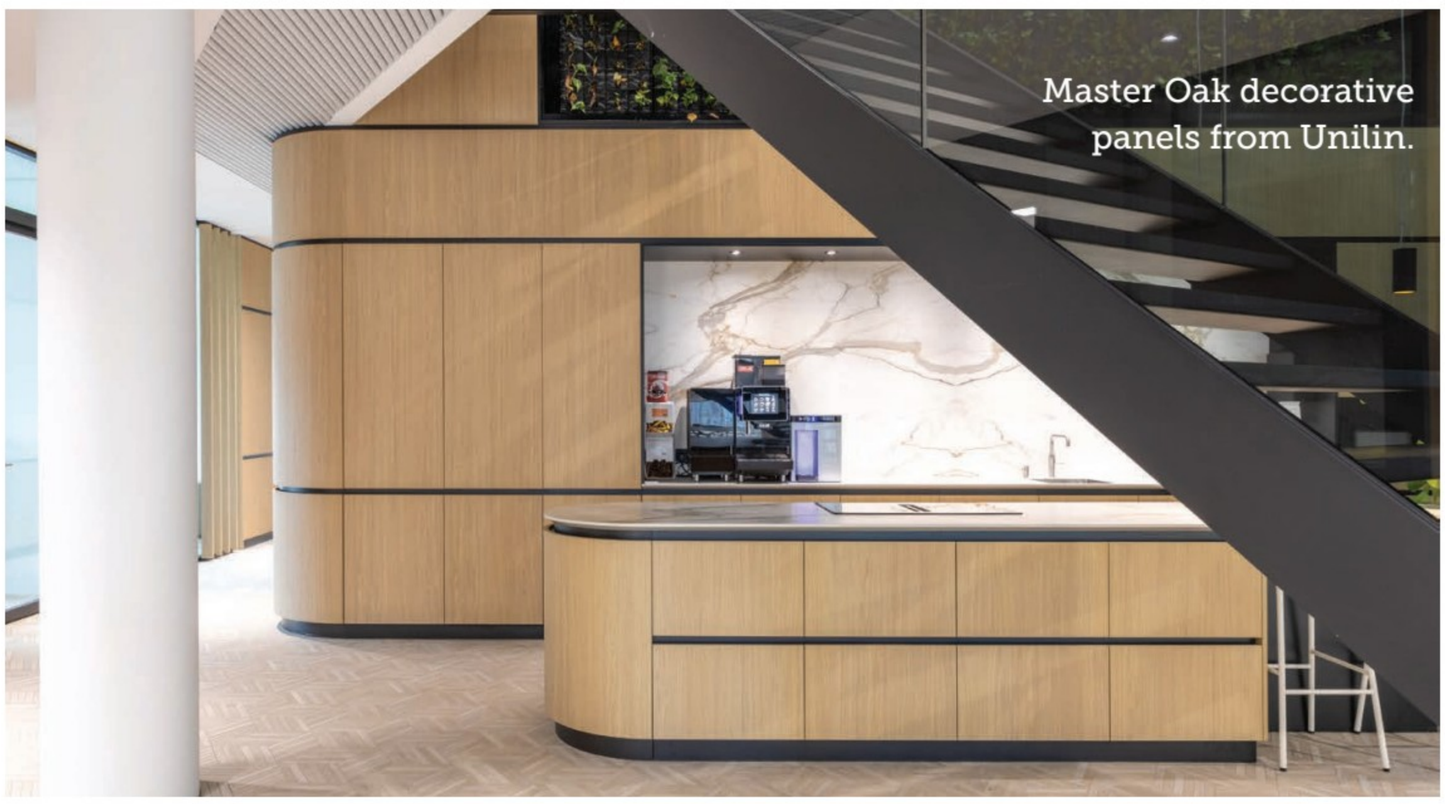

Master Oak decorative panels from Unilin.

able for retrofitting any brand of flatline finishing. It is designed for doors, cabinets, face frames, trim, and moldings, and eliminates the need for three to four employees traditionally required for loading and unloading parts.

The Walcom 2.0 360 True Light is a game-changer for the painting industry, eliminating the challenge of inadequate lighting during the painting process. These innovative lights attach directly to paint spray guns, illuminating the surface being painted with high-resolution color rendering LEDs. The light produced is as close as possible to natural sunlight, ensuring the best painting results by accurately checking base colors and providing optimal lighting even in darker areas. Each includes an air cap ring adapter for compatibility with most spray and powder guns. Learn more at *totalfinishing.com*.

Unilin Panels for Master Oak

Unilin's Master Oak is a decorative panel that captures the look and feel of oak with high-quality HPL and TFL (melamine). The panels are a sustainable alternative to oak made with 100 percent recovered wood, of which 95 percent is recycled wood such as old furniture from local sources.

Unilin's Timber Touch Technology gives the panels added depth and texture, and a unique matt finish that appears warm and natural. Master Oak comes in four natural wood colors and two plain colors, and is suitable for furniture, doors, wall cladding and more.

Learn more at *unilin.com*. **W**



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Ash is getting scarce

By Jennifer Hicks

Ash (*Fraxinus americana*), also known as white ash and American white ash, is losing its battle to the Emerald Ash Borer (EAB). Sellers interviewed by Woodshop News say sourcing the domestic hardwood is difficult, if they can still get any at all.

Michael Johnson of Johnson Creek Hardwoods in Mount Carroll, Ill., says there's a good market for ash but availability is a problem.

"In our area, northwest Illinois, I'd say within 100 miles, the Emerald Ash Borer has killed every single tree. So, I cannot get any decent ash logs. I planted about 2,000 ash trees over the years in my timber, and they're all dead, and all the yard trees that I used to get — the big ones that people wanted to get rid of — they're all gone," says Johnson.

"The only good thing about it, if there is a silver lining, is that so many trees have been destroyed that a lot of people think the Emerald Ash Borer might completely leave the area and allow some of the sprouts to grow into decent sized trees. We have no way of knowing yet if that's going to happen. But there isn't an ash (tree) that I know of that's alive around me right now."

The EAB is an invasive wood-boring beetle from Asia that's responsible for the death and decline of tens of millions of ash trees in North America, according to the USDA Animal and Plant Inspection Service. EAB infestations have been detected in 36 states.

"It's always been one of our top five, top seven sellers," says Clint Dillon of Steve Wall Lumber in Mayodan, N.C. "We move a lot of 12/4 ash and everything I'm hearing with the big thick stuff is that production on that is probably going to cease pretty quickly.

"I hope they figure something out about it because it's always one of our top movers. It stains well, it takes any stain, it works better than oaks in my opinion, and it's just



really popular."

The news isn't much better on the veneer side.

"The EAB has made the availability on the domestic side somewhat less and restricted," says Dan Carroll of Certainly Wood in East Aurora, N.Y., which offers European ash as a substitute. "For all intents and purposes, there isn't much difference between the two aesthetically, if we're picking good quarters. The main distinction is that the European is a little bit brighter, a little less yellow, but it affords us bigger, straighter material."

Select 4/4 ash lumber was quoted at $4 to $4.95/bf. **w**

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ADENTRA ACQUIRES WOOLF DISTRIBUTING

Adentra Inc. has acquired Woolf Distributing Co., a distributor of architectural building and millwork products for residential and commercial projects with a strong presence in seven midwestern states.

"We are pleased to welcome Woolf's team to Adentra," Rob Brown, President and CEO of Adentra, said in a statement.

"Woolf expands our geographic footprint and product offering, adding complementary millwork locations to our U.S. midwest operations, as well as new branded specialty products in the outdoor living product category."

ACSP ADDS NEW VICE PRESIDENT

The Association of Closet and Storage Professionals (ACSP) announces the appointment of Jenna Shock as its new Vice President.

"Jenna Shock brings a wealth of experience and a passion for the industry, which she has demonstrated through her award‐winning work at Inspired Closets Pittsburgh and as Director of Education for the ACSP," the group said in a statement

"Her vision and leadership are expected to drive the ACSP forward as we look forward to celebrating our 20th anniversary in 2025."

Learn more at closets.org.

CROWS NEST HAS A NEW WEBSITE

Crows Nest has launched a new website for its ERP and project management software solutions.

The complete re-design highlights Crows Nest focus on providing a highly customizable, enterprise software solution for project-based manufacturers, service providers, and subcontractors in cabinetmaking, millwork, casework, architectural woodworking, and other specialty trades, according to the company.

"We're really excited about our new site," says Paul Hitchcock, founder and president of Crows Nest. "Site visitors can now easily see what makes us different and better than other ERP and project management solutions, and signing up for a completely free and personalized product demo has been simplified."

Learn more at crowsnestsoftware.com.

CARAGREEN OFFERS MORE COLORS

CaraGreen, a distributor of sustainable building materials, announces the arrival of four new colors — Zirbenwald, Carpe Diem, Moos Grau, and Wildspitze Gold — to its line of Organoid natural surfaces. "These new additions further emphasize Organoid's dedication to merging natural beauty with cutting-edge design, offering designers and architects unparalleled options for creating eco-friendly and visually stunning spaces," the company explained. Zirbenwald features rich, earthy tones and intricate patterns reminiscent of natural pine wood. Bold and dynamic, Carpe Diem brings vibrant energy into any space. Moos Grau offers a sophisticated gray hue that serves as a tranquil backdrop for a variety of design styles. And Wildspitze Gold captures the opulence of alpine peaks kissed by the sun. Learn more at caragreen.com.



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The ExoActive Exoskelton makes light work of tiring overehead tasks.

Festool presents the ExoActive Exoskeleton

By Jennifer Hicks

Festool introduces the ExoActive Exoskeleton, an ergonomic solution designed to support workers under their arms for strenuous work on walls, ceilings and more.

The concept of the product, which hit the market in September, is to enhance productivity on the jobsite, aid user well-being, and reduce fatigue on the body, according to the company.

"We are proud to be first-to-market with the ExoActive Exoskeleton, an innovative new product that becomes an extension of the users," said Rick Bush, Festool's senior product marketing manager.

"We are constantly looking for new ways to help our users maximize productivity, and the ExoActive is a game-changing solution that will help users be even more efficient on the job. With the ExoActive, users can focus on the job and worry less about the weight on their shoulders. It truly embodies our vision of creating tools that are built better to help our users build better."

The Exoskeleton is a harness-like, upper-body frame that slides on like a backpack and can be adjusted to a user's height and body type. It is powered by an 18-volt battery that provides each underarm with an added boost of up to 11 pounds through a controller. It is free of straps and loose parts for unrestricted movement. It includes removable and washable components for hygienic purposes and sharing among multiple users, according to Festool.

Users can set the support level at any of three predetermined working profiles for target support from either the waist up, from chest height, or overhead. Using the Festool Work app, users can select additional profiles for optimal support.

The ExoActive Exoskeleton sells for $3,495. The support harnesses and headrests are sold separately. Learn more at *festoolusa.com*. **W**



Courtesy of Festool

New PRS5 CNCs from ShopBot Tools

By Jennifer Hicks



ShopBot Tools debuted its PRS5 line of full-size gantry CNC routers at the 2024 IWF in Atlanta. The series includes three models — Standard, Alpha, and Alpha ATC — that feature a streamlined modular design for enhanced stability and accessibility, according to the company.

"We're trying to serve the kinds of customers that we are working with the most often these days, which are professional woodworkers, cabinetmakers and people that are making money with their machines," says Brian Owen, CTO of ShopBot Tools. "Customers want a machine that is more rigid, so they can cut faster and [achieve] a more high-quality cut. We beefed up a lot of steel on the machine on the frame, so it stands up during heavy cuts.

