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March 2017

King of the Hill

Rich Davis leads Hawk Hill Cabinetry to new heights

Finishing regs drive new products

Market expands for desktop CNCs

Kitchen trends from KBIS

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- **Pillar coping machine**
- **Senco composite nails**
- **Vitap Point Grooving**

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- Motor: 120V, 1.1kW, 5500 RPM, 9A
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- Max. cutting depth at 90° without rail 2 5/32", w/ rail 1 31/32"
- Included saw blade:
 - 160mm x 20mm x 48T
 - Dust port dia.: 1 1/2"
 - Saw weight: 11 lbs.

W1835 Track Saw

Includes: Accessory Pack

W1832 Track Saw Master Pack

55" Guide Rail

7" 2 HP PLANER MOULDER W/ STAND

- Motor: 2HP, 240V, single-phase, 10.8A
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- 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.

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W1812 7" 2 HP Planer Moulder w/ Stand

D3393 Elliptical Jig for W1812



10" 2 HP OPEN-STAND HYBRID TABLE SAW

- 2 HP, 120V/240V, single-phase (prewired for 120V)
- Motor Amps: 15A at 120V, 7.5A at 240V
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W1837 10" 2 HP Open-Stand Hybrid Table Saw

13" 3/4 HP, BENCH-TOP OSCILLATING DRILL PRESS

- Motor: 3/4 HP, 110V, 1725 RPM
- Overall height: 38"
- Spindle travel: 3 1/4"
- Swing: 13 1/4"
- Drill chuck: 5/8"
- Speeds: 12, 250-3050 RPM
- Table: 12 3/8" dia.
- Table swing: 360°
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- Approx. shipping weight: 123 lbs.

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W1668

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12" X 15" VARIABLE SPEED BENCH-TOP WOOD LATHE

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- Spindle indexing in 15° increments
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New



W1836 Bench-Top Wood Lathe

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- Two flip stops for drilling consistency
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W1833 Pocket Hole Machine



6" PARALLELOGRAM JOINTER W/ SPIRAL CUTTERHEAD

- Motor: 1 1/2 HP, 110V/ 220V, pre-wired 110V, single-phase, TEFC, 3450 RPM, 15A/7.5A
- Precision-ground cast-iron table size: 55 1/2" L x 6" W
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- Rabbeting capacity: 1/2" Spiral cutterhead dia.: 3"
- Cutterhead speed: 4,850 RPM
- CPM (effective): 19,400
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- Approx. shipping weight: 429 lbs.

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W1755S

6" Parallelogram Jointer w/ Spiral Cutterhead



WALL DUST COLLECTOR

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PHOTOS: MICHAEL GORDON (TOP, COVER)

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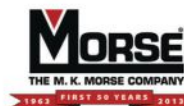


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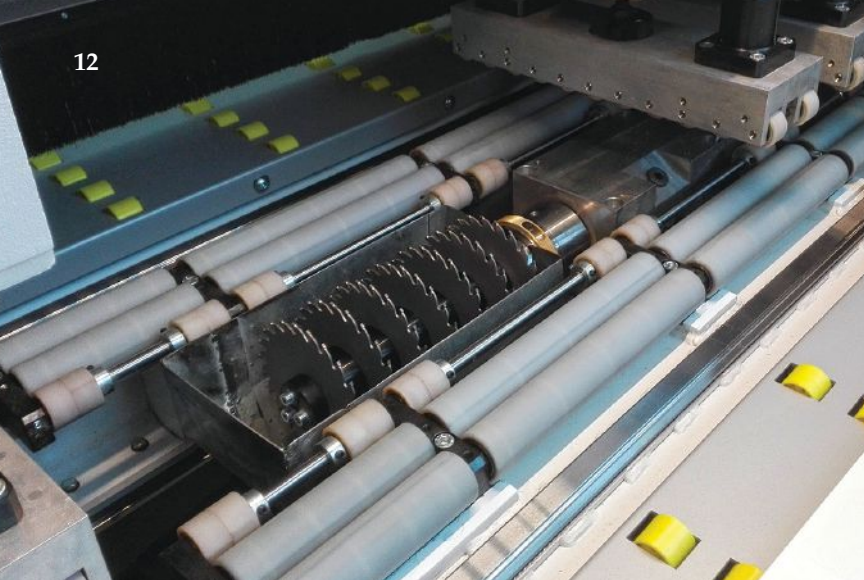
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Desktop CNC technology is advancing rapidly, so here's how to keep up.

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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

EPA formaldehyde rule might not see light of day

The Environmental Protection Agency's formaldehyde rule, scheduled to go into effect Feb. 10, was stayed for 60 days, the result of an executive order to hold off sending any new regulations to the Office of the Federal Register until they have been reviewed and approved by a newly appointed department or agency head.

The "Rule on Formaldehyde in Composite Wood Products" sets standards for maximum formaldehyde emissions from certain composite wood products and imposes testing, certification, recordkeeping and labeling requirements on manufacturers, fabricators, retailers, distributors and importers.

The EPA had been developing this rule since former President Obama signed the Formaldehyde Standards for Composite Products Act into law on July 7, 2010. The rule basically mirrors standards established by the California Air Resources Board for products sold, offered for sale, supplied, used or manufactured for sale in California.

If EPA does not take some action within the 60-day period of stay, then the rule will become effective as published and the future compliance dates therein (Dec. 12, 2017; Dec. 12, 2018, and Dec. 12, 2023) will remain in place.

EPA rules and regulations are driving new product development from finish manufacturers, as John English notes in "No turning back now" on Page 45. Bob Flexner explains a proposed ban or restrictions for two stripping solvents on Page 30.

* * *

Got some great feedback from my January 2017 column on working with kids in the shop. To recap, I was somewhat terrified of bringing six second-grade students into my shop to build a Cub Scout project. Haven't exactly conquered that fear, but the advice is helping.

The dad of two Eagle Scouts shared dimensions for a stool, which looks like a perfect project for next year. I'm told big-box stores offer classes specifically for kids, so that's on my list to check out. Thanks for all of your advice and keep it coming.

* * *

The Homag Group increased its stake in Benz, a manufacturer of wood- and metal-processing tool systems for lathes and machine centers, from 51 to 75 percent. It plans to become the sole shareholder by the end of 2018.

The Zimmer Group owns the remaining shares. "Thanks to its range of woodworking products, Benz has been the Homag Group's preferred development partner and supplier in the field of tooling systems for many years," Homag CEO Pekka Paasivaara said in a statement. "We want to continue to build on this cooperation and expand the worldwide sale of Benz products. To speed up important investment decisions, we have decided to acquire the remaining shares."

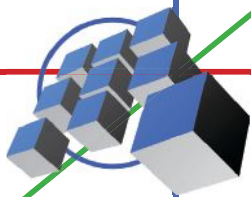
Homag reports that Günther and Martin Zimmer resigned as managing directors of Benz, replaced by Marco Huber.

Anderson America is expanding its sales, technical, support and parts capabilities with a new headquarters facility in Pineville, N.C.

The company designs and manufactures CNC machining centers.

"There have been many recent innovations and improvements to our comprehensive product line that have been extremely well received by our end users and prospective clients," the company said in a statement. "These, combined with unprecedented sales growth and increased distribution, created the need for facility and personnel upgrades to better serve and support our over 4,500 machines North American installation base." **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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John Sarkosy

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New trends stand out in NKBA survey

By Jennifer Hicks

Top trends in the kitchen and bath industry include contemporary and transitional styling, better lighting and added technology, according to a recent survey compiled by the National Kitchen and Bath Association at the Kitchen & Bath Industry Show in January.

Contemporary — defined as featuring flat panel doors — eclipsed traditional as the second most popular North American kitchen design for its ease of cleaning.

“It also takes some of the visual clutter out of the space, allowing one to add in patterns in other surfaces such as back splashes and countertops. The range of finishes on the panel doors trending are everything from a high polished finish to a super matte finish,” NKBA manager of certification and design Ellen H-Millard says.

Kitchen buyers want their cabinets painted white or gray, according to the survey. Blue and black paints are also gaining popularity.

A third of the respondents noted the importance of incorporating sufficient wiring for current and future technologies, such as Internet-connected appliances and electronic docking stations.

“Lighting is a must in cabinetry and has been seen in glass wall cabinets for years. However the trend is really lending itself to lighting in all cabinetry, inside and out,” H-Millard says. “Lighting is being incorporated into toe kicks, drawers, shelving and even countertops.

“Storage and charging stations in drawers should be an automatic consideration in cabinetry. In addition, cabinetmakers may want to consider providing hidden locations for smart-home objects such as the Amazon Echo or Google Home.”

Other top trends include quartz countertops, induction cooktops, convection ovens and microwave ovens hidden in drawers. Metal cabinetry is trending higher, while the “furniture look” — turned legs and corbels, for example — remains popular.

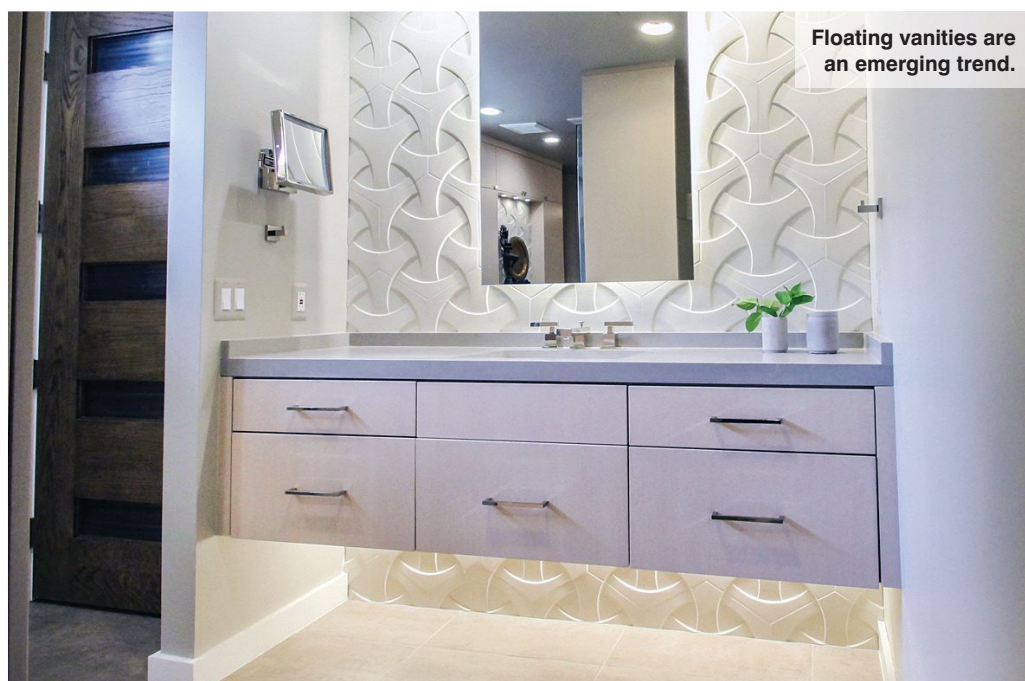
For more, visit www.nkba.org. [W](#)



Storage and lighting remain at the top of the list.



Barn and pocket doors are becoming more popular.



Floating vanities are an emerging trend.

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Furniture makers group honors New Hampshire man

By Jennifer Hicks

Each year, the Society of American Period Furniture Makers honors an individual with its Cartouche Award for lifelong contributions to the craft. Jeffrey S. Roberts of Unity, N.H., is the 2017 recipient.

