

WOODSHOP

NEWS[®]

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www.woodshopnews.com April 2020

Never say no

Massachusetts' shop believes one job leads to another

A new generation of table saws

Choices for countertops

Reasons to add an aggregate head

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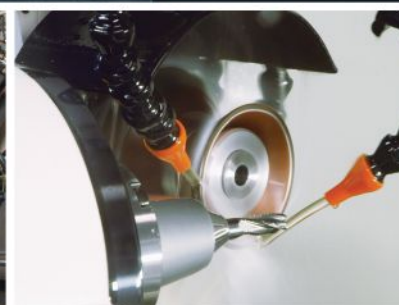
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PHOTOS: MICHAEL GORDON (TOP, COVER)

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SALICE



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BLOGS



Over the Workbench

Talkin' shop with former editor A.J. Hamler



This Business about Woodworking

Share an opinion with David DeCristoforo but don't expect to be right

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with TOD RIGGIO

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Published author still looks good on a resume. By sharing your knowledge, especially in a publication read by your peers, writing is a proven avenue to promoting your business and impressing customers. Some of you are posting videos on YouTube and ramping up their social media exposure – both excellent column topics, by the way – and writing would fit in well with your overall marketing plan.

What can you write about? Anything pertaining to the process or getting better results is a good fit for the Finishing column. Pro Shop deals with business issues, such as customer relations, capital investments, management philosophies, human resources, and marketing plans.

The Cutting Edge offers several opportunities. The topic can be moderately technical, such as controlling wood warpage; considerations for having 3-phase power installed; the best glue formulations for a specific kind of work, fastener strength; etc. The topic can be highly technical – creating furniture or cabinet templates for CAD use; setting up repeatable CNC jobs; math formulae for electrical loads; understanding and/or designing barcode batch jobs; or determining optimum horsepower and torque ratios for most-effi-

cient table saw use, for example. The topic can even be minor technical (although we'd only do maybe one or two of those a year) such as efficient fastener storage; extending the life of belts in wide belt sanders; wood recycling and reuse; improving router/shaper collets; or strengthening furniture components.

We consider all topics. Just send a proposal, which should include a concise outline of what you want to write about, to editorial@woodshopnews.com.

A hidden surprise

While removing a tired kitchen, I found a well-preserved television guide, dated February 1964. It has comedian Jonathan Winters on the cover, dressed as a character from "A Wild Winters Evening" special that ran on NBC. It had been placed behind a cabinet back and confirmed the kitchen was original to the house.

It was a great surprise meant for me, the guy who would ultimately destroy the cabinet-maker's work. The kitchen's next remodeler will find an issue of Woodshop News, though I suspect it won't take 56 years to find.

Xylexpo postponed

Xylexpo 2020, a woodworking trade fair in Milan, Italy, has been postponed due to the Covid-19 pandemic.

"We waited as long as we could, hoping the situation would go back to normal," exhibition president Lorenzo Primultini said in a statement. "We hope that, by the end of May, the Coronavirus effects will not be what we are seeing now, but unfortunately, we cannot tell when this emergency will be over on a global scale, and most of all, we cannot predict its impact on the industrial system and on the supply chains of the wood and furniture technology industry." 

Working with tools and wood is inherently dangerous. We try to give our readers tips that will enhance their understanding of woodworking. But our best advice is to make safety your first priority. Always read your owner's manuals, work with properly maintained equipment and use safety devices such as blade guards, push sticks and eye protection. Don't do things you're not sure you can do safely, including the techniques described in this publication or in others. Seek proper training if you have questions about woodworking techniques or the functions of power machinery.

EDITOR TOD RIGGIO

ART DIRECTOR BRIANA SMITH
STAFF WRITER JENNIFER HICKS
CONTRIBUTING WRITERS
BOB FLEXNER, JOHN ENGLISH, GREG WILLIAMS
WEB ADMINISTRATOR MARY LOU COOKE

SALES & MARKETING

PUBLISHER
RORY BEGLIN
860-767-3200 EXT. 242; rory@woodshopnews.com

CLASSIFIED MARKETPLACE ADVERTISING
860-767-3200 EXT. 242; FAX: 860-767-1048
marketplace@woodshopnews.com



MARINE GROUP PRESIDENT GARY DE SANCTIS
VP EDITORIAL DIRECTOR BILL SISSON
VP, MARKETING AND EVENTS JULIE JARVIE
VP DIGITAL DEVELOPMENT ERIC DALLIN
FINANCIAL ANALYST CHRISTINE NILSEN
PRODUCTION MANAGER SUNITA PATEL
PRODUCTION COORDINATORS CHRIS CIRILLI,
AMY PINTO, JENNIFER WILLIAMS
TRAFFIC COORDINATOR SAMANTHA BRENNAN
DIRECTOR ACCOUNTING SHARED SERVICES KELLY BAUMGARDNER
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VP OF PEOPLE AND PLACES JOANN THOMAS



AIM BOARD CHAIR EFREM ZIMBALIST III

HEADQUARTERS:
10 Bokum Road, Essex, CT 06426
(860) 767-3200 • Fax (860) 767-0642
Editorial E-mail: editorial@woodshopnews.com
Advertising E-mail: sales@woodshopnews.com
Website: www.woodshopnews.com
Advertising Billing Questions: (661) 965-9925

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NEWS DESK



Kristina Madsen will receive the Award of Distinction at The Furniture Society's upcoming conference in Asheville, N.C. At left is Madsen's "Poppy Cabinet".

Furniture Society conference focusing on the maker's impact

By Jennifer Hicks

Organizers for The Furniture Society are planning a dynamic agenda for this year's annual conference, scheduled for June 17-20 at the University of North Carolina's campus at Asheville. The event theme, "FS20: Building Place, Shaping Identity, Creating Community", will focus on the impact of the furniture making community in today's world.

"We are trying to recognize the essential role that furniture fulfills in daily life and our community at large, and we feel that the field of furniture has a huge power to have a positive impact worldwide, way beyond marketplace and making furniture as an indi-

vidual," says Monica Hampton, the group's executive director.

Tanya Aguiniga will give the opening address. Raised in Tijuana, Mexico, she holds an MFA in furniture design from the Rhode Island School of Design and a BA from San Diego State University. She will touch on her methods of using craft as a performative medium to generate dialogues about identity, culture and gender while creating community.

Conference mornings will follow a traditional agenda where attendees can select from various presentations, ranging from artist talks to hands-on workshops. In the afternoons, they will have the opportunity to take part in the

Society's new Craft for a Greater Good program which began last year in an effort to help communities that host the conference.

This year, attendees can collaborate with students in the school's STEAM studio, a program that approaches problem solving through science, technology, engineering, art and math. STEAM has partnered with Be-Loved Asheville, an organization that builds tiny homes for the homeless. Furniture made at the conference will go into those homes.

"We wanted to help and be of use with something that could be sustained long after we're gone, so the idea is to create templates for the furniture to be used after we're gone so it can continue to be built in the future," says Hampton.

Other conference events include exhibitions, a dinner dance, local studio tours, and Award of Distinction ceremony. This year's honoree is furniture maker Kristina Madsen.

For more, visit www.furnsoc.org. 

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AWFS kicks off second 'Design it Digital' contest

By Jennifer Hicks

The Association of Woodworking & Furnishings Suppliers will conduct its second Design it Digital CAD-based design competition for middle school, high school and post-secondary students in accredited design or related programs in North America.

"We can't wait to see the student entries we will receive," says AWFS assistant executive director of education Adria Salvatore. "We value this opportunity to welcome more students to our industry and highlight the creativity and innovation involved in CAD for wood products manufacturing."

Students who enter Design it Digital are presented with three hypothetical scenarios in which a client is asking for a custom piece of furniture. They can choose their favorite client project and design a solution using any CAD and rendering software.

Entry and judging are online processes through the contest website at <https://did2020.artcall.org>. The contest will be judged by a panel of industry professionals and the winning entries will be announced by AWFS in August 2020.

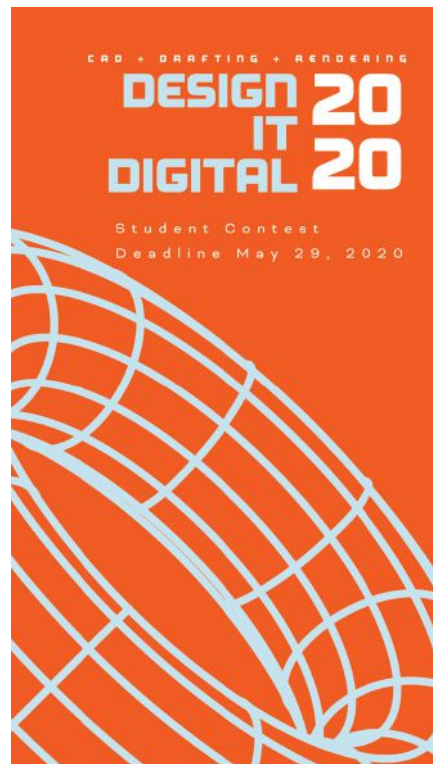
Middle and high school entries will be judged separately from post-secondary entries. Cash prizes for first place, second place, and honorable mention will be awarded for both school levels, along with in-kind prizes donated from industry sponsors including AWFS member companies.

Fuji Spray, a manufacturer of paint spraying equipment, is donating a pair of HVLP Semi-Pro Paint Systems. Blum USA has signed on as the high school prize sponsor.

"The 2018 contest brought a winning student and his teacher to IWF Atlanta to experience the industry firsthand. It is an excellent opportunity to engage young people in the many facets and skills required in wood manufacturing," adds AWFS education committee chair Brian Joyce.

Contest entry is free, and applications will be accepted through May 29.

For more, visit www.awfs.org. 



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New carving school set to open in Maine

By Jennifer Hicks

Reproduction furniture maker William Francis Brown is opening a new woodworking school, Maine Coast Workshop in Camden, Maine, in May. Workshops will concentrate on classical high-end carving, 18th-century Chippendale, Queen Anne, Federal, and 19th-century Shaker projects.

Brown, 62, lives in Virginia and works full-time as the director of anesthesia at a North Carolina hospital. He's been a carver and reproduction furniture maker for the past 40 years. He wants to share his knowledge and passion for woodworking by creating this school.

"I have really accomplished everything I've set out to do with my own work," he says. "I mean there's always more, but it's a fairly solo activity. You're in a shop by yourself all day long, and when I was learning I just really enjoyed the camaraderie and having people around. I just thought it was a lot of fun."

"I've been thinking about it for years and I've been in this long enough where I think I can do it. If I can do it and make ends meet, this will be my way to phase out of medicine. Anesthesia is very stressful. I'm up at night a lot and it's not easy. I do these stretches and I'm like a zombie when I'm done. It's getting harder to keep that up. And I'm definitely looking forward to scaling back."

Classes will run May through October, beginning with four-, five- and six-day project classes, and one-day sharpening classes. Brown has called on some of his peers to teach, including Alexander Grabovetskiy, Graham Blackburn, and Alf Sharp.

"There's a niche for what I'm doing that doesn't exist," adds Brown. "I'm pretty much strictly sticking to traditional 18th century American furniture with carving."

For more, visit www.maine coastworkshop.com. 

AWI & SMA releases new stair standard

The Architectural Woodwork Institute and the Stairbuilders and Manufacturers Association have announced that the AWI SMA 0643 – Wood Stair, Handrail, and Guard Systems Standard has been completed by the SMA Quality Standards Committee.

The AWI and SMA teams are now preparing to begin the American National Standards Institute (ANSI) process, during which the standard will open to public comment. At the completion of this process, the AWI and SMA teams will address any comments or suggestions submitted.

AWI SMA 0643 - Wood Stair, Handrail, and Guard Systems provides standards and tolerances for the quality fabrication and field installation of wood stair, handrail, and guard systems. Further, it establishes minimum aesthetic and performance requirements.

The standard draft is available for public comment at www.gotoawi.com/standards and www.stairways.org.

