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NEWS[®]

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November 2019

Made in Alaska

Kurt Echols runs Cabinet Fever, a custom cabinet shop in Anchorage

Outsourcing opportunities

Desktop CNCs keep improving

Flexner: Finish compatibility

NEW TOOLS

- Freud CNC router bits
- Kreg pocket-hole jigs
- Max USA SuperFinisher
- Vitap Point K2 2.0

\$3.95 (Canada, \$5.95)



15" 3 HP PLANER WITH SPIRAL CUTTERHEAD

- Motor: 3 HP, 240V, 15A, single-phase
- Max. stock width: 15"
- Maximum stock thickness: 6-1/8"
- 3", 4-flute, spiral cutterhead with 52 carbide inserts
- Pedestal-mounted control panel
- Magnetic switch with overload protection
- 2-Speed, chain-driven, automatic feed rollers—16 & 20 FPM
- Ball bearing return rollers
- Precision-ground, cast iron table and extension wings
- Table size with extension wings: 15" x 48"
- Dust port: 4"
- CSA Certified
- Approximate shipping weight: 581 lbs.



W1863 15" 3 HP Planer w/ Spiral Cutterhead

7" 2 HP PLANER MOULDER W/ STAND

- Motor: 2HP, 240V, single-phase, 10.8A
- Cutterhead speed: 7000 RPM • CPM: 14,000 • CPI: 64-300
- Feed rate: 0-18 FPM • Max. profile: 6 3/4" W x 3/4" D
- Planing width: 7" • Min. stock length: 9"
- Min. stock thickness: 1/4" • Max. stock thickness: 7 1/2"
- Overall dimensions: 36 1/4" L x 22" W x 34 1/2" H
- Approx. shipping weight: 324 lbs.



W1812 7" 2 HP Planer Moulder w/ Stand

D3393 Elliptical Jig for W1812

PATENT OWNED BY
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INTERNATIONAL INC.

18" 1 1/2 HP OPEN-END DRUM SANDER W/VARIABLE-SPEED FEED

- Sanding motor: 1 1/2 HP, 120V, single-phase, 13 Amps
- Sandpaper speed: 2600, 3400 FPM
- Conveyor feed rate: 0-12 FPM
- Max. stock dimensions: 36" wide x 4 1/2" thick
- Min. board length: 6"
- Min. board thickness: 1/8"
- Sanding drum size: 4"
- Dust port: 4"
- 18" x 44 1/2" abrasive conveyor belt
- Uses 3" wide sandpaper roll
- Includes 100-grit sandpaper
- Overall size: 50" H x 35 1/2" W x 22 1/2" D
- Approx. shipping weight: 235 lbs.



W1854 18" 1 1/2 HP Drum Sander

13" 3/4 HP OSCILLATING DRILL PRESSES

- Motor: 3/4 HP, 110V
- Spindle travel: 3 1/4"
- Swing: 13 1/4"
- Drill Chuck: 1/64"-5/8"
- Arbor: JT-33
- Speeds: 12, 250-3050 RPM
- Table size: 12 3/8" dia.
- Table swing: 360°
- Table tilt: 45° left & 45° right
- Oscillating spindle: 3/4"
- Table dust port: 2"
- Approx. shipping weight: 123 lbs. (W1668), 180 lbs. (W1848)



Spindle Oscillation is so unique that it was issued a patent!



Includes sanding drums

A PATENT WAS ISSUED
AS A RESULT OF ITS
AMAZING TECHNOLOGY



W1668
Bench-Top
Model



W1848
Floor Model



New

38"

63"

W1668 13" 3/4 HP, Bench-Top Drill Press

W1848 13" 3/4 HP, Floor Drill Press **NEW MODEL!**

KNIFE BELT SANDER/BUFFER

- Motor: 1 HP, 110V, 14A, 1725 RPM
- Belt size: 2" x 72"-76" range
- Belt speed: 4500 FPM
- Left arbor: 1" x 8 1/2" extension with 5/8" arbor
- Height with belt arm horizontal: 11 1/2"
- Height with belt arm vertical: 37"
- Overall width: 29 1/2"
- Cast-iron body
- All ball bearing construction
- Approx. shipping weight: 113 lbs.



W1843 Knife Belt Sander/Buffer

6" X 29" BENCHTOP JOINTER

- Motor: 1 1/2" HP, 110V, single-phase, 12A
- Max. width of cut: 6"
- Min. workpiece length: 8"
- Max. depth of cut (per pass): 1/8"
- Cutterhead speed: 10,000 RPM
- Cuts per minute: 20,000
- Cutterhead diameter: 1 7/8"
- Knives: 2 (HSS), 6" x 7/8" x 3/32"
- Footprint: 18 7/8" x 11"
- Table size: 28 1/2" x 6 1/4"
- Fence size: 22 7/8" x 4 1/4"
- Dust port: 2 1/2"
- Approximate shipping weight: 82 lbs.



W1829 6" x 29" Benchtop Jointer

10" 2 HP OPEN STAND HYBRID TABLE SAW

- Motor: 2 HP, 120V/240V, single-phase (prewired for 120V)
- Motor Amps: 15A at 120V, 7.5A at 240V
- Enclosed cabinet bottom with 4" dust port
- Precision-ground cast-iron table with steel wing measures 40-1/4" x 27"
- Rip capacity: 30" to right, 15" to left
- Includes a 10" x 40-tooth carbide-tipped blade, standard and dado table inserts, miter gauge, push stick, and arbor wrenches
- Weight: 243 lbs.



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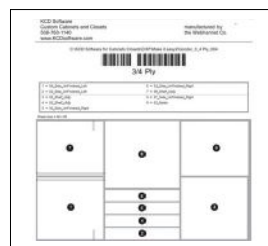
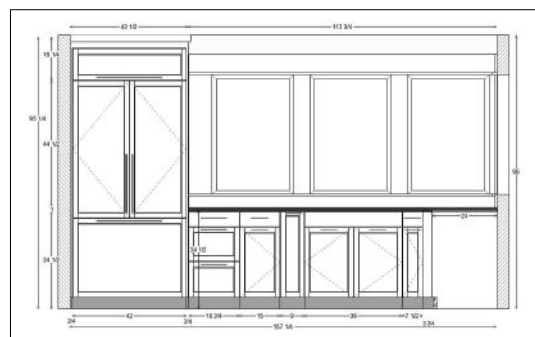


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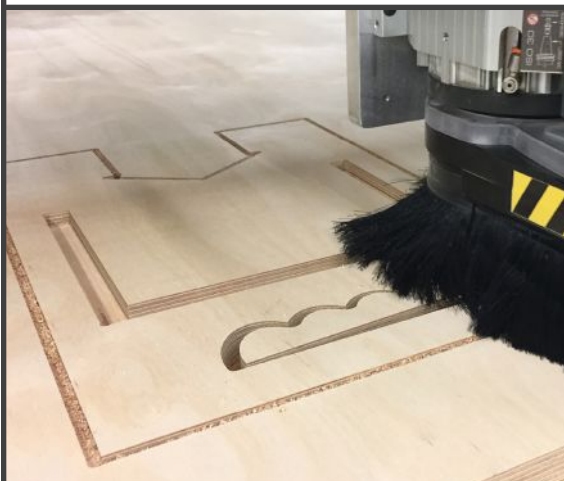
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BLOGS



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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TAKING STOCK

with TOD RIGGIO

Laguna adds division; Stiles chooses a partner

There's lot of news this month and no place else to put it, so let's take stock of it here.

Laguna Tools announced that it is expanding the line of products that made it famous over 35 years ago, professional-quality industrial woodworking machinery, by creating an Industrial Division.

"Listening to our customers demand for an even broader line of professional industrial machines, we have created a new division that will focus specifically on the development of these products," Rick Kerrigan, sales manager for the new division, said in a statement.

"We are very excited to meet the industries need for the high-quality equipment Laguna is known for."

Stiles Machinery and Hundegger USA are collaborating to provide a single-source solution to support the entire North American mass timber and prefabricated housing industries.

"With the continued growth and interest in mass timber and offsite home construction disrupting conventional building methods, Stiles and Hundegger are excited to be an integral part of providing solutions to manufacturers within these industries," said Russ Suor, Stiles' executive vice president.

Rev-A-Shelf LLC has acquired Sidelines Inc., a leader in the closet organization industry, of Scottsdale, Ariz.

"The Sidelines product and reputation for quality are an exciting addition to the Rev-A-Shelf closet/whole home cabinet accessories offering," said David Noe, general manager of Rev-A-Shelf. "Our customers will find many resourceful ways to design them into future jobs, and the end consumer will benefit."

"Rev-A-Shelf has an excellent reputation in

our industry with the means, know-how and ability to take the scope of their line to new heights with the addition of the Sidelines line," added Charles and Kris Costa, founders of Sidelines. "We are excited to see the merger of our two companies take a giant leap forward."

Atlantic Machinery in New Milford, Conn. is now the exclusive importer and distributor in North America of GMC SRL of Carpi, Italy, a manufacturer of vertical panel saws.

GMC produces one-piece, welded-frame machines for wood, solid surface and composite material applications, all in a variety of manual models, automatic models, and electronic-programmable models.

"GMC's line of vertical panel saws are well-known worldwide for their high quality, precision, and reliability while also being customizable for the client's production needs," the distributor noted.

Casadei-Busellato, which announced an alliance with JKL Machinery at the 2019 AWFS Fair in Las Vegas, held a grand opening of its North America headquarters on Oct. 10-11 in Brighton, Mich. The 5,000-sq-ft. showroom features the Italian manufacturer's latest technologies, including CNC machine centers and the AXO CNC panel saw and Flexa 47XE Servo edgebander.

Richelieu is presenting a new collection of decorative wire mesh in new styles and finishes for residential, commercial and architectural applications.

"Each model ranges in transparency from highly opaque to almost translucent, creating some of the most appealing effects. Offered in a variety of industrial, classic, and modern styles, wire mesh is available in multiple finishes that can match perfectly with cabinetry hardware," the company said. **W**

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.

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- Max. cutting height: 6"
- Min. stock thickness: 3/16"
- Min. stock length: 6"
- Max. cutting depth: 1/8"
- Feed rate: 16 FPM & 28 FPM
- Number of knives: 3
- Knife size: 15" x 1" x 1/8"
- Cutterhead speed: 5000 RPM
- Table size with extension rollers: 15" x 50"
- Approx. shipping weight: 517 lbs.

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- Min. stock length: 6"
- Max. cutting depth: 1/8"
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- Cutterhead speed: 5000 RPM
- Table size with extension rollers: 15" x 50"
- Approx. shipping weight: 553 lbs.

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8" X 72" DOVETAIL JOINTERS WITH BUILT-IN MOBILE BASES

- Motor: 3 HP, 230V, single-phase
- Table size: 8" x 72"
- Fence size: 4 1/2" x 38"
- Maximum depth of cut: 1/8"
- Rabbeting capacity: 1/2"
- Cutterhead speed: 5500 RPM
- Cutterhead diameter: 3"
- Cutterhead knives: 3 (G0855)
- Cuts per minute: 16,500
- Number of cutterhead inserts: 36 (G0856)
- Insert size: 15.0 x 15.0 x 2.5mm
- Power transfer: Poly-V belt drive
- Switch: push-button with large off paddle
- Approx. shipping weight: 450 lbs.

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- Motor: 3 HP, 230V, single-phase
- Table size: 8" x 76"
- Fence size: 4 1/2" x 38"
- Maximum depth of cut: 1/8"
- Rabbeting capacity: 1/2"
- Cutterhead speed: 5500 RPM
- Cutterhead diameter: 3"
- Cutterhead knives (G0857): 3
- Cuts per minute: 16,500
- Number of cutterhead inserts (G0858): 36
- Insert size: 15.0 x 15.0 x 2.5mm
- Power transfer: Poly-V belt drive
- Switch: push-button with large off paddle
- Approx. shipping weight: 484 lbs.

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G0858 Spiral Cutterhead



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"Roots Chairs" by Beatriz Mayorca, a mingle between concrete, glass mosaic and metal.

SAC selects winner of Mineck Fellowship

By Jennifer Hicks

Beatriz Mayorca of Oklahoma City, Okla. is the recipient of the 2019 John D. Mineck Fellowship, which includes a \$25,000 award, from the Society of Arts+Crafts.

The foundation was formed in 2007 to award charitable and educational gifts reflecting Mineck's interests and values. Mineck was a past president of SAC's board of trustees.

"Beatriz represents all of the core qualities of the fellowship: a young-in-career furniture maker who is producing exciting and innovative work. In her application she detailed how the fellowship would advance her career as a furniture maker by allowing her access to classes in new techniques and materials, as well as helping her to upgrade her studio. With this fellowship Beatriz will be able to advance her career and we cannot wait to see what she makes next," says juror Sam Aldrich.

Mayorca plans to use the award to attend a workshop taught by 2013 Mineck Fellow Vivian Beer in Pembroke, N.H. that explores

the relationship between digital design and production.