Throughout a 37-year career, Roberts has built hundreds of period pieces in Queen Anne, Chippendale, Jacobean, William and Mary, and Federal styles.

"I am very excited about it. It's an opportunity for me to hopefully expand my audience. I've been here in New Hampshire now for about 10 years and I've been self-employed. I've had a few really good clients throughout my career that I was lucky to get that gave me the opportunity to make some really cool projects," Roberts says.

Ken Johnson, SAPFM vice president and mediator of the group's Cartouche selection process, says Roberts' breadth of work, mentoring and teaching efforts, and contributions to the SAPFM made him an easy choice.

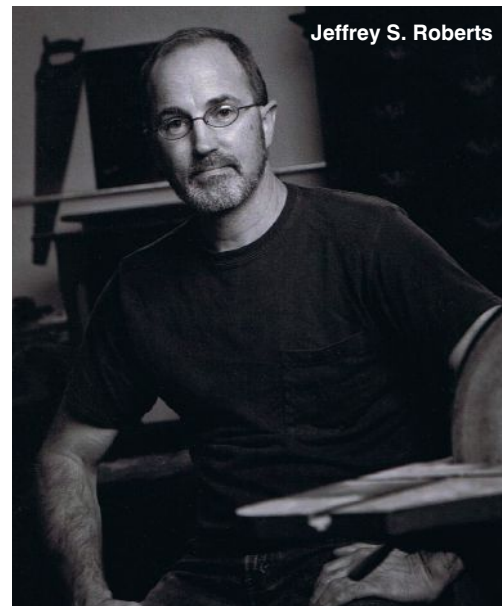
"Normally [recipients] are a little bit older but he's been doing this over the course of his career and he's made a lot of stuff," Johnson says. "We also look for educational outreach, which he's done. This type of work is a relatively narrow niche within the furniture mak-

Cartouche Award



ing community and, to some extent, it's kind of dying out. It's just not as popular an aspect of furniture making as some of the others, so mentoring, teaching, and writing about it are strong positives and he's done that as well."

Roberts is principal of J.S. Roberts Furniture Maker & Carver. He attended North Bennet Street School in Boston, and has worked at several small shops. He's a multiple award



Jeffrey S. Roberts

winner at the League of New Hampshire Craftsmen Fair and member of the New Hampshire Furniture Masters' Prison Outreach Program, which teaches woodworking skills to inmates.

The Cartouche Award is open to craftsmen, educators, conservators and supporters.

For more, visit www.jsrobertsfurniture.com and www.sapfm.org. [W](#)

Training center schedules August opening in Colorado

By Jennifer Hicks

The National Woods Manufacturing Training Center in Colorado Springs, Colo., is scheduled to open in August, representing a national model that industry leaders hope to replicate in other areas of the country.

The 46,660-sq.-ft. facility is roughly divided into three spaces for wood industry training, manufacturing industry learning labs and education for other building trades, such as automotive and metal fabrication.

The center began as the Peyton Woods Manufacturing Program to provide advanced manufacturing and trade training to area students and adults. Dean Mattson, creator of an impressive shop program in North Salem, Ore., came aboard as the program's director. District superintendent Tim Kistler provided a vacant middle school to host the program.

Industry support — from Stiles Machinery, Leitz Tooling, Columbia Forest Products, TigerStop, Bosch, Kreg Tools and others — has provided approximately \$2.5 million in tool and machinery donations.

Last year, the Widefield School District of Colorado Springs partnered with the Peyton School District to get its students involved. The program currently serves 180 students from six districts, prompting the



need for an updated facility.

"We've created a curriculum, solicited millions of dollars of in-kind donations from the manufacturing sector and we have a student population now, so the only thing we have left to do is raise some capital to do the remodeling of our building, such as put the wiring to the machines. That's our heavy lifting right now. We need to raise a little over a million dollars to do that," Mattson says.

"We have contractors, laborers, HVAC technicians and electricians donating time, but not raw materials like duct work and hard wires. That's where we are still being challenged. So we've done everything we can possibly do for this industry. We need to have these employers step up and see the value. As a result, they'll get top selection opportunities for all of their talent. The urgency is if we don't get enough capital, we have to delay our August opening."

For information, contact Dean Mattson at deanmattson@peyton.k12.co.us or Tim Kistler at kistler@peyton.k12.co.us. [W](#)



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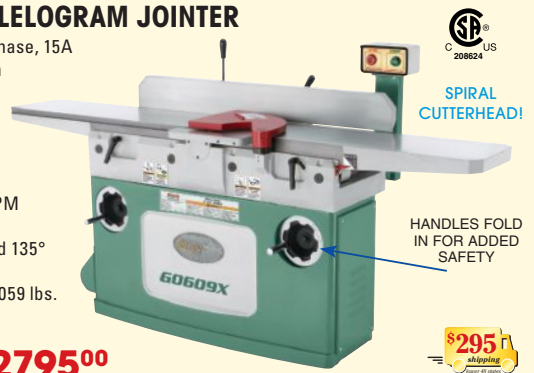
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TOOLS & TECHNIQUES

Vitap unveils CNC for sound-absorbing panels

By Jennifer Hicks

Vitap introduces its Point Grooving CNC machine for the manufacturing of sound-absorbing acoustical panels.

Riccardo Azzoni, owner of Atlantic Machinery in New Milford, Conn. — the exclusive importer and distributor for Vitap in North America — explained that sound-absorbing panels are becoming more popular in the wood industry to address noise concerns in all types of environments from theaters to private residences.

"We believe acoustical panels are going to be very important in the fu-



ture. Some are drilled on one side, but a lot are grooved on the opposite side for a different visual appeal than just the holes. So Vitap has been involved in developing a similar machine using plates instead of drills. The plates are movable on two axes and can groove the other side of the panel according to a specific pattern. So you can achieve whatever design you want and the machine optimizes the panel automatically," Azzoni says.

Different blades can be used for creating various grooving patterns. The patterns can be designed from an office computer or loaded directly onto the machine's computer.

"Typical CNC machines will do one point at a time, but this will do multiple grooves at one time, giving you a tremendous savings in time and the same optimization benefits as with the acoustical panels," Azzoni adds.

The machine accepts panels up 49-1/4" wide and requires about 40 sq. ft. of floor space. The base price is about \$130,000.

For more, visit www.atlanticmach.com. **W**

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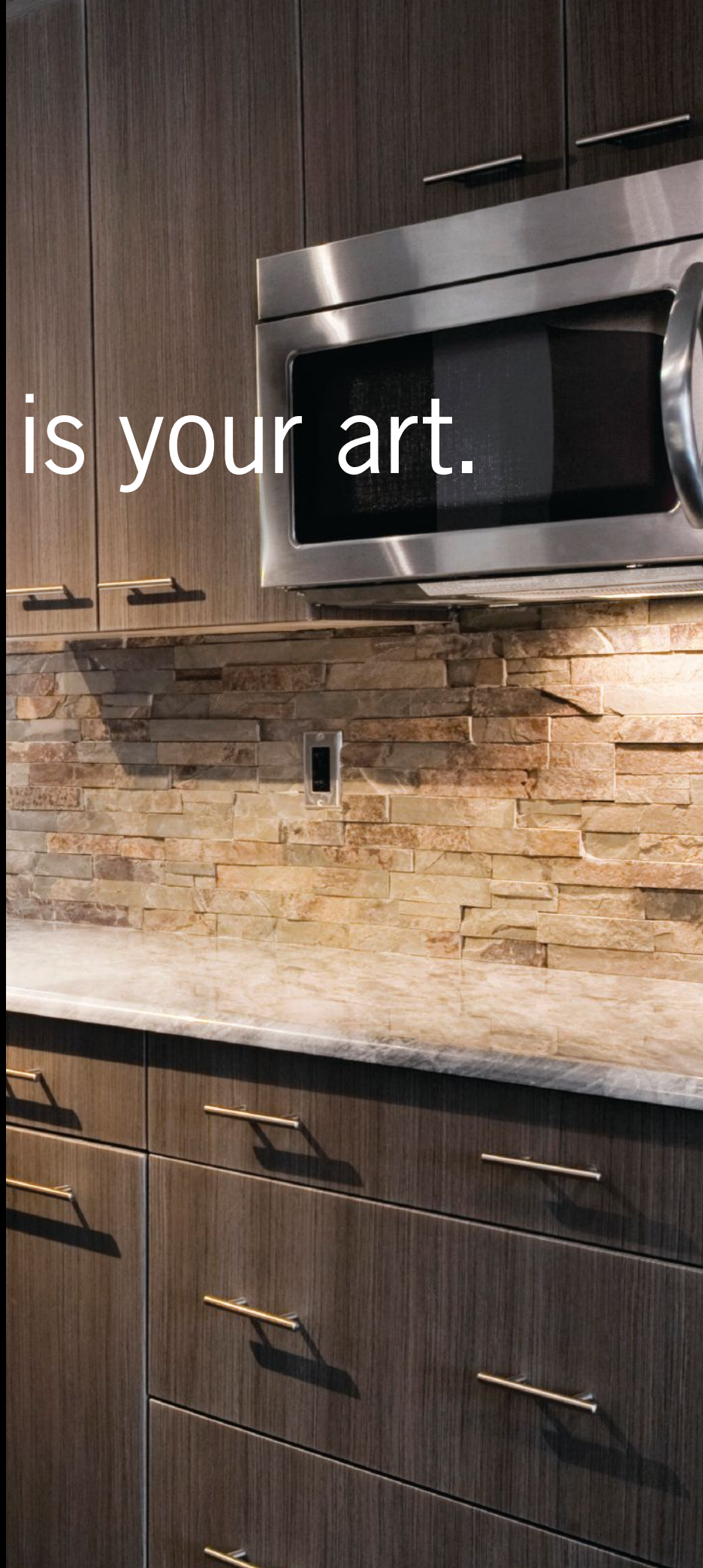
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Bosch says Core battery delivers more power

By Jennifer Hicks

Bosch unveiled its Core 18-volt 6.3-Ah lithium-ion battery, model GBA18V63, at January's World of Concrete show in Las Vegas. The company says the new battery delivers up to 80 percent more power than previous generation Bosch batteries, made possible through the implementation of new technology, including larger cells that cool more quickly than the competitions.

"There are three things you can do to improve a battery and improve run time. You can change the cell, you can better manage the heat or you can better construct the battery. And with the Core we've actually done all three of those," product manager Theron Sherrod says.

He explains that Bosch's engineers increased the size of the 10 high-density cells by 15 percent, enabling users to get more power out of the battery. They improved the battery's heat management system so it can transfer more heat to the outer surface, resulting in up to a 35 percent better cooling effect than the company's previous Cool Pack batteries.

"The worst thing that can happen to a battery is for it to get hot while it's running, so we've come out with our Cool Pack 2.0, where we wrapped each cell in its own compartment so we can transfer as much heat out of the cell as possible," Sherrod says.

"On the inside, we use copper plate for connectivity to the cell. Our



competitors use a galvanized metal, which is not as conductive as copper. We also use a technique called laser welding, making the top of the cell to the copper one piece. Anytime you introduce an impurity or other metal, you are adding resistance and that adds heat. So galvanized metal and solder add head, which reduces run time and battery life."

Sherrod adds the laser welding process represents a multimillion-dollar investment from Bosch.

The batteries are fully compatible with all Bosch 18-volt lithium-ion tools and chargers. A bare battery sells for \$149, but they will also be available in charger and tool kits.