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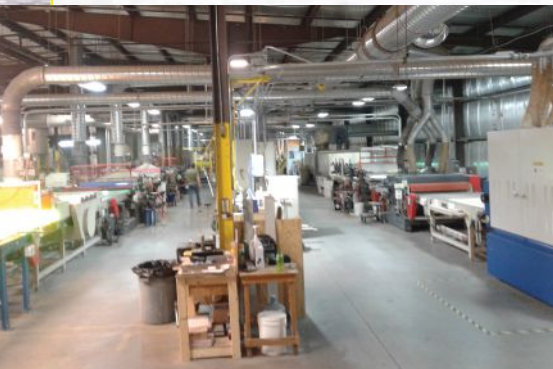
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NEWS DESK

IMA Schelling Group offers machine trade-in program

IMA Schelling Group, a provider of sales and after-sales support of IMA and Schelling products for the woodworking, metalworking and plastics industries, has announced that it is actively seeking to refurbish and resell used IMA and Schelling machines at its rebuild center in Morrisville, N.C.

"Our thorough rebuild process brings IMA and Schelling machines to like-new condition," Peter Tuenker, the group's managing director, explained in a statement. "We are actively seeking panel saws and edgebanders to purchase for trade-in value toward a new machine, then we'll re-vamp and resell the machines on our website." For more, visit <https://imaschelling.us>.

New West Coast Sales Manager for Biesse America

Giorgio Lobbia has accepted the position of West Coast Regional Sales Manager for Biesse America, according to the company.

"Giorgio has 20 years of experience in the woodworking industry, 14 of those directly with Biesse," the company said in a statement.

"In his new role, Giorgio will be responsible for the management and representation of the entire Biesse product line on the West Coast, managing the regional sales team and distribution network. His knowledge will be a valuable asset to our customers, as well as our sales team and distributor network."

For more, visit www.biesseamerica.com.

Learn about the latest version of Cabinet Vision

The latest version of the Cabinet Vision design-to-manufacturing solution will be exhibited Mar. 11-13 at Wood Pro Expo and Cabinets & Closets Conference & Expo 2020 at the Arlington Expo Center in Arlington, Texas.

The latest version "delivers greater control and flexibility for the machining of part connections, empowering users to better automate and manage every aspect of production," according to the company.

"Cabinet Vision Version 12 features an all-new connection manager that delivers complete control over the machining that occurs where two parts meet by enabling users to easily define and automate those connections. For instance, if a dado with pre-drills or fixed position-dowels with RTA fittings are needed, the connection manager provides the tools needed to define those specific operations, and many more."

For more, visit www.cabinetvision.com.

Half million trees planted in Hawaii

The Hawaiian Legacy Reforestation Initiative has planted its 500,000th native tree in Hawaii. More than 1,200 acres of former pastureland on both Oahu and Hawaii Island have been reclaimed and returned to native forest, according to the nonprofit organization.

"It's wonderful to witness the birth of a forest, but there is much more going on here. This project goes beyond just planting trees. It is developing entire native ecosystems, right down to the shrubs, flowers, and grasses. We are seeing unparalleled research and development advances and seeing the return of the endangered birds that historically occupied these lands. The 'io (Hawaiian hawk), the pueo (Hawaiian owl), and the nene (Hawaiian goose) all have taken up residence again in the Legacy Forests. It's remarkable how fast these changes are happening," Francis Wong, HLRI's board chairman, said in a statement.

For more, visit <https://legacyforest.org>.

CMA opens annual competition

The Cabinet Makers Association is accepting submissions for its Wood Diamonds Awards program. The contest is open Mar. 1 through May 1, and the fee for each project is \$75. The contest is offered to current CMA members only. Non-members are welcome to join the association so they can participate. The winners will be announced as part of the CMA's member appreciation reception during IWF Atlanta this summer. To review submission requirements and access the entry form, visit www.cabinetmakers.org/wda2020.



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Rich, red cherry is alive and well

By Jennifer Hicks

Recent and ongoing design trends tend to infer that light-hued hardwoods and painted materials rule consumer interest, but American cherry [*Prunus serotina*] has hardly gone out of favor, according to hardwood suppliers interviewed by Woodshop News.

Jerry Anton of O'Shea Lumber Co. in Glen Rock, Pa. says supplies and pricing of cherry have held steady. Most of his customers are interested in plain sawn over figured variations.

"We seem to be doing well with cherry and a lot of it is the really red cherry that's selected because of the color. It did seem to dip off a couple of months ago, but it's been picking back up. We've always had a pretty steady business with it, but it seems to be picking up. I know a lot of things are painted but I've been hearing the look of natural wood is coming back," says Anton.

O'Shea Lumber is in a state that many say is the source of the finest cherry in the world. "We do get really nice cherry here for sure, but we sell it all throughout the mid-Atlantic area," says Anton.

Scott Roberts of Roberts Plywood in Deer Park, N.Y., which offers cherry hardwood, plywood and veneer, says prices have gone down while the quality has gone up. And

while its not moving as well as it did 10 years ago, sales have been quite steady over the past four to five years.

"Some people still do traditional work and are still using it for that. Sometimes people are using cherry and even painting it because it has great workability. It's close to maple in pricing but a lot easier to work with. It's better behaved. It's more stable than maple," says Roberts.

"And some people do want a more traditional look, but I had one guy mix cherry and bubinga together and it was absolutely stunning, although not a look for everybody. Another guy stains it to make it more chocolate in color."

"When you have a selection of hardwoods, cherry still is a big seller," adds David Norman of Parkerville Wood Products in Manchester, Conn. "We carry about sixty different hardwoods and cherry is still a big mover for us."

"We outsell poplar to cherry for sure, but that's probably always been true because poplar's a cheaper product. Walnut is bigger than cherry as far as trends. Walnut has replaced cherry as far as what everybody is going for when going for nicer woods."

Plain-sawn 4/4 cherry retails for about \$4.50/bf. **W**



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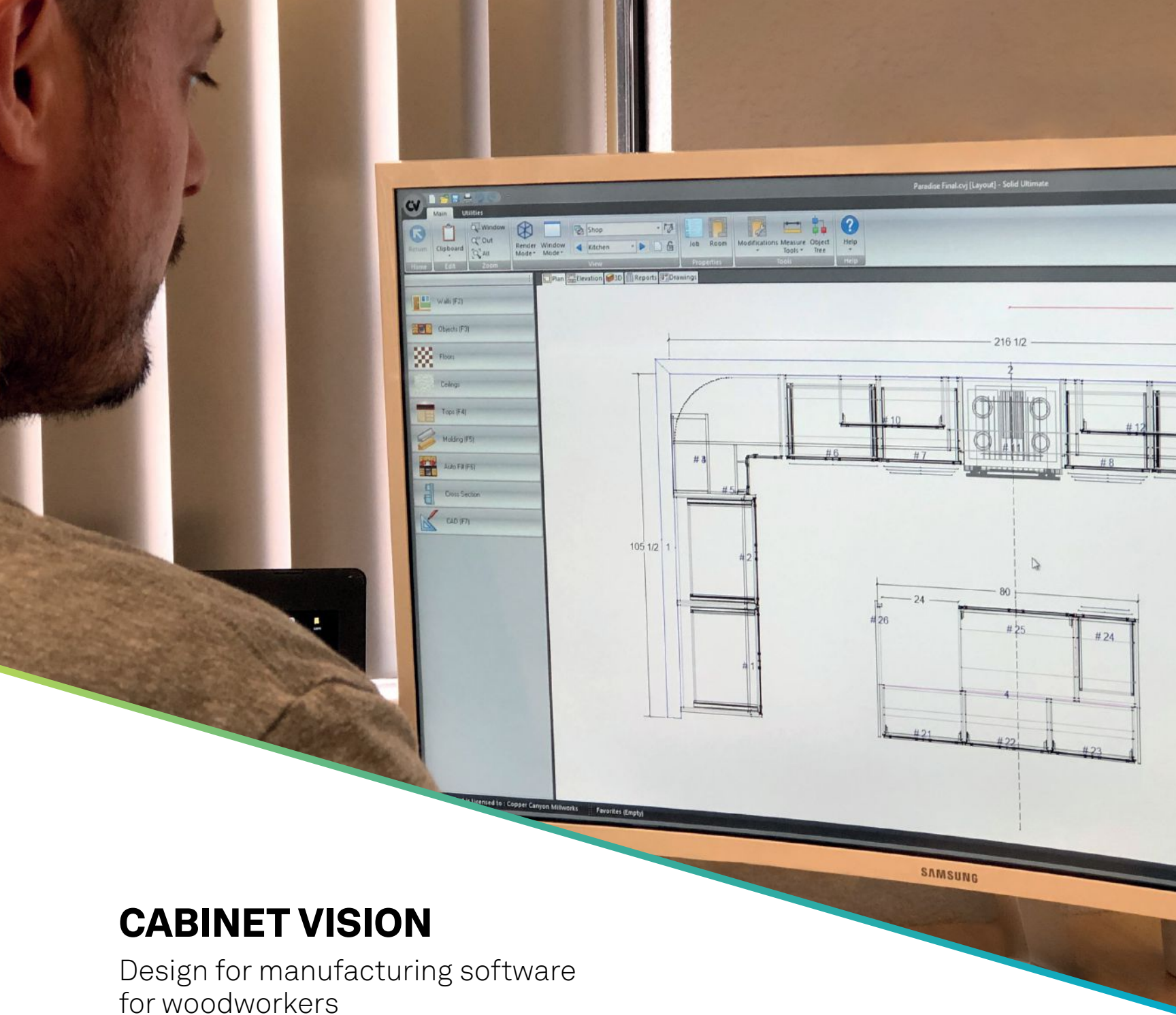
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TOOLS & TECHNIQUES



Grizzly's CNC routers can help shops reach the next level

By Jennifer Hicks

Grizzly Industrial offers its first two CNC woodworking routers, models G0894 and G0895, for shops seeking to add digital fabrication to their production processes.

The G0894 with a 23" x 35" cutting area is aimed at entry-level buyers or those making smaller projects such as signs or components. The G0895 can handle a full 4' x 8' sheet and features a six-zone vacuum table.

"The G0894 is really ideal for anyone who wants to get into CNC. It does do some light duty production work," says Grizzly's quality control engineer Cornelius Rand.

"Moving up, if you're a cabinetmaker and looking for your first CNC, the G0895 would be a great option because you get the 4' x 8' capacity with the vacuum table, and it's still

at an entry-level price compared to a lot of the other CNCs on the market."

Model G0894 features a 3-hp, 220-volt, 3-phase spindle motor, 1/8" to 1/2" ER20 collet, and seven T-tracks for workpiece hold-downs. It weighs approximately 772 lbs.

Model G0895 has a 6-hp, 220-volt, 3-phase spindle motor, 1/4" to 5/8" ER32 collet, four T-tracks, and six independently controlled vacuum zones. It weighs approximately 2,315 lbs.

Both models also feature a hand-held digital display with keypad controls and a USB port. The machines are compatible with most major brands of CAD/CAM software.

Model G0894 sells for \$5,995; model G0895 for \$17,995.

For more, visit www.grizzly.com. 

Laguna fills a gap with the Revo 15/24

By Jennifer Hicks

Laguna Tools has rounded out its lathe line with the new Revo 15/24. Boasting a relatively short 24" distance between centers and a motor that handles higher torque at a low rpm, the 15/24 is designed to handle demanding projects at a budget-friendly price, according to the company.

"The Revo 15/24 fills the gap between the Revo 12/16 and the Revo 18/36, providing space constrained users with more power and capacity," says product manager Benjamin Helshoj. "We wanted to fulfill the need to have an economy lathe with an adjustable stand."

The Revo 15/24 is powered by a 1.5-hp, 110-volt motor. It features a three-step pulley and electronic variable speed, ranging from 50 to 4,200 rpm, with a digital readout.

The lathe also features Laguna's Pulse Width Modulation, which basically makes sure there's sufficient torque to turn tougher materials at low speeds.

"That's what a user is looking for," Helshoj explains. "A big drawback to smaller lathes is they become weak with low torque and low rpm and we're trying to fix that problem. The three-step pulley gives you different speed ranges at very low torque for some serious bowl turning."

Other features include adjustable legs, a steel bed, and Laguna's patent-pending Precise Point, which allows end-users to dial in the tailstock quill to meet with the headstock center. Accessories include a 20" extension bed, LED work light, and casters.

The Revo 15/24 sells for \$1,999.

For more, visit www.lagunalathe.com. 