"Vivian has been developing an outstanding career, making artistic furniture mainly using metal. In her workshop, I am going to learn, side by side, new 3-D software technology, and the hand skill and manipulation of the metal," says Mayorca. "Also, the financial support of this fellowship is going to help me to buy the software and hardware needed for this class; and some tools required to improve my studio space."

A native of Venezuela, Mayorca came to the United States in 2005 and holds a BFA in Interior Design from the University of Central Oklahoma. Focusing on sculptural and functional artistic pieces, she incorporates mosaic, woodwork, and poured concrete into her work which can be found at contemporary galleries throughout Oklahoma. She has also been commissioned to design bike racks for the University of Oklahoma in Norman, Okla. and a park in Oklahoma City.

For more, visit www.societyofcrafts.org. 

Homeowners want hi-tech bathrooms

By Jennifer Hicks

Today's high-end bathrooms should have smart showers, heated floors, centralized and motion-control lighting, leak detection devices connected to mobile apps, sound systems and connectivity.

That's according to a study commissioned by the National Kitchen and Bath Association (NKBA) and Custom Electronics Design and Installation Association (CEDIA), which suggests that end-users are ahead of the design curve.

The Bathroom Technology Awareness and Usage Report surveyed 206 NKBA designers, 47 technology integrators and 301 consumers who are in the process of planning a bathroom remodel. The purpose of the research was to understand why there is a significant gap between the bathroom technology that is available and the technology that consumers currently have in their master bathrooms, and to identify measures that can be taken to close the gap.

"Homeowners are bringing technology into their homes," says Suzie Williford, chief strategy officer and executive vice president of industry relations for the NKBA. "In this instance, they are knowledgeable about what's out there and are comfortable asking for it. We continue to study the market, learning what's driving homeowners. Sharing these insights with our members and collaborative partners like CEDIA helps chart a course for deeper collaboration. Together, we deliver beautiful, safe, functional homes."

Other wish-list items include automatic temperature adjustment and hands- or touch-free faucets and toilets.

The study concludes that designers and technology integrators collaborating on master bathroom projects can add value to their roles by alleviating homeowner questions, providing confidence and guiding product decisions, according to the study.

For more, visit www.nkba.org. 

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NWFA goes young with first pick

By Jennifer Hicks

Eleven-year-old Finneas Luca is the first recipient of the National Wood Flooring Association's Next Generation award. Luca is the son of NWFA member Dinu Luca, owner of ADL Floors Inc. in Woodinville, Wash.

"Almost three years ago now, the NWFA launched NWFA University in an effort to reach more wood flooring professionals with training opportunities when and where they want it," says NWFA president & CEO, Michael Martin.

"Our vision at the time was to offer a new, cost-effective, convenient way to provide training basics without the burden or cost of travel. Our hope at the time was to engage with younger generations in ways they already embraced – digitally. Never, in our wildest dreams, did we image we'd have an impact on an 11-year-old protégé."

Luca is the youngest person to successfully complete all of the NWFAU courses in the Installation and Sand & Finish learning paths. He passed the 72 required courses, scoring 80 percent or higher for each.

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

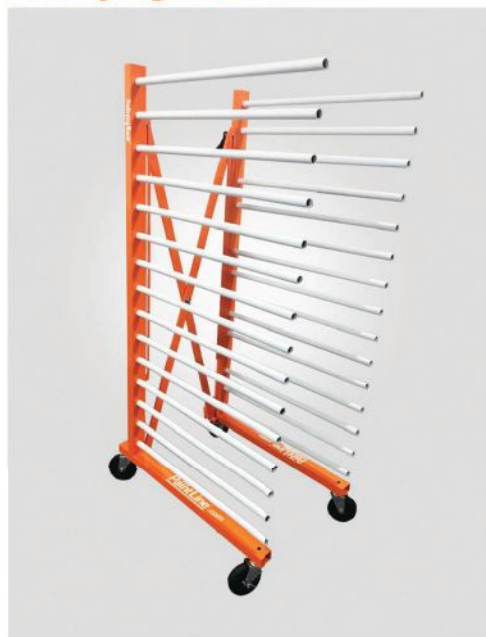
Finneas Luca accepting the Next Generation award.

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Sought-after imports add color and contrast

By Jennifer Hicks

Sales of exotic woods continues to flourish, according to suppliers and importers interviewed by Woodshop News.

"[Buyers] are looking for the vibrant colors, the yellowhearts and padauks and other pretty woods that have a color contrast with something else," says Chad Muterspaw, owner of C.R. Muterspaw Lumber Co. in Xenia, Ohio.

"We've seen this in large scale projects, not just with the hobbyists, but some of our bigger cabinet shops. When they're going to exotic woods, most of our customers are looking for

a more vibrant color than in domestic species. They are extremely popular, and the demand is high. In the last year or so, the demand has steadily increased.

"Yellowheart has been hard to get," adds Muterspaw. "We've just added Caribbean rosewood and there's a lot of color variation in that."

Rocky Mehta of West Penn Hardwoods in Conover, N.C. specializes in exotic species and offers a vast selection. Material for tabletops has been moving especially well.

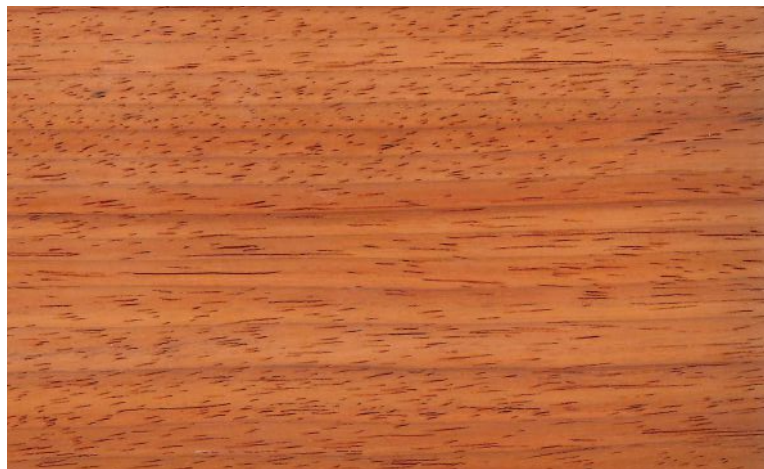
"I'm selling a lot of slabs of Guanacaste,

monkeypod and jatoba, padauk, sapele and African mahogany. Thirty percent of our sales are slabs," says Mehta.

Mehta says short boards – 3' to 5' in length – are also popular. "I'm bringing some shorter lengths of what normally are 7' to 8' and longer boards. This makes up about 25 percent of my business. Some of my customers are hobbyists and are so thrilled to pay 30 percent less."

Bob Putnam of Rare Woods USA in Mexico, Maine says online sales have picked up. "It's a relatively new venture for us and it's going quite well. We have mostly rough lumber but for that we'll run it past the planer so you can see the figure better through our online tools. Boxwood is one species we have that is very hard to find so we've sold a good amount of that. Tulipwood is another that's really hard to find and people really like it." [W](#)

Purpleheart (left) and padauk.



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TOOLS & TECHNIQUES

Max USA introduces SuperFinisher brad nailer

By Jennifer Hicks

A new 18-gauge brad nailer from Max USA, the SuperFinisher model NF255SF2/18, boasts innovative features that make it an ideal choice for high-end finishing applications, according to the company.

"We have some special features built into this tool that are a little bit different from a

traditional 18-gauge brad nailer. It's geared more towards contractors that have high-end projects such as luxury homes, remodels and things like that where the finish is extremely important to the end-user," says Denene Williams, the company's marketing manager.

The tool features a Precision Point Contact Nose, which allows users to fasten trim in nar-



row spaces and guides nails to a precise area of the work surface, such as when toe nailing.

"If a nail needs to be shot in a very narrow space, because of the small width of the nose, the nail is easily able to reach that position. Also, when somebody is shooting into material at an angle, the flat-top body can get very close into the surface of the material within 1/8"," Williams adds.

Other features include the Air Duster to clear dust and debris from the work surface and an anti-dry firing mechanism that prohibits the tool from firing when seven nails remain in the magazine.

The nailer can shoot fastener lengths ranging from 5/8" to 2-1/8" and sells for \$389.

For more, visit www.maxusacorp.com. [W](#)



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Rockler adds PaintLine products

PaintLine products, including the Pro-Drying Rack EX and RR3KD, are now available from Rockler.com, the website of Rockler Woodworking and Hardware.

"More and more woodworkers and DIYers are discovering PaintLine and experiencing easier and faster refinishing and repainting processes when they use our products," Kyle Robinson, PaintLine's president, said in a statement.

"We're really excited about our new relationship with Rockler, and the fact that the first PaintLine products they're offering on their site are two of our top sellers."

For more, visit www.thepaintline.com.

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“You guys are awesome! I have yet to build the beds but I ordered two of the kits (on a Thursday) and within one hour, the UPS shipping numbered was emailed to me. Everything got here the following Monday in excellent condition. Today (Tuesday) I went to our local builder’s warehouse and priced the rest of the materials/wood. Each bed, not including the mattress and before adding molding, will have cost me \$460. If I add \$100 or even \$200 of molding and cabinetry, I am still only at \$660. I just saw a bed online, easy to build, for \$2,929. What an incredible savings! I will have three basic beds built for around \$1,852. I will be ordering one more kit from you in a week or so. It is so nice to feel good about a purchase...especially one online. Thank you so much...incredible company!”

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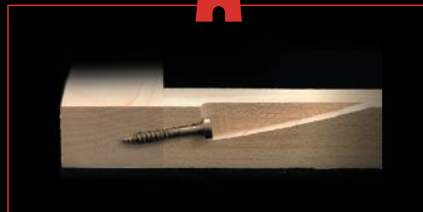


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TOOLS & TECHNIQUES



Vitap adds more features to Point K2 work center

By Jennifer Hicks

Atlantic Machinery Corp., the exclusive importer and distributor of Vitap machinery in North America, announces a new version of the Vitap Point K2 work center with extended machining capabilities, constant clamping control, and an automatic tool changer.

The original Point K2 machine was designed as a compact CNC for the smaller shop with limited space. The Point K2 2.0 retains a small foot print, approximately 7' x 6', and is available with a 920mm (36") or 1250mm (49") entry width. The larger width will accommodate a 4' x 8' panel, while the feedthrough system allows for unlimited material lengths.

Atlantic Machinery president Riccardo Azzoni says the Point K2 2.0 is distinguished from competing models in several ways. For example, it comes with a four-position tool changer and the programming can be done either at the machine or downloaded from a computer.

The machine allows end-users to quickly and efficiently perform a variety of cutting, drilling horizontally and vertically, grooving, milling, and routing operations. Using Vitap's software for bar nesting, each section is first cut to size, then the Point K2 can drill that section's four sides and groove, rout, and drill the face of the piece before releasing it to the operator, making it ready to be assembled into a finished product.

"This is a major plus for this kind of machine because on a conventional CNC machine the horizontal drilling is very limited. There is only one position where you can drill horizontally, and it's very slow because the drill head has to be moved from one end of the panel to the other.

"On this machine it's very quick because you have the part moving as well as the drill head moving at the same time in opposite directions, so you can optimize the speed of the machine and do it much quicker while achieving the ability to drill horizontally on all four sides," says Azzoni.

All processes can be achieved without the need to reset the parts hold-down systems, due to the patented Constant Contact Clamping System.

"This is another big plus because when you only have one clamp as some competing models do, the part can't move until the clamp has released and repositioned, otherwise the part is going to move," Azzoni adds. "With two clamps constantly moving and gripping the part, this problem is resolved.

Additionally, no vacuum pump is required because machining is done from underneath the workpiece while the part is clamped on top.

The Point K2 sells for \$80,000 to \$95,000 depending on size, options and features. Accessories include front and back roller supports.

For more, visit www.atlanticmach.com. 

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Kreg presents a pair of pocket-hole jigs

By Jennifer Hicks

Kreg Tool has introduced a new line of 300 Series pocket-hole jigs and accessories that simplify the setup process.

"Kreg's always had multiple stops on its jigs for essentially every 1/8" of board thickness. With this new series you can still work with all of those thicknesses, but we've pared it down to essentially three ranges (1/2", 1" and 1-1/2") of thickness," says Kreg's Dave Stone.

"When assembling a pocket hole joint, we always want the joining workpiece as close to the center of its thickness as possible to minimize chance of splitting. But we know you don't have to be perfectly centered. Here, there are three ranges, so people don't have to be quite as defined but can do the same things as before."

The 300 Series includes the 320 jig with two drill guides and a spacer, and the 310 jig with one drill guide. They sell as kits for about \$40 and \$20, respectively.

For more, visit www.kregtool.com. 

The new Kreg 300 Series includes the 310 jig (left), a single drill guide, and the 320 jig with two drill guides.



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Freud adds Black ICE to CNC router bit line

By Jennifer Hicks

Freud is presenting a new line of coated solid carbide router bits called Black ICE (Industrial Cooling Element) that offer a longer cutting life, better finishes and increased productivity compared to uncoated router bits, according to the company.