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



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Pillar Machine revamps CMJ coping machine

By Jennifer Hicks

Known for its ability to perform chip-free coping or tenoning, the CMJ coping machine was introduced by Accu-Systems in 2011. Pillar Machine bought the rights and redesigned the machine, adding a side clamp, better spindle parts and a more rigid structure.

Pillar Machine president and CEO Jeff Hatch says the operating process saves end-users time profiling parts before coping.

The CMJ features two counter-rotating, independent vertical spindles. One spindle clears the leading edge of the rail, while the second processes the remainder of the part's width.

"This does end-coping for top and bottom rail ends on doors and for mid rails. The benefit is that you can pre-profile your material through a molder and get a tear-out-free cope from this machine. That pre-profiling saves a ton of time in the process and you can have two rails done in about

eight seconds," Hatch says.

The CMJ manual model sells for \$19,500. The addition of an automatic tool chang-

er and HKS spindles brings the price to about \$40,000.

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



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Senco adds line of composite fasteners

By Jennifer Hicks

Senco, a specialty metal fastener manufacturer, expanded its product line in February to include composite staples and nails. The new blade-friendly and rust-free fasteners are designed to coexist with traditional metal fasteners in the marketplace, serving applications where metal is not ideal.

"This line of composite fasteners, which is really a blend of polymer resin and fiberglass, is designed to complement metal fasteners, not replace them," product manager Ryan Shuler says.

"They can be used where the fasteners come into contact with things like sanding belts, cutting equipment and router bits. Metal fasteners can really destroy some of these pieces of equipment and materials, which are very ex-

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pensive to replace. So now work can be sanded, shaped and cut without damaging anything.”

Available in a variety of standard sizes, the new fasteners won't rust or corrode and are resistant to chemicals, sunlight and moisture. Unlike metal, they do not cause wood deterioration, staining, or long-term degradation of the fasteners holding power, making them useful for lumber processing and outdoor use, according to the company.

Woodworking applications include use in spoiler boards in CNC operations and joining smaller and larger boards for machining. For furniture and millwork, they can eliminate the need to clamp or construct complicated jigs for setup.

Unlike metal fasteners, they permanently fuse with the material they are being driven into when they are sanded down. This eliminates the need to putty, resulting in a seamless appearance when the material is painted or stained, the company says.

Senco product manager Dave Shumate notes that while the plastic fasteners provide for a strong withdrawal value when penetrated into material, they should be viewed as a temporary holding solution when used in structural purposes.

“When you compare plastic to metal, the sheer value is much lower with plastic so there's no structural integrity to a plastic composite fastener when you look at using them with bigger nails or other applications such as a framing nail. The real reason to have plastic is you can use them where you can't use metal fasteners. So, as opposed to having to clamp two materials together, this is a product that you can shoot down and, when done, just give it a slight sideward hit and it will break apart,” Shumate says.

Senco composite fasteners are available in standard-sized strips that fit pneumatic nailers specifically designed to drive composite fasteners. Sizes include 18-gauge brad nails, 15-gauge nails and 16- and 20-gauge staples.

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

AWFS making more room for suppliers

Organizers of the 2017 AWFS Fair announced that it has sold out the supplier portion of the trade show's main exhibit hall.

Additional space for supplier companies is available near the Closet and Home Organization Pavilion.

This year's fair is scheduled for July-19-22 at the Las Vegas Convention Center.

For more, visit www.awfsfair.org.



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*Base price shown without vacuum pump or installation and training.

Something new every day

Desktop CNC technology is advancing rapidly, so here's how to keep up

By John English

The concept of computers controlling a cutting or milling head in X, Y and Z planes originated just after World War II and by the 1980s there were a number of small machines and DIY kits available.



Axiom Precision offers a variety of desktop CNCs.

With the growth of personal computing, CNC really took off and during the next few decades it evolved into the huge, sophisticated work platforms we see today. But in the last few years, several manufacturers have recognized the need for small machines that can handle anything from scribing and scoring to additive technologies (3-D printing). That

market is defined by small shops that are looking at entry-level equipment; schools and colleges that want to introduce students to CAD and CAM programs; and larger shops that either don't want to dedicate a big machine to a minor task or else wish to explore the possibility of new technologies on a smaller, experimental scale.

One way that manufacturers control cost on desktop units is to substitute over-the-counter routers for spindles, just as they did with the very first machines. Today, some CNC setups even come without the router. For example, Axiom Precision (axiomprecision.com) offers an entry-level machine that delivers "maximum performance with a minimum footprint." The

Techno's HD II with optional safety enclosure.



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company's Hobby Series accepts the Bosch Colt router. Larger Axiom desktop models require a standard 3-1/2" router or else they are equipped with a spindle. The line ranges from the 12" x 12" Hobby to the servo-driven 48" x 48" Elite, which can travel at up to 320 inches per minute (IPM), has a full 8" of Z range and is built around a 3-hp electro-spindle that has integrated liquid cooling.

New and improved

Techno CNC Systems LLC (technocnc.com) recently introduced the HD II 2436, a compact version of a full-scale CNC router system that is ideal for both production and education tasks. That's because it's available with an optional safety enclosure and stand that can be easily transported from one room to another. It has a 24" x 36" process area and comes with

precision ball screws on all three axes. Brushless micro stepper motors move the 2-hp high-frequency collet spindle and the table is set up for both vacuum and T-slot. In addition, the HD II 2436 comes with a hand-held controller, 7-1/2" gantry clearance and a 9-1/2" Z-axis stroke. Also available is a fourth-axis rotary table and tool kits.

ShopBot Tools (shopbottools.com) offers a flexi-

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Laguna's (from left) IQ, IQ L4F and IQ Pro models.



ble platform to support growing digital fabrication interests and needs. The ShopBot Desktop can be ordered with a Porter-Cable 2-1/4-hp router or an industrial 1-hp HSD spindle. XYZ movement is 24" x 18" x 5.5" and the gantry frame is welded aluminum with a removable aluminum T-slot deck. The cut speed is 240 IPM and it runs on household current. Schools in particular might also want to check out the Desktop Mini Enclosure, which is an acrylic guard that keeps fingers out and dust in. And ShopBot just released the new Desktop Max

with a larger (36" x 24") work bed.

"The ShopBot Desktop Max was inspired by our customers," ShopBot marketing director Jeanne Taylor says. "This new tool makes it easy to fit items such as guitars, chair and table parts, cabinetry parts and more, onto the bed." It comes with one of two bed options — an aluminum deck or a plenum with a universal hold-down system, which eliminates the need for screws, adhesives or clamps for holding large sheet goods in place. The Desktop Max also features a dual-motor gantry design.

Choices to consider

Laguna Tools (lagunatools.com) offers three 24" x 36" desktop models. The IQ is designed for prototyping and small production runs and features an industrial-grade, liquid-cooled electro-spindle. The IQ L4F adds the ability to route, probe, turn and 3-D print. And the IQ PRO adds a more powerful hand-held control that allows for tool-path previewing, plus a three-position automatic tool changer.

Next Wave Automation (nextwaveautomation.com) offers the Piranha and Shark desktops. The

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CAMaster's Stinger, and the Piranha and Shark from Next Wave Automation (clockwise, from top).



Piranha XL has a 12" x 24" cutting area and comes with a 3-D model library and VCarve Desktop V8. That's a design software program for a PC computer and it allows a woodworker to save the program to a USB flash drive and plug it in so the computer doesn't need to be in a dusty shop environment. The Shark HD4 features a heavy-duty gantry reinforced with plate aluminum, and a rigid interlocking aluminum table. It is built to handle 2-1/4-hp routers or a water-cooled spindle. It features adjustable bearings to give more stability during heavy cutting. Included are VCarve Pro V8 Design software, Vector Art 3-D Sampler Pack, CNC Shark control software 3.0 and in some configurations, Virtual Zero software that maps the surface of the table or workpiece and uses the map as a dynamic reference point. This eliminates problems caused by warped or bowed workpieces and small inconsistencies in the table. It also allows you to carve and machine stock that is intentionally convex to begin with. A new electronics package expands the capabilities of the CNC Shark and allows attachments like laser, 3-D printer, fourth axis and water-cooled spindle control.

CAMaster (camaster.com) offers its Stinger model with 2' x 3' and 2' x 4' tables. Constructed on a welded steel frame, the Stinger has industrial quality rails and bearings and is shipped completely built and tested. Each Stinger comes with a control PC that runs Windows 7 Pro and has a 19" flat-panel monitor. The Stinger also comes with Vectric's Cut 2-D design software.

ShopSabre's (shopsabre.com) recently introduced the ShopSabre 23, which incorporates a control system powered by WinCNC and "is perfect for educational settings, hobbyist shops and startup companies where a larger machine is not an option," according to the company. It has a 30" x 40" cut area, and 5" of Z clearance.

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Other options

Digital Wood Carver (digitalwoodcarver.com) offers an array of entry-level desktop CNC machines, software and tooling. The basic model has a 40" x 24" bed, with the

ability to add a fourth axis.

CarveWright (carvewright.com) desktops are available from Rockler in five configurations, the largest for projects up to 12' long and 14-1/2" wide.

The smallest desktop unit from Velox CNC (veloxcncrouters.com) is the VR-2525, so named because the machine's travel is 28" x 28" x 8" (Z clearance is 6"). It runs with a 3-1/2-hp Porter-Cable model 7518 router.

Intelitek (intelitek.com) is a company that brings technology to classrooms and its small desktop CNC, the BenchMill 6000, is a PC-based machining center designed for advanced manufacturing instruction.

The 1624R CNC desktop router from Vision Engravers (visionengravers.com) has a 16" x 24" aluminum T-slot table to accommodate various work-holding fixtures, a red laser pointer for easy job setup, a Series 4 Controller with a hand-held pendant and optional Raster Braille inserter for sign making and oscillating knife for cutting semi-rigid materials.

Spray Technology



Woodworkers who like to build their own machines will enjoy a visit to the X-Carve site (inventables.com/technologies/x-carve), where three incredibly basic nuts and bolts models are available. The beds are roughly 20" x 20", 30" x 30" and 40" x 40". This is a learning experience rather than a doorway to large-scale production. The Chicago-based company, Inventables, has a stated goal of trying to ignite a revolution in digital fabrication.

To see what's coming down the pike in terms of new desktop CNC routers, do a search on kickstarter.com. It's a fundraising site where new entrepreneurs go to find financing for their inventions. **W**



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Rosewood sales steady despite recent restrictions

By Jennifer Hicks

Last fall, the Convention of International Trade of Endangered Species of Flora and Fauna (CITES) listed all *Dalbergia* rosewood species — except for *Dalbergia nigra* (Brazilian rosewood) — under Appendix II protection. The listing requires appropriate documentation at ports of entry and exit.

hardwood importer in Weaverville, S.C., says the new regulation cause delays as compliance issues are sorted out.

"We're sticklers about the paperwork and we're putting a lot of pressure on our suppliers to make sure that there are no surprises on our end. And, in doing that, it does cause delays," Corte says.

"As for the outlook, I don't really know at this time because these are

Brazilian rosewood



East Indian rosewood



As a result, the future of the U.S. rosewood market carries a bit of uncertainty, according to hardwood dealers interviewed by Woodshop News. But for the time being, it's mostly business as usual.

Rory Wood of Rare Woods U.S.A. in Mexico, Maine, says rosewood sales have held steady. "So far, no problems, but we have a 30-ton shipment due from Tanzania soon. We have asked our supplier to supply the required CITES documentation, but the African countries are way behind in matters of this nature and the Custom and Boarder Patrol authorities of the U.S. government are super vigilant, so we are wishing for luck with that," he says.