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Orion 950 moisture meter loaded with features

By Jennifer Hicks

When wood moisture monitoring calls for sophisticated technology, the Orion 950 Smart Pinless Wood Moisture Meter from Wagner meters is a top of the line device made to give dependable results, according to the company.

The 950 has a variety of new features including dual depth measurement, a temperature/relative humidity sensor, equilibrium moisture content (EMC) calculation, on-demand field calibration, and Bluetooth capability.

"Having a meter like this with multiple depth modes really allows you to see if the core of a thicker slab is still wet even if the surface is dry, and you can get the feel whether you want to work with it or not," says Wagner's vice president, Eric Wagner.

The EMC calculation feature determines when wood has reached its equilibrium with the environment and will no longer gain or

lose moisture, making it ready for installation or fabrication. This reading can benefit a woodworking shop in several ways by establishing a threshold the material should remain at, according to Wagner.

"Let's say a woodshop is building a nice a conference room table for around \$5,000 to \$10,000. They would want to have a conversation with the customer that wood is a living breathing material that absorbs and releases moisture, and if they want it to last a long time, they will keep it at a certain humidity and temperature based on the EMC calculation," he says.

"This allows a shop to not get a call back from an angry customer as well as differentiate themselves in that this is another range of service they're providing."

Every meter is shipped with a calibration block. The Orion 950 starts at \$479.

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Axiom's Iconic-8 with stand and toolbox.

Axiom adds entry-level Iconic series

By Jennifer Hicks

With the first-time CNC user in mind, Axiom Tool Group has integrated the Iconic series to its machining center line. They feature the same prismatic guides, ball screws and powerful DSP pendant controller used in Axiom's larger CNC machines, but are scaled down in size and offered at a more affordable cost, according to the company.

The Iconic series includes three models based on capacity - Iconic-4 (24" x 24"), Iconic-6 (24" x 36") and Iconic-8 (24" x 48"). Each has a 1-hp (800W) electro spindle, RichAuto B11 industrial 3-axis CNC controller, extruded aluminum frame, interlocking aluminum table, integrated MDF spoil board, and auto tool touch-off plate.

Axiom acquired the Iconic brand in August 2019.

"This line is going to provide a hobbyist or educational user with the opportunity to purchase their first machine and allow it to be good enough to be their last machine. They're inexpensive but built with the same premise and with many of the same components and the same engineering that our larger machines have," says Axiom's Todd Damon.

The machines are ideal for fabricating furniture components, signs, musical instruments and more, as well as applications with plastics, non-ferrous metals and other materials.

Damon notes that the Iconic's controllers are easy-to-use and don't require regular software updates, important factors for beginners new to the technology.

The Iconic machines can be customized. Accessories include a steel stand, toolbox, hold-down clamps, dust collection components, tooling, LED lamp kit, 2.8-watt laser, and more.

The machines start at \$3,999 and include lifetime technical support.

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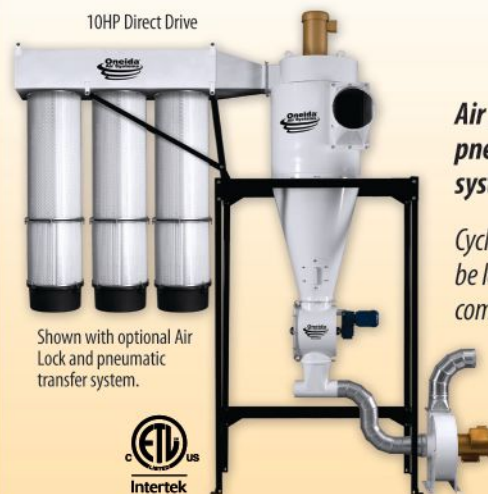
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Countertop choices

The list includes granite, laminate, solid surface, concrete, engineered products, and some favorites from the past making a comeback

By John English

What goes around... In the early 19th century, as kitchens became more formalized, marble and maple slabs began to replace pine, slate, cast iron and stone as the countertops of choice. Many early kitchens also had an end-grain chopping block or at least a breadboard on hand, to help save the main surface. Soapstone was popular too, and granite finally appeared in the pantries and kitchens of upscale homes during Victoria's

reign. By the end of the century, cooks were also choosing steel, nickel, pewter and edge-glued maple strips (a version of butcherblock) to top their cabinets and surround their sinks. Ceramic tile was a strong favorite for a while, especially as a backsplash material, and stainless steel began appearing between the wars.

All of those receded during the post-War boom in colorful plastic laminate, which eventually led to the solid surface revolution in the early 1980s. That lasted a few decades

until natural solutions and manmade imitations slowly crept back into the limelight. In addition to marble, concrete and glass, recent countertop history has leaned heavily toward the same materials used a century or more ago – stainless steel, maple butcherblock, granite and engineered stone that often looks like marble and slate, but isn't as soft, porous or scratchable.

With all that history and the vast volume of experience it has delivered, woodshops now have a vast array of materials to choose from when it comes to counters and other components. Designers and architects often spec the tops, or customers hire their own countertop subs, so woodworkers don't always get to choose or influence choices. But when they do, they need to know their options.



Examples of the Portrush (left) and Whitby designs, available from Cambria, a manufacturer of natural quartz surfaces.

What's new?

One of the major advantages that laminate and solid surface materials have over natural and synthetic stone is that they can be machined with woodworking tools.

PaperStone fits this bill. The manufacturer is based in Hoquiam, Wash., and is online at paperstoneproducts.com. The material can be fabricated and installed using traditional tools with high quality carbide-tipped blades. As a relatively new and affordable alternative to traditional solid surface materials, it comes as composite panels that are made from post-consumer recycled paper, melamine, proprietary non-petroleum phenolic resins and natural pigments. The product is durable and easy to install, has a Class A fire rating, and remains structurally rigid in both horizontal and vertical applications. Most PaperStone products are certified recycled by the Rainforest Alliance to the Forest Stewardship Council (FSC) standards and are also certified food safe by NSF International. It is available in thicknesses from 1/8" to 1-1/4" and sheets up to 60" x 144".

One of the newest things from Panolam Ind. in Shelton, Conn. is something old. The company's Nevamar plastic laminate division is celebrating its 80th year by introducing the Yesteryears Collection. This is a mix of 20 new and retro woodgrain, abstract and solid countertop designs that have been inspired by some of our favorite patterns over the past four decades. Looking at the collection online at panolam.com, older woodworkers will definitely feel a tug on their memory strings. These are the colors and patterns of '50s diners and Grandma's appliances, kitchen table and countertops. They are an evocative and inspiring dance down Memory Lane, and there are woodshops out there that will both delight in them and find ways to make them thoroughly modern.

Among other products, Stevens Ind. (stevenswood.com) in Teutopolis, Ill. makes unique textured and patterned laminates for medical, educational and commercial interior cabinetry and millwork.



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A kitchen with soapstone countertops, courtesy of Vermont Soapstone.

The newest design collection is called Ashland, which is described as harmonious greys and tranquil white, industrial concretes, genteel textiles and cozy woodgrains in four distinctive textures (Trio, Alder, Artika and Warm) and nine fresh color offerings. The collection also has an inherent green nature as its recycled core requires that no trees need be sacrificed for design. Stevens Wood collections are UL GreenGuard Gold Certified and the Ashland collection is available with an FSC-certified core option.

Omnova Solutions (omnova.com) in Beachwood, Ohio makes emulsion polymers, specialty chemicals and engineered surfaces for a variety of commercial, industrial and residential uses. Among its offerings are a variety of decorative surface materials including paper laminates in a large assortment of patterns and colors and hundreds of woodgrains; 2D laminates that are engineered to be scratch, abrasion and stain resistant, and 3D laminates, also known as rigid thermofoils (RTF). Omnova also makes acrylic specialty lami-

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nates (films) that are an attractive, functional and affordable surfacing solutions for a variety of indoor and outdoor applications where UV and/or moisture resistance is required. They come in stone and woodgrains, plus abstract or geometric designs, and they can be flat laminated or thermo-formed to a variety of substrates. These films are available in both standard and impact-modified formulations, and they are reverse printed in a variety of widths up to 92".

For woodshops that need to create something very custom, very dramatic and quite unique, Omnova's Viewnique digital wall murals are customized large format, printed vinyl wallcoverings that can be used to create single spaces or reinforce branding across franchise locations. These murals are available in a variety of textures, styles and constructions, including a recycled content offering that may contribute to LEED certification. And creating a Viewnique mural can be a fast, straightforward process that can go from initial concept to finished execution in just a few short weeks.

Stone and rock

Shops have a wide range of choices when it comes to both sedimentary and igneous natural rock and synthesized (engineered) stone. These include marble, granite, quartz, concrete, sintered stone and soapstone.

Marble is sedimentary, so it usually has calcium and other mineral deposits that appear as streaks and patterns that give it a unique appearance. However, it needs constant sealing and even with that will often stain over time because of its porosity. It's softer than most other stone choices, too, and is thus susceptible to hardened steel knife edges and other abrasion. However, it does look rich and can be extraordinarily appealing.

Granite was fired in the bowels of the earth and formed as magma cooled. It is tough, beautiful and enduring because it is made up of quartz, feldspar, mica and other hard minerals. It's also one of the most expensive options. It will withstand a great deal of use and abuse, comes in myriad colors and patterns and is widely available. In many upscale real estate markets, granite kitchen counters are the expected norm and nothing else will be acceptable.

Both marble and granite tile can be an extremely cost-effective alternative to one-piece or joined slabs, especially in mid-priced neighborhoods. Big box stores such as Lowes usually carry 12" square solid granite and marble tiles that run from \$2 to \$10/sq. ft. The standard way to use them in countertops is to lay down a 3/4" plywood deck topped by a cement board and then set the

tile. Incorporating a ceramic backsplash and front drop delivers approximately 25" depth. With materials and labor, the finished counter usually runs less than \$25/sq. ft., can often be completed by in-house personnel and can work better with a tight schedule than waiting for a slab to be manufactured and installed. Marble slabs are in the \$100 to \$200/sq. ft. range, so the savings are often large enough to overcome a client's objection to grout lines.

Quartz (crystallized silicon) is another very popular stone-based option. Engineered quartz is made by crushing the rock and then reconstituting it with resins. It can have some minor issues with heat that one doesn't get with granite, but other than that the materials are quite similar in terms of the properties.

Cambria (cambriausa.com), located in Le Sueur, Minn., is a manufacturer of natural quartz surfaces. The company's namesake product often looks and feels like granite or marble, but the manufacturer says that it is harder than both. That means Cambria is less likely to scratch, chip, or stain. And while marble especially requires regular sealing, all Cambria requires is to be washed down with a little warm water and mild soap. It's non-porous and nonabsorbent, so it won't draw in moisture from raw or leftover food, which can harbor harmful bacteria.

Caesarstone Ltd. is headquartered in Charlotte, N.C. and operates a new manufacturing facility in Richmond Hill, Ga. This company also manufactures premium quartz surfaces, which are used in both residential and commercial projects as countertops, vanities, wall cladding, floors and other interior surfaces. Caesarstone is blended at a ratio of approximately 90 percent natural quartz aggregates with pigments and polymer resins.

One might think that concrete countertops would be an inexpensive alternative, but they can be surprisingly costly when done by a competent artisan. Because they are often poured on-site, they are extremely customizable and can work well in irregularly shaped spaces or in renovations where square and plumb need to be compensated. Concrete is extremely durable, must be sealed properly, is difficult to decorate so it is usually offered only in a wide range of monotonies, and is very trendy. It also needs good structure in the casework because of its inherent weight.

A less expensive alternative is sintered stone, which is a conglomeration of recycled rock, glass, ceramic and other materials. It is quite green, which can be appealing to homeowners with environmental concerns. It's quite subjective in appearance, depending as it does on the component minerals.

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Panolam's Yesteryears Collection.

For example, DuraLosa is a brand of sintered stone countertop manufactured by Sage Surfaces (sagesurfaces.com) in The Woodlands, Texas. It is comprised of natural materials including clay, feldspar and other minerals and pigments. Currently, the catalog includes a baker's dozen of color options running from the creamy ivory Avena through reds, browns and even veined patterns to the luxurious deep gray Pizarra, which has ebony accents.