"We also wanted to make it easier to access the work area. So, with this series, the whole table of the machine has been redesigned. The table is lower, and the rails on the side are now level with the machine rather than being above it. It's easier to get access to the work area from all sides of the machine if you want to load or unload material from whichever side is convenient for you."

The Alpha and Alpha ATC models are available with table sizes ranging from 48" to 192" and gantry beam widths from 32" to 108". The Standard is available with table sizes from 48" to 96" and gantry beam widths from 48" to 60".

The three models are also available with 8", 14" or 26" of Z travel, a vacuum hold-down system, additional aluminum extrusion for adding fixtures and jibs, and ShopBot's accessories like the rotary indexer and vacuum hose cradle.

The Alpha ATC features a nine-position tool bar that automatically retracts below the work surface when not in use.

"Rather than being in the back of the machine and blocking material that you may want to push through the machine, it drops out of the way and you can push wood through the machine onto a pallet when you're unloading it, or you can put longer pieces of wood onto the machine without having the toolbar in the way," says Owen.

The Alpha ATC with a 4' x 8' table starts at $37,750.

Learn more at *shopbottools.com*. W

Courtesy of ShopBot



North Star provides equipment financing

By Jennifer Hicks

The 2024 IWF featured plenty of eye-catching, cutting-edge machinery that could help woodworking business owners bring their companies to the next level of production, for a price. Representatives from North Star Leasing, a division of Peoples Bank that specializes in equipment financing, exhibited to promote their financing options and explain how they can help buyers get more equipment into their shops.

"We consider ourselves a one-stop shop for financing," says Talia Crowley, North Star's vice president of business development. "North Star Leasing works with a large range of business sizes, credit scores, and equipment prices. Our minimum is $1,000 for an equipment purchase, so we also work with all price ranges, and we work with almost any piece of equipment."

Crowley says machinery financing frees up cash for operational costs, personnel costs, savings for emergencies, and anything else businesses tend to endure. North Star works with businesses of all sizes, from sole proprietors to larger corporations, and is attuned to the current industry trend towards increased automation.

"Equipment financing acts as an additional payment option, and we find that many of our customers are small to medium businesses," says Crowley. "The customer fills out a short application, which includes a one-time credit check on the business owner. My underwriters then use this information to create terms."

She adds that that applicants must be sole proprietors or registered businesses. "We don't finance individuals who are just hobbyists, which many woodworkers are; they need to have a business need for the equipment.

"We are a smaller financing business ourselves, so something about North Star Leasing that's great is that there is a real human aspect to it where we talk to customers and get to know their needs."

Learn more at *northstarleasing.com*. W

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Jun Tomagan, Loss Control Representative

SandMan adds to Sand Pro line

By Jennifer Hicks



Courtesy of SandMan

SandMan Products featured its new Sand Pro DL6046 downdraft station with a 59" x 46" table that doubles as a workbench at the 2024 IWF.

"The Sand Pro DL6046 is a smaller version of our Sand Pro DL9648, our largest machine that's very popular for us. It's got a smaller footprint for when space is more limited, or if you only have one or two people sanding cabinet doors," says company owner Nate Troyer.

"One of the master brands that we do a lot of business with had asked us to make this for them, so we put a bunch into one of their places and it was pretty successful. Then we decided to put a refined version of it on the market for the public. It's got receptacles on all four corners, a stainless-steel hanger for your orbital sanders, magnets for your tools, and a built-in storage area."

The machine's 1.5-hp, 3-phase motor powers a 16" backward inclined fan that produces 3,700 cfm, according to the company.

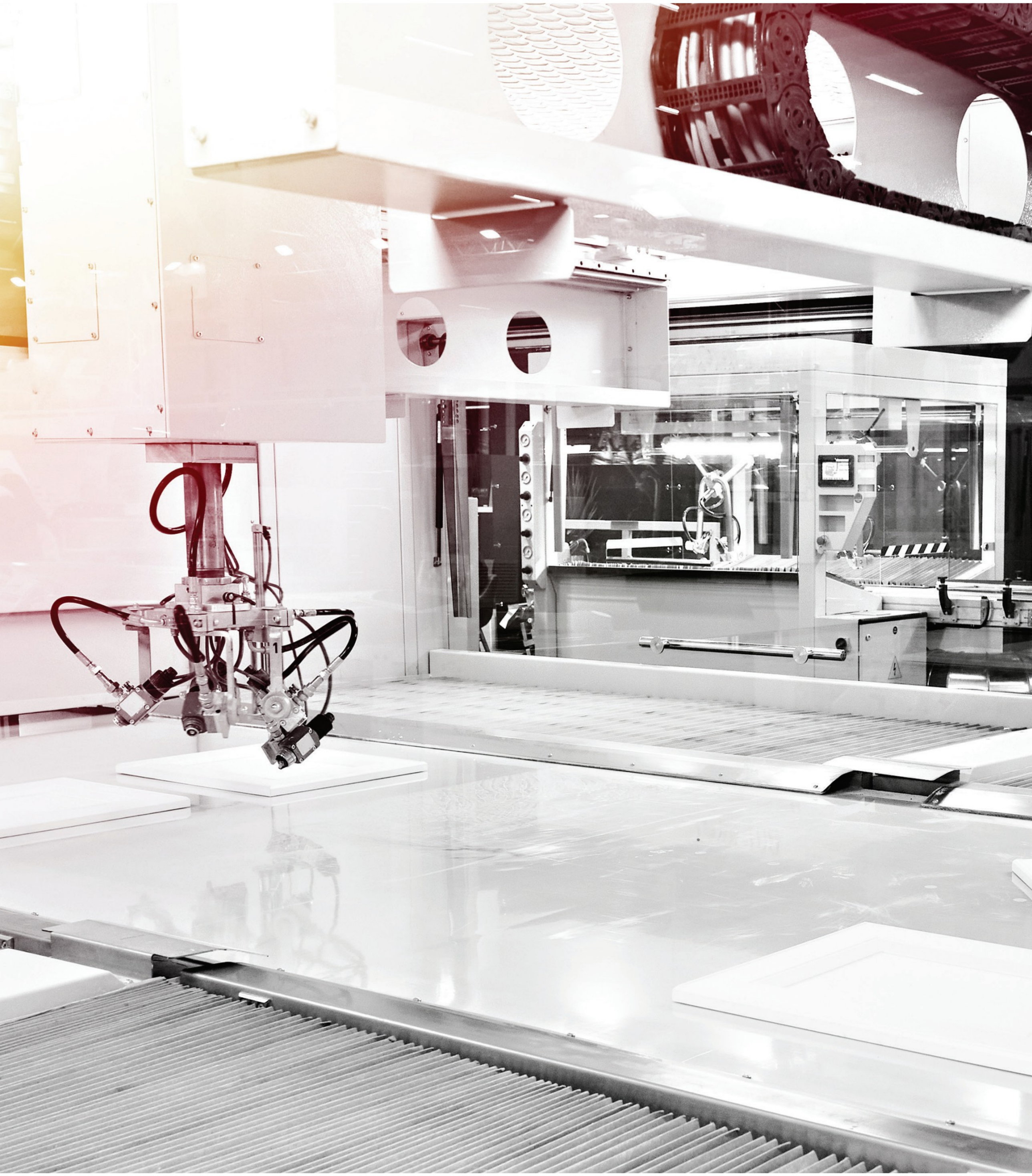
Features include four 20" x 25" x 2" surface-pleated filters and a rubberized mar-proof top with a grid system for jigs and fixtures supported by an aluminum frame.

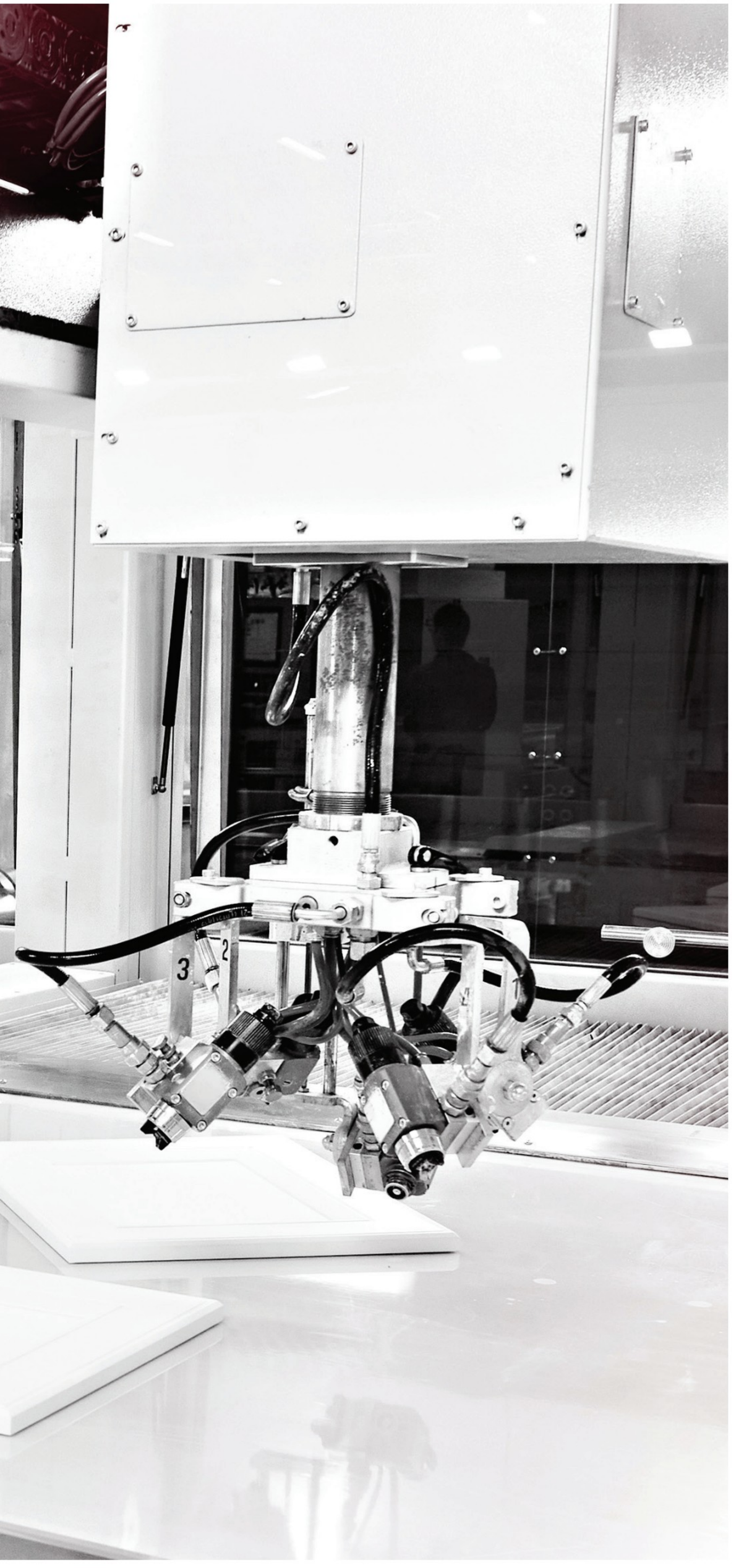
Other features include two shelves, easy access for filtering service. and forklift accessibility from both ends.

The Sand Pro DL6046 sells for $7,495. Swivel casters and other accessories are available separately.

Learn more at *sandmanproducts.com*. **W**







Adobe Stock

Automating the finishing department

The market for spray machines and robotic applicators has exploded with an array of choices

By John English

For many smaller shops, finishing is still a manual task that's done with a brush, rag, roller or spray gun. But that could soon change as entry-level automation becomes more affordable.