Three bubinga species — *Guibourtia demusei*, *Guibourtia pellegriniana* and *Guibourtia tessmannii* — as well as kosso or African rosewood (*Pterocarpus erinaceus*) were also listed in Appendix II. Brazilian rosewood is listed under Appendix I as a species threatened with extinction.

Fabs Corte of Cormark International, a

sweeping changes across the entire *Dalbergia* species. They've put everything on Appendix II. If it was one species, we could just switch to an alternative. But when they've got all of the species lumped together like this, there are obviously a lot of questions and a lot of uncertainty, and I don't know in the long term if these species will be economically viable to us and to our suppliers. That's just speaking for us," Corte adds.

Kevin Klasmeier of Exotic Lumber in Annapolis, Md., sells Bolivian, East Indian, Honduras and African rosewoods, as well as cocobolo, and has not yet been affected.

"Everyone keeps telling me it's going up on the CITES list and I'm not going to be able to get this or that, but I can get rosewood all day long. I really don't know what's going on with it. I don't want to say something I don't know anything about. I have rosewood here, Honduras types, and I can get it still," Klasmeier says. **W**

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Human skills still must be valued even as your reliance on CNC in the shop grows

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We're probably all familiar with the "success story" of a struggling shop that turned things around with added technology. What they used to do by hand is now being done by

a new CNC machine in a quarter of the time. And it doesn't get sick or complain and it can work around the clock.

But, in reality, CNC machinery breaks down, behaves badly at times and will only work around the clock if it has a human babysitter. I'm not a Luddite suggesting technology is somehow bad, but I am trying to strike a nerve in those who have experienced success with technology. We're too often enamored

with a new way of doing things. If not monitored in your business plan, purchasing a better mousetrap can make you lose sight of the bigger picture: Are you driving your business or is the technology?

Bringing the 21st century into the shop environment is nothing short of exercising basic common sense. But thinking it alone will be your savior is shortsighted. Consider modern-day weaponry design. Every century has developed a new way of killing in order to gain an advantage over the adversary. The basic premise is if you create or desire a more powerful weapon, you will gain an edge over your opponent. However, you must consider how to manage it, not just how to develop and use it. But if you advance simply for the sake of advancement without a plan of implementation, you will escalate the odds of technology driving your business.

The first step, from one craftsman to another, is to choose technology that fits your business model. It's tempting to get what the competition has or the latest new gadget, but results will vary from shop to shop.

Your first battle will be with the perception that technology is dangerous to the working class. Your employees will always be your

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greatest asset, so resist the urge to place more value on the machines.

New ways of thinking and doing things can be scary and intimidating. That's why some people never change. They're content with how things have always been done and they don't want to have to learn something new. The key to making it work is to know what to embrace in the new and what to hold onto from the old.

Consider the wise investing advice: "Don't put all of your eggs in one basket." Diversification provides balance and security because you're not "all-in" on one system that might or might not succeed. In like manner, completely buying into technology's offerings could leave you high and dry if things go south.

And, in a business that will always have some reliance on a maker's skill, the last thing you want to do is burn bridges to the past.

We're all in business to make money. But we should also strive to honor the craft. True craftspeople take pride in their work. That means implementing the best of the new technology by building it upon the firm and established foundation of the past. [W](#)

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

Plastics program returning at 2017 AWFS

Plastics and plastic fabrication will return as a focus of the 2017 AWFS fair, scheduled for July 22-25 in Las Vegas.

"In 2015, AWFS began a focused effort of giving buyers a road map as a means of locating these products on the show floor much easier than they have in the past. It worked out very well for both exhibitors and attendees and, as a result, this program has been expanded for 2017," said Rob Howell, the trade show's chair, in a statement.

The program includes a two-part seminar series in the fair's College of Woodworking Knowledge educational program; a SMART session hosted by Stiles Machinery on "Minimizing handwork with producing plastic parts," and a presentation by Michael Fabbri of King Plastic on current plastic materials, applications and tooling for woodworking businesses.

For more, visit www.awfsfair.org.

WMMA asks for Baldwin Award nominations

The Wood Machinery Manufacturers Association is seeking nominations from its membership for the 2017 Ralph B. Baldwin Award of Excellence.

The award recognizes an individual who has made outstanding contributions to the entire woodworking equipment, cutting tool, and supply industry. It will be presented at the Woodworking Industry Conference, scheduled for Apr. 25-28 at the Omni Rancho Las Palmas Resort in Rancho Mirage, Calif.

Nominations will be judged on contributions to the WMMA, industry, the individual's company and to local government, civic or charitable activities.

The entry deadline is March 11.

For more, visit www.wmma.org.



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Easy learning curve for Cabinet Vision software

The program has multiple offerings for cabinetmaking and closet designs, along with add-on modules to help maximize yield

Some cabinetmakers view design software as too complicated and hard to learn. However, if they would take a moment to think about how they learned their trade and their knowledge of parts manufacturing and assembly, it might not seem so daunting.

Cabinet Vision is one example of design software that's fairly easy to learn and the key is how you approach the process.

It's a whole lot easier if you view it as a personal assistant — rather than an adversary — that is capable of helping with design, ordering materials, pricing, assembly, sales and more.

The best introduction to Cabinet Vision is to download the Essential version. There is a 30-day free trial, which is ample time to learn and implement your shop's preferred materials, hardware and assembly techniques. But be forewarned, it is a large program and takes about an hour to download.

Winterthur receives new endowment in furniture conservation

Winterthur Museum, Garden & Library announces a newly endowed position, named the Elizabeth Terry Seaks Furniture Conservator, in honor of the late mother of Dr. Terry G. Seaks, a collector and economist who made the position possible.

Mark Anderson, senior furniture conservator at Winterthur, will assume the endowed position immediately.

"Winterthur is deeply grateful to Dr. Terry G. Seaks for this generous planned gift and continuing annual donations," said David P. Roselle, Winterthur's director, in a statement. "Through Mervin Martin, Winterthur Furniture Conservator from 1968 until 1979, Terry became familiar with conservation at Winterthur. After Merv's death in 2009, Terry renewed his relationship with Winterthur through Mark Anderson, and we congratulate Mark for his appointment to this newly endowed post, which will serve as a lasting tribute to the late Elizabeth Terry Seaks."

For more, visit www.winterthur.org.

CMA will hold three regional events

The Cabinet Makers Association has scheduled three regional events in 2017 and announced plans for a 20th anniversary conference in 2018.

"The CMA is committed to continuing regional events as a means

Installation requires your name and contact information. The free trial is a sales tool after all. Once complete, you'll get an authorization code to begin the download.

You'll also get a user name and password for access to the Cabinet Vision support site that features 23 training videos, ranging from four to 15 minutes in length. Cabinet Vision also has a YouTube channel with hundreds of training videos.

But, if you're like me, you probably just want to dive into the program. I studied the menus and commands first and that helped to understand the videos. And, frankly, I got more out of the YouTube videos that focused on simply creating a room, adding a few standard cabinets, sink, countertop and hardware. Once you grasp those concepts, it's fairly easy to add custom components.

Skipping the trial and purchasing the software presents options for paid training, such as classroom and online instruction.

The power of Cabinet Vision is evident from exploring the Catalog and Construction Methods functions, which is where most of the details for cabinetmaking are stored. For instance, the Materials Catalog contains 17 categories, including draw guides, laminate, panel stock, etc. The depth of choices shows that the people

who write and manage the Cabinet Vision programs must have spent some time on a shop floor.

After opening Essential to create a new job, the user is directed to a Job Properties page to input customer information, due dates, room measurements, cabinet specs, countertop choices, molding profiles and more.

The next step is to draw the finished room, complete with appliances, flooring, architectural details and whatever else you've dreamed up with the client. Later, you can add wall colors, cabinet finishes and the like to provide the customer with a complete design that can be easily changed. There's another add-on module, PhotoVision 32 Architectural Simulation, to produce stunning presentation printouts.

Cabinet Vision will also produce reports to help manage the job through bidding, ordering, manufacturing and assembly.

Cabinet Vision has multiple offerings for cabinetmaking and closet designs, plus add-on modules to help maximize yield from sheet goods and send designs to a CNC router. This makes it possible to configure the software so it works best with a shop's specific workflow pattern. It also allows the shop to buy only the software it needs initially, become familiar with its basic operations and lessen the overall learning curve. **W**

of connecting similar-sized shops around North America with the purpose of sharing best practices and business acumen, while learning how other businesses do what they do," the group said in a statement.

This year, regional events are scheduled for Apr. 10 in Chicago; May 3-4 in Northern California, and Oct. 18 in Lancaster, Pa.

The anniversary conference is scheduled for early 2018 in Denver.

The regional events typically involve plant tours, educational seminars, and networking opportunities.

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

Vero updates Alphacam software

Vero Software offers the latest edition of Alphacam, enhanced to make it easier to use and improve productivity, according to the software developer.

Alphacam 2017 R1 features user interface improvements, a new 3D machining command, sawing enhancements, and simulation updates.

"The overall user experience has been augmented in a number of ways, including restyled dialogs to provide a more intuitive layout, with images and tooltips included to help the user," the company said in a statement.

For more, visit www.verosoftware.com.

Growth predicted for home improvement market

Home improvement and repair expenditures are projected to increase 6.7 in 2017, according to the Remodeling Futures Program at the Joint Center for Housing Studies of Harvard University.

"Growth in home prices is continuing at a healthy pace and encouraging homeowners to make remodeling investments," Chris Herbert, the center's managing director, said in a statement.

"Home sales are remaining on an upward trajectory, as well, and this coupled with continued growth in remodeling permit activity suggests another strong year for home improvements."

For more, visit www.jchs.harvard.edu.

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EPA throws the baby out with the bathwater

The EPA issued a proposed rule on Jan. 12 that would ban or restrict the use of methylene chloride and n-methylpyr-

rolidone in paint and coating removers for most consumer and commercial applications. Interestingly, this rule doesn't apply to pro-

fessional refinishing shops, though the EPA said they would revisit this exemption as they gather more information.

I suspect the EPA concluded that eliminating these two stripping solvents would unreasonably burden these shops. Nevertheless, the agency did propose that container sizes less than 55-gallon drums be eliminated (with some discussion to reduce this to 30 gallons), which would have the practical effect of excluding smaller shops.

You can find the 277-page rule from several websites by searching "Federal Register notice methylene chloride and n-methylpyrrolidone."

Methylene chloride

Methylene chloride, sometimes called dichloromethane, is the strongest and fastest-acting solvent used in paint and coating removers. It's not a friendly solvent. Excessive exposure to the vapor can cause temporary damage to the central nervous system that leads to irritability, drowsiness, confusion and a tingling sensation in fingers and toes.

More worrisome, the vapor can also be absorbed into the bloodstream and replace some oxygen with carbon monoxide, which can cause a heart attack in people with heart problems. If splashed onto skin or into eyes, methylene chloride causes a burning sensation (which can be relieved by washing with clean water).

There's no question that you should protect yourself by wearing thick gloves, a long-sleeved shirt, eye shields and working with adequate cross ventilation or outside when using a methylene-chloride stripper. Organic-vapor respirator masks are not very effective against methylene chloride because the molecule is very small and penetrates the filter.

But these aren't the issues the EPA was addressing in its proposed ruling. The EPA and other regulatory agencies have claimed for at least 25 years that methylene chloride is a suspected carcinogen, that it causes cancer. The claim began after a study was published in 1986 that concluded laboratory mice developed cancer when exposed to very high doses of methylene chloride for six hours per day, five days a week, over most of their lives.