Soapstone is another economical option. This is a quarried gray, blue, greenish natural stone that can have some marbling. It was popular a century ago and has always stayed on the fringes of the countertop market. Much of its content is talc, which is a clay mostly comprised of magnesium silicate. Talc got a bad rap lately because a personal product made with it allegedly had traces of asbestos. That apparently isn't an issue with soapstone. It's not as hard as granite but is quite dense. So, it's not very porous, and thus doesn't require sealing. According to the Vermont Soapstone Co. in Perkinsville, Vt., it "has been a staple in labs for ages because it's extremely durable and impervious to virtually all chemi-

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cal." It is also impervious to heat, and seams are almost invisible when done by a pro. Vermont and other manufacturers can mill grooves for drain boards in soapstone counters that lie adjacent to sinks.

Alternative thinking

Among the other possibilities for covering or creating counters are thermofoil and the new generation of modified lumber. Neither is a solution for high traffic or use, but they can be used in ancillary locations such as prep areas. Thermofoil is not heat resistant, but it is easy to clean and doesn't have the warping, chipping, or climate-related issues that can arise with paint or other finishes. And modified lumber such as those offered by Lignia (lignia.com) have value as both a sustainable resource and also as a somewhat more resilient surface than some of the less dense hardwoods. It's especially suitable for outdoor kitchens because of its durability and stability.

Lignia begins as fast-growing softwoods from FSC-managed plantations. The manufacturing process then transforms it into a low-movement timber with all the properties of hardwoods. According to the company, that leads to a reduction in the number of slow-growing hardwood trees being felled, with a corresponding increase in sustainability for the planet. In addition to the basic product, there are also fire- and water-resistant versions.

Not all new materials are used in horizontal orientation. Many of the latest innovations complement counters and are being used not only in casework but in backsplashes and wall panels, too.

This year, AGT is adding several new colors and patterns to its deco-

orative panels line. Woodshops can currently choose between matte and high gloss polymer panels that are available in numerous neutral colors. These are ideal for interior cabinetry, wall paneling, furniture and other vertical surfaces. The low reflective properties of AGT's matte panels can help create environments that are both elegant and tranquil. Both solutions offer ease of use, a strong resistance to chipping, and excellent stain resistance. They are distributed by Hardwoods Distribution Inc. through its Hardwoods Specialty Products, Paxton and Rugby locations.

While it's not the best choice for food prep areas or around sinks and in bathrooms, wood is still a great option for low traffic counters. Greenlam Ind. (greenlam.com) in Doral, Fla. offers premium wood veneer laminates in a range of species that are made from FSC-certified timber. The company also offers compact laminates for use in all weathers that have light-fast finishes designed to withstand years of outside use. They come in a huge range of solid colors, wood looks and mineral effects. Plus, some have anti-bacterial protection, and some were specially developed to shield surfaces from chemical attack.

Lenderink Technologies (lenderink.com) in Belmont, Mich. is probably best known in woodshops for veneers in thicknesses from micro thin (translucent) to 1/4 thick. But Lenderink also offers real natural stone veneer in thin sheets. These come in two different types of sheets – one has a proprietary No. 160 Water Resistant Backer that offers flexibility, and the other is a thicker option that offers translucency for back lighting. Both can make a shop's creative juices flow. Lenderink will even build stone veneered panels (flat, curved and complex shaped) for a client. 

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- Table tilt: 5° L, 45° R
- Floor-to-table height: 35 1/2"
- Cutting capacity/throat: 16 1/2"
- Maximum cutting height: 16"
- Blade size range: 162"
- Blade widths: 1/8" - 13/8"
- Blade speed: 4500 FPM
- Resaw fence size: 6" H x 23" L
- Overall size: 35 1/4" W x 33 3/4" D x 78 1/2" H
- Approx. shipping weight: 784 lbs. (G0636X)

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- Motor: 5 HP, 220V, single-phase or 7 1/2 HP, 220V/440V*, 3-phase
- Precision-ground cast-iron table size: 33 1/2" x 23 5/8" x 2"
- Table tilts 45° for bevel cuts
- Floor-to-table height: 34 1/2"
- Cutting capacity/throat: 24 1/2"
- Maximum cutting height: 16 1/4"
- Blade size: 180" L (1 1/4" - 1 1/2" W)
- Blade speed: 5300 FPM
- Shielded and permanently lubricated bearings
- Overall size: 48" W x 32" D x 83 1/2" H
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7 1/2 HP

G0569 ONLY \$3250⁰⁰

\$199⁰⁰
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16 1/2" DOVETAIL MACHINE

- Motor: 1 HP, 110V/220V, single-phase, prewired 220V
- Table size: 24" x 7 3/4"
- Floor-to-table height: 46 1/8"
- Number of spindles: 1
- Spindle speed: 18,500 RPM
- Dovetail bit size: 10° angle x 5/8" L
- Dovetail shank diameter: 1/2" (12mm)
- Max. dovetail height: 3/4"
- Minimum dovetail height: 3/16"
- Max. thickness: 2 3/8"
- Minimum thickness: 1 1/32"
- Max. stock size: 59" L x 16 1/2" W
- Minimum stock size: 7 1/4" L x 2 3/8" W
- Overall size: 38 3/4" W x 26 1/2" D x 56 3/8" H
- Approx. shipping weight: 539 lbs.

**EXTREME
SERIES**



G0611X ONLY \$3995⁰⁰

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SHIPPING

21-SPINDLE LINE BORING MACHINE

- Motor: 2 HP, 110V/220V, prewired 220V, single-phase, 20.8A/10.4A
- Air requirement: 70 PSI
- Table size: 43 1/8" W x 15 1/4" D
- Floor-to-table height: 33 1/4"
- Spindle travel: 3 3/8"
- Max. stock width: 8"
- Number of spindles on boring head: 21 (10 left and 11 right)
- Distance between spindle centers: 32mm
- Shank size: 10mm
- Fence length: 74 3/4"
- Stroke operation: Pneumatic
- Overall size: 75" W x 28 3/8" D x 58 1/4" H
- Footprint: 36 1/4" x 28 3/8"
- Approx. shipping weight: 514 lbs.



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- Cartridge filter diameter: 19 1/8" x 2
- Impeller size: 18 1/2" steel radial fin
- Air suction capacity: 4029 CFM @ 4.3" SP
- Maximum static pressure (inches of water): 16.8" Sound level: 87-90 dB
- Filter: Spun bond polyester, 99.9% efficiency from 0.2-2 microns
- Collection drums: Steel, 55 gallon x 2
- Overall dimensions: 76 3/4" L x 60" W x 139 3/4" H
- Stand: 13 gauge steel
- Cyclone body: 16 gauge steel
- Blower housing: 11 gauge steel
- Approx. shipping weight: 937 lbs.

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G0638 ONLY \$4695⁰⁰



24" PROFESSIONAL PLANERS

- Cutterhead motor: 5 HP, 220V, single-phase (G5851Z), or 7 1/2 HP, 220V/440V*, 3-phase (G7213Z)
- Feed motor: 2 HP
- Max. stock thickness: 7"
- Max. cutting depth: 1/8"
- Feed rate: 17-26 FPM
- Speed: 5200 RPM
- Approx. shipping weight: 1126 lbs. (G5851Z), 1130 lbs. (G7213Z)

Z-SERIES



G5851Z
SHOWN

SINGLE PHASE

G5851Z ONLY \$5250⁰⁰

3-PHASE

G7213Z ONLY \$5395⁰⁰



STRAIGHT LINE RIP SAW

- Main motor: 15 HP, 220V/440V*, 3-phase, 44A/22A
- Feed motor: 2 HP, 220V/440V*, 3-phase, 6A/3A
- Table size: 53" x 37"
- Floor-to-table height: 32 1/4"
- Maximum cutting thickness: 3 3/8"
- Minimum cutting length: 8" (with included hold-down roller kit)
- Feed speed (variable): 30-112 FPM
- Saw blade diameter: 10"-12"
- Maximum cutting width: 18"
- Arbor diameter: 1"
- Spindle speed: 4500 RPM
- Dust port diameter: 4"
- Overall dimensions: 61 1/4" W x 43 1/2" D x 80 1/2" H
- Approx. shipping weight: 2243 lbs.

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G0524 ONLY \$9750⁰⁰



INDUSTRIAL-DUTY TILTING SPINDLE SHAPER

- Motor: 7 1/2 HP, 220V/440V*, prewired 220V, 3-phase, 3450 RPM, 20A/10A
- Spindle travel: 6 3/4"
- Spindle tilt: -5 to +45°
- Spindle size: 1 1/4"
- Spindle length: 7"
- Spindle speeds: 3900, 5000, 7200, and 9400 RPM
- Maximum cutter diameter: 10"
- Precision-ground cast iron table size: 47 1/4" x 35 1/2"
- Fence: wood, independently adjustable
- Footprint: 33" L x 29 1/2" W
- Approx. shipping weight: 1096 lbs.

EXTREME
SERIES



G0608X ONLY \$4850⁰⁰



12" SLIDING TABLE SAW WITH INDEPENDENTLY-POWERED SCORING BLADE

- Main motor: 7 1/2 HP, 220V/440V*, 3-phase, prewired for 220V, 20A/10A
- Main table size: 35 1/4" x 21 1/2"
- Sliding table size: 126" x 14"
- Rip capacity with standard rip fence: 49 3/4"
- Max. crosscut width with crosscut fence: 126"
- Max. depth of cut: 3 3/8" @ 90°, 2 3/4" @ 45°
- Main blade arbor: 1"
- Scoring blade arbor: 20mm
- Overall size: 139"W x 133"D x 45"H
- Approx. shipping weight: 1498 lbs.



G0699 ONLY \$6995⁰⁰



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AUTOMATIC EDGE BANDER

- Required power supply: 30A, 220V, single-phase, 60 Hz
- Feed motor: 3/4 HP
- Glue spindle motor: 1/2 HP
- End trim motor: 1/4 HP
- Flush trim motor: 3/4 HP
- Buffing motor: 1/4 HP
- Heating element: 1455W
- Table size: 10 1/2"W x 78 3/4" L
- Min. panel dimensions: 4 3/4"W x 9 1/2" L
- Compressed air required: 100 PSI
- Glue pot capacity: 34 oz
- Roller width: 3 3/4"
- Roller diameter: 3/16"
- Edgebanding coil capacity: 31 1/2"
- Approx. shipping weight: 875 lbs.



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G0774 ONLY \$10,495⁰⁰

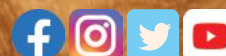


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NEVER SAY NO

This Massachusetts' cabinet shop believes that one job usually leads to another, so it seldom turns work down

BY JENNIFER HICKS





Vartanian Custom Cabinets in Palmer, Mass. just celebrated its 35th year in business and is looking forward to more prosperous years ahead. The family-owned turnkey custom cabinetry company prides itself on having outstanding employee retention and a well-equipped shop with cutting edge machinery, as well as a great reputation with its customer base.

Owner and founder Aram Vartanian says that the key to continued success is to remain flexible and let customers dictate their needs, then produce top quality products with unmatched service that brings them back time after time. This includes taking on as many jobs possible regardless of size, a strategy he used during the Great Recession to keep the doors open.

"We just kept going and always stayed busy and always pushed. We took jobs whether big or small and we learned that you never say no

to a bathroom vanity because it turns into a kitchen. We still try not to turn work down. We try to take the job and we try to keep our clients happy and it turns into another referral," says Vartanian.

The business has 14 full-time employees. There are 10 in the shop and four in the office, including Vartanian and his wife Lisa, who handles administrative duties. The owners say everyone is equally motivated to see the business thrive and evolve. And so far, so great, with an annual sales volume of just under \$4 million and 10 percent growth.

Auspicious beginnings

Just out of high school and a few years from starting the business in 1984, Vartanian joined his older brother and mentor in the building trades.

"My brother John and I started together in his basement in Wilbra-

PHOTOS: MICHAEL GORDON



Employees Luke Hunter (left) attaching the face frame to a cherry kitchen island and Adam Portelada assembling panels.

ham. We worked several years in the remodeling business together, and in the evenings and on weekends we'd build cabinets for some of those projects. It started as a hobby, then we split the two companies apart and created this cabinet company and he remained in the remodeling business," says Vartanian.