Automated spray machines are designed to be stationary units in a production line. They work like wide belt sanders – the woodworker feeds parts in at one end and a mechanical conveyor moves them through the machine until they emerge, dry and handleable, at the other end. The machine is basically a big box with air filters that recover or remove overspray, a spray gun, and a large sheet of paper or a cleanable belt that keeps the parts moving. Sometimes the configuration is two machines in series, where one applies the coating and the next does the curing. The paper belt is discarded after each job, or the cleanable belts are either automatically or manually cleaned as needed.

The advantages of automated spray machines are that the coating depth can be extremely even, errors are rare, and overspray is very well managed. They're also faster than manual work, so they release employees to do other tasks. They can be programmed to spray just about any liquid coating, and the spray pattern, nozzle distance and fluid volume can all be programmed to change as needed during the process. One of the biggest selling points of these machines is that the learning curve is quite short, as they are fairly easy to operate.



An inside view of a Dynamic reciprocating spraying machine from Total Finishing Solutions shows how the guns can achieve wide coverage.

A woodshop can choose between many machines, depending on what is being coated. When shopping for a machine, the width and height are critical while most machines have open ends for long stock. The number to watch for is feet per minute, as this tells you how fast a job can be processed. Choosing the feed speed is determined by the viscosity of the liquid, its evaporative qualities, the depth of the finish, and the size of the parts. The machines have a comprehensive control panel that can usually be programmed for manual or automatic input, so each job can be handled differently as needed.

Long and thin stock such as moldings, stiles, rails, siding and trim are best served by a fan coating head or a linear spray machine. The fan coater is exactly that – a fan shaped spray head that delivers a wide and thin mist. Most machines will have several fans, and they usually have more than one filter so the operator can clean up without stopping the machine.

OTHER SETUPS

A linear spray coater has an overhead gun or guns, a long conveyor belt, and guides that usually include a hold-down roller before the guns. They're simpler machines that are easy to maintain and clean. Bigger machines can handle hundreds of feet per minute but their limit is part width, so some wide architectural crowns or large historical reproduction base moldings won't fit on smaller machines. High volume (more expensive) linear machines can have multiple pump circuits and multiple gun arms.

A reciprocating head is a solid choice for kitchen elements such as five-part doors, drawer faces, shelves and flat panels. Basically, reciprocating means 'moving'. The machines have sensors that tell them when a part is entering the chamber and the size of that part. The working head's action is very familiar to CNC owners. It can be equipped with one, two, four or more guns, and it moves quickly in X and Y. It can also angle/rotate as needed, to coat edges. Most machines now have LED lights and inspection windows so the operator can watch what's happening in real time. For cabinet doors, the normal process is to coat the backs, and then do a second run to coat the fronts.

One thing to keep in mind is that spray coating machines use extraction fans and filtered air intake/makeup blowers, so there will need to be some infrastructure (and budget) for those.

Most reciprocating machines have easy gun switching, which lets the operator change coating material or colors without having to go through a full clean-up.

Larger doors, complex surfaces and cabinet components are usually coated using rotary spray machines. Here, the parts move under heads that rotate on arms as needed. They can spray a fine, even mist over a wide area, and they move parts through a lot faster than reciprocating machines. Sensors or scanners



This labeled illustration of a Venjakob coating machine from Stiles Machinery shows the various elements of an automated spray booth.

tell the controller where to concentrate and where to be circumspect on complex parts, so even sculptural components can be evenly coated. The volume of delivery is controlled with a combination of variations in the line (feed) speed, and the rate at which the arms rotate.

Spray coating machines come in airless, high pressure, medium pressure and HVLP options. Some are set up for powder coating, with dedicated recovery that pretty much eliminates waste.

ROBOTS AND COBOTS

For smaller shops, robotic spraying can be a very custom, one-part-at-a-time process and this can be a significantly smaller investment than a tunnel machine. Here, small robots can pick up one door at a time and hold onto it using clamps that fit into the 35mm hinge mortises in the door. While one arm secures and moves the part, another moves the gun. Simpler entry-level systems are also available where only a gun arm is used. And there are spraying and drying systems that hold doors, drawers and even case goods in other ways as they present them to the spray gun, and then move them through the spray booth for airflow or heat based drying/curing.

A cobot is a collaborative robot, which is basically a mechanical arm that has sensors on board that can detect people and other objects, so it doesn't bump into them as it moves.

Cobots are made up of a base, a flexible arm with full rotation in the elbows (so it can move a whole lot more than a human with a spray gun), a flexible wrist, and a controlled tool at the end of the arm. Cobot arms can move a spray nozzle parallel to a part, rather than using the swaying arc that nature imparts to human arms. As a result, robotic spraying equipment is very precise and uniform, and consequently wastes very little of the liquid.

These arms can also be set up to

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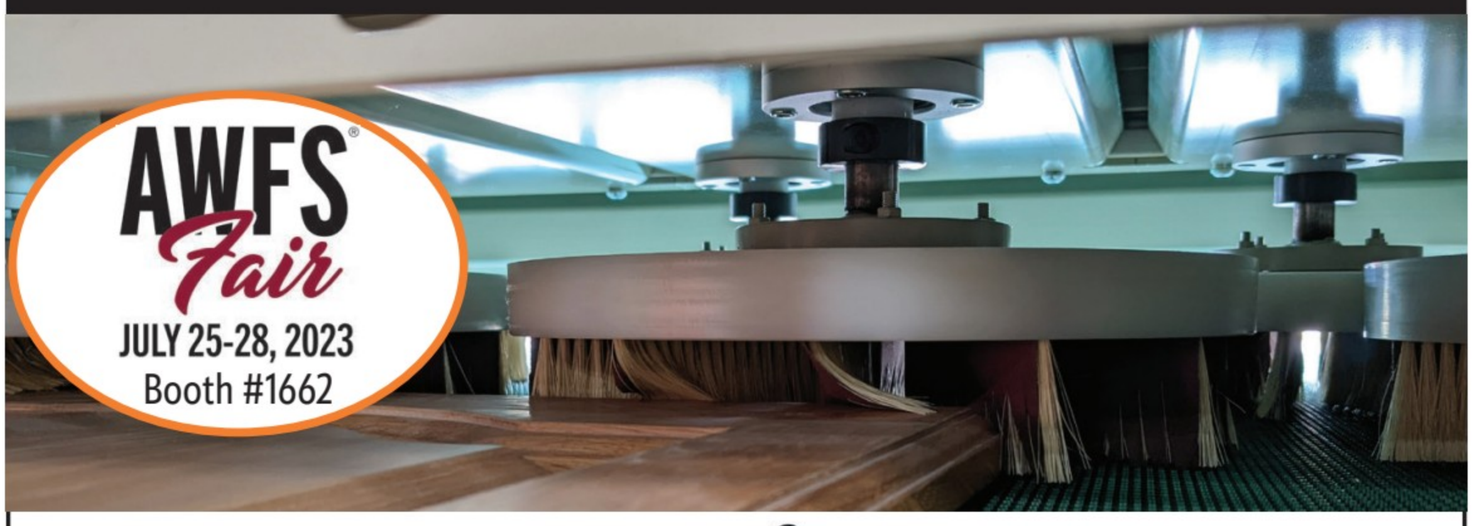

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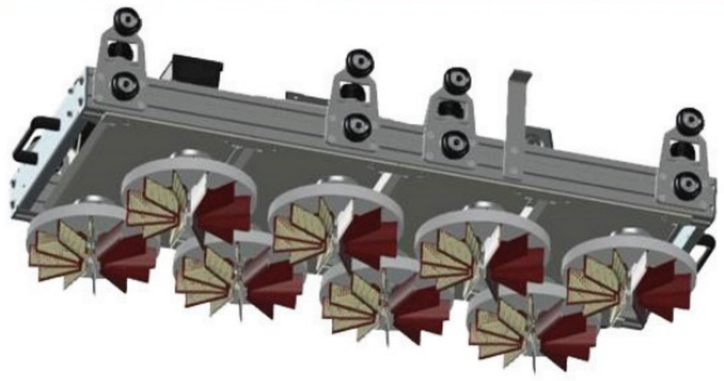



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Fanuc's CRX 10iA cobot offers simple programming with a drag and drop interface that trains it to do tasks such as sanding and coating parts.

repeat processes, so similar doors in subsequent jobs can be coated with less set-up required. That recipe approach reduces errors, and waste.

Small cobots are essentially batch machines. That is, they are intuitively best suited to batch processing rather than continuous process. They start and stop smaller jobs, rather than running large volumes all day. Some cobots have more or fewer axes than others (it's usually about six) and the more they have, the more complex parts they can reach.

Many robotic spray systems now use basic AI to teach the cobot how to spray. The operator holds a gun and physically goes through the movements, and the arm 'learns' from that. This is a way for users to avoid excessive programing. They can teach the tool, performing operations in short phases that can then be sequenced to create complete tasks. The trade term is mimic software.

Two critical aspects to ask about when exploring the cobot option are the arm's reach (how far can it be cantilevered from its base without losing precision), and payload strength (what weight can it handle – and that includes guns, hoses, and liquid).

For complete coating systems, the equipment may include the option of color changers and purging equip-

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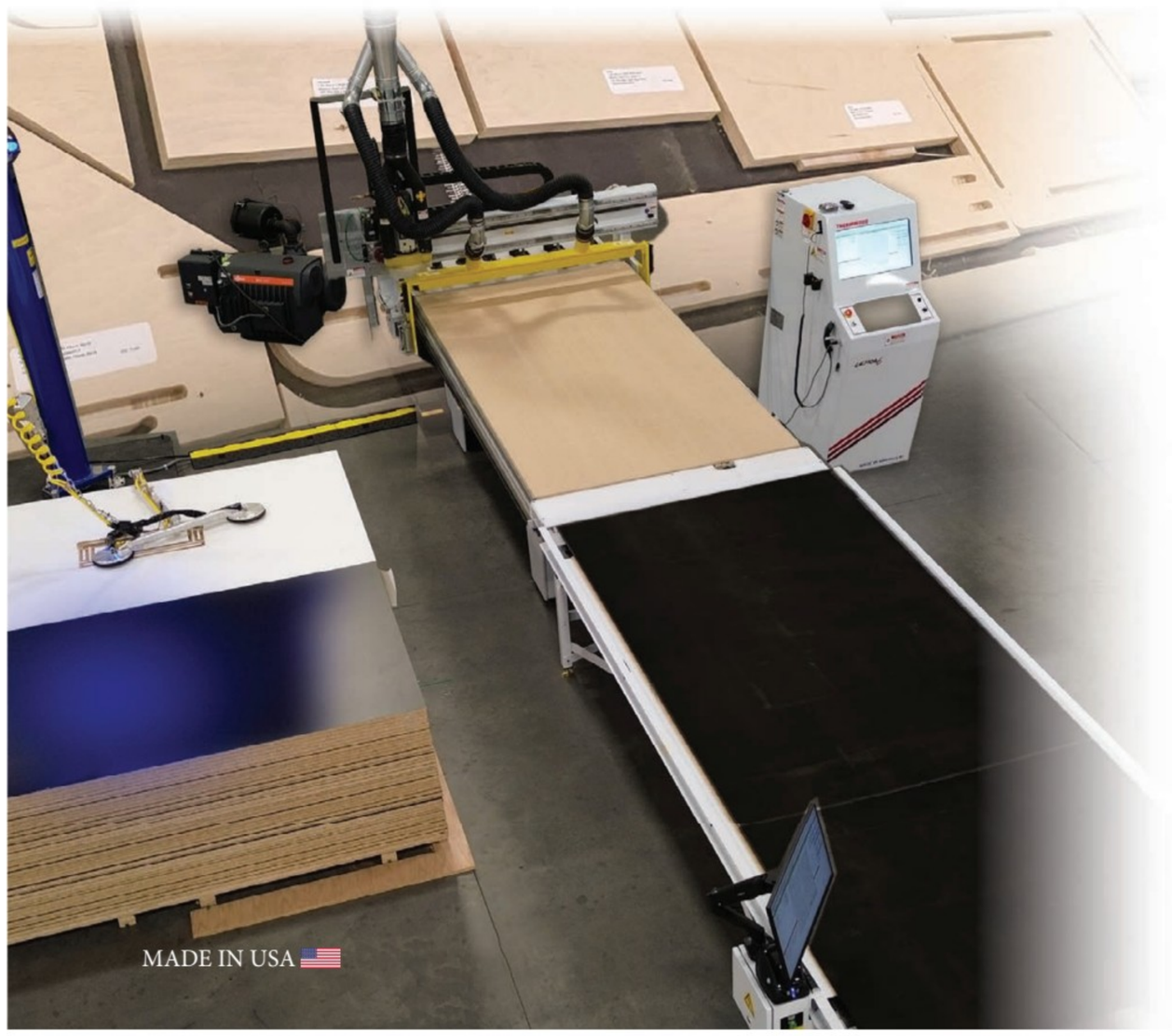

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ment, different delivery and pumping set-ups (pneumatic, electrical, piston, diaphragm and so on), and various ways to handle, mix, recover and store fluids. For example, some manufacturers offer dosing units that mix colors, thinners etc., while others require the shop to do all the prep.