The claim ignores at least four large human studies between 1946 and 1994 involving four major companies and 6,000 employees exposed over their working lifetimes to varying concentrations of methylene chloride vapor all day long, every working day.

No evidence was found in these studies to indicate a higher risk of cancer from exposure to methylene chloride and there are no comparable studies elsewhere that I know of that do show a link. In other words, while it is known that methylene chloride can cause malignant tumors



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in laboratory mice, there's no evidence methylene chloride causes the same in humans.

In the EPA's defense, it's fairly standard practice to extrapolate from mouse studies to humans but, in the case of methylene chloride, further research has shown that mice metabolize the solvent differently than humans through a different pathway. Using mouse studies to establish rulings banning methylene chloride is not conclusive.

The 1991 conference

In February 1991, I had the opportunity to attend a two-day conference in Washington, D.C., sponsored by the EPA, OSHA, the U.S. Consumer Product Safety Commission and other governmental health and safety agencies. The event was arranged to get feedback from the "stripping" industry in an attempt to find a replacement solvent for methylene chloride.

Attending were more than 200 people from all levels of the industry, from raw materials and equipment manufacturers to stripper suppliers to small-shop refinishers to consumer representatives. There were more than 50 presentations, many in smaller settings. A book with all these presentations was published at the end. The conference made a big impression on me.

I had been refinishing furniture for 15 years at that point. I think I had a pretty good grasp of strippers and their use. What I came away with was that methylene chloride wasn't harmful when used in the proper conditions and that there wasn't any adequate replacement solvent. But the representatives from these government agencies didn't seem to be listening to anything that was being said. It seemed to me that they were intent on banning methylene chloride anyway.

No ban followed, but all the talk, plus a growing consumer rejection of smelly solvents, created a market for alternative strippers. Most were based on n-methylpyrrolidone (NMP), some on dibasic esters (dimethyl adipate and dimethyl glutarate) and benzyl alcohol.

OSHA steps in

Skip ahead to the late 1990s and the regulators were at it again. This time it was OSHA leading the way with a ruling that refinishing shops would be required to limit employee exposure to methylene chloride vapors from 500 parts per million (ppm) to 25 ppm averaged over an eight-hour day. Again, the reason given was that methylene chloride was a suspected carcinogen.

At the time I was writing for Professional

Refinishing magazine, the refinisher's trade magazine. OSHA's position was obviously a really big issue for us and we published many articles, some of which pushed back and others suggesting ways to work within the new guidelines.

One of the ways, of course, was to install much better air-moving equipment. But this was quite expensive, so some shops switched to NMP. This wasn't a new solvent, but until the 1990s it hadn't been used for stripping because it is much slower acting and evaporating than methylene chloride and also more expensive.

The problem was that NMP had some known health problems — primarily that it caused reproductive problems in some women exposed to it. In my experience this was not discussed much, and, in fact, strippers based on NMP were by then widely available in plastic containers in paint stores and home centers as alternatives to methylene chloride.

Given enough time, NMP and the other substitute solvents work well enough for removing coatings, but manufacturers exaggerated the speed considerably (to compete with methylene chloride) and this had the result that these alternatives got the reputation for "not working."

Another problem with these alternative solvents (not including NMP) that isn't mentioned often is that they are combined with a lot of water. Water kept in contact with veneer long enough for these strippers to work (sometimes overnight) lifts veneer.

Where we are now

I've followed the tug-of-war between regulatory agencies and the producers, suppliers and users of methylene chloride strippers for 25 years and I've been fairly directly involved twice during that time. I haven't seen any convincing evidence from these agencies or anyone else that methylene chloride causes cancer in humans — and lots of evidence that it doesn't.

On the other hand, the evidence is clear that NMP causes reproductive problems in women.

So the effect of the regulatory agencies devoting so much time and energy to banning methylene chloride has been the introduction and widespread use of a substitute solvent that is known to create severe health problems.

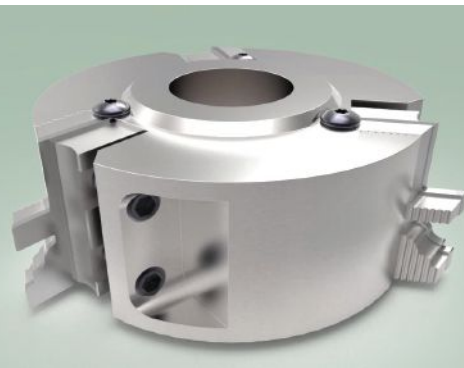
The EPA now seems to be trying to correct this situation by simply proposing a ban on both solvents for most situations. **W**

Bob Flexner is author of "Understanding Wood Finishing" and "Wood Finishing 101."

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- Table size: 21¾" L x 16⅞" W
- Table tilt: 5° L, 45° R
- Floor-to-table height: 37"
- Max. throat capacity: 13½"
- Max. throat capacity w/fence: 12"
- Max. cutting height: 14"
- Blade size: 120" (⅞" to ¾" W)
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- Footprint: 24" L x 18" W
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- Arbor: ⅝"
- Arbor speed: 3450 RPM
- Max. depth of cut: @ 90° 3¼", 45° 2¼"
- Rip capacity: 30" R, 15" L
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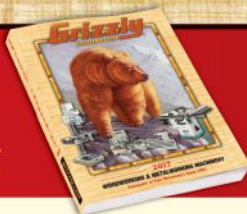
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- Motor: 5 HP, 220V, single-phase, 25A • Jointer table size: 14" x 59 1/2"
- Cutterhead diameter: 3 1/8" • Cutterhead speed: 5034 RPM
- Cutterhead: Spiral, 32 inserts • Cutterhead insert size: 15 x 15 x 2.5mm
- Max. jointer depth of cut: 1/8" • Max. width of cut: 12"
- Floor-to-table height (Jointer): 35 1/2"
- Fence: 6" x 51 1/4"
- Bevel jointing: 0-45°
- Dust port size: 4"
- Planer feed rate: 22 FPM
- Max. planer depth of cut: 1/8"
- Max. planer cutting height: 8"
- Planer table size: 12 1/4" x 23 1/8"
- Overall size: 67 1/2" W x 41 1/2" H x 24" D
- Footprint: 26" L x 19 1/2" W
- Approx. shipping weight: 704 lbs.



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G0634XP ONLY \$2550⁰⁰

15" PLANERS

- Motor: 3 HP, 220V, single-phase, 15A
- Max. stock thickness: 8"
- Min. stock thickness: 3/16"
- Max. cutting width: 15"
- Min. stock length: 8"
- Max. cutting depth: 1/8"
- Feed rate: 16 & 30 FPM
- Cutterhead dia.: 3"
- Cutterhead speed: 4800 RPM
- Cutterhead knives: 3 HSS, 15" x 1" x 1/8" (G0453); 74 inserts (G0453Z)
- Precision-ground table size: 15" x 20"
- Overall size: 32 1/2" L x 42" W x 45 1/8" H
- Approx. shipping weight: 675 lbs.



3-KNIFE CUTTERHEAD

G0453 ONLY \$1250⁰⁰

SPIRAL CUTTERHEAD

G0453Z ONLY \$1795⁰⁰

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24" PROFESSIONAL PLANERS

Z-SERIES

- Cutterhead motor: 5 HP, 220V, single-phase (G5851Z); 7 1/2 HP, 220V/440V*, 3-phase (G7213Z)
- Feed motor: 2 HP
- Precision-ground cast-iron table size: 31 1/8" x 24 1/8"
- Max. cutting height: 8"
- Max. cutting depth: 1/8"
- Feed rate: 17-26 FPM
- Cutterhead speed: 5200 RPM
- Approx. shipping weight: 1130 lbs.



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G5851Z \$4895⁰⁰ SALE \$4695⁰⁰

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G7213Z \$5195⁰⁰ SALE \$4950⁰⁰

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- Motor: 2 HP, 120V/240V, single-phase, 15A/7.5A
- Jointer table size: 7 3/8" x 45 1/8"
- Cutterhead knives: 3 HSS-Single sided
- Knife size: 6 1/4" x 9 1/16" x 1/8"
- Cutterhead diameter: 2 1/16"
- Cutterhead speed: 5400 RPM
- Max. planing height: 6"
- Planer feed rate: 11 & 22 FPM
- Planer table size: 19 1/4" x 14 1/8"
- Fence: 4 3/4" x 41 1/4"
- Bevel jointing: 0-45° L/R
- Overall dimensions: 46" W x 33" D x 46 1/2" H
- Approx. shipping weight: 418 lbs.



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20" PLANERS

- Motor: 5 HP, 240V, single-phase, 19A
- Max. cutting width: 20"
- Min. stock length: 8"
- Max. cutting depth: 1/8"
- Feed rate: 16 FPM & 20 FPM
- Cutterhead dia.: 3 1/8"
- Cutterhead knives: 4 HSS, 20" x 1" x 1/8" (G0454); 98 carbide inserts (G0454Z)
- Cutterhead speed: 4800 RPM
- Table size: 20" x 25 3/4" (20" x 55 1/2" w/ extension)
- Overall size: 39 1/2" W x 55 1/2" D x 45 1/8" H
- Approx. shipping weight: 932 lbs.



4-KNIFE CUTTERHEAD

G0454 \$1750⁰⁰ SALE \$1495⁰⁰

SPIRAL CUTTERHEAD

G0454Z \$2575⁰⁰ SALE \$2195⁰⁰

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24" EXTREME-DUTY PLANER W/ SPIRAL CUTTERHEAD

EXTREME SERIES

- Cutterhead motor: 10 HP, 220V, 3-phase (G9961); 220V/440V* (G9741)
- Feed motor: 1 HP • Feed rate: 20-40 FPM
- Precision-ground cast-iron table size: 24" x 35 1/2"
- Max. stock thickness: 9"
- Min. stock thickness: 1/4"
- Max. cutting depth: (G9741) 5/16", (G9961) 3/16"
- Max. cutting width: 24" Min. stock length: 10 1/2"
- Cutterhead knives: 4 HSS, 24 1/8" x 1 3/16" x 1/8" (G9741); 162 carbide inserts (G9961)
- Cutterhead dia.: 4 5/8"
- Cutterhead speed: 5000 RPM • 42 - 84 CPI
- 20,000 CPM (G9741); 30,000 CPM (G9961)
- Overall size: 42 3/8" W x 36" D x 58" H
- Approx. shipping weight: 1980 lbs.



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G9741 \$7995⁰⁰ SALE \$7795⁰⁰

SPIRAL CUTTERHEAD

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KING OF THE HILL

Hawk Hill Cabinetry & Custom Woodwork in Vermont finds a cabinetmaking niche with vacation homes

BY JENNIFER HICKS

It basically started with a job offer. Hawk Hill Cabinetry & Custom Woodwork in Brandon, Vt., can trace its roots to a contractor/craftsman relationship.

"I was working on my own as a cabinetmaker back in 2001 and Rob Naylor contacted me and wanted to know if I'd start a cabinet shop for him," Hawk Hill principal Rich Davis says. "So that year, I started at Naylor and Breen as a cabinet shop manager to work in-house on projects they were doing.

"We were attached to the main office of Naylor and Breen when I first started. I had four guys in the main shop with me. In 2008, we named the shop Hawk Hill cabinetry to give ourselves our own identity. It's named after a hill out back where hawks fly over all the time. We are still under Naylor and Breen's control."