Made with Freud's exclusive TiCo (Titanium Cobalt) hi-density carbide, the bits are optimized for fast feed rates and high heat applications. The Black ICE coating shields the solid carbide cutting edge by creating a slick, lubricant like action for friction, heat and pitch build-up.

"We spent years in testing and development in order to introduce a premier solution in solid carbide router bits and protective coatings that delivers an incredible, unmatched two-times factor in life, finish quality, performance and productivity," says Russell Kohl, president and CEO of Freud America.

The bits are specifically designed for CNC applications in laminated materials such as HPL, melamine, paper laminate and other abrasive materials laminated on wood composites, MDF, particleboard, hardwood, softwood and plywood materials.

For more, visit www.freudtools.com. 

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Desktop CNCs

The market for these innovative and affordable machines keeps expanding, along with their capabilities

By John English

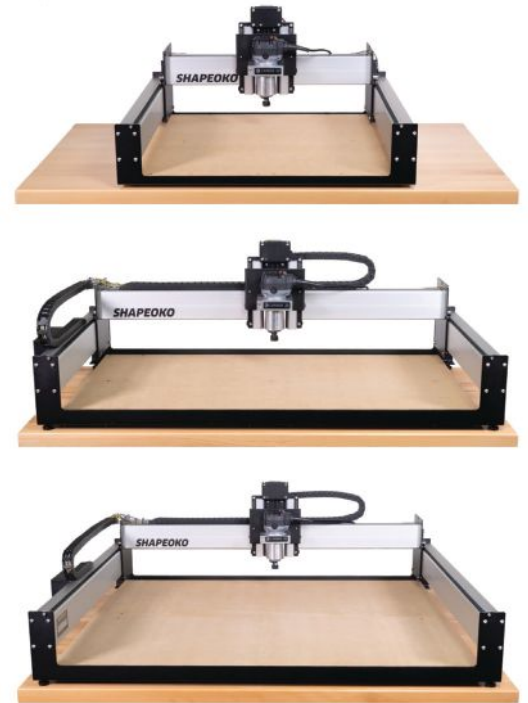
For many woodworkers, their first CNC is a small model that doesn't cost a lot and hopefully offers a short learning curve. These are collectively called desktop, benchtop or portable units, but there are some differences between those categories. The words desk and bench are fairly interchangeable and are most often used just to differentiate scale (benchtop units being slightly larger). But portable CNCs are becoming a term unto their own. Just because a CNC is small enough to carry doesn't make it portable anymore.

One of the most talked-about products at the 2019 AWFS Fair in Las Vegas was the Yeti Smartbench (yetismartbench.com), and this looks like the future of 'portable' CNC machines. It can machine a full 4' x 8' sheet, and travel 6" vertically, too. Other truly por-

table jobsite CNCs include the remarkable Shaper Origin (shapertools.com), and the versatile Handibot from ShopBot Tools (shopbot-tools.com).

While those ingenious machines are taking CNC milling to the jobsite, there is also a whole range of small, more stationary units that are described by their manufacturers as 'desktop' models. These are generally designed for prototyping, very short production runs, and the machining of unique but quite small items.

Desktop CNCs are generally quite affordable, and that makes them especially attractive to hobbyists, small professional shops, schools or colleges, and artists who design one-off projects that often incorporate other media such as plastics and soft metals. Some desktop CNCs can be switched from routing to laser



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The VR5050 from Velox CNC.

cutting or engraving. Most are fairly easy to program and use, and many offer the option of using an over-the-counter portable router as the motor, rather than a dedicated spindle.

Companies that manufacture desktop units are often at the forefront of CNC technology, and many of their innovations eventually become mainstream in larger machines. Take, for example, the new Virtual Zero Unlimited software from Next Wave Automation (next-waveautomation.com) in Perrysburg, Ohio. The program lets a woodworker map the entire surface of a board when it is placed on one of the company's Shark or Piranha brand desktop CNCs. This eliminates problems caused by even slightly warped or bowed material, and also allows a user to maintain a constant cutting depth on oddly or intricately shaped projects. The latest Shark model, the HD5, also comes with Ready2Control software on board (the package simplifies machine operations) and, in the spirit of desktop flexibility, it can use either a 2-1/4-hp standard router or Next Wave's water-cooled spindle.

Another name that's familiar to small-format CNC enthusiasts is Axiom Precision (axiomprecision.com), which recently purchased Iconic CNC (iconiccnc.com). Iconic makes the X Series desktop router that the company touts as a "plug-and-play solution for production, as a creative tool, or simply as a hobby in your workshop". It comes with a 20" x 15"

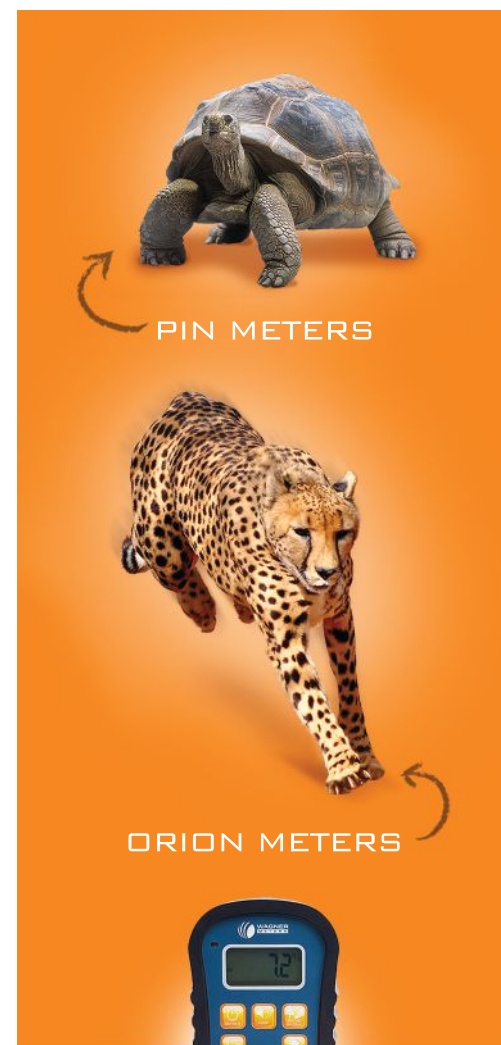
work area, a 3.5" Z range (up and down), and VCarve software.

Production grade

While one core aspect of desktop CNCs is their small size, that doesn't mean they're not as tough as their big brothers. For example, the new Desktop Max ATC from ShopBot Tools is an exceptionally robust machine, and it even comes with an optional automatic tool changer (ATC), just like the big boys. The ATC quickly and robotically changes cutters between tool paths, and that eliminates the need to change and zero tools individually. The machine has a 36" x 24" work area (that's just about the limit for a 'desktop' machine), and it's available with two different decks.

The first of these is an aluminum general purpose deck that comes with an attached MDF spoil-board. Because the Desktop MAX ATC is completely open underneath and the aluminum deck can be partially or completely removed (it's a series of interlocking small planks), a woodworker can add widely available aftermarket dovetailing or end-milling attachments. The other deck option has a universal vacuum hold-down kit that includes a plywood plenum, MDF spoil-board, and ShopBot's Vacuube, a plenum that works well for holding large parts like panels or flat doors without needing screws, nylon nails or tabs.

By the way, ShopBot recently came up



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The HD5 from Next Wave Automation (left) and Laguna's IQ Pro.



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with a new way for woodworkers to get their hands on a desktop CNC. It's a subscription program (not a lease) that provides woodworkers with the tool plus everything required to make it work, for a monthly fee. This is kind of a partnership where woodshops can get new or good-as-new tools, and the company will continuously refurbish and recycle the equipment. There's a minimum three-month commitment, and after that a shop can trade up, trade down, or cancel the subscription at any time.

Irvine, Calif. is home to Laguna Tools (lagunatools.com), which has long been a source for both traditional and automated woodworking machinery. The company's CNC division offers the IQ series that features a heavy-duty frame and hand-held controls. There's a basic model (the IQ) and an upgraded version (the IQ Pro) that includes a three-position automatic tool changer that uses ISO-20 tool holders. The workspace on both machines is 24" x 36", and they sport an industrial-grade, 3-hp, liquid-cooled, electro-spindle.

Based in Cartersville, Ga., CAMaster Inc. (camaster.com) offers both full-size and desktop machines, so their engineering leans more toward production values than some smaller machines on the market that are specifically designed just to prototype. The company's Stinger series of desktop CNCs offers several models and sizes, each constructed with a welded steel frame and high-precision bearings with hardened steel rails.

The catalog from Baileigh Industrial (baileigh.com) in Manitowoc, Wis. includes the Desktop CNC Engraver, model DEM 2720, with a 20" x 30" work area and a 4" Z stroke (its vertical ability). It comes with software and tooling included. It's also laser engraver ready, so a woodworker can swap out the spindle for an optional laser that is sold sepa-



Axiom Precision's I2R 4.

rately. For woodworkers who already own some tooling, this machine comes with an ER-11-4.0 mm collet.

Vision Engraving & Routing Systems (visionengravers.com) in Phoenix provides a full catalog of desktop to full-size machines. The latest addition is the 1624R, which comes with a 16" x 24" aluminum t-slot table to accommodate various work-holding fixtures, a red laser pointer for easy job set-up, a Series 5 controller with a V-Touch pendant, and an optional Raster Braille Inserter for automatic Braille bead insertion.

More choices

The California manufacturer Carbide 3D (carbide3d.com) makes three very inexpensive desktop CNC machines in its Shapeoko line, and the company has just added a new router motor that fits all three models. The new Carbide Compact Router comes as just the motor (no base) with a 1/4" collet and two sets of replacement brushes, all for just \$80. It's variable speed and the range runs from 12,000 to 30,000 rpm. The smallest Shapeoko has a work area of 16" x 16" x 3", and the top of the line XXL model can handle parts up to 33" x 33" x 3". For woodworkers with no experience in this area, the package also includes a crash course in CNC and the company's Create 2D CAD/CAM design software.

The selection at Velox CNC (veloxcncrouters.com) in Orange, Calif. includes models starting at 24" x 24" all the way up to a full 5' x 10'. The company says its desktop CNCs "have the power to rough out deep cuts on hard woods and yet still are accurate to one-fifth of the thickness of a human hair."

The BT1212 benchtop CNC router from Techno CNC Systems (technocnc.com) in Ronkonkoma, N.Y. includes a 1-hp router, full safety enclosure, aluminum t-slot table and brushless stepper motors and drives. It comes with Techno's popular hand-held controller.

The machine is ideal for small part production, prototyping, model making, engraving, signage and educational applications. Techno also just introduced the HD II, which is a compact version of a full-scale CNC system that has a 20" x 34" process area, with 7-1/2" gantry clearance and a 9-1/2" Z-axis stroke. It comes standard with a 2-hp HSD high frequency collet spindle, and a vacuum t-slot table.

Pasadena, Texas is home to LHR Technologies and its CarveWright line (carvewright.com), which offers the new CX model. It looks like a lunchbox planer, and because it's open-ended it can handle material of essentially any length. The CNC package also offers scanning and woodturning options. This machine is known for a short learning curve and it comes with simple to use drag-and-drop software. CarveWright also has more than 7,000 patterns and projects in its library that woodworkers can download and create.

Digital Wood Carver (digitalwoodcarver.com) in Martinsville, Ind. has a very active user group, and the company is noted for its customer support. The catalog includes a few variations on its 24" x 40" x 5" model (including 3- and 4-axes packages), plus a basic 18" x 24" model intended for carving. Most of the kits include the machine, VCarve or Aspire software, and a vacuum system.

Romaxx CNC Systems (romaxxcncrouters.com) in Redfield, Mich. offers three desktop CNCs – the WD-1 (handles work up to 25" wide, 8-1/2" tall and any length); the WD-2 (32" x 30" x 6"); and the HS-1 (up to 14" wide, 4.4" tall and any length).

Winder, Ga. is home to Probotix (probotix.com), which offers four desktop models that range from 25" x 25" to a whopping 37" x 50" workspace. A woodshop can choose between supplying its own spindle, or adding either an air-cooled or water-cooled one from the company.

EzRouter (ez-router.com) now offers a tabletop version of its commercial-duty Mini CNC that can be ordered with tables up to 40" x 40".

Maslow (maslowcnc.com) is a community driven open source project that has developed a large (4' x 8') CNC cutting machine. While obviously not a desktop CNC, it is extremely affordable (about \$500), has a small footprint, and is essentially shop-built. Plus, it works with both Mac and Windows.

Built in the U.S., the ShopSabre 23 (shopsabre.com) has the rigid build of an industrial CNC machine and a 30" x 40" worktable. It is designed with industrial ball screws on every axis and is equipped with the ShopSabre control system.

Zenbot (zenbotcnc.com) offers five very basic and affordable CNC models from 16" x 24" all the way up to full sheet capacity. And the Chinese company Omio CNC (omiocnc.com) offers 11 models of desktop engravers/CNCs. 