Cobots are low maintenance. Once one of them is programed and the product is fed to it, it will just get on with the job without continuous tweaking or monitoring. And they don't require specific orientation.

They can be attached to a bench, cart, floor, wall or ceiling – wherever they can achieve the best coverage.

Cobots don't breathe, so they don't have the same health and environmental concerns as human operatives. They also don't take up a lot of shop space. As a way to automate finishing equipment, they can pay for themselves very quickly when their price is balanced against the cost of training and employing a paint booth operator.

Whether a woodshop is searching for finishing tunnels or cobot arms, the bottom line for any kind of production run is automation. Choosing the level, and the investment size, is a complex journey but it can significantly reduce finishing costs over more traditional methods. **w**

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A GOOD MATCH

Spectrum Woodworking & Interiors achieves steady growth with new owner Josh Sharp

BY JENNIFER HICKS



Sharp and the shop's general manager, Adam McNamara.

Courtesy of Spectrum

Total revenue has doubled since Josh Sharp purchased Spectrum Woodworking & Interiors in Oregon City, Ore., five years ago.

"Our sales our goal is where we should be, between $10 and $12 million in top line revenue this year," says Sharp. "When I bought the company, I think their biggest year was $4.5 to $5 million. We've experienced steady growth. We've gone up and down a little bit; we did close to $10 million and scaled back a little bit. It's about testing capacity in what we're able to do. We have a steady growth plan, and our growth is about 15 percent per year."

Operating out of a 23,500-sq-ft. shop in the suburbs of Portland, the company currently employs about 45, including help in the shop, front-end, and installers. It sets itself apart from the competition by strictly focusing on specialized commercial work, such as tenant improvement in corporate offices, high-rise buildings, and single location offices.

MAKING THE DEAL

Sharp purchased Spectrum in May 2019 from the original owner, Bo Corcoran, who founded the company in 1988.

"Bo was retiring and looking to make an exit. I responded to an ad online that a company was for sale. I did not know it was woodworking. I walked through the door, liked it, and met the existing team."

Originally from Michigan, Sharp moved to the Portland area in 2009 as a salesman for a different manufacturer in the building envelope industry.

"It was still construction related, so I was still working for commercial and institutional clients through architects. My background is construction. My family's been builder/developers for 50 years, so I feel very comfortable in the commercial construction related space even though manufacturing's a whole lot different than general construction."

The purchase included the machinery, client list, goodwill, and all the basics, except for the shop itself. The original building was about 20 minutes away in Canby, Ore.

"I was going to lease the building, but right when we were negotiating, the building was sold to somebody else, so we needed a new home. We went from 27,000 square feet down to 11,000 square feet in that same building, so we did that move, and six months later we picked up the whole shop and moved it all here."

At the time of the sale, there were about 30 employees. The entire existing staff stayed for the transition, and those with a key role within the office are still there today. There are now about 18 in the shop and 15 on the front end. Sharp oversees day-to-day operations with help from his right-hand man, general manager Adam McNamara.

BRANCHING OUT

The architects and general contractors that Sharp formerly worked with as a salesperson have helped him navigate the area's commercial interiors market.

"We have relationships with designers, but most of our work is bid to commercial general contractors. We probably have almost 15 we work through regularly which is nice





because I know there are a lot of companies that have two or three GCs that do all their work. It's nice to have a lot of irons in all the fires. We're very diversified, and we have a pretty broad range of clients.

"We are starting to branch out into the Seattle/Tacoma markets. The furthest we've gone is three hours away from our shop, but most of our work, I'd say 60 percent, is within 10 miles from here."

In addition to commercial tenant improvements, the company also does some institutional work for city, county and local governments.

"Class A and Class B office spaces are primarily our bread and butter. We do some work in educational institutions. It wouldn't be far-fetched to say we go to a school occasionally, even though it's not a market we focus on. We do work in city and county courthouses and libraries, too.



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We tend to do a fair amount of law offices. They typically have a larger square footage in hi-rise buildings."

BEHIND THE SCENES

The shop features a Schelling FH4 panel saw, Holz-Her Auriga 1308 XL edge bander, and Anderson Selexx 512 CNC. There's also a backup Morbidelli CNC, an older Gannomat Index 230 drill and dowel machine, and a Gannomat Concept 70 case clamp.

"We make Euro-style slab commercial casework. We do not do residential-style doors. I would say 85 to 90 percent of what we do is pretty traditional Euro-style boxes for commercial," says Sharp.

"We're primarily limited to a lot of laminate and veneer, which would incorporate some hardwoods and solid woods. We see a lot of oak, a lot of walnut. We don't use a whole lot of super exotic woods. Everything is custom that we do, but we don't get the liberty to do things like you would see in the very high-end residential sector. But we do grain matching on veneers and wall panels and flitchings and all that."

A customized spray booth allows for all types of finishing options.

"Most of our work is toned and stained wood. Whitewash was popular two years ago. We do very little with paint, but we do paint. You get a better project with tone and stain. Paint is susceptible to damage when being shipped, so for those projects we will do the priming and try to leave the painting to the painters on-site.

Spectrum is a two-year member of the Architectural Woodwork Institute and participates in the organization's workshops and other functions for business furtherment.

Spectrum is currently booking into 2025.



Photos by Jennifer Hicks

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"We're having our best revenue year that we've had. At this point in time, we're just about full for the year. So, we're having to get more selective," says Sharp.

"The backlog is a good thing. But it's challenging because we have to say no to a lot of people that have good work because we're already so full. We know there's a ton of good work that we haven't even seen yet that's just going to continue to come out. Most of our work runs on 12 to 16-week cycles because it's commercial."

Sharp adds that the company has competition.

"I could probably identify two or three in town I could name who we closely identify with as far as size and scope. They're certainly bigger shops but a lot of the bigger shops in Portland don't do the type of work we do — they focus on different markets, [such as] hospitality retail fixtures. We don't do any of that type of work or very little. And then you've got your smaller companies where they only want to do casework. We like a good mix and i think that's a very good differentiator from your standard, smaller shop."

KEEPING UP WITH DEMAND

Sharp says the growth will require the company to expand operations soon, by either getting a new building or a second location.

"It's very difficult to find space and very expensive out here. Property is a premium. Finding space is a challenge. We can find a building, but it has to be a good return on investment. It needs to make sense in that it has the infrastructure we need when we move into it."

About four employees were added to the office staff in the past year. Spectrum is actively hiring in the shop.

"Labor is obviously a big challenge these days. It's a growing concern how we onboard and train, and we might have to create our own talent groups."

Moving forward, Sharp, and McNamara are focused on keeping in touch with the market and how things are changing. He says the two describe the operation as a "Purple Cow", as their different backgrounds help the company remain unique and interesting to clients.

"As a non-woodworker running a woodworking manufacturing business, I think, makes us unique. Most businesses like this were started by someone that came from the woodworking industry, whether they were a fabricator or installer. Neither of us came from that industry, which I think is an advantage. It gives us a different view on the industry as a whole. I think we make decisions differently than a traditional woodworking company would," says Sharp.

Learn more at *spectrumwoodworking.com*. **W**

Courtesy of Spectrum



Drilling in the edge of a sheet can be done accurately on a 3-axis machine with an aggregate head, like this one from Benz Tooling.

Just like new

Upgrades and adds-on to get more from your shop's outdated CNC

By John English

It's a harsh reality for woodworkers when they realize that their brand-new CNC router has quietly become several years old. Time slips by and machines, like their operators, start feeling dated.

But unlike woodworkers, the physical depreciation of a CNC doesn't automatically consign it to retirement. As long as the heart is strong, there are lots of ways to give it a whole new lease on life.

RETROFITTING

For a CNC that still has a solid frame, flat table and trouble-free gantry, replacing the control panel may seem like a sensible upgrade. But faster controls will probably dictate upgrading the servo motors too, along with the spindle, most of the wiring, the capacity of the tool changer, and swopping out a few ancillary electrical components. A full retrofit can cost a pretty penny, but it's still far less expensive than buying a whole new machine. That's especially true when the shop has already paid for the infrastructure to support the CNC including the power supply, dust extraction, loading and unloading mechanics, clamps, fixturing, vacuums and all kinds of jigs and adaptations.

Leaving the machine where it is can minimize downtime, too. The true cost of selling an old CNC and buying a new one involves a lot more than just the price tags. There will be days, even weeks, during the transition where nothing is built. Then there's the huge cost of shipping a large chunk of iron (two, as the old machine must be moved, too), and hidden costs such as interest rates and time spent training on the new machine. These other numbers are what convince many woodshops to retrofit rather than replace.

There's also value in the operator's comfort with the existing machine, with its physical space in the shop, and its unique idiosyncrasies. Of course, some of those norms will change with a faster controller, a more powerful spindle, and a larger tool changer. But the heart of the machine is familiar, intimate and understood. That inspires a degree of confidence. So, even though the retrofitted CNC is almost an entirely new entity, its core familiarity imparts a sense



The SB15160 digitizing probe from ShopBot can 'read' a surface and create a toolpath.

of ease rather than the trepidation that often accompanies learning about a new piece of equipment.

The latest generation of controls can compensate for slight irregularities in an existing machine, so cutting results are often more precise after a retrofit. Processing is also going to be faster, and maybe a lot faster if the spindle is also upgraded.

The retrofit can be done at the woodshop, so there's no need for forklifts, cranes, or moving other machines. And there's no need to disconnect power, compressed air, vacuum and dust collection lines to gain access. Plus, all the new features will be under warranty for a while, which helps ease one's mind during the transition.

The usual process is that the woodshop contacts the retrofitter who sends a tech person or a team out to evaluate the existing machine and make recommendations for upgrades. Once a path forward has been decided upon, the service company will build a new controller and probably a whole new electronics cabinet, too. That, along with other hardware upgrades, is then shipped to the shop, and a crew of technicians soon follows to install and update the software. Some service companies will do the work at night or over a weekend, and they may even run new wires while the machine is still operating on the old ones, to minimize downtime.

Once everything is installed, the CNC gets tested and calibrated, and that can shut down production for a day or two. Then the woodshop employees are trained in the new controls and maintenance schedule, after which they can get back to work on client projects.

Full retrofitting is generally done to larger, more expensive machines. That's because there's a point where it will probably make more sense to buy a new CNC rather than rebuild an entry-level model. But the service company will provide an estimate based on make, model and year, so it quickly becomes obvious if the numbers aren't going to work.