In 2010, fire destroyed Naylor and Breen's place of business. The silver lining in the loss was a new 4,700-sq.-ft. shop for Hawk Hill, separate from Naylor and Breen's new building. It's stocked with digital fabrication and industrial machinery, and a five-person crew, including woodworkers Tim Anderson, Matt Shook, Jeremy Woods and Dan McDonough and finisher Brenda Hall.





Rich Davis (white hat) and Jeremy Woods at Hawk Hill Cabinetry's shop in Brandon, Vt., which produces kitchens, bathrooms and a whole lot more.





Cherry is a top request for kitchen and doors.



"I think it's a comfortable number with the size of the shop we have," Davis says. "We may have room to squeeze in one more person, but we may have to change how we produce things."

LEARNING TO FLY

Hawk Hill has spread its wings through the years, morphing from a strictly in-house shop to one that has also tapped into the Northeast's vacation-home market.

"The main impact was when I made a couple of contacts with architects in Long Island, did a couple of projects for them, and they liked our product," Davis says. "The client had a house up in Vermont, I did a project for them there and they had a summer home in the Hamptons. I got in touch with the architect from that one job in the Hamptons, which led to five other houses there."

Hawk specializes in the design, manufacturing and installation of custom kitchen cabinetry, built-ins and architectural millwork including stairs, mantel assemblies and interior and exterior doors. It's still a mostly in-house shop, with roughly 90 percent of the jobs funneled through Naylor and Breen from general contractors and architects.

"We're a custom shop. It doesn't matter what anyone asks for. They just have to show us a picture and we'll do it," says Davis, whose motto is always to stand by his work.

PHOTOS: MICHAEL GORDON (IN SHOP)

The shop serves a 60-40 mix of residential and commercial clients, with the latter focusing on remodels of restaurants, bars and convenience stores. In this economy, the residential market is more reliable, Davis says.

The shop has adapted to style changes through the years.

"When we first started out, we were doing overlay setups and now we're doing more beaded inset doors. We are also doing a lot of two-tone color variations where, say, the perimeter of a kitchen is a stained cherry wood and the island is finished with something different like black paint," Davis says.

"Cherry is popular up here and we do a lot of painted white products, too. And right now there's a lot going on with grays and soft hue colors, which are nice. In our commercial end, we've done some bars with cherry slabs."

A MAJOR ACCOMPLISHMENT

Hawk Hill surpassed \$1 million in annual revenue last year after coming close in previous campaigns. Davis credits Naylor and Breen for running a tight ship and providing Hawk Hill with solid backing.

"All of our guys get paid by Naylor and Breen, so we don't have to worry about getting paid from our clients to support everybody," Davis says. "It's all under one compa-



Brenda Hall moves an order of aromatic cedar.



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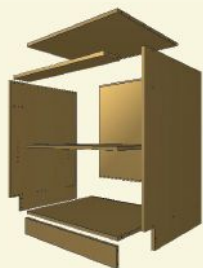


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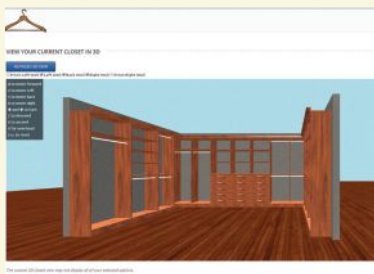


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Woods operates the shop's Flexicam CNC and a recent kitchen project.



ny, but separated with a financial statement that shows we sustain ourselves and make money at the same time."

With that benefit there is, of course, a slight catch that can lead to difficulties in the production schedule.

"We're often called upon to do something small for [Naylor and Breen] that's very time-sensitive, so we find ourselves having to drop what we're doing here and take care of that before getting back to what we were working on," Davis says.

Hawk Hill also has the advantage of slim competition. "We don't compete with big-box stores and if we feel we are, then we step away because that's always just a battle with pricing," Davis says. "I don't even know how many custom cabinet shops are around here. There are a few one-man shops, but they're not a production shop like this."

Davis is currently working with the parent company on networking with more architects, with the goal of adding more clients and projects in 2017. Its marketing efforts include a glossy magazine-style portfolio, website and social media program. **W**

Contact: Hawk Hill Cabinetry & Custom Woodwork, 192 Alta Woods, Brandon, VT 05733. Tel: 802-465-8297. www.hawkhillvt.com.

Making the best Cabinets & Furniture



Compiled by BHSW Inc.

Good lighting means good work, and two new LED bases from Micro Fence are specifically designed to help woodshops make the best cabinets and furniture. These lights work on the company's superb aftermarket plunge bases (one standard, one trimmer), and can be ordered with mains or battery power for corded or cordless tools.

Upgrading machines such as CNC routers and edge-banders is a big part of the quest for perfection, and the folks at NEXTECH understand that. They supply state-of-the-art machines at affordable prices, and then deliver the best customer support in the industry.

And keeping that machinery in perfect working order is a job for SLIPIT – two families of lubricants with a seventy-seven year history of supporting fine work. SLIPIT comes in a silicone base for lubing internal machine parts, and a silicone-free variety for use on in-feed tables and other areas where it contacts unfinished wood.

A critical part of making the best cabinets and furniture is creating clean manufacturing and finishing environments. American Fabric Filter works with woodshops to create custom bags that allow existing dust collectors to deliver better results – and often dramatically so.

And shops that use outsourcing to maintain great quality and high volume will be delighted to learn about all the new wood products, cabinet boxes and doweled drawer boxes available from Elias Woodwork – ideally located halfway between Maine and Washington State for great shipping options.

Whether you're upgrading handheld routers or large CNCs, outsourcing components or just wanting to keep machinery clean and well lubed, these companies combine to help you deliver the best cabinets and furniture.



americanfabricfilter.com 44



eliaswoodwork.com 40



nextechmachinery.com 41



slipit.com 43



microfence.com 42

Increase Profits by Outsourcing from the Right Supplier



Elias Woodwork, located at the geographical center of North America, has been making some of the best outsourced cabinets in North America since 1983. Now the company has developed a new line of Assemble-On-Site (AOS) custom, frameless cabinet boxes that snap together in minutes using only a rubber mallet. This innovative product has revolutionized casework assembly and installation, making it easier and faster than ever before. These superb quality cabinet boxes are available in 3/4" UV-finished birch plywood or furniture board, using only CARB2 compliant materials, and they come with full tops, bottoms and backs. They can be ordered as a component or a full kitchen remodel project – including doors, drawer fronts, drawer boxes, moldings and wood accessories that are all consistently finished. Not only does a woodshop save time and money on building and assembly, these custom cabinet boxes are shipped flat packed to the shop or jobsite with just a three to four week lead time.

Elias Woodwork understands that being competitive is an imperative for its customers. With that in mind, the company has also added doweled drawer boxes as an option. Through selective options, these boxes can become very affordable. Available with a clear lacquer finish, they come unassembled with pre-glued dowels inserted, for quick and easy assembly. The knockdown nature also means additional cost savings on shipping. The boxes are manufactured with 5/8" nine-ply Baltic birch sides, with edge banding on the top edge and a 1/4" thick plywood bottom that is

recessed by 1/2". A woodshop can accessorize them with cutlery, spice or knife block inserts, for additional functionality.

Elias Woodwork takes pride in manufacturing some of the highest quality wood cabinetry components, and delivering them at competitive prices. Even though the industry has seen some growth in both thermofoil and laminate products, wood still remains the most popular choice for kitchen design. Real wood offers rich color and texture, while remaining a sustainable product that is biodegradable and 100% renewable. For thirty-four years, Elias Woodwork has understood the need to earn and keep the respect and trust of its custom-

ers. The company's highly trained team on the shop floor is encouraged to think outside the box, and the result is a long history of sustained growth. Adding their 290 employees to a woodshop's team is the smartest way to build better cabinets and grow your business.

Outsourcing cabinet boxes, doors and drawer boxes is also the best way to add 'custom' to cabinetmaking and furniture building, without adding costs for equipment and labor. With a reliable parts supplier on board, a kitchen builder, contractor or developer can offer more creative drafting and choose from a much wider range of profiles, species and finishes.

Plus, with costs determined up front, it's a whole lot easier to meet budgets and deadlines.

Quality, selection and pricing are the keys to being a successful supplier. Elias Woodwork's vast selection of quality wood products and superior finishing options provides all the tools needed for its customers to keep pace with industry trends and grow their own businesses. The company takes cost control very seriously, using lean manufacturing and just-in-time principles to be more competitive. And Elias Woodwork's shipping program also offers additional cost savings with FREE shipping on any orders of thirty or more 5-piece construction doors and drawer fronts to anywhere in North America (some restrictions may apply).

Elias Woodwork. Making the best cabinets and furniture.



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Elias Woodwork

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NEXTech Machinery: Affordable, High Quality Machines

Woodworkers looking to automate their process and upgrade milling, sawing, sanding and edge banding quality turn to NEXTech Machinery. The company, located near Charlotte, N.C, is dedicated to helping woodworkers add flexibility and automation to their workflow with solidly constructed, affordable industrial CNC routers, edgebanders, sanders and panel saws.

'Support' is absolutely critical to NEXTech, led by woodworking industry veterans. The team offers vast expertise in optimizing production floors by recommending the best equipment to meet company goals. Attentive support including parts, service and personalized technical support are delivered from NEXTech's headquarters.

"NEXTech's machine and service quality are second to none," says Arch Adams, owner of FunSpot Trampolines in Hartwell, Ga. "They actively assist us in making the highest use of our new R200 48 CNC router, and have never left us to reinvent the wheel. NEXTech's superb support equips us to expand our product line and grow our business. We are so pleased; we have already ordered an R300 50 DC with a C-axis."

NEXTech consistently goes above and beyond industry standards in terms of design, quality, price and service. More than 1,800 units a year are produced including affordable flat table CNC routers to models with automatic infeed and offloading, automatic and manual label printing in customized sizes and configurations. The lineup includes five-axis moving table or gantry formats, flexible Pod & Rail routers, and space-saving verticals. Each machine features "best in class" components.

NEXTech also offers a complete range of wide belt sanders. The affordable, entry-level



S37-C is a single combination head machine with a maximum working width of 37.4". Next up, the S43-RC offers two sanding heads that can handle work up to 39" wide. And two versions of the top-of-the-line, three head S52 accommodate parts up to 51" and come in a number of configurations. The S52-RRRC, features three sanding heads to provide maximum production flexibility. Set-up on this machine is simplified thanks to a numerical control pad with a pre-set function that controls table height, and a digital display of board thickness. The robustly configured PS52-PRC planer sander, with a precise steel helical planer head, weighs 14,000 pounds and provides the perfect base for a quality finish.

NEXTech edgebanders are built with a heavy base construction to prevent vibration and tedious resetting evident in lighter weight machines. Ranging from the EB200 Series to the sophisticated EB400 Series, they are simple to operate without finicky gimmicks. The EB200 possesses many features found in higher-end models, allowing smaller shops to enjoy first-class results and competitive superiority.

The EB300 Series is a heavy-duty, simple-to-operate edgebander that is scalable, allowing the addition of pre-milling machining units, top and bottom trimming units and scraping units, as well as precision horizontal and/or vertical grooving. The EB400 series includes a corner rounding unit with two motors and simple, straightforward operation. It brings production flexibility with its optional preci-

sion grooving, pre-milling, trimming stations and other units.

Tim Brown Construction LLC. in Pagosa Springs, Colo. runs two machines from NEXTech – an EB300 PTS edge-bander with pre-mill, and an R400 48ACD CNC router with automatic loading and unloading.