Eager to grow, Vartanian hired a couple of employees for fabrication and sales help, and had the current facility built in 1986. The first building was about 5,000 sq. ft., but several additions over the years have bumped it to 15,000 sq. ft., including a showroom.

The shop has progressively implemented automated and high-tech machinery and continues to review the latest products on the market. This practice stems from the incorporation of Cabinet Vision design software in 1988, which runs the shop's CNC router, panel saw and cut-off saw.

"We do all of our designing and everything in here and we're downloading cutlists straight into the shop. We had to automate because we went to all of the effort of learning Cabinet Vision and it was so amazing that if we didn't link it to the machines in the shop, we were throwing away 90 percent of the information for a guy in the shop to rethink things through. So, technology for us is number one."

Expanding the market

Vartanian limits the scope of work mostly to residential jobs, a decision he made early on as a business owner simply because homeowners appreciate the quality of work he has to offer.

"The only commercial work we do is when it's with a contractor we have a good relationship with. Recently we did the bar and lockers in the Long Meadow (Mass.) Country Club. I got that job through a builder that we do business with, but if some other builder came to me, I probably wouldn't have pursued it."

The initial client base was in western Massachusetts, when there was plenty of new construction and remodeling going on. But that has changed.

"Now we're out to Cape Cod, up to Maine and New Hampshire, covering a good part of New England. A lot of these jobs are secondary homes for customers in this area so wherever it happens to be, we're comfortable traveling a couple hundred miles easily. We've put plenty of kitchens for secondary homes on a truck and shipped them to Florida. It's not work that we're actually pursuing; it's work from clients that we have done work for in the past," says Vartanian.

He doesn't worry about competition, even though it's out there. The company has a special niche in the local market with its service offerings and price points that other shops just can't compete with.

"We do a lot of work in the Boston area, and there's a lot of competition out there. There are a lot of high-end shops and it's really nice to compete at that level. They're so talented and the quality is there, and dealing with the architects, it's just brought us up to a whole new level."



The shop's dovetail joinery produced with an Omec 750 CN.

Staying ahead

The shop advertises but nearly 70 percent of its clientele is channeled through referrals from family, friends, builders and architects.

When the market crashed in 2008, the shop survived by cutting prices and offering semi-custom and stock cabinet lines.

"When the bottom fell out, it was painful to a certain degree financially, but it was easy to shift gears and get down and dirty and go after the middle- to lower-end product lines and that kept our guys busy. We weren't making a whole lot of money, but I wanted to retain my employees and we absolutely did keep everybody. We didn't have to do that for too long and we were back in the high-end market pretty quick," says Vartanian.

The shop has discontinued the stock offerings but does offer three different price points based on material and construction options. It has also gained a broader clientele by offering more entertainment centers and closet and storage solutions.

Changing styles

Vartanian observes what customers seem to go for and updates the showroom accordingly.

"When we bring our clients into the showroom, it's a real educational process where we explain how we build the cabinet and what sets us apart from everybody else," he says. "We're certainly not trend setters. We tend to follow the trends. One of the things that we are very good at is picking up a trend and refining it a bit and taking it to the next level."

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- Paul Reidt

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The shop builds to the latest trends in its market, which currently lean toward inset, painted cabinetry.

The local market calls for mostly inset framing and painted wood cabinetry, while interest in oak, cherry and other stained products is diminishing. Moving east towards Boston, trends are similar but with cleaner lines and fewer details, according to Vartanian.

"It's been trending that way for several years and it's really starting to move from the Boston market into the western side with just cleaner lines," he says. "One of the things we're starting to see now are more gloss and high gloss finishes. Kitchens are predominantly matte but the high gloss trend is starting to pick up especially in certain areas such as pantries and bars where you'll see a more edgy type finish."

Refinement and growth

The Vartanians say they are fortunate to have a very low employee turnover rate, as all but a few of their employees have been there for at least 10 years. They've also had great success hiring from the nearby trade school, Pathfinder Regional Vocational High School.

Employee insight is highly valued, and the owners often engage them in idea-sharing meetings to make the company better as a whole. A recent meeting topic considered ways to implement more lean production practices, and the Vartanians believe it produced better results than if they'd sought an outside consultant.

"Lean is something we studied on our own as a group and tried to apply the best we could. It has had tremendous effects on our operations. We cut a lot of waste and inventory out and there's less clutter in our facility and it's more organized on a day-to-day basis. We work as a team here to figure out how to do things better."

The owners clearly want to expand their business but are not quite sure the current building is large enough to get them to where they want to be.

"In terms of growth it's always hard to tell but at some point, we're going to plan another addition and add on to the shop. I think we have all the equipment and toys that we need out there now and it's just a matter of space to become more efficient. At that point we will have to figure out where we need to be as a company and determine if we want to stay at this exact location or move into a new facility. That's a big jump for us so we're going to take our time and make sure we make the right decision," says Vartanian.

Contact: Vartanian Custom Cabinets, 10 2nd St., Palmer Industrial Park, Palmer, MA 01069. Tel: 413-283-3438. www.vartanianscabinets.com 

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A NEW GENERATION OF TABLE SAWS

Manufacturers are introducing new safety systems and feature-rich models for shops of all sizes

By John English



The new HW110S-36 from Harvey Industries.



The SCM Minimax sc 2c.

The table saw is almost exactly the same age as the United States.

In 1777, British woodworker and sailmaker Samuel Miller was awarded patent No. 1152 for a table saw. A native of Southampton, he was definitely not the first person to build one, but he was smart enough to patent it. To adjust the depth of cut, one had to raise or lower the entire table. It was essentially a rip saw, and as the blade teeth had no set it's probable that binding and kickback were issues.

While larger casework manufacturers today tend to use beam saws, panel saws and CNCs to size parts, the table saw is still the central feature in most small- and mid-size woodshops. Both stationary and sliding table saws are now being updated with new safety features, automation, controls and software. And at the other end of the scale, corded and cordless portable units are experiencing a resurgence on jobsites because of advances in both battery and motor technologies.

Mind your fingers

The OWL award recognizes innovation in products, services and processes by companies that are located in one of the major industrial zones in Germany. This year, 85 companies submitted 91 innovations at the 13th annual competition. Altendorf GmbH had a winner in the Industry and Crafts category with its new safety system for sliding table saws. Previous protection systems used technology that relied on the conductivity of skin to detect a hazardous situation, and to then pulsate the saw blade to a stop. The problem was that contact had to take place between the saw blade and a woodworker's hand for the safety system to kick in. Plus, in some systems the machine's internal components are damaged during the incident.

Altendorf's new system relies on the ability to detect the

hazard at a very early stage. Two cameras collect data, which is then processed by a powerful hand-detection program. When the system identifies a dangerous situation, the whole saw unit slows down and the saw blade abruptly stops within a quarter of a second. After activation, the machine can immediately go back to work with no damage to the machine or saw blade.

"We've always been uneasy about the fact that existing systems only ever kick in after the accident has happened," says Karl-Friedrich Schröder, head of development at Altendorf. "And they cause damage to parts of the machine as well. We wanted the machine to act sooner, first and foremost to prevent accidents and protect the operator. So, we developed a system that gains us valuable time and lets us disable the danger before contact even happens."

OWL jury spokesperson Thomas Niehoff added that "this will lead to setting new standards that will improve requirements for worker safety in the woodworking industry and the trades worldwide."

The system doesn't destroy the sawblade or require replacing a brake block. It simply stops and drops the blade when a hand is detected. The saw also warns the operator with lights when a hazard is approaching, and then slows the blade so the woodworker feels more resistance and knows something is amiss. Dubbed the "Hand Guard", it should be available in Europe this spring and will eventually enter the north American market after regulatory benchmarks have been met. Altendorf Group has also recently introduced MAGIS, a new digital graphical operator system that guides users through predefined cutting sequences on table saws to save time and material. The group's MAGIS Opti is PC and tablet-based optimization software that makes sliding table saw operations more economical.

The Felder Group has also introduced a new safety system for sliding table saws. Called the Preventive Contact System

SawStop's Jobsite Saw Pro.



(PCS), it was showcased at the 2019 LIGNA woodworking show in Hannover, Germany. When the risk of an accident (fingers too close to the blade) is detected, PCS triggers the lowering of the saw blade under the table at the speed of light. The saw is immediately ready to use again at the push of a button. The mechanism works damage free and without consumable parts - there's no need to replace an aluminum block, or the blade. PCS is now available as an option with the Format-4 kappa 550 sliding table panel saw.

Keep in mind that there have been other finger-saving technologies that have not survived the U.S. patent courts, so woodworkers need to do due diligence before investing in one of the new systems.

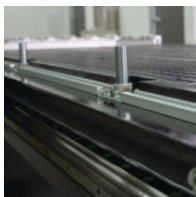
Shopping for saws

The new Fusion F1, F2 and F3 table saws from California-based Laguna Tools emphasize superior dust collection through over/under collection and sealed bottoms. All of the models are equipped with a riving knife, and the F2 and F3 feature the Hi/Low aluminum fence extrusion found on some European

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saws. These units have permanently lubricated bearings and Acme screws. The F1 hybrid (\$999) features low noise and vibration, a 1.5-hp 110-volt motor, cast iron table and 30" precision T-fence. The F2 (\$1,399) has a cabinet-mounted trunnion, and the F3 (which has an optional 52" fence) has a cast-iron trunnion, upgraded handles and miter gauge, an outfield table that is equipped with double miter slots, an extra heavy-duty cabinet and a standard 36" fence. Prices begin at \$2,199.

The new 10-hp, 3-phase, 14" sliding table saw from Grizzly Industrial (model G0853) is listed at \$12,500. It has digital controls for main blade tilt from 0–45 degrees, and speed settings at 3,000, 4,000, and 5,000 rpm for various materials and thicknesses. There are also controls for the scoring blade alignment and ripping, thanks to a very accurate motorized fence that can reduce set-up time and cut list errors. The G0853 also has dual operation stations, which allows the operator to be on the rip fence side of the table or take advantage of the full 126" of crosscutting space. It will rip to 51-1/4", and the sliding table handles 126" x 126". The saw has a 4" depth of cut at 90 degrees and 2-3/4" at 45 degrees (with a 14" blade, but the 1" arbor will also accommodate a 12" one). The table size is 59" x 68" with the included extension wings. There's an adjustable blade guard, a riving knife/spreader, and both 4" and 5" dust ports.

Woodstock International offers a hybrid table saw, three cabinet saws and a 10" slider, the W1811, which has a scoring blade, 63" crosscut capacity, riving knife and blade guard with integral dust port.

Martin Woodworking Machines in Charlotte, N.C. offers five industrial sliding table saws under its own brand, and three Robland models (one of which is a combination machine). The top end Martin T75 PreX combines a cutting height of more than 200 mm (7.87") with a swiveling range of 2 x 46 degrees, which the company says is the first time that has been offered anywhere in the world.

Currently scheduled for an April release, the new HW110S-36 from Harvey Industries in Montclair, Calif. is listed at \$2,995. It offers 36" rip capacity right of the blade, and there's a 52" model that's listed at \$3,195. Both saws have a 4 hp, 230-volt, single-phase motor. Named the Alpha Series, these are industrial grade, premium table saws with a 31-1/2" extra-deep cast iron table for increased safety, and permanent PVD coating of the entire table with Titanium Nitride (TiN) for rust prevention and less friction. There's a newly developed blade guard and a unique dovetail-style



Martin's T75 PreX.



The Ironwood SL200, available from Stiles.

cast iron trunnion system for much smoother and more stable operation. There's also both upper (blade guard) and lower (shroud) dust control. Both models come with Harvey's innovative Compass miter gauge and an oversized T-square fence system with dual position viewers for the high/low fence.

Speaking of fences, the L5 No Lock Air Lock fence from Northtech Machine in Borden, Ind. took home a Visionary New Product Award at AWFS last summer. The company says it's the quickest and easiest fence on the market because it eliminates the need for hand wheels and manual locks. A woodworker simply places a hand on the fence to disengage the auto lock, moves it into position, and then removes his/her hand to lock it into the new location. Northtech says that it can be fitted to almost any brand of straight-line rip saw or table saw.