POPULAR UPGRADES

Woodshop owners who already have a 3-axis machine sometimes think of 4- and 5-axis CNCs as being the next natural upgrade. Adding a fourth axis isn't for everyone, but it's a logical upgrade for shops that want to make round parts for architectural elements and furniture. A fourth axis lets the CNC do turning, so now the shop can make balusters, newel and porch posts, finials, pilasters, table legs, chair stretchers – in fact, anything that can be turned at



A CNC retrofit, such as this Motionmaster 5-axis from CNC Parts Dept., can upgrade memory, speed and accuracy.

speed on a traditional wood lathe, including bowls and even some hollow vessels. Or when it's turning slowly, a fourth axis can allow the shop to execute gentle curves, swirls, ropes and other decorative elements that can't easily be made with three axes.

If, on the other hand, the woodshop makes rectangular and flat casework, doors, drawers and the like, a fourth or fifth axis probably won't revolutionize production as much as doing a retrofit to increase speed and accuracy. Or upgrading a major element such as a vacuum table, tool changer or aggregate head may be wiser than adding a C axis.

Custom enclosures are one of the more popular upgrades for CNCs. They're relatively affordable and they provide a clean environment that reduces rework and maintenance. Some enclosures have a ceiling that is a filter system, while others side vent. Once an enclosure is in place, the limited volume of air now trapped around the machine can be cooled or heated without having to pay excessive utility bills for climate control throughout the whole shop. That limited enclosed space can also be kept relatively dust free, so parts can be manufactured in a space with low contamination and regulated moisture content. Enclosures can limit the transfer of airborne fines that travel between the shop's traditional machines and the CNC. They can also reduce harmful sound levels, and both of those factors (reduced dust and noise) increase operator safety.

The ability to regulate humidity is also a reason that enclosures are becoming more popular in geographical areas with extreme seasonal temperature variations. This helps with rust issues on machine beds and bolts, and reduces moisture absorption by the wood so there's less movement and lighter weight.

An inexpensive upgrade for shops with a vacuum table, even a small one, is a set of gasket tiles that let the operator block off unpopulated space and increase the holding strength of the vacuum. Some gaskets still have small hole patterns, so they don't completely block airflow, and that makes it a little easier on the pump.

Marking, barcoding, stickers, stamps and scanning devices can be an inexpensive upgrade. These help the operator keep track of parts and orient them properly during assembly. The machine manufacturer may recommend (or supply) compatible marking devices and software for specific CNC models, but there are a wide range of aftermarket options online.

LOAD, ALIGN, SWEEP

Loading full sheets onto a CNC and then unloading the cut parts can be a labor intensive and time-consuming task. For small shops, a conveyor/roller table on wheels is a huge upgrade and these are very affordable. Two tables are even better: one for loading and the other for offloading. Some tables expand and contract for a perfect fit in confined spaces. Most have adjustable legs so they can be set up at the same height as the CNC bed, and others can be manually raised with a pedal as the stack of sheets diminishes.

Manufacturers of 4x8 or larger CNCs can either supply or recommend automatic loading and unloading devices that are compatible with their machines. Some attach to the gantry and have bars with vacuum heads that grab and pull a sheet into position (it's usually a two-step process). Then the attachment moves the sheet so that one end and one edge are butted up against location pins. Aftermarket sheet loaders are hard to find online, so the CNC manufacturer or a user group may be the best resource for finding one.



CNC enclosures, like these from United Partition Systems, can reduce noise, dust and moisture.

Others sheet feeders are free-standing stationary machines, and there are some manually operated vacuum lifts on wheels that will lift a sheet, let the operator wheel it into position, and then place it gently on the table.

With advances in AI, robots are becoming the standard way to tend machines and feed sheet goods. They have become more affordable and more widely available over the years, even for small shops. Robotic arms can pick up a sheet, place it very precisely on the workspace, and hold it in position until the fixturing or vacuum engages. They can also pick up and sort parts according to size, orientation or label, turn them over and stack them for edge banding, and then sweep and vacuum the table before the next sheet is placed. That latter process is a lot healthier and more productive than an operator using compressed air to blow the table clean.

Robots that can lift full sheets are pretty sizeable. They need to have the payload capacity and the reach to do the

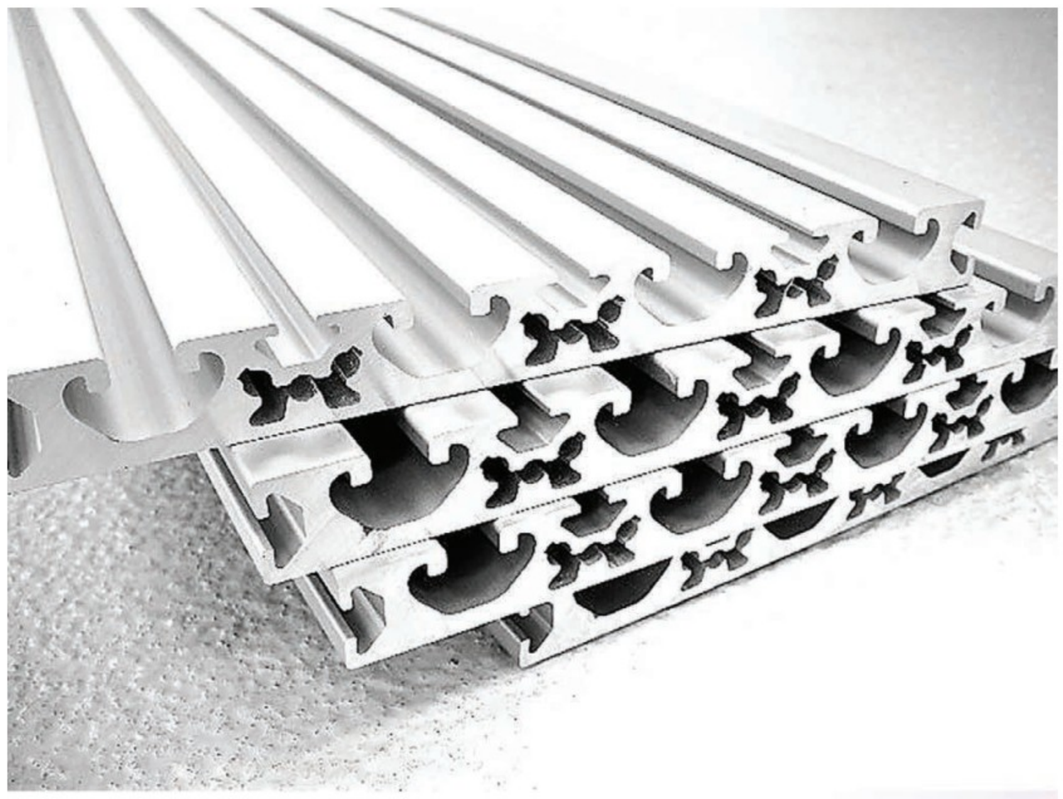


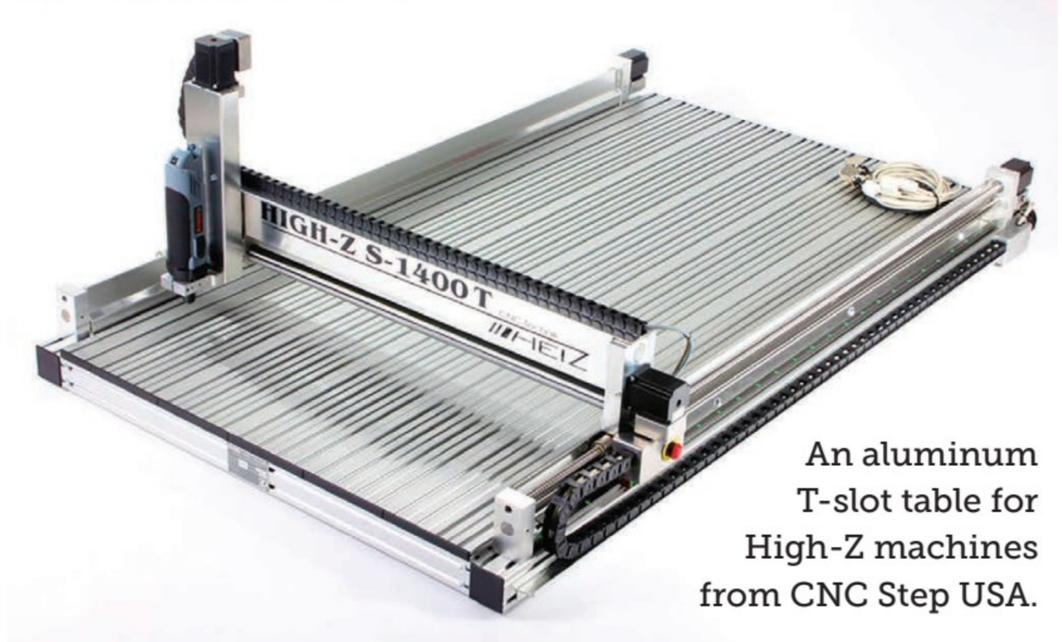
Loading and unloading devices, like these from NewCNC, often include alignment and sweeping systems.

job, and both of those abilities come at a price. A 4x8 sheet of melamine-coated MDF runs close to 100 lbs., and it will need to be moved at least four feet and possibly more. So, some set-ups use more than one robotic arm, and that can up the price, too. Others move sheets in stages, dropping them and repositioning as needed.

A woodshop owner can add up all the time spent manually loading and aligning sheet stock, and then unloading cut parts and waste over the course of a year. When one balances those man/hour costs against the price and operating cost of a robot, the numbers start making sense.

Panel alignment is another basic upgrade that can quickly pay for itself. If the shop can't justify the cost of robots, then adding pop-up pins that are automatically controlled with pneumatics or electronics, or even manually with a foot-operated switch, can speed up alignment after loading.





An aluminum T-slot table for High-Z machines from CNC Step USA.

AGGREGATES

A standard CNC router has a spindle that points at the floor. An aggregate lets that spindle point a tool in any direction from down to sideways (90 degrees), which means it can work on the sides and edges of parts. But it also expands the number of tools available. A quick online visit to an aggregate supplier lets the owner of a 3-axis CNC discover a whole new world of possibilities.

There are a couple of caveats, such as the fact that an aggregate places the tool farther away from the spindle. That means there can be a reduction in power, a bigger possibility of heat build-up, and a loss of accuracy when the tool travels sideways and shear pressure engages. But for small parts and short runs, aggregates can revolutionize what a CNC can do.

Aggregate heads are usually offered in either grease-lubricated, maintenance-free models for short run work, or heavy-duty units with oil bath lubrication for production runs and deep cuts.