"I can't say enough positive," Tim says. "I met them at the IWF show in Atlanta, and honestly, I was there to buy a different product. I just kept coming back to their booth. The CNC was so affordable, even though it had all the same HSD motors and other parts that the other machine had. Their technician was here right away for set-up, and they are honestly concerned about us, even though we haven't had a single problem with the machine. It has been a really pleasant experience."

NEXTech invites woodworkers interested in affordably increasing production levels and the quality of their components in 2017, to contact them to set up a one-hour, no obligation consultation with one of the company's in-house manufacturing consultants. Woodworkers can visit NEXTech to demo five CNC routers, edgebanders and sanders. Contact NEXTech for details.



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Phone: (704) 307-2670

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Light Up Your Plunge Routing



Experienced woodworkers understand that the quality of fine work is related to the amount of light being focused directly upon it. Having a bright light shine down on the action is pure joy when running a router.

Micro Fence light rings are designed to do exactly that. They attach underneath the top of the housing and shine down on the bit, and the work area. In shops where overhead lighting is less than it could be, or when aging eyes don't see as well as they used to, these plunge base light rings are nothing less than heaven-sent. But even young eyes will welcome the advantages that Micro Fence's clear lighting brings to detailed routing. These little gems provide virtually shadow-free illumination, the likes of which you've never seen on a woodworking tool before. And the lights

can be run off mains or battery, making them ideal for jobsite situations. If one needs to go cordless, just add the 9 Volt battery-powered option.

Superbly engineered, the two light rings are just the latest in a long line of products from noted woodworker Richard Wedler, who understands exactly what's needed: he has been making custom cabinets and furniture for over forty years. The first element in his Micro fence system, an edge-milling guide, was developed to address problems in straight-line and circular routing applications that Richard had to confront in his own commissioned work. He and his father Jack, a machinist and toolmaker for over sixty years, put their heads together and created that original Micro Fence® Edge-Guide. Since then, Rich has created a complete system that woodworkers all across the continent now rely upon to build casework and furniture at the highest level. The line includes the two plunge bases (one standard, one micro), circle and ellipse jigs, the incredibly accurate Micro Stop, some vacuum clamping equipment, and a host of other accessories – all of which are featured in the online catalog.

The Micro Fence system turns your hand-held router into the precision milling machine it's capable of being for straight-line, circular and elliptical applications. It provides woodworkers with micrometer-adjusted measuring capability that is usually found only in the machine tool world. The system can now be fitted to most models of routers, laminate trimmers and high-speed rotary tools.

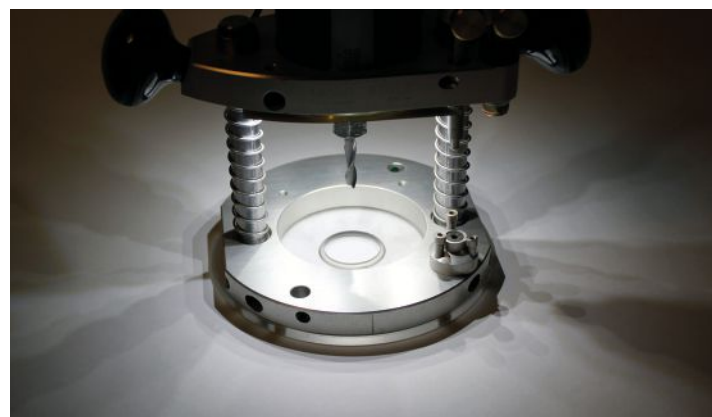
Richard's goal has always been to build the highest quality and most useful tools possible, and these new lights fit perfectly within those parameters. Their objective is simply this: to bring the greatest degree of precision and control to your work.

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Is this the best-kept secret in lubricants?

Cabinetmakers and furniture builders know all about wood movement.

In the hot, sticky summer of 1939, John Bogie was the superintendent of a large apartment complex in Queens, New York. The residents were complaining that windows were sticking, drawers wouldn't slide and doors wouldn't open. The inventive Mr. Bogie cooked up a solution on his kitchen stove and then applied what was soon to become SLIPIT™ to all of those problems. It worked so well that he decided to manufacture and market it, and that was the birth of one of the first really effective, nontoxic lubricants in America. By the way, it's still made in the good old USA.

Business owners know a good thing when they see it, and SLIPIT caught on quickly. Within a year, Otis Elevator started using SLIPIT Sliding Compound, and the company is still a loyal customer seventy-seven years down the road. Today, the list of customers includes Malson Millworks and Texas Wood Mill Cabinets, Inc. to the Chicago Transit Authority, NASA and the US Navy, and many more large and small.

Thousands of woodworkers across America have also turned to SLIPIT as their lubricant of choice. That's because the company offers two very distinct families of products that are ideally suited to woodshop challenges. One product group is silicone-free compounds for use around unfinished wood; the other contains silicones for use in applications such as internal machine surfaces. Each is available in three forms to suit almost any imaginable application – liquid, gel, and aerosol spray.

Among the many, many ways that SLIPIT can ease things along in a woodshop are lubricating clamp threads, pulleys, drawer slides, hinges, wooden runners, rust-prone machine parts, hand tools, saw surfaces, planer beds, jointer tables, out-feed rollers – even the bases of portable routers. Oh, and SLIPIT also helps a lot when driving long screws into pilot holes in hardwood.

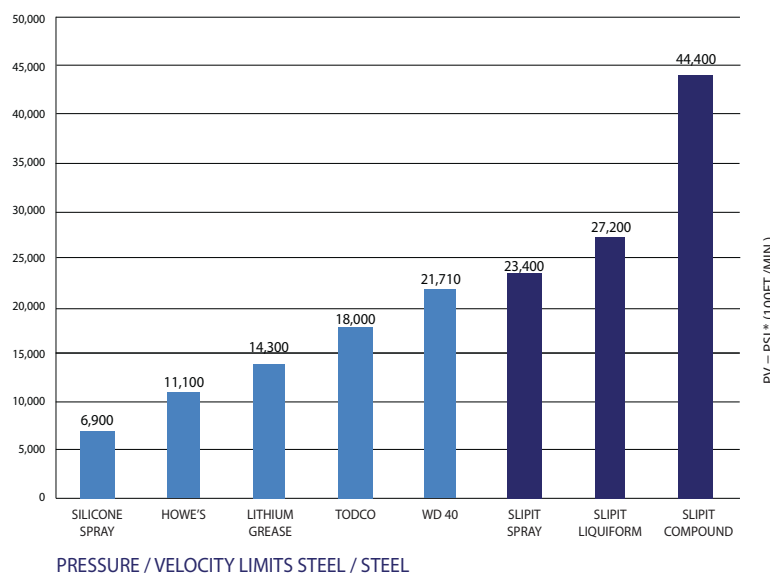
Any product that has been growing steadily in popularity for more than seven decades has obviously been thoroughly shop-tested. But SLIPIT has earned much more than anecdotal praise: it has

also delivered great results in testing at independent industry laboratories. There is solid science behind the performance claims. And woodshops that have been using other products for years are going to be quite surprised when they take a look at how their old favorites stack up – or in most cases don't – during independent testing against SLIPIT. Among the testing agencies are New York Testing Laboratories, Inc., the Handyman Club of America, and Rensselaer Polytechnic Institute (RPI). This last is a private research university and space-grant institution located in Troy, New York. It was founded in 1824 and is described as the oldest technological university in the English-speaking world. In RPI's rigorous testing, SLIPIT proved to be the best lubricant for load carrying and wear reduction.

Period.

There's an old woodworking adage that says if you look after your tools, they will look after you. If one keeps components and tables lubricated, there will be fewer interruptions in the flow of work. SLIPIT doesn't just contribute to faster feed speeds or fewer mechanical breakdowns. Properly lubricated equipment also

SLIPIT outperforms other lubricants in tests performed by RPI



contributes to safety, and in 77 years SLIPIT has yet to record a single safety-related incident. When everything runs smoother, woodworkers can concentrate on their primary task – building the best cabinets and furniture.

The nineteenth century educator Frances Willard (1839-1898) was fond of saying: "I will not waste my life in friction, when it could be turned into momentum." She wasn't actually talking about woodshop challenges, but she sure could have been. Friction was just as bad for her business then as it is for yours today.

Fortunately, we now have the solution. SLIPIT.



SLIPIT

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Email: slipit@slipit.com

Website: www.slipit.com

Instantly Improve Your Dust Collection



A high quality finish is the most visible evidence that a woodshop is making the best cabinets and furniture, and that always begins with dust control. A properly functioning collector will both scrub the air clean and also remove waste from parts as it is generated – everything from large chips to fine sanding residue. Superior debris removal also improves milling processes: it's essential that machines, and espe-

cially CNCs, are not being asked to cut the same material twice – once as a workpiece and the second time as accumulated sawdust that should have been removed.

Usually, the problem with inefficient dust control is not that woodshops have invested in the wrong collector: it's that the one-size-fits-all bags that manufacturers supply are not customized for the task. They're the wrong size, shape or filter for a specific environment.

For the past two decades, Florida based American Fabric Filter Company has been upgrading dust collection for woodshops all

over the country, often with quite dramatic results. The company designs and fabricates optimized custom dust bags and sleeves to go on collectors – anything from a 1/3 HP drum top hobbyist unit to a 100+ HP factory bag house system. A small collector's performance can often be substantially improved by increasing the filter area. But commercial shops may need larger filters with thicker fabrics, and AFF can

custom design and manufacture these to take full advantage of the available suction and airflow. Bags can be made with hanging loops, inlets of any size, shape or location, skirts, belt loops and many more add-ins. Sometimes the engineers design extra 'sister' bags to get the proper airflow without back pressure.

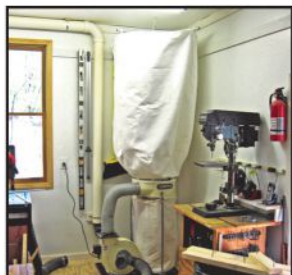
So, is it time to improve your returns – and that means both the quality and volume of the air going back into the shop, and also the investment that you made in a dust collector?



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**NO
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Even with changes in the EPA, companies are banking on environmentally-sound finishing products

By John English

During the last few decades, wood finishers have dealt with changes related to everything from waterborne products to formaldehyde and volatile organic compounds. These and other environmental concerns have changed the way that coatings are both made and applied. Now, some personnel changes at the EPA and a number of other federal agencies have shop owners wondering whether some of those regulations will be rolled back and, if so, what effect that will have on how things are done in the woodshop.

The best advice is probably to wait and see and be very slow to make changes. Yes, there might well be an interim easing of finishing regulations in the near future, but for several decades the tendency in the coatings industry has been to lessen any negative environmental impacts. There are elections every couple of years and various political winds will blow stronger every now and then. But one must watch decades-long trends for guidance when making investment decisions. And switching to new processes or products takes a considerable investment in time, tweaking and training. Given those trends, the odds are that any new regulations will revert quickly under another administration, or even if the makeup of the Senate changes in the off-year elections in 2018.

As one would expect, much of what's new in the coatings industry is related to environmental issues and many of the new products have been in the works since long before the election.

Formaldehyde free

AkzoNobel (online at akzonobel.com and chemcraft.com) has been working on UV-LED curing for some time, which it describes as "a sustainable wood finishing technique that uses up to 30 percent less electricity than competing curing methods." The company has recently developed AirGuard formaldehyde-free catalyzed lacquer and conversion varnish and the low-formaldehyde, isocyanate-free Verde Unico. This is a clear topcoat with urethane properties that combines the advantages of traditional urethanes and precatalyzed lacquer to deliver good moisture and wear resistance, according to the company.