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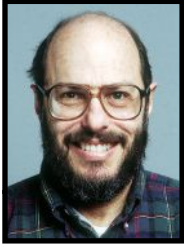


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The answer lies in a knowledgeable understanding of which stains and finishes are compatible and which aren't

It's common to read a manufacturer's label or an article or book that includes the instruction to use a compatible stain or finish. What does this mean, actually? Which stains and finishes are compatible with each other and which aren't, and how can you know?

Compatibility between products usually means that the newly applied coating doesn't blister, or dissolve and smear, the underlying coating. Smearing is, of course, much more likely to occur if you are brushing than if you are spraying.

Compatibility also means that the newly applied coating bonds to the underlying coating. If a coating doesn't dissolve into the existing coating, you may have to scuff it with steel wool, an abrasive pad or fine sandpaper to make scratches so the two layers will interlock and bond mechanically.

As you will see, when defined these ways, compatibility actually has more to do with how the products are applied (wipe, brush, or spray), and whether or not the surface is scuff sanded between coats, than with the nature of the products themselves.

Solvents and thinners

To make sense of compatibility it's helpful to understand the difference between the terms "solvent" and "thinner." These terms are often used loosely and interchangeably, but they refer to entirely different functions provided by the volatile (evaporating) liquid in finishing products.

A solvent puts a solid into solution. Thus, a solvent for a stain or finish will dissolve or seriously damage that stain or finish even after it has fully dried.

A thinner thins a solution but doesn't dissolve a solid. Thus, a thinner has no effect on a stain or finish once it has fully dried.

The same liquid can be a solvent in one situation and a thinner in another. For example, mineral spirits (paint thinner) is a solvent for solid wax but only a thinner for oil, varnish and polyurethane. Lacquer thinner is a solvent for lacquer but only a thinner for catalyzed finishes and non-grain-raising (NGR) dyes. Water is a solvent for water-soluble dyes but only a thinner for water-based stains and finishes.

One liquid can also be both a solvent and a thinner for the same product, as lacquer thinner is for nitrocellulose lacquer and alcohol is for shellac.



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Solvent

If a stain or finish contains the solvent for the underlying, dried stain or finish, the newly-applied product will dissolve the underlying stain or finish. This may not cause a problem if you are spraying, but it will result in smearing if you are wiping or brushing, especially if the underlying stain or coating contains a colorant.

Lacquer thinner (contained in lacquer and sometimes lacquer-based stains) has the potential of causing the most problems, because it is a solvent for so many different stains and finishes. These include lacquer-based stains, water-based stains, oil-soluble dyes, alcohol-soluble dyes, shellac, lacquer, and water-based finish. In addition, lacquer thinner will blister all varnish-based products if applied heavily and kept wet for a while.

Other solvents, such as alcohol (contained in shellac and alcohol-soluble dyes), mineral spirits (contained in oil, varnish, and oil- and varnish-based stains), and water (contained in water-based stains and finishes, and in water-soluble dyes), cause fewer problems than lacquer thinner, because fewer products are affected by them. The most likely situation you will experience is probably brushing water-based finish over a water-soluble dye. The water in the finish will dissolve the dye and cause it to smear.

Non-solvent

If a stain or finish doesn't contain a solvent for the underlying stain or finish, the newly applied stain or finish won't dissolve into the underlying layer and may not bond well to it. Only if the underlying layer is fairly recently applied (so it hasn't thoroughly dried), thin enough so the wood's porosity still provides an uneven surface (as is the case with stains), or scuffed to create scratches, can a good bond be guaranteed.

The most common situations where coatings are incompatible due to poor bonding occur when using varnish, polyurethane, water-based finish, and catalyzed finishes. These finishes don't bond well to themselves after the underlying layer has dried thoroughly, and all except catalyzed lacquer won't bond well to other finishes. (Catalyzed lacquer contains lacquer thinner, so it has the potential of dissolving most stains and finishes.)

It's always safest to scuff the underlying surface before applying one of these finishes (whether over itself or another finish) unless you are applying all coats within a short time frame. Manufacturers of catalyzed lacquer, and a related finish called catalyzed varnish, usually provide that time frame. A good rule of thumb for varnish, polyurethane, and water-based finish is not more than one week between coats.

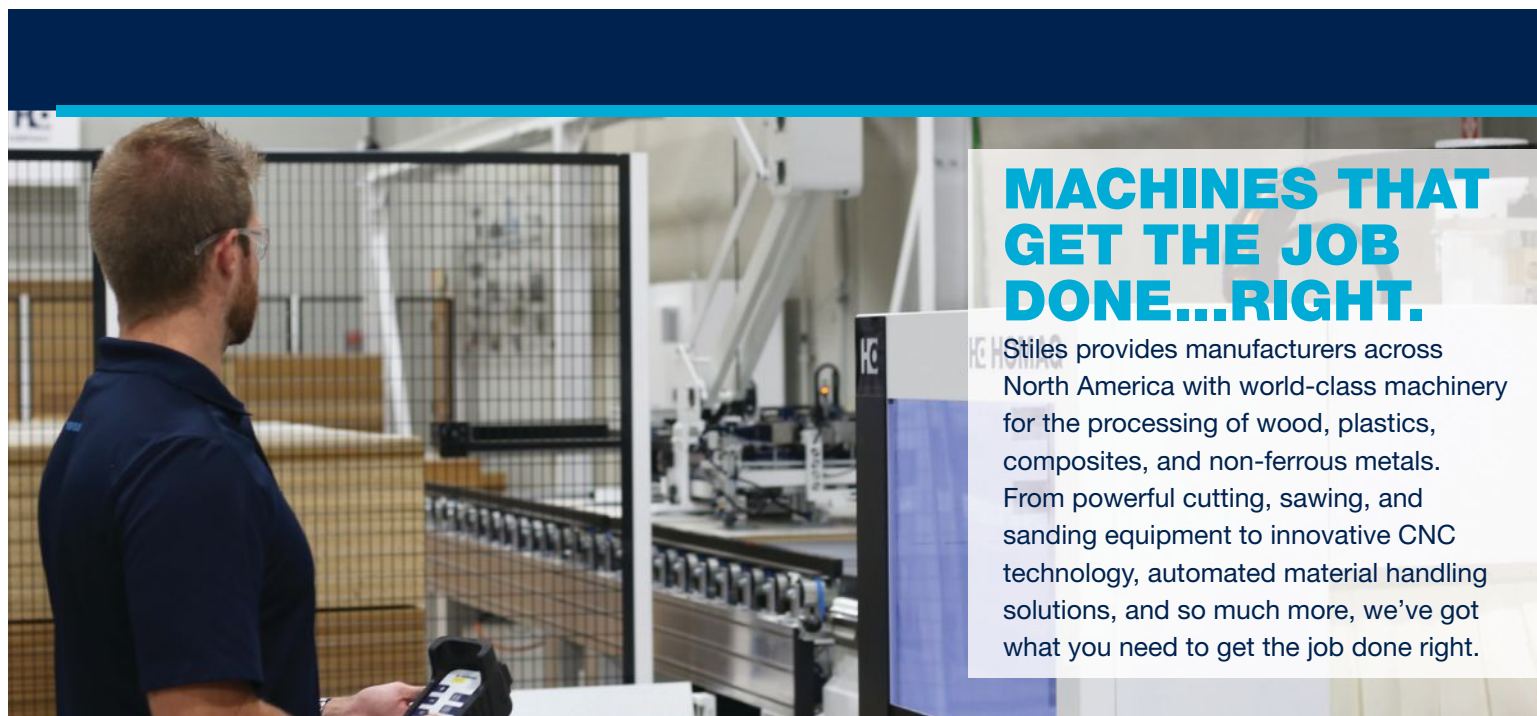
Spray, brush or wipe

As you can see, any product that contains the solvent for the underlying product is compatible with it if it is sprayed. Bonding occurs chemically and is thus very strong.

Only in the case of applying a lacquer-thinner-containing finish over oil-soluble dye (a fairly rare situation) is there the potential for a problem. The dye may bleed into the coats of lacquer causing colored spots to show up in the finish over the pores. If you are using these two products together, you should apply a barrier coat of shellac in between to prevent the bleeding.

When a product that contains the solvent for the underlying stain or finish is brushed or wiped, however, part of the underlying stain or finish will be dissolved and smeared into the newly applied coating. If the underlying stain or finish contains a pigment or dye, you will make a mess that can't be corrected short of stripping and starting over.

On the other hand, products that don't dissolve into each other don't bond well to each other after the underlying coating has thoroughly dried unless you put fine scratches in it to achieve a mechanical bond. But products that don't dissolve into each other don't smear when brushed or wiped. **W**



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CUTTING EDGE

with R.W. LEE

Welcome to G-code 101

Learning to read and write instructions for CNC
machinery will boost your shop's bottom line

Understanding G-code is an important machine operator skill for shops looking to increase the output and profitability of their CNC routers. It's often a shortcut to the more time-consuming task of CAD drawing and CAM programming.

G-code is the language used to send instructions to computer-controlled machines to make something. G-code stands for geometric code and operates in the Cartesian coordinate system (the work envelope of a machine), which is generally defined by X, Y and Z coordinates.

G-code sends step-and-direction instructions that tell the CNC machine's spindle and bit a given direction and distance to move from the machine's home position (0,0,0) when cutting parts. It is essentially the same process a woodworker uses to manually process panels. The difference is telling a machine to do it with explicit commands.

Rather than using a CAD drawing for every object that needs to be cut out of sheets goods, it is much faster to write the process in G-code, plus any changes or corrections can be made right at the CNC machine in minutes instead of hours needed when the program has to start again with a CAD drawing.

Breaking it down

A line of G-code is commonly called a block. A block contains words, which are letters in the alphabet (A to Z). Following the words is a string of numbers called an address. The words and address are the instructions for the CNC machine's controller.

An example of a block of G-code looks like this:

N## G## X## Y## Z## F## S## T## M##

(N represents the Line Number; G – Machine Motion; X – Horizontal Position; Y – Vertical Position; Z – Depth; F – Feed Rate; S – Spindle Speed; T – Tool Selection; M – Miscellaneous Functions)

A block of G-code and its words have a syntax which is the set of rules, principles and processes that govern the structures of the blocks, words, and addresses, just like any other language. Different controllers have unique dialects or uses of words and the instructions that follow.

Subprograms

There are times that multiples of the same part need to be cut. This can be done with a CAD/CAM program to generate the tool-paths and G-code. But a faster and more profitable method is to write a subprogram, which is part of the main program.

G-codes are available on any CNC machine controller to use subprograms which will make the programming process easier, more efficient and less prone to errors.

And once a main program has been written using subprograms for one purpose, it can be used again. Eventually, a shop will have a library of main and subprograms to choose from.

Functions to know

Subprogram use the functions M97, M98 and M99. The M97 function uses a subprogram that is within the main program (local subprogram), while the M98 function calls a subprogram that is stored in the controller. The M99 function ends the subprogram and transfers the processing back to the main program.

By adding work offset calls (G54-G59) and changing the movement mode from absolute movement mode (G90) to incremental movement mode (G91) throughout the main program and subprograms, the capacity of the M97 and M99 calls for subprograms can be made even more powerful.

G90 instructs the CNC router to go into absolute distance mode, where axis numbers (X, Y, Z) usually represent positions in terms of the currently active coordinate system or work offset. Typically 0,0,0, though there are exceptions.

G91 instructs the CNC router to go into incremental distance mode, where X, Y and Z usually represent incremental moves from the last position of the cutterhead. For example, an instruction such as X5, Y5, tells the spindle to move 5" from its present X- and Y-axis locations.

G54 through G59 and G59 P1-254 are what are known as work offsets. G54 is most often associated with the machine's usual home position (0,0,0). G58 through G59 can be set to any position within the X-Y-Z work envelope. **W**

Stiles gives students a closer look

Manufacturing Day is a nationwide event designed to showcase careers in manufacturing while also helping to shift the perception of the industry for future generations. This year, Stiles University hosted a Manufacturing Day event in Grand Rapids, Mich.

The event kicked off with a tour of Homag Machinery North America, where students witnessed how German-engineered flat table CNC machines are built and assembled in the United States.

Then students visited Stiles Machinery where they had the opportunity to see those same machines in action as members of Stiles' staff demonstrated how to program and operate them to produce hundreds of wooden cell phone holders. Once the machines had processed the parts, each student had the chance to sand and stain their own cell phone holder which they were able to take home as a memento.

"Manufacturing Day is not only beneficial for students, exposing them to high-quality careers made available within the manufacturing industry, but it also serves as a learning opportunity for us, helping us get to know the next generation of employees and understand what they are looking for in a future employer," Thomas Allott, manager of Stiles University, said in a statement.

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PRO SHOP

with DAVID GETTS

Shake on it after the paperwork is done

Who wants to think about, much less talk about, paperwork? I think for most of us, paperwork is more of a necessary evil than an important tool. Hopefully I can help you change your mind.

I heard an English teacher say, "If you can learn to command the language and learn to express yourself in written form, you will discover how much influence you can achieve over life situations." Creating a good paper trail in business is much the same. With a proper trail you can maintain control. Without

one, expect a chaotic mess.