Tooling for aggregates includes the familiar drills and router bits, but there are units available that can handle wire brushes, circular saw blades, long and short bits,



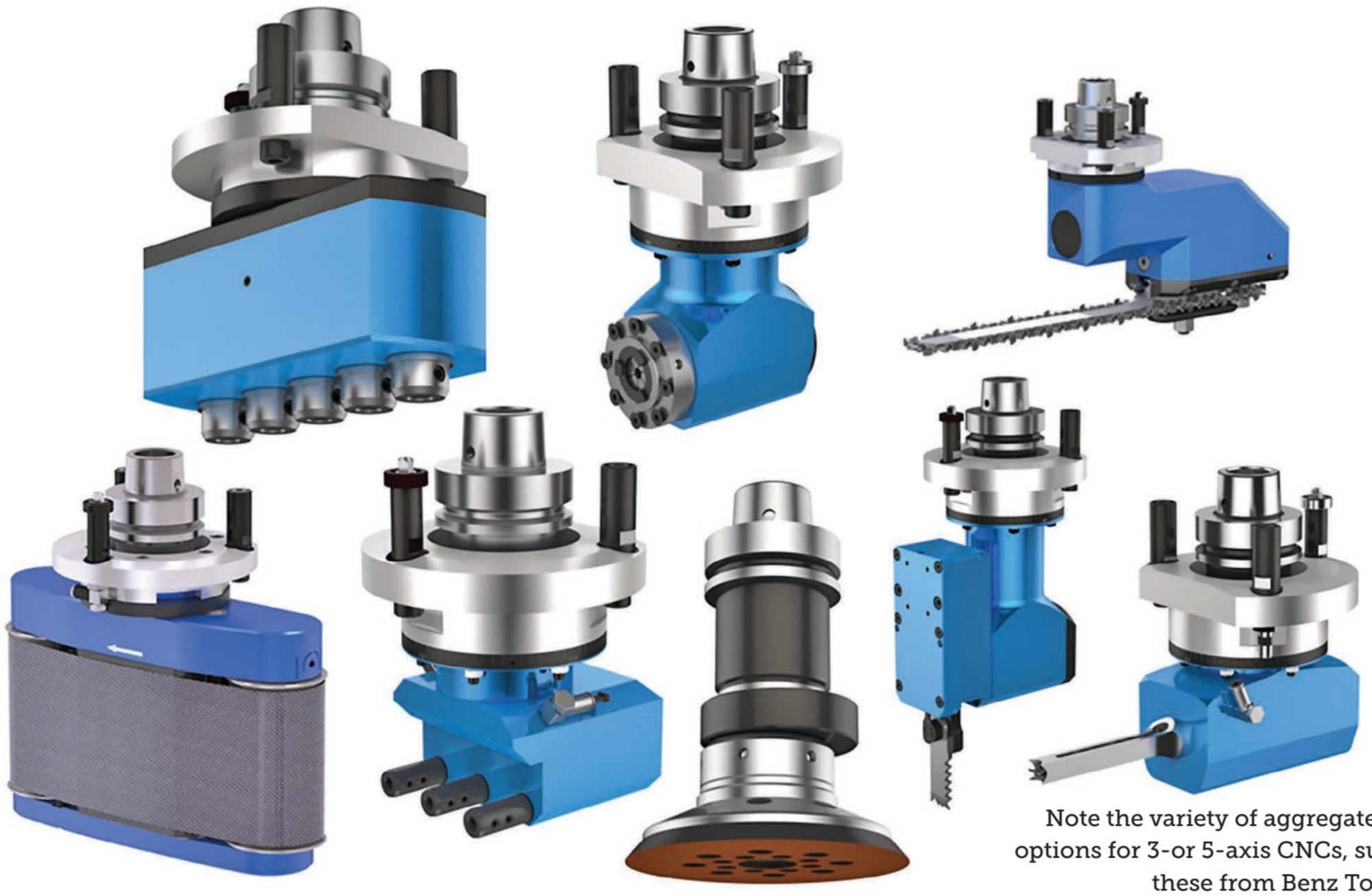
and more than one tool at a time. They can plunge, notch, chop pockets, work on the underside of parts along the edges, or do molding and shaping at any angle from 0 to 90 degrees. They can ease edges or chamfer, round over, flush trim, and even float so that the bottom of a groove is consistent even when the top surface undulates. There are aggregates for nesting, parallel drilling, pocketing and slotting, and even for drilling connected holes for hardware such as Lamello's Cabineo.

A woodworker can attach a sanding aggregate that uses inline or orbital action, and there are belt sanding aggregates that can clean up edges in a jiffy. Chisel units will chop mortises for tenons, and knife units can slice through cork, leather, felt and similar materials to make items such as drawer liners, or protectors for lamp bases. There's even a chain saw aggregate for making larger, deeper mortise pockets for heavier furniture joinery, and a blower unit that attaches to a tool holder and cleans the machine surface.

SMALL SHOP ADD-ONS

CNCs with work areas that are less than 4x8 in size can benefit from relatively inexpensive upgrades and add-ons that open the machine's potential. These include aftermarket kits for milling dovetails or fingerjoints, drag or oscillating knife kits, and burning pen attachments that replace the router bit for doing fine or decorative work such as sign making and pattern drawing. There are dust boots and devices that attach to the tool and blow dust away from the cut; LED lights that attach to the spindle and illuminate the work (some larger versions attach to the bottom of the gantry); small vacuum clamps and tables that will run on a jobsite compressor; and various devices that zero out bits for depth after a tool has been changed.

One of the easiest upgrades for a small CNC is to add a T-slot MDF table that can be used to hold work in place. The



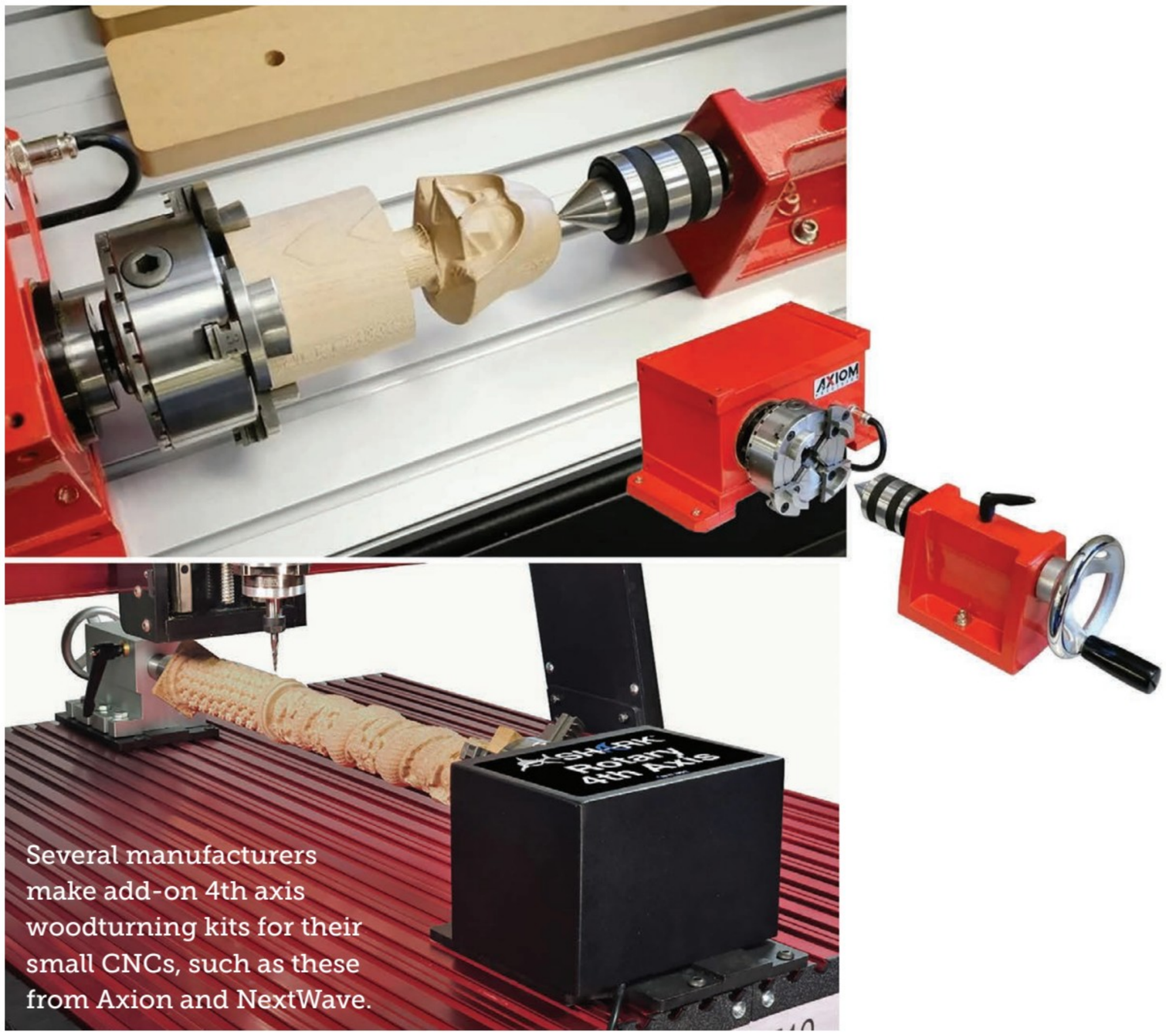
Note the variety of aggregate head options for 3-or 5-axis CNCs, such as these from Benz Tooling.

slots can travel in one or both directions across the tabletop, and several manufacturers make clamps with T-shaped bases. There are also aluminum T-slot tables, but these are usually made to fit specific models of small CNCs, and they may need to be modified if they're going to replace an MDF spoil board.

There are innumerable clamping, fixturing and work-holding devices, many of which are made of plastic or wood, so the bit won't get destroyed if there is contact. Just do a search online for "clamps for a small CNC".

Some CNCs will accommodate a 3D touch probe, which is used to create a toolpath for carving in three dimensions.

Several small CNC manufacturers offer turning kits that replicate the work of a C axis in miniature and spin the work so that the router bit can shape it. Others make small, flexible vacuum kits with a handful of pods and a single air tube that can be placed anywhere to hold unusually shaped objects as easily as they do flat panels.



Several manufacturers make add-on 4th axis woodturning kits for their small CNCs, such as these from Axion and NextWave.

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Fanuc America offers a downloadable app on its website that helps a shop collect and send info about its CNC to get a quote.

Small CNCs can also benefit immensely from the addition of aftermarket spindle coolant systems, upgraded vacuum pumps, pod and rail fixturing (pods can elevate the work off the table so the sides can be accessed fully), lasers for engraving or cutting, and many other options. There are air guns that blow waste away from the tool into a vacuum system; Braille tools that can insert metal or plastic balls into drilled holes to create readable surfaces or signage; raised gantry kits that increase the CNC's capacity in Z (up and down movement), and devices that move machined parts and clean up the dust before locating the next blank.

A laser can often be switched out for the spindle, and this opens a whole new category of woodshop customers who need engraving for awards, signage, precision parts, decorative items, and marketing with logos and trademarks. The bottom line is that older, large CNCs can be updated and upgraded for faster and more accurate productivity, and smaller machines can find new functions with relatively inexpensive add-ons that can keep them busy, even when the shop isn't cutting cabinet parts. **W**

Courtesy of manufacturers









Prepping for 2025

As the new year approaches, take the time to assess your shop's software, insurance, and financial needs

By John English

The national economy seems to bode well for woodshops this fall, despite all the political rhetoric in the air. Inflation continues to decline, as do interest rates. And conversely, a slight uptick in the unemployment rate may benefit smaller employers who have had a hard time recently finding qualified people to hire.

The U.S. Bureau of Labor Statistics reported in mid-August that inflation in July was at an annual rate of just 2.9 percent, which suggests a return to long-term normalcy. The rate of inflation hit an uncomfortable high in the summer of 2022 at 9.1 percent, which occurred in the wake of the pandemic and related global supply chain challenges. Those issues have faded, and with them a degree of uncertainty has dissipated.

Interest rate trends are also encouraging. Interest charges can be the difference between an average and a good year for woodshops because they not only affect the buying materials on credit, but they also cause ripples in the

Adobe Stock



housing market. That can have a drawn-out impact on casework sales in terms of housing starts and remodeling. But there was good news in late August, when U.S. 30-year and 15-year mortgage rates fell to 6.46 percent and 5.62 percent, respectively. The 30-year rates have declined steadily from 7.22 percent in May, and most analysts are predicting reductions in the Fed rate before the end of the year. We probably won't see sub-6 percent on 30-year loans this winter, but the consensus is that we will during 2025.