Oliver Machinery in Kent, Wash. offers its

Heritage collection for small shops and hobbyists, which includes a 10" jobsite table saw with a folding stand. The company (which may sound familiar as it has been an industry leader since 1890), also manufactures four heavy-duty table saws that range from a 10" model at \$1,499 to 12" and 16" saws. The latter starts at \$5,299.

Stiles Machinery offers three models in the Ironwood line of sliding table saws, the SL100, SL200 and SL300. They have aircraft-grade aluminum sliding tables that are manufactured in Europe and deliver extremely smooth and precise movement that reduces operator fatigue and is totally maintenance free. Chrome hardened guide rails make sure the sliding carriage has no lateral movement. The SL300 offers a 51" rip capacity, 7.5-hp motor, three blade speeds, and a scoring blade with a separate 1-hp motor.



LAGUNA



The Fusion Series, available from Laguna Tools.



Grizzly Industrial's model GO853 and JET's JTAS 12" saw.

SCM Group offers 15 sliding table saws in four brands that range from small to large – Minimax, Nova, Classic si and L'invincibile. The new entry-level Minimax sc 2c has a small footprint but can handle large jobs. It comes standard with scoring, can accommodate a 12" blade and its 5.5' crosscut capacity is ideal for processing panels. At the other end of the range, the flagship L'invincibile six has a 550mm blade that can tilt in both directions, uses arch-ground steel slideways so the carriage will never require adjustment, and comes with a state-of-the-art 12" touchscreen.

Cantek America carries five table saws and six sliders. The choices begin with the P30 slider (12" standard diameter blade with an option for 14" max) that has 5-hp main motor with a 3/4-hp scoring motor. The largest unit is the D405ANC, a 14" saw that can be equipped with an optional digital fence. It comes with a 7.5-hp main motor and a 1-hp scoring motor, a 51" ball screw guided and programmable rip capacity, and three speeds.

JPW's Powermatic division lists 17 table saws in its catalog – everything from a 1-3/4-hp 30" model with a riving knife to the superbly engineered 3000B that has a 7.5-hp, 3-phase motor, 14" blade and 50" of rip capacity. And JPW's JET Tools division currently lists 13 saws in the contractor, hybrid and small table saw fields. Many of these are variations of the standard 1-3/4-hp saw with 115- and 230-volt motors, and various rip capacities. At the top end are four versions of the Deluxe Xacta saw (3- and 5-hp) that deliver either 30" or 50" ripping. These machines have a quick-release riving knife. And the top of the line saw is the 12" diameter JTAS-12-DX that has a 5-hp, single-phase motor and a full 80" width of solid cast iron table. And JPW's Baileigh Industrial also has a full catalog of hybrid, cabinet and sliding panel saws.

Rikon offers two contractor saws (1-1/2 and 1-3/4 hp), and the 11-315X which is a 12" sliding panel saw with a 5.5 hp main motor and a 1-hp scoring motor. The 11-315X runs at 4,000 rpm, has a sliding beam

Felder's Preventive Contact System lowers the blade when fingers get too close.

capacity of 126", and weighs in at 1,230 lbs. It's listed by Rockler for \$7,999.

New CNC in Holland, Mich. is known for routers but also offers an industrial sliding table saw with dual speed (3,800/5,200 rpm) and a 7.5-hp main blade with motorized lift. It's available with front and rear load options.

And JLK Machinery in Brighton, Mich. sells the 9-hp Casadei SC400 NC sliding table saw, which can handle up to a 400 mm (15-3/4") main blade and has a separately powered scoring blade, an aluminum carriage with high-precision steel guides, and an NC (numerically controllable) fence and main blade projection.

Smaller saws

Last September, SawStop announced a new version of its portable table saw. The Jobsite Saw Pro features the company's contact detection technology and a host of other features including one-turn elevation, a squeeze-to-tilt balanced trunnion and an onboard accessory storage drawer. There's a dust collection blade guard, 24-1/2" deep table surface and quick-change High/Low T-Glide fence face. USD retail is \$1,399 and the Canadian MSRP is \$1,850.



Festool now owns SawStop so it is introducing a new mini table saw (the TKS) with that safety equipment on board. There are currently no plans to bring it to North America because the company says a version of it is already available here from SawStop (see above).

Coming soon from Bosch Tools is the 4100XC-10, which is a 10" worksite table saw with a Gravity-Rise wheeled stand. It has a 15-amp, 4-hp motor with soft-start and Constant Response circuitry to help maintain speed under load. There's a standard fence,

and an auxiliary fence for narrow workpieces. The stand has 8" rubber-composite tires and the saw has a three-position adjustable riving knife. The 4100XC-10 has a 30" x 22-1/2" tabletop with a 30" rip capacity.

For installers researching their options in small jobsite saws, Delta, DeWalt, Hitachi/Metabo, Makita, Maksiwa, General International, Ridgid, Grizzly Industrial, Rockwell, and Skilsaw all offer corded versions, and both DeWalt and Milwaukee also have cordless versions. [W](#)

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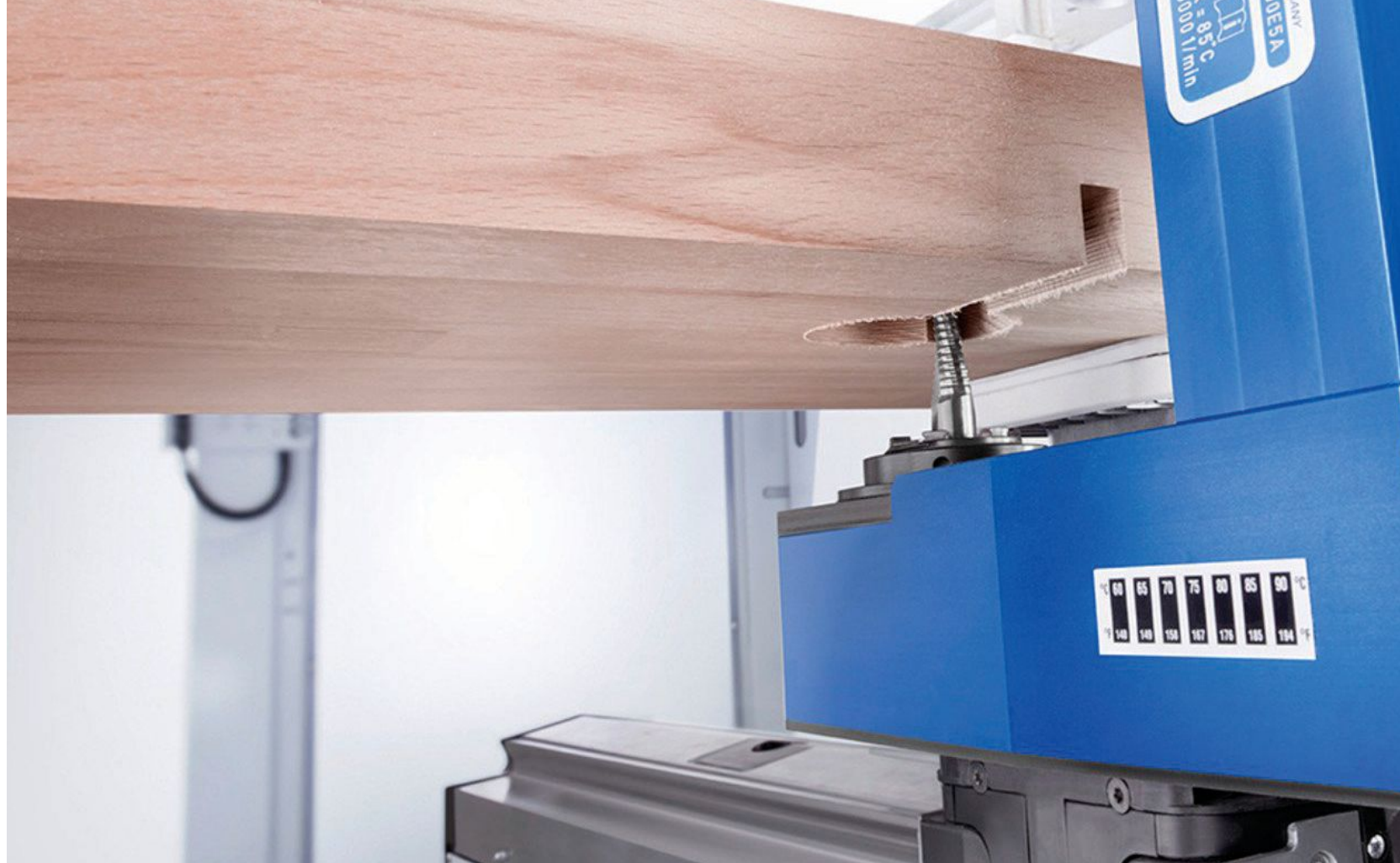
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AN EXQUISITE SOLUTION

Aggregate heads can add some of the advantages of extra axes and 3-D milling capability to a basic 3-axis CNC router

BY JOHN ENGLISH

A standard CNC spindle points the tool (router bit, etc.) down toward the bed of the machine and thus toward the work that is secured there. The bit is vertical. It can plunge into the work, travel across it (side to side, X) or along it (back to front, Y), and change its height and thereby the depth of cut (Z). Some bits can also use a side profile to shape edges.

But as long as they're chucked in a standard spindle, they can only move in, out, up and down. They can't undercut or mill at angles other than 90 (Z) and 0 (X and Y). There are a few workarounds such as programming multiple stepped cuts or using inverted profiles, but these can require a lot of setup and sometimes special tooling.

So, a 3-axis machine moves the spindle in X, Y and Z. Larger machines often add a fourth axis (A or B), and others a fifth (A and B) to this basic configuration. These can rotate the work while the spindle is moving in X, Y or Z (or in X and Z, or Y and Z simultaneously). An A axis allows the work to spin around the X while a B spins around the Y, and a C spins around the Z.

Confused?

OK, here's a visual. You're making a baseball bat on a CNC. The long, square blank lies flat on the worktable, where it is secured mechanically or by a vacuum clamp. The problem here is that a straight plunging bit can't reach all the way around the bat (underneath) because it can only travel left/right, forward/

back and up/down. So, it can easily mill the top of the workpiece and halfway down the sides, and that's it. But if you add a fourth, rotary axis (similar to the headstock and tailstock of a wood lathe) which can slowly rotate the blank in suspension above the worktable, then the vertical spindle can complete the job. That's because the rotary axis is able to present the uncut (formerly the bottom) face to the tool. So even though the bit stays vertical, it can now 'reach' parts that were previously inaccessible.

If one end of the bat could also be raised and lowered while the blank rotates, that would be a fifth axis.

A few small CNCs and most mid-size to larger 3-axis machines offer the ability to add

PHOTOS: COURTESY OF BENZ TOOLING



an aggregate head, which can achieve somewhat similar results. This accessory fits between the spindle and the tool (cutter). Also known as just an 'aggregate' or as an angle head, it allows tools such as router bits, circular saws and drill bits to approach the sides and even the bottom of a workpiece at other than the standard vertical angle. It's a less expensive way to add many of the capabilities of an A or B (or both) axis to an XYZ machine.

An aggregate head is not quite the same as a true fourth axis. When it's mounted on a 3-axis machine, there is still a limiting factor because the spindle and aggregate head that are holding the tool are usually moving while the workpiece remains stationary. That's not always the case, but it is generally so. So, a basic understanding of axes and their potential is essential when considering the purchase and use of an aggregate head. For example, a 5-axis router can move either the part or the tool along or around five axes simultaneously. Do you need this? Beyond being able to reach into all kinds of spots, there is also a time consideration. In most cases, the more versatile the machine becomes (that is, the more axes that are available), the less time will be required to move and re-clamp parts or change tools.