I've harped about the importance of paperwork for years. I'd say my obsession with documenting everything is just that, an obsession. That probably stems from my time in school when a professor told me the best acronym to follow as a young manager is CYA (Cover Your Ass). So, document everything, including change orders, design and product approvals, scheduling, material procurement, subcontracting, and the rest.

Most of us do just enough paperwork to keep the business running. But if you want to

maintain control and your sanity, get everything in writing. Let me explain.

On a handshake

I'm currently in the middle of a large renovation project on a commercial property. The general contractor on the job, whom I've worked with for 25 years, asked me to come on board because the previous sub had lost control and the client was angry. We made a handshake deal and got started. I hadn't forgotten about the importance of paperwork, but I thought it could be delayed based my long relationship with the GC. Well, I was wrong.

Instead of setting the ground rules with clear-cut responsibilities, the handshake deal began to fray after about two weeks. Most of the rift centered on my perceived responsibilities to clean up the mess from the previous sub. The property owner got mad at the GC, who got mad at me. During our meeting of resolution, it was made crystal clear to me that our 25-year bond didn't carry the necessary weight that an iron-clad contract outlining our terms would have. I'm not saying the contractor threw me under the bus, but he had no choice but to protect himself first. Had I not had a prior relationship with them, we

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would no doubt have been out on the street panhandling for our next project. By going soft on demanding (my responsibility) a proper agreement with the contractor, my company's ability to run smoothly was negatively affected by the third-party's action against the general contractor whom I was working for.

In other words, be aware that the lack of good paperwork can even cause grief from people not directly in contract (or contact) with you. Never underestimate the power of a rock-solid paper trail.

A reason for rules

The whole experience of that project, as stressful as it was, is a good reminder about the importance of generating a complete paperwork trail. It's not enough to just do the initial project setup with a work parameter contract, but of equal importance is the need for the ongoing paper trail of jobsite management. What I lacked on that particular project was the initial paperwork. We had reams of follow-up paperwork documenting everything from how many nails we used to what time an employee took a smoke break. But that darn handshake deal convinced me I could forego that element and make up the difference with our clean documentation throughout the process.

Every company needs to have a solid Standard Operating Procedure. It's the document that lays out the ground rules for every scenario from contract agreements to how to deal with unacceptable employee behavior (and what is defined as "unacceptable behavior"). A good SOP becomes your company's personal bible. Learn to follow it religiously.

There's a reason to have rules, they give everyone a clear guideline on how to behave and react to differing situations, and they provide that needed paper trail which allows you to CYA.

Paperwork is a marvelous thing. Like it or not, it's the one thing that can both protect you from a lot of harm and provide you with what you want. How is that not a good thing? **W**

David Getts is a certified kitchen designer and owner of David Getts Designer Builder Inc. in Seattle.

Dominic Rubino to speak at CMA's 2020 conference

The Cabinet Makers Association announces that Dominic Rubino will be the closing keynote speaker at the organization's 2020 national conference, scheduled for Mar. 4-6, 2020 in St. Charles, Ill.

"A professional speaker, facilitator, author, and business coach, Dominic Rubino is dedicated to helping woodworking professionals work less and earn more. Through his blog, articles, podcast, and videos Rubino has been teaching business improvement tricks to shop owners for almost two decades," the CMA said in a statement.

"Rubino will close the conference with insights about how business owners need a map to get their company to the destination. That map is a strategic plan that portrays what the company will look like over the next five years. Rubino's presentation will outline specific steps to help attendees figure out who will do what by when."

For more, visit www.cabinetmakers.org/2020.



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- Feed rate: 20, 25, 30 FPM
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- Rip capacity with standard rip fence: 49¾"
- Max. crosscut width with crosscut fence: 126"
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- Depth of cut at 90°: 4"
- Depth of cut at 45°: 2¾"
- Main blade speed: 3000, 4000, 5000 RPM
- Main blade arbor: 1"
- Scoring blade size: 120mm (4¾")
- Scoring blade arbor: 20mm
- Scoring blade speed: 8000 RPM
- Scoring blade tilt: 0-45°
- Sliding table size: 15½" x 126"
- Maximum rip capacity: 51½"
- Length of crosscut: 126"
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SINCE 1983





MADE IN ALASKA

Kurt Echols opened Cabinet Fever, a small cabinet shop in Anchorage, 20 years ago after taking a job offer in the 49th state from some former customers

BY JENNIFER HICKS



When cabinetmaker Kurt Echols was given the chance to take his skills to Alaska in 1981, he jumped at the opportunity. It allowed him to experience the northern lights, frozen tundra and eventually open Cabinet Fever, a custom cabinet shop in Anchorage.

Cabinet Fever serves the state's biggest city and beyond, producing commercial and residential work. Founded in 1999, the four-person shop is on target to hit \$800,000 in annual sales.

"We pretty much do all remodels with the residential side, mostly houses from the 70s and 80s. There were a lot of houses built back then, after the [Trans-Alaska Pipeline System] was finished. A lot of people had money, the economy was booming, and there was a big building boom. They were building tract houses with cheap cabinets and particleboard. Now people are older, they have more money, they've got those houses and they want to fix them up," Echols explains.



Shop foreman William Morrison (left photo) and cabinetmaker Cameron Gould.

FROM A WOODWORKING FAMILY

Echols was born in Orange, Calif. and moved often with a father in the military. But he was never far from working with his hands. "My dad was a woodworker, so were my uncles and grandfather. My grandfather built wooden boats in Long Beach for whaling ships to come to Alaska, of all places. My dad was in the military but before and after that he was a general contractor and always had some sort of project going like a gun stock or dining room table," says Echols.

After graduating high school in Washington, D.C. in 1971, Echols moved with his family to Hermiston, a small city in the eastern Oregon. He joined his two brothers in starting a framing company, Echols Brothers Construction, which lasted several years.

"Then I started building cabinets in a barn behind my house. This was before Home Depot came to town and there weren't a lot of options for cabinets. There were one or two other one-man shops in town, that's it," says Echols.

His customers included two brothers who had moved to Oregon after working on the

Alaskan pipeline. In 1981, they were headed back and invited Echols.

"They moved back to Fairbanks and called and asked if I wanted a job up there. They were reopening a glass shop that their father had closed. They wanted to start selling cabinets and they remembered me from Oregon," says Echols, who gave a quick 'yes' and moved with his wife and two young children.

Echols got a crash course on the Alaskan economy. "Our economy's really dependent on oil prices. It's by far the largest industry up here. So, when oil prices go down, everything goes down. Oil executives get laid off, sell their big houses and leave then a few years later they come back," he explains.

The glass company transformed into a home center, offering windows, floor coverings, cabinets and appliances. Echols took on selling and installing manufactured lines of cabinetry, as well as building and installing countertops.

"That was the tail end of the pipeline construction and a lot of people in Fairbanks had a lot of money. There was a housing boom

with a lot of custom and log homes being built – all new construction. That was short lived. The boom lasted until about 1986 when the economy crashed really bad and a lot of houses got foreclosed on."

A LUCKY BREAK

As a result, Echols moved to Anchorage and worked for a cabinet and appliance distributor. "I did that for two years, but we were still in an economic slump and I saw the writing on the wall. I moved back to Fairbanks and started working on my own as an installer and did finish carpentry for other shops and private clients," he says.

While making his way in Anchorage, Echols, an outdoor enthusiast, wound up badly injured in a snow machine accident that ultimately led to hip replacement surgery.

"I got to where it was hard to be a carpenter anymore because it was hard to carry anything. So, I decided to be a salesman again. My friend, Don Kessler, had quite a bit of money from a framing business and put it up to start Cabinet Fever.

"I had the experience and he had the cash, so we started Cabinet Fever in 1999 so I could have a desk job. It's now in its 20th year."

In the beginning, Cabin Fever sold cabinets and hired installers because Echols wasn't physically able. But he got better and bought out his partner around 2002. The shop is at its third location, a 2,200-sq.-ft. space in a quiet industrial complex. The crew includes cabinetmakers William Morrison, Cameron Gould and Ethan Sebwenna, plus office manager Marina Ott.

The shop has everything but a CNC machine. "There are a few large production shops in the area that are always happy to help," says Echols.

ALL OVER THE STATE

The shop's ratio of commercial to residential work is constantly changing. "We used to do about 50 percent commercial work and that would be all over the state. Now it's about 25 percent but we're bidding on more of it. We've done a lot in Prudhoe Bay, Barrow [re-named Utqiagvik] and Fairbanks. We did all of the cabinetry in the Fairbanks airport when it was rebuilt and small jobs in the Anchorage airport, too," Echols says.

"We'll do work all over the state and it's a big state. We've done work in Seward, Homer,



Owner Kurt Echols.

Soldotna, Kenai, and quite a bit in Wasilla. We've done work in Nome."

It's interesting that southeast Alaska, which includes the capital city of Juneau, is most often served by shops in Seattle, according to Echols.

"We also do some real high-end homes with big kitchens and some multi-units. Clients have varying budgets. We don't turn any work down, but we probably should. I think

we're the only shop in town that still does repairs on cabinet doors.

"I'm not sure if we make a lot of money on it but its steady money and provides a service. Everyone in town – Lowes, Home Depot, builders and supply outlets – if they get a customer with a broken door or drawer, they send them here. And those people are really happy with our work, so they'll come back years later for a kitchen or they'll tell somebody about us."

The majority of orders are for painted cabinets with Shaker doors. "My sales reps keep telling me white is fading in the lower 48. For us it's all mostly white. I bet 95 percent of our kitchens are white right now. But some people like dark cherry, rustic alder and rustic hickory."

The company recently acquired a portion of a modular building unit used during pipeline construction and is in the process of adding heat and ventilation to make it a spray/paint booth.

MARCHING ALONG

Cabinet Fever enjoys a great word-of-mouth reputation and receives a regular stream of work from builders and designers. The shop

advertises in Alaska Home magazine and through local radio spots.

Echols sees opportunity to increase volume, but his small shop space doesn't make that easy. "The refacing part of the business is doing so well now I thought about actually starting just a refacing business under the same name and license but at another location with a showroom, salesperson and a spray booth in there."

Having recently turned 66, Echols is considering how long he will stay working and says he's always planned on turning Cabinet Fever over to a buyer someday, preferably one of his employees.

"My son [Seth] worked here for about seven years as cabinetmaker. He was really good, and I was hoping someday he'd take it over, but he never really got into the sales or design aspects. He ended up moving back to Oregon."

Echols, who builds guitars as a hobby, has found a home in Alaska. "I've always loved it up here," he says. "I love hunting and fishing and hiking. I especially loved hiking when I was younger, but I have a four-wheeler I take out and a snow machine. It's a great place to live."

Contact: Cabinet Fever, 8220 Petersburg St., Anchorage, AK99507. Tel:907-349-4871. www.cabinetfever.net



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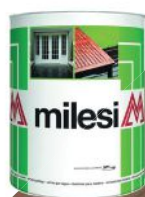
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Compiled by BHSW Inc.

The Shaper Origin looks like a portable router with a small screen on the top. But what you're really looking at here is profound. It's the future of power tools, and it's here now. This little machine is a portable CNC that's very affordable, and can mill anything from a small mortise to an inlay around the edge of a hardwood floor. It can make cabinet and furniture parts, design without a computer, and completely change the way a woodshop re-tools for 2020.

Another revolutionary tool, BESSEY's GearKlamp® takes a standard F-type bar clamp... and moves the handle! You tighten or loosen it with a grip that wraps around the bar, rather than being directly below the bottom jaw as it is in traditional clamps. This means that woodworkers can slide the jaws into tight spots, and wrap a whole hand around the grip for full torque even when the clamp is right up against a cabinet. It comes as a single clamp or in affordable sets that are perfect for re-tooling, and rethinking how you clamp.

Thinking of taking design in-house, but some of the CAD options out there are just too intimidating? Take a look at CabWriter – it's complete software that uses the very intuitive Sketch-Up™ as a base, and also offers optimization, cut-lists and everything else a shop needs to re-tool for CNC. It even works with Macs.

And if you still have questions about software, hand-tools, portable CNCs or any other aspect of moving your business forward, help is at hand. The Cabinet Makers Association (CMA) invites you to their national conference from March 4th through the 6th, 2020, at a resort near Chicago. The Association was created by a group of custom cabinetmakers who felt that small to medium-size shops need to network together and help each other grow. It offers woodworkers a whole range of valuable tools to use in 2020 – including friendship, knowledge and experience.

Whether it's a portable CNC, a new set of clamps, easy CAD software or professional support, now is the time to re-tool for 2020.



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Networking with Other Shops is the Best Tool We Have

The Cabinet Makers Association is inviting all woodshop owners and managers to its 2020 national conference, which will take place from March 4th through the 6th at the Q Center in St. Charles, Illinois. The venue is situated on 95 acres along the Fox River, just over an hour west of downtown Chicago.

Back in 1998, a group of shop owners decided to create a mechanism whereby small to medium-size shops might network together, and help each other grow profitably. The result of their efforts, the Cabinet Makers' Association (CMA), is made up primarily of businesses with twenty or fewer employees, and in fact the majority are 1-5 person shops.