For woodworkers, the takeaway here is that next year might be a good time to invest in high-ticket machinery, as interest rates are becoming more favorable for both borrowing and housing starts. It may also be a better labor market from an employer's point of view, and slowing inflation should help us get a better handle on operating costs.

SHOP SOFTWARE

Artificial Intelligence (AI) is now an integral part of almost every small business management software suite, and woodshops are no exception. Project management programs are making extensive use of machine learning to reduce rejects and increase production rates. AI lets the woodshop's employees and management make more informed decisions because it can create up-to-the-minute analysis of everything from just-in-time buying to projected sales, time management, machine maintenance, utilities and waste control, and any other quantifiable aspect of running a small business.

AI is, in basic terms, the process whereby computers collect data and then make predictions.

Machines obviously can't think like a human, but they do generate numbers that allow a computer to evaluate and advise. A woodshop looking for a comprehensive business management suite for 2025 needs to think about this potential and find a comfortable level of AI. Some software will micro-manage to the point of distraction, while other programs are designed more for high-volume production environments than the custom work being done in a small woodshop.

Choosing software is no longer a simple matter of reading reviews and buying online. It is becoming complex enough that woodworkers are turning to consultants for advice before they buy or rent.

In the office, AI is being used extensively in marketing and communication to enhance the image of small businesses. As woodworkers increasingly turn to social media to display their portfolios and potential, programs such as ChatGPT can help tailor the message. But while software can write paragraphs and correct spelling errors, it can also paint a wooden, unimaginative picture that is often more technology-based than customer oriented.

AI excels at retrieving and organizing information, and this is perhaps where it will become most useful in the woodshop. In-house searches are now lightning fast, and they can comb through countless file formats and versions. That means a shop's entire history with a specific client or supplier can be retrieved quickly. It also means that everyone on the team, from installers to cabinetmakers, spray booth operators to lumber buyers, can all access the same very precise information, and enjoy real-time updates. These are all features that a woodshop manager can ask about when shopping for AI-supported shop software.

But there's one more little bonus in the new generation of programs that can pay extra dividends. Many suites are now offering instant team access to all the shop's data, but when it arrives at each employee's desk, some software is now adding the option to create personal, task-specific tools for analysis. For example, the shop's salesperson doesn't need to spend a lot of time on glue curing times, and the person spraying coatings doesn't care about the fastest driving route to a jobsite. AI helps individual employees sort through the mountain of data, extract what concerns them, and then organize and present it in a useful manner.

Part and parcel of the new AI capabilities is a feature called natural language processing, or NLP. This acronym refers to a computer's ability to interpret, manipulate, and understand human language. It basically lets the computer talk to humans using spoken rather than automated language. It's more personal. We hear it when we're put on hold every time we ask for assistance from a large company. NLP lets a computer assess inflection, volume, stress and other factors in human speech, and then replicate it.

Yup, C-3PO has arrived, and he can work in our woodshops.

INSURANCE

Another very serious aspect of shop software that managers need to ask about before buying a suite of tools for 2025 is security. This is rapidly becoming a nightmare for small businesses, where evermore frequent breaches are releasing personal data and opening woodworkers up to legal repercussions. It's imperative that shop owners contact their insurance carrier and confirm that they are covered for any negative impact from a data breach.



Despite the most sophisticated software, the simplest solution here is an old-fashioned one. Examine your records and see what you can live without. For example, woodshops don't need to store customers' credit cards or bank records for future purchases. And they don't need to upload customer names, addresses, emails and personal data to a cloud: these are small files that can be stored on a USB flash drive with no online vulnerability. A second flash drive can provide all the backup needed.

The end of the financial year is a good time to do a comprehensive inventory of the woodshop's insurance coverage. Areas to check are general liability, workers' comp, errors and omissions, property coverage, and a relatively new one called environmental liability insurance (ELI). Many business owners refer to this as pollution insurance, and it covers problems caused by pollutants released by the shop to the air, nearby bodies of water, the land around the shop, wildlife, and the local ecosystem. It can also cover human injury or loss of life that derives from chemical or other harmful waste, depending on the policy.

ELI can be expensive, but there are ways to reduce the risks, and therefore the cost of the policy. These include instituting a training program that teaches employees how to deal with potentially hazardous materials — everything from fine dust to solvents, plastic laminate and edge banding waste, even discarded blades and other sharp items. There are also a host of IoT (Internet of Things) devices on the market that can monitor factors such as smoke, heat, water, chemicals, and even noise pollution, and provide online or Bluetooth-based warnings that can help reduce the negative results from a spill, leak or other emission. Having these in place can help reduce the cost of an ELI policy. ELI often covers problems that are specifically excluded in both liability and property insurance policies, so it's worth discussing with an insurance agent.

FINANCING

Once upon a time when small business owners wanted to buy a new machine, they visited a bank manager. That's still an option, but now it's just one of many. And while some of the new choices may sound a bit farfetched, it's surprising how well they can work.

Calling the bank manager can involve meeting strict standards, providing lots of paperwork, and enduring a long process laced with inflexibility. Banks are still very conservative, and even more so since new regulations kicked in after the global recession in 2008.

Some nonprofits, government agencies, and even a few large corporations offer small business grants. These are usually industry specific, and they require a lot of research.

Crowdfunding is all about presentation. This is the use of a specific website to raise a loan or a grant from many small investors. It has grown exponentially over the past few years and is becoming a viable option.

Social or Peer-to-Peer (P2P) lending is when another business or an individual investor loans money to a business without going through a bank. There are P2P lending companies that arrange the contact between the borrower and lender, but because there are no bricks and mortar involved, it pays to tread cautiously and investigate thoroughly before committing.

Angel investors are well-heeled individuals who invest their own money in businesses, and they usually ask for a share of the ownership (think Shark Tank).

The U.S. Small Business Administration (SBA) helps small businesses get funding by setting guidelines for loans and reducing lender risk. These SBA-backed loans make it easier for small businesses to get the funding they need.

And leasing can be done through an equipment supplier or a leasing company. While it delivers the machine without the shop owner handing over a large amount of cash, it can be expensive in terms of interest and buyback at the end of the lease. **w**

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"Fruition" at the Museum for Art in Wood in Philadelphia.





Fellowship works come to 'Fruition'

By Jennifer Hicks

The Museum for Art in Wood in Philadelphia is hosting "Fruition", an exhibit of work by the nine fellowship recipients of the museum's annual Windgate Arts Residency Program in Wood (WARP Wood), that runs through Oct. 20.

Established in 1995, the residency is a two-month experience encouraging fellows to pursue new work either solely in wood or in other materials in meaningful combination with wood, through research, exploration and collaboration.

"WARP Wood is a unique and valuable opportunity for artists and thinkers all over the world to challenge themselves, stimulate creativity, and build community within art in wood," said Jennifer-Navva Milliken, the museum's executive director and chief curator, in a statement.

"Since their arrival in Philadelphia in early June, the fellows have been immersed in their work and in conversation with each other. They wasted no opportunity to discover the city of Philadelphia, even using salvaged hardwoods and integrating recognizable urban motifs into inspiring new works and ideas. The results of these experiences are shared with museum visitors in a unique exhibition that never fails to surprise and broaden our understanding of what this material offers artists."

The nine fellows are San Diego-based artist and furniture designer Chance Coalter; woodworker and sculptor Melissa Engler from Asheville, N.C.; furniture maker and sculptor Jamie Herman from Fairport, N.Y.; woodworker, artist, and engineer Jodi Prud'homme from San Francisco; printmaker and mixed-media artist Sara Tabbert from Fairbanks, Ala; and Los Angeles-based artist and educator Sarah Watlington.

Learn more at *museumforartinwood.org*.

A GREAT ESCAPE

The New Hampshire Furniture Masters hosted its annual Prison Outreach Program Exhibition from June 20 through Aug. 30 at the organization's gallery in Concord, N.H.

Founded in 1999, the program educates select prison residents on the art of fine furniture making. This year's exhibition showcases work from all three participating prisons, including the New Hampshire State Prison for Men, Maine State Prison, and the New Hampshire Correctional Facility for Women.

The program's goal is to have participants spend their time productively, and so they may use their skills upon their release and to build self-confidence and a sense of self-worth.

"Our Prison Outreach Program exhibition is a wonderful opportunity to explore the impact this program has on the lives and livelihoods of those incarcerated. Many pieces in the show are available for purchase through our online store, with proceeds benefiting the maker and our organization," the group said in a statement.

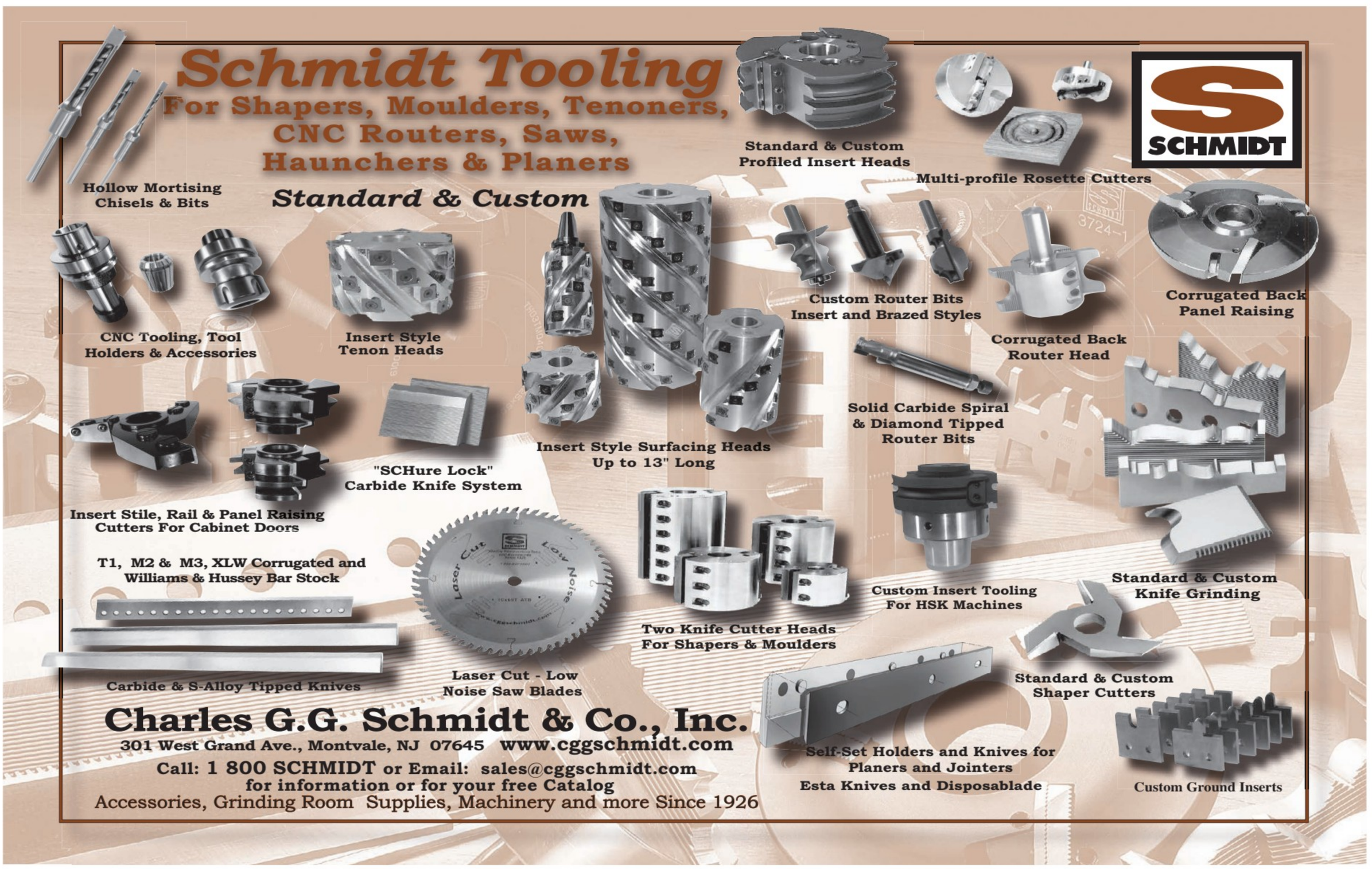
Learn more at *furnituremasters.org*. **W**

Photos: John Carlano

NEW PRODUCTS



ICYBREEZE
has developed a portable air conditioner/cooler, the Ultimate Cooler, for jobsite or shop use. It cools air for up to 2.5 hours of continuous use and has a misting function. Learn more at *icybreeze.com*.