Aggregates can, of course, be used on 4- and 5-axis machines to improve their versatility. But small- to mid-sized shops that already own a 3-axis machine often find that adding a 0 to 90 degree aggregate head will solve almost all of their challenges. They'll be able to cut, rout, sand and profile at any angle between zero and 90. One big advantage here is that a shop can move into a whole new method of assembly. For example, the CNC router will

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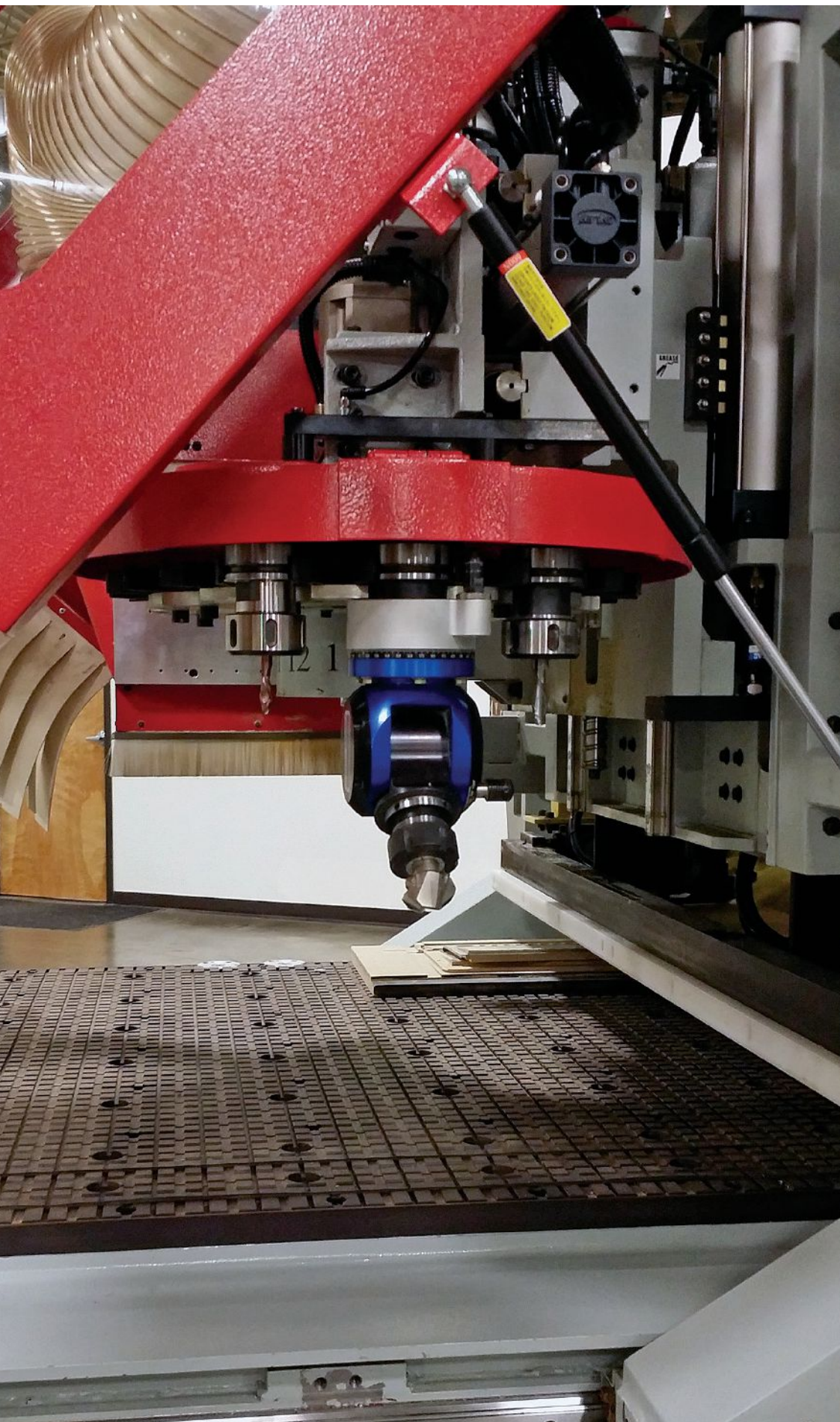
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Aggregate heads can be added as accessory to some 3-axis machines.

now be able to slot for mechanical connectors in the edges of mitered panels, which opens up new ways to build drawers and not-rectangular casework. Miters are not restricted to 45 degrees, because an aggregate head can work at any angle between 0 to 90.

However, there are some aggregate solutions that just don't work without a C axis. These are often related to working on curved parts such as stairs, islands and windows. Shops that work in the round, especially in more than one plane (that is, they make parts with complex curves) may want to discuss their exact requirements in detail with a salesperson before assuming an aggregate head alone is the best way to address their needs. It may be time to add an additional axis, too.

Mechanical considerations

If an aggregate head was simply installed on the spindle, it would spin just like a router bit. So, a woodworker must transfer the rotational motion from the spindle through the aggregate to the tool, and this is done by using an anti-rotation solution such as a ring or block that grabs the torque pin on the head and holds it stationary. These are sometimes included and sometimes optional.

Adding an aggregate head will reduce the Z travel of your CNC router. What you are essentially doing is extending the length of the spindle, so it's extremely important to pay attention to clearance. The bit or blade is now a little closer to the bridge, clamps, toolholder and other elements of the machine. Plus, it can reach around it in more angles. When a sawblade or a long bit is installed, there must be room for the entire assembly (spindle, aggregate head and tool) to move freely in all of the possible directions it might take.

When the addition of an aggregate head reduces the Z travel, and curtails travel near parts of the machine, that in turn reduces the overall size of the available work envelope. That is, the maximum size of the parts being made is going to be a little smaller in some dimensions. If a shop is already close to maximum tolerance, the addition of an aggregate might mean that large parts may need to be milled as sub-assemblies that can fit comfortably on the workspace and be assembled later to form a larger whole. Or, maybe it's time to swap the 4x8 table for a 5x10.

Another consideration is torque. An ag-



With an aggregate head, shops can cut, rout, sand and profile at any angle between zero and 90 degrees.

aggregate head holds the tool farther from the spindle, so there is more shear (sideways) pressure. That can generate heat, and nothing wears out an angle head faster than excess heat build-up. It may also affect accuracy, especially if the cut is too deep (too high a chip load), the feed (travel) rate is too high, or the rotation is too fast or too slow. Aggregates come with different types of lubrication and cooling that include grease, or an oil and air mister. And most come with a built-in thermometer that lets the woodworker constantly check for problems.

Sometimes the workpiece isn't absolutely flat, and if a standard cut is made the groove can vary in depth. This can be a problem when, for example, a rabbeted edge must seat fully in the groove. One type of aggregate, called a floating head, is designed to deal with this problem. It allows the machine to register the depth of cut from the surface of the work directly below the aggregate head, rather than from a standard pre-determined Z point. That is, it constantly 'reads' the surface and adjusts accordingly, which can be very useful when working with thin veneers or milling close-fitting joinery such as dovetails. The range of travel can be quite dramatic. For example, the Benz floater (item 727WT03601G10M4) has a range of 8mm (more than 1/4").

The bottom line is that an aggregate head can add immense versatility to a machine, especially when combined with the addition of a fourth axis. But woodshops need to keep in mind the limitations of these heads, especially when it comes to intense usage in a higher volume production environment. They are an exquisite solution for small shops that make one-off parts, patterns and prototypes, or do short production runs. And they can be a valued asset for custom cabinet shops that build one case at a time, or furniture builders who need to work in more than three axes and who are not yet ready to move up to a machine that is capable of continuous 5-axis machining. 

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NEW PRODUCTS



▲ **MILWAUKEE TOOL** introduces Leather Performance Gloves, designed to provide all day comfort without sacrificing productivity, according to the company. The new gloves leverage the lightweight design of the current Milwaukee Performance Gloves with an added leather palm for durability. They also feature a moisture wicking terry cloth sweat wipe on the thumb and Smart-swipe technology on the knuckle for touch screen compatibility without having to remove your gloves. The gloves are available in five sizes and sell for \$24.99. For more, visit www.milwaukeetool.com.



▲ **DEWALT** has added Power Detect Technology to its four new 20-volt Max XR brushless tools, including a 7-1/4" circular saw (model DCS574), reciprocating saw (DCS368), 5" angle grinder (DCG415), and hammer drill (DCD998). The technology can identify the battery the tool is paired with and adjust power output accordingly. The new tools also feature upgraded motors and components, according to the company. For more, visit www.dewalt.com.



▲ **GRIZZLY INDUSTRIAL** presents two new double-bevel, compound, sliding miter saws – the 10" model T31634 and 12" model T31635. Both saws feature a sliding travel of 9-3/8" with an 'easy-grip' slide handle, laser cut guide, LED worklight and 1-1/2" dust port with collection bag, according to the company. Both saws are powered by a 2-hp, 110-volt, 15-amp, single-phase motor. The 10" model sells for \$299; the 12" model for \$359. For more, visit www.grizzly.com.



◀ **MILWAUKEE TOOL** has added the 18-gauge 1/4" narrow crown stapler to its M18 Fuel cordless nailer lineup. The stapler leverages a nitrogen air spring mechanism with the battery's power to sink staples to the proper depth in hard materials. Other features include tool-free depth adjustment, a compact, lightweight design, and sequential and contact firing modes. For more, visit www.milwaukeetool.com.



▲ **RICHELIEU** introduces a selection of Tunable White (TW) LED lighting solutions. The Atom TW LED puck light has a quick connect system and a shallow depth designed for a flush installation. It can also be surface-mounted with two optional trim rings, according to the company. The K-Pad TW LED (above) is an under-cabinet light designed for quick and easy surface installation. It comes in a stainless-steel finish. FlexyLED TW LED tape light is designed to slide easily into slim profiles for a modern minimalist look. For more, visit www.richelieu.com.

◀ **MAKITA U.S.A.** is introducing its new Quiet Series of electric air compressors designed to reduce the exposure to excessive noise. The series includes three models: the MAC100Q for one tool on small jobs, and the MAC210Q and MAC320Q for case and base installation, trim and finish carpentry, and other larger applications or multiple tools, according to the company. For more, visit www.makitatools.com.

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▲ **PRESCO LIFTS** presents the P3 Operator Controlled Load Leveler that can be raised or lowered at the touch of button. It has an integrated turntable that sits on anti-friction bearings, allowing users to spin the load so they are always loading and unloading from the same spot. Two models are available with 2,000- or 4,000-lb. capacities. Both units operate on standard 115-volt power, according to the company. For more, visit www.prestolifts.com.



▲ **FESTOOL'S** new cordless Vecturo oscillating multi-tool combines limitless functionality with exceptional controllability, delivering precise results in the trickiest of places, according to the company. It features a tool-less plunge base and depth stop (sold separately or included with the Vecturo Set), StarlockMax tool holder, and brushless EC-TEC motor. For more, visit www.festoolusa.com.

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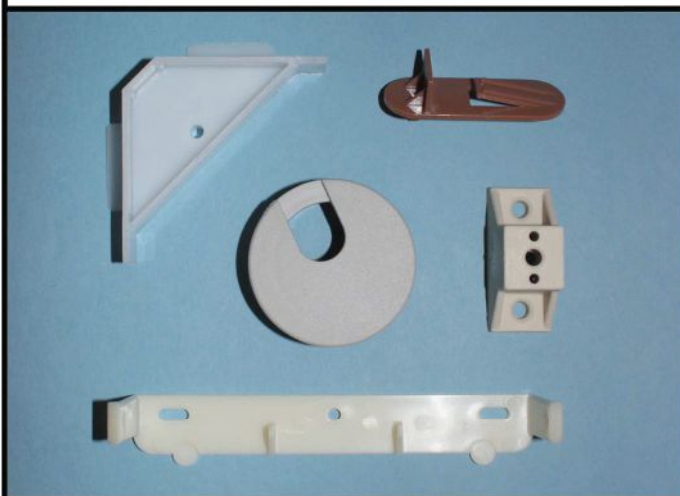


◀ **FESTOOL USA** has unveiled its new CT 15 mobile dust extractor, featuring a HEPA filter, touch-operated control panel and tool-triggered activation. The CT 15 weighs just under 24 lbs. and sells for \$349. It is compatible with all Festool systems, capable of removing dust, water and dirt, according to the company. For more, visit www.festoolusa.com.