The CMA's first national conference was held in March 2018 and drew almost two hundred attendees – one of whom summed it up thus: "It was nice to meet so many others with the same challenges, and to hear their ideas to overcome those challenges. And it was also great to walk away more motivated than when I arrived."

The theme of the Association's second conference will be "2020 Vision: A Clear View of the Woodworking Industry". Guy Bucey, the director of operations for Albany, NY based Inova, will kick off the conference. Bucey, who served two deployments in Iraq, was the keynote speaker at the Under 40 Leadership Conference at AWFS in Las Vegas. The closing address will be delivered by Dominic Rubino, who has spent much of the past two decades teaching shop owners how to work less and earn more.

In addition to local plant tours, educational sessions will focus on creating a business roadmap that includes Hindsight (looking in the rearview mirror to see where we have been); Peripheral Vision (checking the blind spot to see what's happening around us); and Looking Ahead (shifting gears to accelerate forward). Woodworkers don't need to be



CMA members to sign up, as they will receive a one-year membership when they register for the conference.



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CABINET MAKER ASSOCIATION
Amanda Conger, Executive Director
 Ph: (616) 930-4610
 Web: www.cabinetmakers.org/2020
 Email: director@cabinetmakers.org



Affordable, Powerful Cabinet Design Software

When woodshop owners think about retooling, their minds naturally drift toward table-saws and the like. But the most powerful and versatile tool in any shop nowadays is software. Without it, nothing happens. And with the right software, everything happens efficiently, affordably and profitably.

Say hello to CabWriter.

This suite of tools is designed specifically for small to medium sized cabinet shops. Flexible, affordable and intuitive, it builds upon the SketchUp drawing environment.

CabWriter Pro and CabWriter CNC work with other compatible applications to bring a design from screen to machine. Woodshops need to create designs quickly, and every hour saved on design is profit. Plus, customers today expect to view the final product interactively, in 3D and with the ability to make changes. CabWriter does all of that.

Custom shops also need to be able to spec for their own equipment, create non-standard size cabinets, and add high end touches such as complex curves, pull-outs and face frames that span several cabinets. They have to be able to generate a cut-list quickly, optimize sheet goods and export CAD files directly to CAM.

Up until now, that level of capability has been out of reach of small shops, due to high cost. Or the available libraries didn't offer enough capacity to customize. CabWriter does.

And CabWriter also offers parametric drawing capability, which lets a woodworker de-

scribe construction methods via 400+ parameters. Do you use dados, butt joints, qualified tenons, captured backs or another method for carcass construction? Do you build face frame or frameless, or something in between? Raised panels or flat? Decorative end panels? Are they butted into the face frame, or mitered?

All of this is entered during set-up. After that, CabWriter knows how to draw cabinets your way.

Once a designer has laid out the walls and defined the space, CabWriter's exclusive Story Stick layout tool can be used to indicate the style of each cabinet, and where they begin and end. Then it will automatically draw exactly as you will build, including the joinery. A wide variety of cabinet types are supported, including standard uppers or bases with or without drawers, sink bases, angled or blind corners, refrigerator cabinets, divided cabinets and more. This variety means you can design anything you can dream up: kitchens, entertainment/media centers, vanities, closets, wine racks or even furniture.

And the shop can quickly and easily edit an existing cabinet to change dimensions, style or features. Different cabinets in the same design can have different construction methods. By saving your parameter files or retrieving parameters from any of your past cabinets, you quickly build a library of construction methods.

CabWriter uses the power and ease-of-use of Sketchup Pro to render cabinets. It uses



true parametric drawing to create casework exactly how it will be built. A woodworker can create shop drawings that include section, elevation and plan views, and easily export an Excel compatible (.csv) cut-list. CabWriter offers native support for Cut-list Plus fx with its advanced cut-list capabilities, material cost estimation, optimized plywood cutting diagrams and part label printing. It will also generate door and drawer schedules at the push of a button, and export parts in DXF format to your favorite CAM software. If you don't own your own CNC, you can send files to someone who does and have them cut the parts for you!

And if this is your first CAD package, the company offers both webinars and online training videos to help you master CabWriter and SketchUp.

Isn't it time you re-tooled the most powerful tool in your shop?

CabWriter
Cabinet Design Software



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Re-Tool with GearKlamp

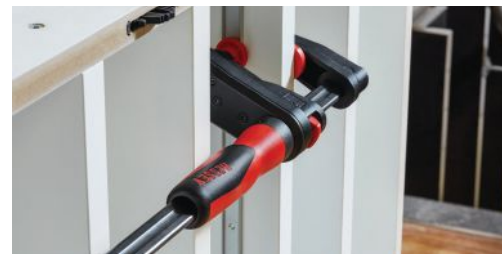
"I like that the handle is offset from the clamping area. In the past, your knuckles could be in the way."

That observation is taken from woodworker Casey Reeves' review of the BESSEY GearKlamp®, a new tool that works big in a small space. The first of its kind in the world, GearKlamp is a sweet solution for cramped locations. Up until now, bar clamps have operated by rotating a handle that was attached to the bottom of the lower jaw, and that often got

in the way. The patented gear mechanism on GearKlamp has moved the action to the main bar, so it's offset. That means the jaws can fit easily into drawer openings and other tight spots, and the woodworker's hand no longer needs to fit in there with them.

Remember trying to reach into a cabinet to turn the handle of an F clamp with just a thumb and a finger? Or grabbing a pair of pliers to get some traction because there was no room to fit your whole hand? Those days are gone. The GearKlamp delivers 450 lbs. of clamping force right where you need it, while saving the skin on your knuckles.

GearKlamp has a quick release shift button for fast set-up. It also has tough, molded and reinforced clamping arms and a hardened, tempered, cold drawn steel rail. A fully enclosed, Fiberglas™ reinforced polyamide housing for the gears will keep out dust and debris. The pads have a



narrow profile, which is quite convenient in tight spots. It allows these clamps to slide into places where standard ones won't fit. There are non-marring plastic caps for the jaws, and these can be removed instantly to reveal V-grooved anvils for clamping round parts. The swiveling pressure pad on the lower jaw will self-align on clamped parts.

GearKlamps come in 6", 12", 18" and 24" capacities, all of which have a throat depth of 2-3/8".



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Making Things Should Be Easy

Have you shied away from desktop CNCs because of the learning curve? Or perhaps you feel their confined worktable limits their usefulness to you? Perhaps a stationary CNC would eat up too much space in a small woodshop?

If so, Shaper Origin may be just what you need. Incredibly versatile, very affordable and surprisingly easy to use, this is the world's first handheld CNC.

It's intuitive: your hands already know how it works. Anyone who can use a portable router and a cellphone has the skills required.

It's portable: use it in the workshop, or take it to the jobsite. Origin can take on projects at a wide variety of scales. Use it to inlay border designs in an installed hardwood floor, or cut a mortise for a single hinge. Origin can cut the reliefs for all your cabinet hardware, or cut the joinery for dovetailed drawers with simple, replicable precision.

Here's how it works...

First, you place special tape – called Shaper-Tape – on the material to be cut. Origin then scans the tape location and creates a map of your workspace. 'Place' the file you want to cut in that scanned workspace. Origin will create toolpaths based on the cutter diameter you are using and the information found in the file. To begin cutting, simply follow the toolpath that appears on the onboard screen.

As you move along the toolpath, the tool makes continuous tiny corrections, keeping your cuts smooth and precise. If you drift too far off the path, Origin automatically retracts the spindle, preserving your workpiece from damage.

Another major advantage over traditional static CNCs is that Origin doesn't require any programming knowledge or specific software. A woodworker can import a drawing from a variety of 2D or 3D design programs.

Then there's the option of downloading cut-ready files directly from ShaperHub™, an online resource for pros and hobbyists alike. You can find Origin-ready cut files for all sorts of projects: anything from a simple bowtie to



the mortise for a Simonswerk Tectus TE 240 Hinge, or a Paulk-inspired workbench to a user-designed telephone cabinet. Because it's largely a repository of designs created by Origin users, ShaperHub keeps growing as the tool finds its way into more and more shops throughout the US and Canada.

You can also create designs directly on-tool. This option doesn't require a computer at all. Use the Pen Tool to 'draw' your toolpaths directly on your workspace or place basic shapes where you need them. Shaper Tools is constantly updating the software and increasing available features because the company believes that "power tools should get better with age."

The latest version, called Golden Gate, includes an Extension (like an app for your phone) called Text Basic, which is a convenient way to add engrave-able text to projects. For furniture builders, a new extension called Box Joint Basic now makes it a breeze to create and cut precisely fitting joinery on the tool—no computer or physical templates needed! Simply input the joint parameters (stock dimension, pin count, tool diameter and glue gap) and Origin will design and produce toolpaths

for the joint's mating parts.

Yet another benefit of Origin is that it saves your workspace, including all cut history and design information. This means you can start a job one day, and come back to it the following day, week, or month.

The magic of Origin is that it is designed to accommodate itself to your workflow—however you work. Use it to dash off a prototype in the shop, or adjust on the fly. Bring it to a jobsite to work on an installation when there is no margin for error. Design an entire project from front to back using the intuitive on-tool CAD.

However you work, Shaper Origin is designed to help you do what you do best, even better.



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Shaper Tools

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ORDERING OUT

Outsourcing can save a shop time and labor, and also presents a new business opportunity

BY JOHN ENGLISH

There's a new concept in Europe that North American cabinet shops may find interesting.

In 2018, IKEA reported almost 40 billion euros (\$44 billion) in sales. That's a sizeable number, and when one considers the relatively low cost per unit of their product, it's also an awful lot of cabinets and furniture.

Given the numbers, it's no surprise that other companies have found a way to piggyback on IKEA's success. Take, for example, Reform (*reformcph.com/us*). This is a Danish company that has four locations in major European cities, and has now opened its fifth showroom in New York. Here's what the company says on its website about what it does:

"IKEA makes quality kitchen components. Reform designs unique kitchen fronts and countertops made from durable materials, that are easy to combine with IKEA's basic and popular modules. It's that simple!"

Yes, they make aftermarket doors, drawer fronts and laminate tops for customers whom they first send to an IKEA store. Specifically, IKEA. No other supplier.

They're turning factory boxes into custom casework, at bargain basement prices. And they're not alone. There are half a dozen companies doing this already, and more entering the market.

Reform is a hybrid business that takes elements from two separate sources and combines them to create a new market. It's outsourcing taken to new heights. They let IKEA do the heavy lifting, and the customers do the install. All they have to do is buy in, or else make the components, most of which are just single parts (as opposed to the milling and assembly time required to build complete cabinets, or even drawers).

It's a brilliant business model, and one that is definitely going to eat into the traditional custom cabinet market over the next few years. From a strictly numbers viewpoint, there's no way that a regular woodshop can compete with the IKEA/Reform template by building custom casework.

Fortunately, it doesn't have to.

Here, the old adage "if you can't beat them, join them" comes into play, but with a twist. Somebody has to make all those aftermarket components. A small- to medium-sized cabinet shop could definitely add the IKEA-customizing option to its catalog and offer the exact same service that Reform does but make the parts in-house. A shop could even harvest the IKEA doors and drawer fronts that its customer buys and use them as patterns to drill for handles and hinges. That way, they could probably even let the customers do their own installs. They've already installed the boxes on the walls. Why not have them pop the doors and drawer fronts on, too?

Think about that. Never building boxes or drawers, never working on a jobsite, and still being paid to make cabinet and furniture components in-house on a CNC.

It's outsourcing in reverse.

THROW THEM A CURVE

Woodworkers who don't like the flavor of that particular IKEA brew still have a number of ways to gain from outsourcing. Two of the most profitable aspects are working in the round and finishing.

Sheet goods are flat, and most cabinets are rectangular. At some point, designers simply run out of ways to add some pizzazz to all those straight lines. What if a shop could add curved cabinets at the end of each run, or perhaps oval or round islands? And what if curved doors could be ordered in, so that just the cases need to be built in-house?

Say hello to Quebec-based Saint-Georges Doors (*www.cabinetdoorsg.com*). The company builds curved cabinet doors and matching millwork. The doors can be convex or concave, so a shop can deliver outside or inside curves on cabinets. Saint-Georges also offers doors that curve from top to bottom, and that option doesn't just come in single-arc curves (think of the complex profile of a bombé chest).

Curves and rounds can really dress up a project, and they certainly separate it from that old run-of-the-mill rectangular look. Components that are something other than square can say custom in a way that almost nothing else does. Being able to buy in and build in these components can also set a shop apart from the competition, especially if the finishing job is out of the ordinary.

Finishes can be the most personal aspect of a project. Woodshops that invite an interior designer or perhaps an area artist to help with color choices can often create something new and exciting that's simply not available in a factory catalog. A creative mind can shake up the mix. For example, wall and base cabinets don't need to be the same color, and most outsourcing suppliers can expertly tint to match color samples, swatches or Pantone colors for components that they supply. The shop can then complete the package by adding a precisely matching color and sheen to accent pieces that it makes in-house. By originating the color scheme, rather than settling for something offered in a supplier's catalog, the shop can add value, and profit, to components.