Courtesy of manufacturers

BLUM
presentss the Aventos HKi, a compact lift mechanism that integrates seamlessly into the cabinet side panel, allowing for sleek, unobtrusive design without compromising functionality, according to the hardware manufacturer. It can be used in cabinet side panels just 16mm thick. Learn more at *blum.com*.

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TECHNO CNC SYSTEMS presents the Venture Series of CNC routers featuring an industrial-level Osai controller and an HSD 12-speed, air-cooled automatic tool changer with an eight-station rotary carousel attached to the x-axis beam. Learn more at *technocnc.com*.



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Courtesy of manufacturers

DOUG MOCKETT & CO.
introduces the Conference AV Power Pop-up Grommet, model PCS131. The motorized, pop-up power tower features a glass wireless charging plate that lifts at the push of a button to reveal a power station. It includes two outlets, two dual USB-A and USB-C ports, an HDMI port, and 3.5mm audio inserts. Learn more at *mockett.com*.

DURA SUPREME
presents the new Vanity Grooming Drawer with in-drawer storage and a power outlet. Learn more at *durasupreme.com*.









RIDGID
presents new NXT Max locking accessories created for the company's wet/dry vacuums. NXT accessories are part of a swap and lock attachment system. The line includes 2-1/2" diameter utility nozzle, floor tool, car nozzle, crevice tool and rotating dusting brush. Each of these accessories can be paired with a swappable shoe designed to clean different surfaces and debris types. Learn more at *nxt.ridgid.com*.

CASTALY MACHINERY
introduces the Rhéa, a two-door CNC machine optimized for door pre-hang processing. It excels in top and edge project tasks, including door lite cutout and lock prep, according to the company. The Rhea features a DSP CNC controller, optional CAD/CAM system, and steel frame. Learn more at *castaly-cncmachine.com*.



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Courtesy of manufacturers

MAKITA USA
has released two new lighting solutions for its XGT and LXT systems. The portable and foldable lights feature multiple lighting mode options, long run times and multiple hanging and positioning options, according to Makita. They include the XGT model ML012G and LXT model DML818. Learn more at *makitatools.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 at least 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

ILLINOIS

Oct. 22-23 — Chicago Build Construction & Design show featuring exhibitors, demos, networking and more. Location. McCormick Place. *chicagobuildexpo.com*

IOWA

Sept. 23-25 — Wood Component Manufacturers Association's annual fall conference and plant tour event at manufacturing facilities in the Cedar Falls-Waterloo area. Learn more at *wcma.com*.

MAINE

Ongoing — The Center for Furniture Craftsmanship offers year-round classes in woodworking to the highest degree of craftsmanship. One- and two-week workshops from June through October; 12-week Furniture Intensives; a nine-month Comprehensive; eight-week Turning Intensives, and Fellowships. *woodschool.org*

MINNESOTA

Monthly — The Minnesota Woodworkers Guild meets on the second Tuesday of each month at various locations. *mnwwg.org*

MISSOURI

Oct. 2-4 — National Hardwood Lumber Association's annual Convention & Exhibit Showcase at America's Center in St. Louis. *nhla.org*

Oct. 10-12 — National Wood Flooring Association's first Leadership Development Summit. Location: Live! By Loews – Ballpark Village in St. Louis. *nwfa.org*

NEW JERSEY

Monthly — The North Jersey Woodworkers Association meets the third Monday of every month. *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 Central New York holds meetings on the first Thursday of each month at 6:30 p.m. at the Belgium Cold Springs Fire Department in Baldwinsville. *woodcny.org*

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

NORTH CAROLINA

Monthly — Charlotte Woodworkers Association meets the third Tuesday of each month, except December, at 6:15 p.m. Location: 8801 Park Road in Charlotte. *charlottewoodworkers.org*

Oct. 26-30 — Fall High Point Market in High Point. 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 in Reading. *cincinnatiwoodworkingclub.org*

RHODE ISLAND

Nov. 8-10 — Fine Furnishings Show featuring handcrafted furniture, art, accessories and more for the home at the WaterFire Arts Center in Providence. *finefurnishingsshows.com*

TENNESSEE

Nov. 10-12 — STAFDA Convention, an industry event that includes educational programs, seminars, networking and more. Location: Music City Center in Nashville. *stafda.org*

TEXAS

Oct. 6-9 — World Millwork Alliance 2024 Millwork Convention & Tradeshow at the Henry B. Gonzalez Convention Center in San Antonio. *worldmillworkalliance.com* W



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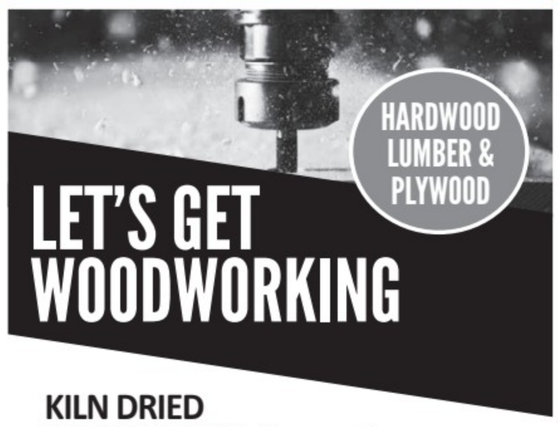

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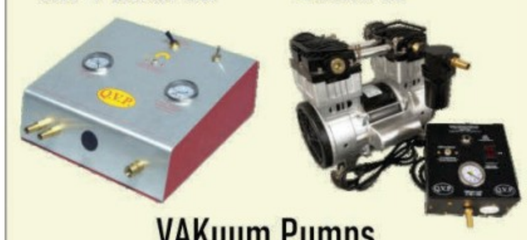

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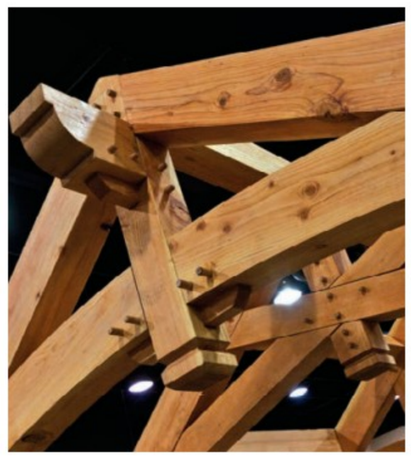


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CMA celebrates outstanding work

The Cabinet Makers Association (CMA) announced the winners of its 14th annual Wood Diamond awards contest at the 2024 IWF in Atlanta. The awards allow CMA members to honor the work of their peers.

Felipe Torres Espino of Torres Espino, The Craftsman in Weslaco, Texas, won the Best of Best Overall and two project category awards. He was humbled and grateful to be selected.

"It means a lot to me," he says. "This is our third year with the CMA. Last year we went to Vegas [for the AWFS Fair] and we had a good experience sharing ideas with the members. I saw the fellowship in the members. Somebody there suggested I submit one of my projects in this and that's what we did. I was surprised we were selected as a winner, especially because there are a lot of great cabinetmakers.

"I feel it was an honor and a privilege that the CMA chose our work. It's an honor to our family."

Gregory Paolini Design in Canton, N.C., dominated with 10 category awards, while Red Beard Cabinets of West Line, Mo., was a four-time winner and Timbercraft Cabinetry & Woodwork in Paola, Kan., earned three awards.

Castleman Carpentry of Berryville, Va., and Colorado Cabinet Makers of Loveland, Co., each won two awards.

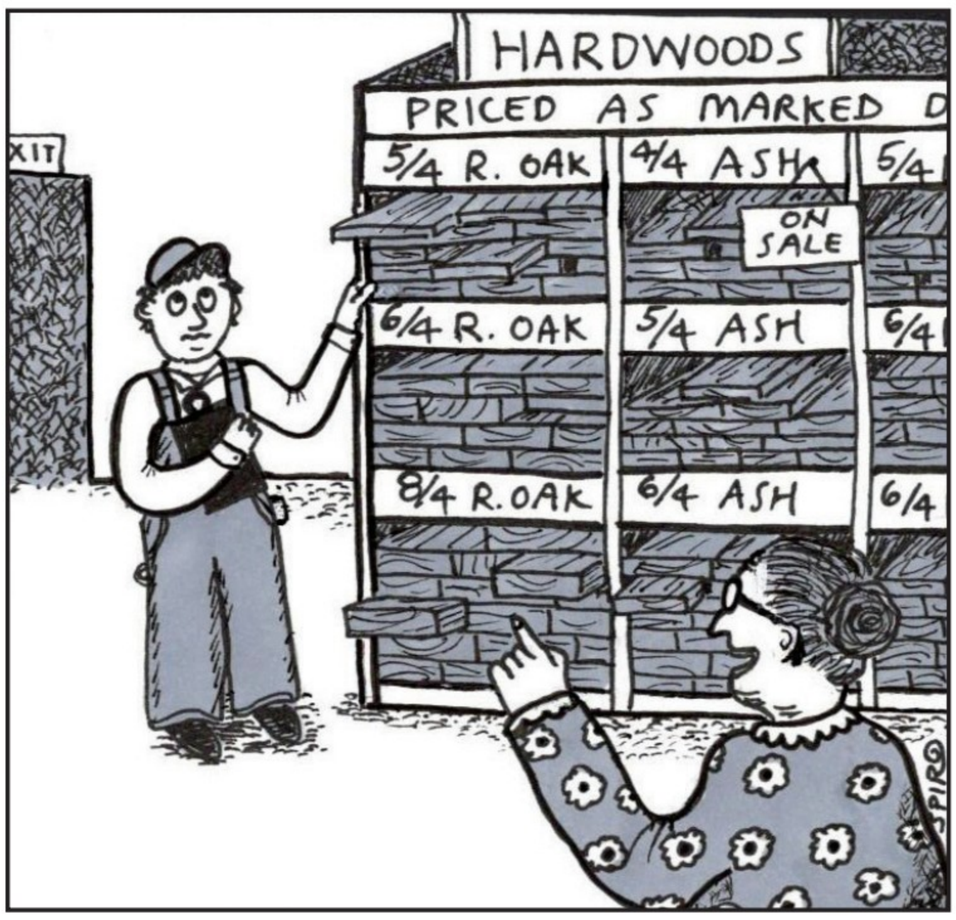
Other winners included Fairfield Woodworks of Lancaster, Ohio; Premier Custom Carpentry of Spring Hill, Fla.; Castleman Carpentry of Berryville, Va. KMA Solutions of West Fargo, N.D., Bill Truitt Woodworks of Charlotte, N.C.

-Jennifer Hicks

The winning project by Colorado Cabinet Makers in the Residential Kitchen, Frameless, $25,000 to $50,000 category.
For a complete list and photos of the category winners, visit the CMA's website at *cabinetmakers.org*.

60 Grit

Rough humor by Steve Spiro



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