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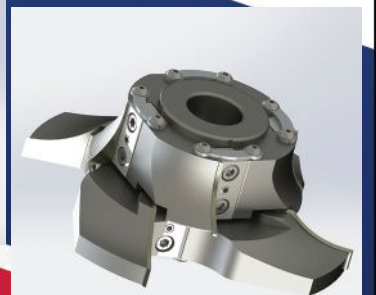
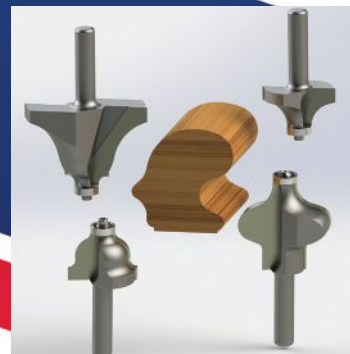
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Last year's Best in Show winners at Providence included Greg Strange of North Easton, Mass.; Peter Kenyon of West Kingston, R.I.; Jeff Woods and Michael Turner of the North Bennet Street School, and Larry Elardo of Groveland, Mass.

Fine Furnishings Show celebrates 25 years

By Jennifer Hicks

This fall will mark the 25th year of the Fine Furnishings Show in Providence, R.I. The silver anniversary event is scheduled for Nov. 6-8 at the WaterFire Arts Center and will feature artists and craftsmen from New England and beyond.

The show presents American-made, hand-crafted décor for the home, office and garden, including furniture, accessories and art from one-of-a-kind pieces to complete room sets in a wide range of designs, materials and prices.

Over 100 exhibitors will offer their work for sale, order and commission.

At last year's show, over 80 new works were entered in the Best in Show program. Exhibitors included two dozen students from the North Bennet Street School and Rhode Island School of Design.

StrathamWood Studios in Stratham, N.H.; Sean Schieber Fine Furnishings in New Market, Md., and M Street Potters in Groveland, Mass. won Best in Show awards for their furniture.

Matthew Soule of SouleWork in Providence won the Marc Harrison Award for Marketing Excellence.

For more, visit www.finefurnishingsshows.com.

South Carolina exhibit

"Grand Designs: 19th Century South Carolina Furniture" is currently on display at the South Carolina State Museum in Columbia, S.C. through December.

Culled from the museum's permanent collection, all of the furniture in the exhibit was made or used in South Carolina.

"The exhibit includes high quality pieces along with furniture 'regular' folks used and everything in between. Many of the pieces are new to the collection and are on display for the first time," the museum said in a statement.

For more, visit www.scmuseum.org. [W](#)

CALENDAR

Organizations sponsoring meetings, classes or shows of interest to professional or hobbyist woodworkers are invited to submit items to: Calendar, Woodshop News, 10 Bokum Road, Essex, CT 06426; 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 — San Fernando Valley Woodworkers meetings are held on the third Thursday of each month at 7 p.m. at the Balboa Park Sports Complex, Gym Building, in Encino. www.sfvw.org

Monthly — Society of Wood Manufacturing, a chapter of AWFS consisting of educators, manufacturers, hardware and industrial suppliers, and machinery deal-

ers, meets during the second week of each month. For location and dates, visit www.awfs.org.

June 5-July 5 — The 39th annual Design in Wood juried competition, sponsored by the San Diego Fair in association with the San Diego Fine Woodworkers Association. Open to all woodworkers 18 and over. Over \$20,000 in awards in 26 entry classes. Location: Del Mar Fairgrounds in Del Mar. For more, visit www.sdfair.com.

FLORIDA

Ongoing — The Dunedin Fine Art Center is offering six-week woodturning classes at its Cottage Campus taught by AAW professional member Tony Marsh for beginners and intermediate-level participants. Full-day classes are held on Thursdays. Call 727-298-3322 or e-mail education@dfac.org.

Monthly — Woodcrafters Club of Tampa meets every third Thursday evening at 3809 W. Broad St. in Tampa. For more, visit www.tampawoodcrafters.org.

GEORGIA

Aug. 25-28 — International Woodworking Fair. Location: Georgia World Congress Center in Atlanta. www.iwofatlanta.com

MAINE

May 26-30 — Classical Carving with Flair taught by Alexander Grabovetskiy. Location: Maine Coast Workshop in Camden. Fee: \$950, plus materials. www.maine coastworkshop.com

June 22-26 — Make a Blanket Chest taught by Graham Blackburn. Fee: \$950, plus materials. Location: Maine Coast Workshop in Camden. www.maine coastworkshop.com

July 5-9 — Fans, Shells, Acanthus Leaves & More — What you Need to Carve a Chipendale Highboy taught by Alf Sharp. Fee: \$950 plus materials. Location: Maine Coast Workshop in Camden. www.maine coastworkshop.com

June 8-Aug. 28 — Twelve-week Furniture Intensive Class. Designed for aspiring professional furniture makers with two instructors and a limit of 12 students. Program covers design, technique, finishing and more. Fee: \$8,120. Center for Furniture Craftsmanship in Rockport. www.woods school.org

MARYLAND

Monthly — The Howard County Woodworkers Guild meets the first Saturdays of the month at the Bain Senior Center at 5470 Ruth Keeton Way in Columbia from 9 a.m. to 12 p.m. Open to all those working in wood. For information, email Manny Flecker at aaron0641@hotmail.com.

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MASSACHUSETTS

May 23-25 — Paradise City Arts Festival Northampton. Juried mixed media craft show featuring 230 exhibitors from throughout the country. Location: Three Country Fairgrounds. www.paradisecityarts.com

July 6-17 — Build a Queen Anne Chair with Phil Lowe. Location: Furniture Institute of Massachusetts in Beverly. Fee: \$1,650, plus materials. For more, visit www.furnituremakingclasses.com.

MINNESOTA

April 16-19 — American Craft Show, St. Paul sponsored by the American Craft Council. Location: St. Paul RiverCentre. For more, visit www.craftcouncil.org.

NEW YORK

Monthly — The Woodworkers of Central 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. www.woodcny.org

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

May 17-20 — International Contemporary Furniture Fair (ICFF). Exhibitors from 36 countries will showcase the newest frontier of high-end contemporary interiors. Location: Javits Center in New York City. www.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. www.trianglewoodworkers.com

June 17-20 — The Furniture Society's annual conference, FS20: Building Place, Shaping Identity and Creating Community, will focus on how furniture is used to foster communities and strengthen the community of furniture making. Location: UNC Asheville and STEAM Studio. www.furnsoc.org

SOUTH CAROLINA

May 5-8 — 2020 Woodworking Industry Conference. Jointly sponsored by the Woodworking Machinery Industry Association and Wood Machinery Manufacturers of America, the event features business development sessions, professional and personal networking opportunities, and more. Location: Wild Dunes Resort in Charleston. www.woodworkingindustryconference.com

SOUTH DAKOTA

Monthly — The South Dakota Woodworkers Guild meets the last Thursday of every month (except August) at various members' shops. The club has hand tool and woodturning groups. www.sdwoodworker.org

VIRGINIA

June 26-29 — Society of American Period Furniture Makers Mid-Year Conference. Held in conjunction with the University of Mary Washington Center for Historic Preservation in Fredericksburg. www.sapfm.org 

TigerStop launches new website

TigerStop, a manufacturer of automated stop/gauge, push feed, and positioning equipment, has a new website.

"The new interactive site is fully aligned with our Mission Statement. It is aimed at helping manufacturers of every size, and across every industry, reduce waste in their processes and make informed business decisions so they can compete in an increasingly competitive global landscape," Mary Dick, president of TigerStop, said in a statement.

For more, visit www.tigerstop.com.

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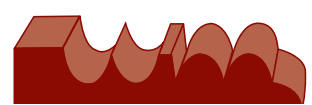
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George Nakashima building the peace table installed at the Cathedral of St. John the Divine; the installation in Auroville, India.

On a mission

George Nakashima Woodworkers in New Hope, Pa. runs the Nakashima Foundation for Peace, a nonprofit organization dedicated to building Altars of Peace/Sacred Tables and sending them to all parts of the world, specifically every continent. It was a dream for Japanese American architect and wood craftsman George Nakashima to use his creations to strengthen world humanity and bring together those of different faiths.

Now, George's daughter Mira Nakashima, who carries on her late father's goals of the foundation with other family members, is searching for the next venue to place one of these grand pieces so that the legacy lives on.

"My father's dream was to do something spectacular in a big way in a big space with important ecumenical sponsoring organizations to spread the word of ecumenism. We haven't gotten to all of the continents yet but we're hoping someday we will find a spot and find and organization and build another one for another continent," Mira tells Woodshop News.

The mission of the foundation is to maintain the architecture and the collection of furniture George Nakashima designed and built on his New Hope property; study, uphold, and perpetuate the great spiritual traditions he embraced and integrated into his work, especially that of Sri Aurobindo, Zen Buddhism, and Christian monasticism, and to build Altars of Peace and send them to all parts of the world as ecumenical seeds of peace planted for all humankind.

While several tables following this mission have been given to various establishments and individuals, three grand pieces, referred to

as Altars of Peace/Sacred Tables, have been placed in their respective host continents of North America, Europe and Asia since 1986. Their locations are the Cathedral of St. John the Divine in New York City; Russian Academy of Arts in Moscow; and Hall of Peace at the Unity Pavilion in Auroville, South India, Asia.

"We are in search of another venue. We are looking for places that would house a 10'-1/2" by 10'-1/2" peace altar that would be consecrated and used as a gathering place for people to either meet or pray or sing or place offerings on or just meditate for peace."

Mira recently worked with a South African organization to place the next table, but various funding and political glitches have hindered that. But she's familiar with the political and logistical challenges in negotiating with foreign organizations. With the Moscow installation, for example, the word 'altar' has a strict orthodox meaning in Russia and was limited to where it could be placed, which is why went to the interdenominational Academy of Arts. The tables are also very expensive to ship properly.

Scot Wineland, of Wineland Walnut in Chico, Calif., is one the lumber companies that contributes to the foundation. He's donated time and material to its cause since the first table was made. "I think this cause is very important to donate to because of all of the negative energy going on in the world," says Wineland.

Mira has her sights set on South

America and Australia.

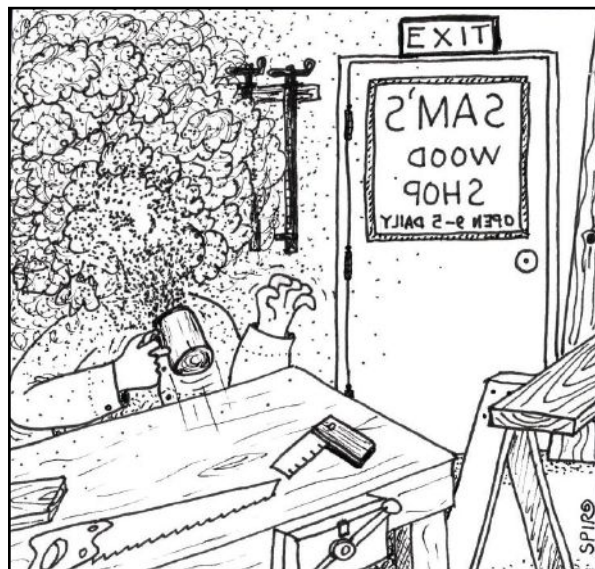
"It would be wonderful if we could find a spot in either of those continents. That's a long way to send a large piece of furniture so I thought maybe we could just team up with woodworker friends we trust in those countries and make something out of the native wood with some of the native craftsmen and make it an international kind of project," she says.

For more, visit www.nakashimawoodworkers.com or www.nakashimafoundation.org

- Jennifer Hicks

60 Grit

Rough humor by Steve Spiro

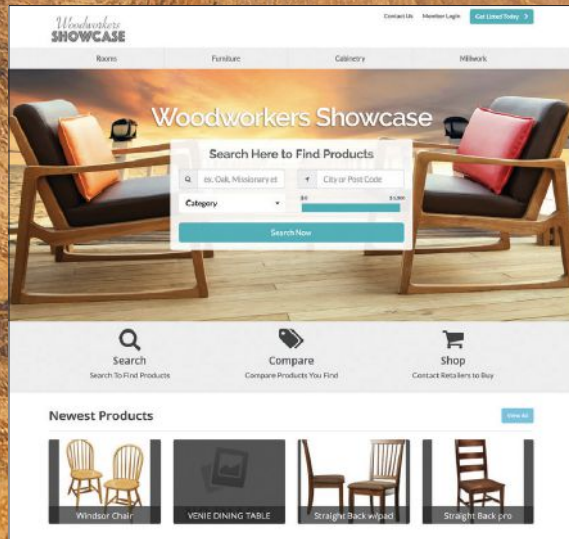


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