There's also a nascent trend toward applying complex artwork wraps to appliances, and it might be handy having an artist on call to work out pigments for cabinet components, so they work well with some of the wilder color schemes that are beginning to creep into kitchens.

The point here is that outsourced components don't have to be dull.

With that in mind, Wisconsin-based Walzcrafft (*walzcrafft.com*) has initiated a new program called the Adventure Series, where a woodshop can order five-part doors and drawer fronts where either (but not both) the stiles or the rails have a profile milled into them. It's a way for woodworkers to create a one-of-a-kind look, and it's actually quite dramatic.

Another way that smaller shops can keep their edge in an increasingly IKEA-like industry is to keep in mind that color and texture are not among the stronger points of factory kitchens. Large



Saint-Georges specializes in providing curved cabinet doors and matching millwork.

manufacturers tend to lean more towards monochromatic monotony. But a shop that can find an outsource supplier who will work with new laminate sources (or explore more options with current suppliers) can offer custom color and textures that add perceived value. Take, for example, the newest family of textured laminates from the Italian company Cleaf (www.cleaf.it/en). They have the look and feel of natural woods, but with all of the durability and toughness of laminate. These include Geta, which is based on the material used to make traditional wooden Japanese sandals, and Poro Noce, which reproduces the look and feel of walnut.

TIME IS MONEY

Yes, outsourcing can save time, and money. But only efficient, well-planned and versatile outsourcing can build profits. One key here is to establish a solid supply chain, where the shop's software, samples and showroom are all keyed into one or two major suppliers and there are no surprises. The quicker and more accurate the bidding process, the more profitable the project will be.

Elias Woodwork (eliaswoodwork.com) has been building cabinet and furniture components since 1983, and the people in its front office have watched the industry change dramatically over those 36 years. Keeping abreast of trends and technology is always a challenge, especially when your business is keeping other businesses profitable. So, last fall the company launched Access Now, which is an online ordering program where woodshops can get quotes and place orders anytime, from anywhere. The program also gives woodworkers access to their accounts, estimates, shipment tracking, product details and pricing. This lets a shop bid jobs over the weekend. The woodworker can tweak the details while standing in the customer's kitchen on a Saturday

morning, and have the purchase order signed before the competition opens for business on Monday.

Keystone Wood Specialties offers a similar service. Its new online Instant Pricing program lets a woodshop receive an email in under 30 seconds with pricing attached. It's convenient and easy to use, and Keystone has created an informative tutorial to explain how the process works at keystonewood.com. By the way, the company recently added Bee-Line dovetailed drawers to its catalog. Billed as an affordable alternative, they have 5/8" sides and a choice of 1/4" or 1/2" bottoms, plus they only require a five-day lead time.

Another way to cut costs and build profits is to speed up the assembly process. In September, the component supplier Cut 2 Size Parts (c2sparts.com) in Prescott, Ariz. announced that it now offers Lockdowel assembly on any Speedbox cabinets ordered through its website. The cabinets are shipped flat-packed, and a single box assembles in about five minutes.

CabParts (cabparts.com) supplies cabinet boxes, closet components, drawer boxes, door and drawer fronts, and a wide selection of hardware. The company's marketing literature has a concise summary of the reasons why a woodshop should outsource. It will have "an immediate and positive impact on a shop's bottom line because assembly does not require highly skilled labor, expensive capital investment or large shop areas." That about says it all.

Another large outsourcing supplier is Cal Door & Drawer (caldoor.com) in Morgan Hill, Calif. Among its wide-ranging catalog are several door choices that have a distinctly Southwest look to them. One nice aspect of its marketing package is a short but comprehensive video shop tour that lets woodworkers see by whom and where their cabinet and furniture components will be made.



Round cabinet doors are available from Saint-Georges Doors in Quebec.

There's a lot new happening at Canestoga Wood Specialties (canestogawood.com) in East Earl, Pa. In July, the company added to its Allure decorative laminate veneer (DLV) door program. New to the catalog are French Cut Shaker and Miter designs in popular Bright

White and White Dove colors. Two of the new mitered profiles, Cabo 225 French Cut and Tobago 225, have a beveled framing bead. Because they eliminate finishing, DLV doors offer significant savings of 30 to 50 percent over similar finished wood doors, according to the company.

Decore-ative Specialties in Monrovia, Calif. (decore.com) has one of the most intuitive and well-designed websites for shop owners looking for components. Among its catalog offerings are Streamline RTA cabinets. Shops can choose from a variety of cabinet configurations, custom color edge banding, and cabinet materials. Streamline orders include assembly hardware, and they can ship from either California or North Carolina. Decore-ative Specialties also offers instant pricing and anytime ordering.

HARDWARE AND ACCENTS

Outsourcing doesn't just save time and money on casework. There are also several very reputable suppliers that offer wood furniture parts and hardware-based items, such as pull-outs and organizers. Rev-A-Shelf (rev-a-shelf.com) in Louisville, Ky. is among the leaders in this field, and the company has just added a number of base cabinet pull-outs, some of which ride on Blumotion soft closing hardware.

Another well-known supplier is Osborne Wood Products (osbornewood.com) in Toccoa, Ga. Among its most recent catalog additions are some square and round stainless-steel table legs, and a selection of Arts & Crafts corbels and brackets. Osborne also supplies less traditional solutions such as a good selection of round feet and other furniture parts in clear acrylic, and a clever new table lift system that elevates a coffee-table top to a more usable height for people sitting on sofas.

New from Richelieu Hardware in Quebec (richelieu.com) are several recycling and composting bin options for base cabinets, and an

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ingenious solution for using all that wasted space in corner bases. It's called the Qanto Electric Lift-Up System, and it essentially lifts out of the countertop to expose storage space in difficult-to-access corners in L-shaped or U-shaped kitchens, as well as end cabinets. It can also be incorporated in a kitchen island design.

There's a whole range of new products in the latest Designs of Distinction catalog from Brown Wood Inc. (brownwoodinc.com) in Lincolnwood, Ill., including a selection of decorative grilles that can be ordered in various shapes and sizes, and can be easily cut to fit in custom applications. One way to use them is to have a grille replace a solid panel in a wall cabinet door for a lighter look.

One way to profit from outsourcing is to shop where there are discounts. Cabinet Parts (cabinetparts.com/biz) in Pompano Beach, Fla. offers professional woodshops a 5 percent discount on its entire catalog, 60-day interest-free financing and up to 5 percent cash back on purchases. In addition to wooden accents (among which is a very large catalog of furniture feet, legs, corbels and the like), the company also carries trash pull-outs, drawer dividers, pantries, wine racks, free-standing islands and any kind of organizer one can imagine.

New Jersey-based Outwater Plastics and Architectural Products (outwaterphotogallery.com) has made things a little easier for woodworkers who are looking for specific cabinet and furniture components by dividing its gigantic Master Catalog into 19 sections on its website. On the other side of the country is Doug Mockett & Co. (mockett.com) in Torrance, Calif., which offers pop-up power ports, furniture legs, drawer pulls and more. **W**



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A RHAPSODY IN blue & green

Coating manufacturers have picked their 2020 Colors of the Year and the results reveal important trends for shops to follow

BY JOHN ENGLISH

It's that time of year again. Interior designers and coatings companies are all busy picking trend colors for 2020. And this is something that woodshops watch because more than half the casework we build nowadays is solid color.

AkzoNobel's Color of the Year for 2020 is called Tranquil Dawn. It's "designed to capture the essence of what makes us human as the dawn of a new decade arrives". The company says that it's a delicate, fluid shade somewhere between green, blue and grey.

"Tranquil Dawn perfectly captures the 2020 mood of what makes us human," explains Heleen van Gent, head of AkzoNobel's Global Aesthetic Center, the body that leads the annual trend research. "It's reminiscent of the colors of the morning sky and encapsulates our desire to treasure our most human qualities."

Hard-nosed, skeptical woodworkers may have a hard time translating such sentiment, but the bottom line here is that these experts can really zone in on what's trending, and what's already popular. A woodshop needs to be aware of where its customer base is going, and

perhaps be ready to follow.

Social media has had a profound impact on mass trending. The speed and scale at which tastes can change is startling. What used to be done with swatches and catalogs over months, if not years, is now done in just days, and sometimes hours. The results are truly global, too. Think about this – last December, Facebook claimed that it had more than 2.3 billion monthly active users. That's one in every three people on the planet. Add in other platforms such as Pinterest and Twitter, and trending has taken on a whole new meaning.

Sherwin-Williams' 2020 Color of the Year is Naval SW 6244. This is a rich navy that "creates a calm and grounding environment infused with quiet confidence," according to the company.

Behr's 2020 Color of The Year is called Back to Nature S340-4, which the company describes as calm, gracious and balanced.

PPG Paints' 2020 pick is Chinese Porcelain, "a blend of cobalt and moody, ink blue that imparts calmness and restful sleep while also



offering the spirit of hopefulness – a rare commodity in a restless world,” according to the company.

Pantone has weighed in with a full palette of colors for 2020, and in keeping with the rest of the industry experts it has included Classic Blue, a teal toned Mosaic Blue, Biscay Green (described as having a hint of cleansing waters) and Chive, along with some warmer accent tones such as Coral Pink and Saffron.

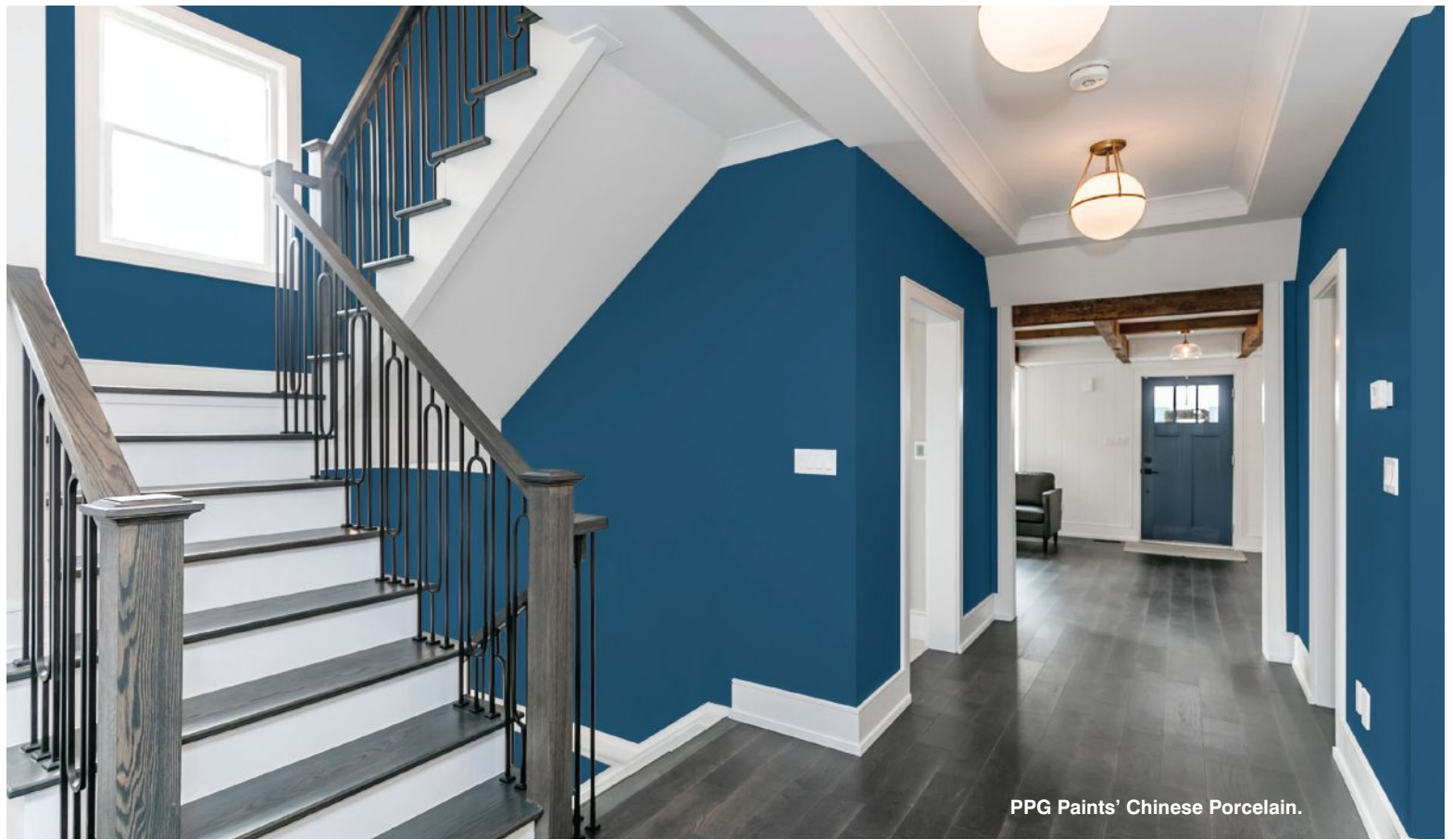
So, the bottom line as far as woodshops are concerned? Your most trend-conscious customers are quite probably going to start looking for topcoats that are soft blues and greens, or combinations of both, over the next few months. That’s especially true in markets where interior designers have a heavier hand. Institutional designers tend to be a bit behind the residential trend, in part because of the larger scale of their projects and the longer timelines that requires, so they may come on board in another year or so. Foil and laminate manufacturers also pay attention to the color experts, so shop-applied coatings may need to match up with those.

Looking backward?

While many designers rely on solid wood or lookalike laminate flooring to warm up a room full of colored casework, others are beginning to use natural wood tones in vertical, rather than horizontal planes.

Paint and solid colors are still the rage, but something subtle is beginning to happen in kitchens and baths. Natural surfaces are returning – not walls of your Grandma’s red oak plainsawn cabinets, but the limited use of wood tones as accents. They’re popping up as short lengths of countertop, end-grain butcherblock, or even entire old cabinets built into a wall of new work. And they’re also appearing as live edge counters on islands and bars, the material of choice for sliding barn door room dividers, or warm-toned backsplashes that offset high-sheen melamine and applied coatings.

Remember the poured resin look on slabs? The new take seems to be to use several coats of a very low sheen lacquer on natural, unstained woods, even on horizontal tops. But it’s especially true of weathered wood such as barn siding or reclaimed shore wood that’s used to create



PPG Paints' Chinese Porcelain.

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frames and shelves. The juxtaposition of erratic natural lines with forced manmade laterals can be quite dramatic. Top-coating the wood with a different sheen than the paint or plastic adds more separation. That is, if the cabinets are shiny and the wood isn't, then people seem to be more drawn to the natural element. It's a comfort thing.

One way around the problem of softer, low-sheen coatings on wood counters is to add tempered glass with low reflectivity. This both preserves and reveals the color and tone, while protecting the finish from sweating beverages or hard, sharp objects.

Wood accents work more often than they don't, but sometimes they just don't. Dark wood elements in a dark blue or green color scheme seem to clash and grate for some people. And given the number of paint companies that are leaning toward greens and blues as their 2020 colors of the year, adding wood may not always be the best way to get back to nature.

Clearcoat over paint?

With the switch from oil to water bases over the past decade or so, one aspect of lower sheen paint has been a little troubling – its durability. This is more of an issue for small shops that only occasionally use over-the-counter paint, rather than larger concerns that buy in bulk and routinely paint.

Applying a polyurethane topcoat can harden a surface, but check with your supplier for compatibility issues before going down this road. Sealing paint in plastic can protect it, make it easier to clean, and prevent blocking (where items placed on a painted shelf tend to stick a

little). But it can also alter the color over time, especially if the topcoat is oil-based. On white cabinets, some yellowing will occur.

Fillers, sealers and of course the paint coats need to be thoroughly cured before clear-coating. The poly will probably require two coats for oil base, and more for waterborne.

A couple of issues to discuss with the client include the fact that although higher sheen is more durable, it will show scratches more, plus a topcoat will require a good month to cure and that needs to be worked into the schedule. If the job includes crown molding or interior (people) doors, those will need to be coated too. If they're not, then the difference in sheen will show and there may also be some color changes over time. Coating such elements can be a bit of a pain if they are already installed.

If possible, a better way to go (rather than paint topped with varnish) would be to coat the bare wood with tinted conversion varnish, and topcoat that with clear. But that's a route to follow with new wood, and it's not an option for restoration jobs that have already been painted, or when a woodworker is adding onto an existing kitchen where previously painted cabinets will pair up with new wood.

No matter how confident you or your supplier are about compatibility, it's a good idea to clear coat the inside face of a painted drawer front or the back of a base cabinet door, and let it sit for a week or two before proceeding to coat the entire job. That way, you can test for flaking and peeling, and see the effect of scratches. Plus, it's easier to sand and re-coat the back of a single drawer front than an entire kitchen. [W](#)

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Maine gallery presenting greenwood furniture

By Jennifer Hicks

“**C**ontemporary Greenwood”, an exhibition of greenwood furniture, furnishings, and art, opened at the Messler Gallery in Rockport, Maine Sept. 20 and will run through Jan. 2.

Greenwood woodworkers harvest their materials from freshly felled trees while both the wood and the bark are green and pliable, according to gallery spokesperson Victoria Allport.

“The artisans in Contemporary Greenwood have used these materials to create furniture, baskets, sculpture, and bowls that arrest the eye and please the hand. Like bowl-carver Amy Umbel, an exhibitor from Friendsville, Md., many of them strive to incorporate craft tradition while keeping the work culturally relevant,” Allport says.

International exhibitors include David Colwell (United Kingdom); AnneLie Karlsson, Anders Lindberg, Beth Moen and Ramon Persson (Sweden); and Elisabeth Mezieres (France).

U.S. exhibitors include Curtis Buchanan of Jonesborough, Tenn.; Christian Burchard of Ashland, Ore.; Dave Chapman of Spring Green, Wis.; Jarrod Dahl of Ashland, Wis.; David Fisher of Greenville, Pa.; Peter

The Messler Gallery’s exhibit features this “Folded Lowback” chair by Peter Galbert, “Cannisters” by Ramon Persson, and “Caimo”, a sculptural basket (below) by Polly Adams Sutton.

Galbert of Roslindale, Mass.; Mark Gardner of Saluda, N.C.; Mike Loeffler of Grand Marais, Minn.; Tim Manney of Brunswick, Maine; Clifton Montieth of Lake Ann, Mich.; Leon Niehues of Huntsville, Ark.; Jim Sannerud of St. Paul, Minn.; Billy Ray Sims of Camden, Maine; Polly Adams Sutton of Seattle; Amy Umbel of Friendsville, Md., and Jennifer Zurick of Berea, Ky.

For more, visit www.woodschoool.org.

Philly exhibit

“Making a Seat at the Table: Women Transform Woodworking” opened at Philadelphia’s Center for Art in Wood on Oct. 4 and will run through Jan. 18.

Featuring juried works from 43 artists and makers from throughout North America, the exhibit focuses on their perspectives and practices. The list includes Wendy Maruyama, Gail Fredell and Sarah Marriage.

“Held on the centenary of women’s suffrage in the United States, ‘Making a Seat at the Table’ showcases the profound skill, innovation, and creative vision of these makers. While acknowledging that woodworking has been and remains male-dominated, the exhibition focuses on the many ways these makers are both expanding the edges of the field and holding down the center,” according to the gallery.

For more, visit www.centerforartinwood.org. 



NEW PRODUCTS

▶▶ JET is introducing new 10" and 12" dual bevel sliding compound miter saws that feature extended tables and a precision, red laser cutline that's visible in direct sunlight, according to the company. Other features include depth stop adjustments for dado or repetitive cuts and an increase in the saw's left bevel angle capacity by 7 degrees. The 10" saw, model 717210, sells for \$499.99. The 12" saw, model, 717212, sells for \$599.99. For more, visit www.jettools.com.



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◀ CRESCENT LUFKIN has launched the Control Series of tape measures that combine a professional feel and finish with the innovations that tradespeople need, according to the company. Features include a 1-3/16"-wide tape with extra-large print and a finger brake. The Control Series offers eight options, including an engineer's blade, two metric versions, and a version with Crescent Lufkin's Nite Eye color scheme for greater legibility. For more, visit www.crescenttool.com.

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▶▶ **OMEGA NATIONAL PRODUCTS** offers a comprehensive offering of wood cabinet accessories, including the popular Evo tall pull-out pantry powered by the Fuller 771 heavy-duty slide. Designed to be trimmed or used at full height, the systems are manufactured in the U.S. with pre-finished maple. The adjustable shelves feature the Platinum Powdercoat rails that match any style kitchen. Simply attach the door of your choice with the adjustable brackets, according to the company. For more, visit www.omeganationalproducts.com.



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▲ **BORA TOOL**, a manufacturer of tools, woodworking and workshop accessories, is introducing a new straight edge system, the NGX Clamp Edge, available in multiple lengths with the ability to cut up to 100". "The NGX Clamp Edge System addresses three major issues in the straight edge market: difficult setup, crooked and messy cuts, and price," says product manager Rod Bonham. "It's easy to set up, it delivers accurate cuts and reduces tear-out, and it's priced so that anyone can afford it." The NGX Clamp Edge sells for \$50 to \$120, depending on length. For more, visit www.boratool.com.

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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 dealers, meets dur-

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

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. www.tampawoodcrafters.org

ILLINOIS

March 4-6 — Cabinet Makers Association National Conference – 2020 Vision: A Clear View of the Woodworking Industry. Inspirational industry event featuring educational sessions, plant tours and networking opportunities. Location: Q Center at St. Charles. www.cabinetmakers.org

INDIANA

Jan. 24-25 — 19th annual Midwest Tool Expo and Auction. Over 200 vendors displaying woodworking and construction equipment in a new 100,000-sq.-ft. convention center. Seminars on both days. Location: Michi-

ana Event Center in Shipshewana. www.midwesttoolexpo.com

MAINE

Jan. 13 – March 6 — Eight-week Turning Intensive program with Beth Ireland. Designed to prepare woodworkers for successful careers as professional woodturners, and also open to amateurs who wish to bring their work up to a professional level. Location: Center for

Connect with suppliers at NBMDA's convention

The North American Building Material Distribution Association will hold its 2019 annual convention on Nov. 12-14 in New Orleans.

The event is expected to attract over 1,000 distribution professionals and feature over 200 suppliers hosting semi-private tabletop exhibits. Distributors in attendance will have the opportunity to connect with current suppliers, identify new partners and explore new product distribution opportunities, according to the trade group.

For more, visit www.distributorconvention.org.

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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.

NEVADA

Jan. 21-23 — International Builders' Show and Kitchen & Bath Industry Show. Location: Las Vegas Convention Center. www.ibs.org or www.kbis.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 second Thursday of the month at various locations in the Albany area. www.woodworker.org

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

WPMA has a new look

The Wood Products Manufacturers Association is launching a new brand that more clearly reflects on the products and services that members are focusing on.

"The new look represents openness to new ideas from the next generation of woodworkers and reflects more on the members we serve. As the WPMA focuses on all facets of the secondary wood industry, it was felt that the new brand should accentuate the work members are doing," the trade group said in a statement.

"The association has also re-branded their website to increase inquiries from potential customers for products that members are able to produce."

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 **W**

New Fusion table saws from Laguna

Laguna Tools is introducing three new Fusion table saws, which will be available in dealer stores Oct. 23.

"The new Laguna Fusion line was developed for demanding woodworkers," the company said in a statement. "Designed around quality components with an emphasis on superior dust collection enhanced by utilizing over/under collection and sealed bottoms."

Fusion 1 is a portable saw with 1.5-hp, 110-volt motor and cast-iron table. Fusion 2 is a successor to the original Fusion table saw. It features a cabinet-mounted trunnion that rides on two solid steel 1" posts. Fusion 3 is the big brother to Fusion 2, according to Laguna.

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Face-frame Kitchen under \$25,000: Chandler Cabinets of Pilot Point, Texas.



Best Overall: Covenant Millwork of Louisville, Ga.



Retail: Ogee of Oakland, Calif.



Bathroom over \$10,000: Sofo Kitchens of Maple Ridge, B.C.



Fish Tank Stand: Custom Creative Furniture of Lawrenceville, Ga.

Wood Diamond winners

The Cabinet Makers Association announced the winners of its 2019 Wood Diamond Awards contest at the AWFS in Las Vegas.

The submissions were predominantly residential although the top award went to Covenant Millwork of Louisville, Ga. for a commercial project in the hospital-ity category.

"The variety of submissions within the residential category confirms that cabinetry continues to extend to every room in the home," CMA executive director Amanda Conger said in a statement.

The 2020 Wood Diamond Awards contest opens March 1. For more, visit www.cabinetmaker.org. 

60 Grit

Rough humor by Steve Spiro

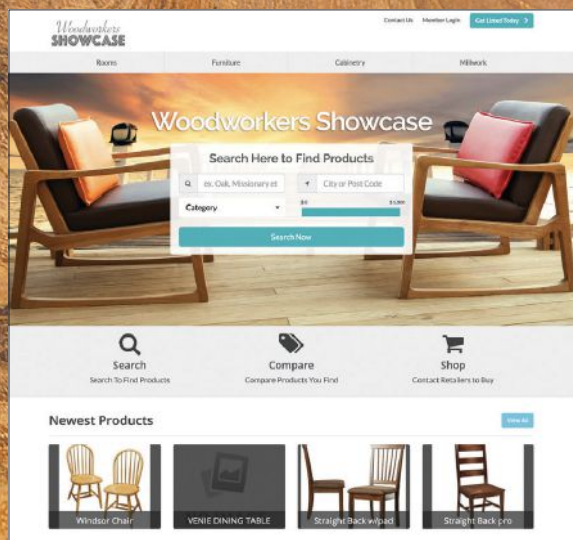


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