Chemcraft also offers a full line of waterborne products under the Aqualux brand, all of which are low VOC and formaldehyde free.

In late 2016, AkzoNobel's Zweihorn division (zweihorn.com) introduced a new primer in Germany that "ensures a perfect opaque coat on wood and wood materials, such as particleboard with primer foil, solid wood or MDF." Called Wigranit in Europe, it could eventually be of interest to U.S. woodshops building painted casework.

PPG Industries (ppg.com) now marks products with its "Ecological Solutions from PPG" logo to identify those that meet environmental standards requiring either zero or low VOCs and can help earn LEED credits.

Zenith Waterborne Lacquer is a third-generation coating from Valspar (valsparwood.com). It is designed to yield a finish that is superior in durability to conventional nitrocellulose finishes. This is a low VOC, HAPS-free formulation that contains no isocyanate or formaldehyde, is packaged ready-to-spray and requires no reduction before use, according to the company.

By the way, woodshops in the southeastern U.S. might like to know that Valspar just signed a new distribution agreement with HGH Hardware Supply to offer its coatings throughout the region.

Aqua Coat (aquacoat.com) is a smaller manufacturer of waterborne coatings based in Elgin, Ill., and the product lines include interior stains, dyes, topcoats, sanding sealers, grain and pore filler, natural wood putty and additives to extend or decrease dry time and harden finishes. The company also makes water-based paint and primer, plus Aqua Coat Equipment Cleaner, which is specially designed to work with all its products.

Well-known in the Northeast, Bush Oil (bushproducts.com) is a high-solids rubbed-oil finish that dries to a rich luster and can be topcoated with nitrocellulose lacquers, urethanes, and rubbing varnishes if desired. This spring, the company is taking its products on the road and will be attending various shows in Maryland, Massachusetts, Ohio and New Jersey.

M.L. Campbell (mlcampbell.com) has been a North American manufacturer of wood coatings for more than 90 years. Last April saw the release of its new Polarion 2K acrylic interior polyurethane system that consists of sealers and primers, plus clear and pigmented topcoats with a full range of sheens, utilizing just one catalyst and mix ratio. It is GreenGuard-certified (greenguard.org), which is an indoor air quality performance-based standard that is used to define products with low chemical and particle emissions.

The company has also introduced Agualente Plus, a waterborne precatalyzed, one-component, VOC-compliant coating system that is based on advanced resin technology. It provides a hard, durable, stain-resistant finish for interior wood surfaces, trouble-free application and a beautiful appearance that mirrors a solvent-based precatalyzed system, according to the company. Agualente Plus consists of a sealer, primer, and clear and pigmented topcoats with a full range of sheens. It, too, is GreenGuard-certified.

Interesting applications

Bona AB (bona.com/en) is a family-owned Swedish company that was founded in 1919. Bona's retail branch supplies floor cleaners, but its industrial division caters to hardwood floor installers — specifically, it provides products for the installation, maintenance and renovation of wood floors. Among them is the Bona Sealer and Finish System. The sealers add color and they also make the finish topcoats adhere better to the floor. There are about 15 products in the line, one of which is Bona Traffic HD available in satin, semi-gloss and extra matte. Other products in the line deliver clear and amber tints and there is also Bona Pacific Filler — a waterborne compound specifically designed for filling cracks, holes, chips, gouges and broken edges in hardwood floors prior to finishing.

Iowa-based Old Masters (myoldmasters.com) has been making stains and finishes since 1926 and one of its latest offerings is a semi-gloss version of its exterior water-based Spar varnish that the company also recommends for interior wood surfaces such as windowsills, where extra ultraviolet protection is desired. It can be brushed or sprayed and cleanup is with soap and water.

Minwax (minwax.com) has a clever new product that might appeal to installers who need to touch up minor damage or perhaps create a matching small part on a remote job site. Called the Wood Finishing Cloth, it's a small plastic pouch that contains a rag with the finish already soaked in. The woodworker can wipe on various colors of stain and finish in one step (two for a darker tone) and it dries in an hour. A pair of plastic gloves is included and cleanup is with soap and water. Coverage is about 50 square feet and the product is available in natural oak, maple, chestnut, dark mahogany and walnut.

Water-based stain

George Adams bought a tiny finish plant from a Milwaukee lumber company back in 1984 and in the next 30-something years grew it from two employees into the brand of choice at many of the country's largest woodworking retailers such as Rockler and Woodcraft. New from General Finishes (generalfinishes.com) is a "Ready to Match Water-base Stain System" for professionals that is designed to make color matching a breeze. The system consists of 10 standard stain bases and a clear that are intermixed to make an endless amount of rich, deep colors. A woodshop receives 150 custom colors on maple and oak. They come in an attractive wooden box for a professional look when discussing color with clients. They're made with cabinet-grade plywood that is maple on one face and red oak on the other. Each chip is labeled with the formula right on the chip for quick, easy reference and the system can also be used to create custom colors. The RTM System can be used under any water- or solvent-based sealers or topcoats, according to the company.

New from H. Behlen & Bro. (hbehlen.com) is a family of Solar-Lux waterborne glazes that can be used for highlighting, antiquing, shading and adding accent colors to profiles. They can be brushed or wiped on and are designed to be applied over waterborne sealers and topcoats such as the company's Waterborne Urethane Finish. These glazes must be topcoated and they're available in two colors: B604-14785 Van Dyke Brown and B604-14355 Burnt Umber.

Waterlox has introduced its TrueTone tung oil in new, color-infused versions. "TrueTone is low odor, easy to clean, maintain and spot repair. It produces a matte to low gloss sheen and 90 percent of the resin

portion of the formula is from renewable, natural resources. It also forms a protective yet elastic finish against common household spills, moisture and foot traffic," according to a company statement.

Deft (buyat.ppg.com) is a branch of PPG Paints and the company's interior water-based wood stain is an oil-modified formula that penetrates deeply into wood pores for a rich, even color. It cleans up with soap and water and dries fast to enable stain and finishing in one day. The low-odor formula is ideal for use in enclosed spaces and it's excellent for use on furniture, doors, cabinets, trim and molding, according to the company.

Decore-ative Specialties offers a diverse collection of water-based



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finishes from classic stains to artistically inspired glazes. There is an excellent interactive introduction to these products on the company's website (decore.com), where a woodshop can preview various colors and combinations such as stain with a glaze, semi-transparent and clear coatings. If the name sounds familiar, it's because Decor-ative Specialties is also a major outsourcing supplier of RTA cabinet components, doors, drawers, moldings and hardware.

Nearing the finish line

Rust-Oleum introduced its new Varathane Ultra Thick Floor Finish

last May. The coating is thicker and stronger than traditional polyurethane with faster project completion, according to the company. The water-based formula can be used over bare or stained wood surfaces.

Zar (zar.com) carries a full line of clear coatings, from its classic high-solid, VOC-compliant finish to Ultra Max waterborne oil modified polyurethane.

Tried & True (triedandtruewoodfinish.com) says it makes 100 percent solvent-free and zero-VOC finish from all natural ingredients. Its Original Wood Finish is for custom furniture rather than production line casework. The company also makes a line of stain and finish products, which are essentially tinted versions of the original with natural pigments instead of beeswax. Both lines of product are considered food safe.

Woodworker's Supply has a proprietary line of finishing products that is sold under the brand name J.E. Moser. Among them is Woodshield industrial waterborne finish, which seals and protects work faster than oils, without the odor of lacquers and

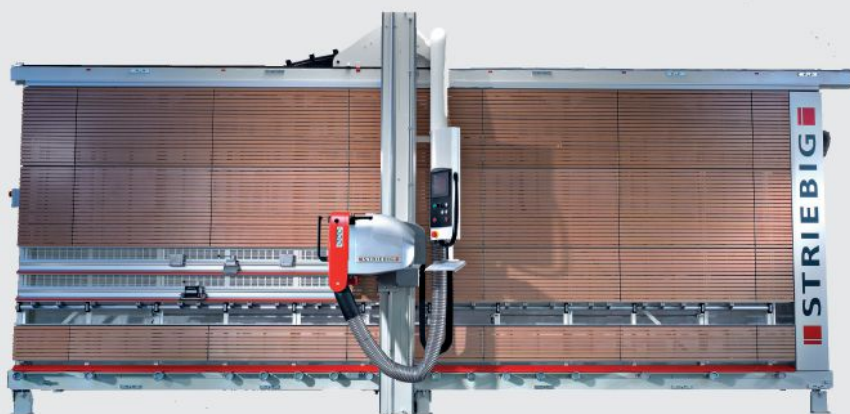
with much greater protection than shellac. It can be brushed or sprayed, works well in high traffic areas, is safer to use around kids and pets, and dries non-toxic and environmentally safe, according to the company. Woodshield can be tinted with J.E. Moser's Wizard Tints for custom finishes.

One last thought: woodshops interested in exploring UV-LED curing have probably noticed how loud some systems can be. If that's a drawback, take a look at Phoseon's new WhisperCool online (phoseon.com). It's a quieter solution with high UV output and it's based on high-power, air-cooled lamps. [W](#)

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ALL ON THE TABLE

BY JOHN ENGLISH

The innovation and variety of table saws
and their capabilities continues to grow

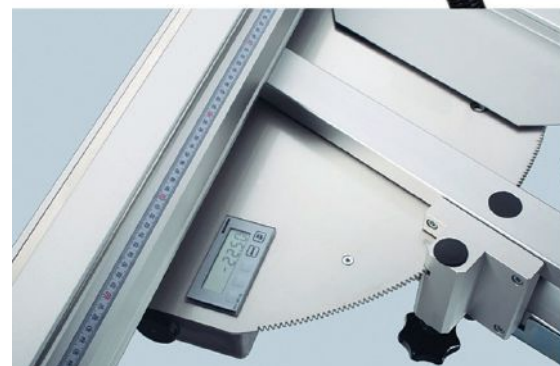
“T able saw” is an inclusive term. It embraces everything from large sliding versions to cabinet, contractor and portable job-site units. So identifying trends across all of these categories can be a bit overwhelming.

Let’s begin with larger industrial saws. Here, innovation seems to be happening in two main areas: more complex, yet easier-to-use, controls and improved ergonomics. More manufacturers are moving their control interface from the body of the saw to a swivel arm and, as more functions become automated, the programs are actually becoming simpler and easier to use.

Take, for example, Martin Woodworking in Charlotte, N.C. (martin-usa.com). The parent company is located in Ottobeuren, Germany, so the saws are built to traditional European engineering standards. Martin’s approach to controls is encompassed in one of the company’s slogans: “Let the machine do the calculations.” Its Radio-

Compens system asks the operator to set the radio-controlled miter crosscut table to the desired cutting angle and the machine then takes care of the rest. It delivers correctly calculated measurements, taking into consideration the kerf of the saw blade regardless of the blade’s width. If a woodworker needs to calculate a measurement from the top of a workpiece instead of the bottom, the operator can touch one button on the controller and the new measurements will be displayed. Another optional feature is what Martin calls a fourth axis, which describes motorized automatic stops for crosscutting.

Altendorf (altendorf.com/en) has revamped its F45 line and the new look embraces both modular and versatile solutions. The redesigned control module is at eye level, can be swiveled and comes in three different packages that let a woodworker decide just how versatile the saw needs to be. Options include automatically correcting the positioning of the rip fence when the saw unit is tilted, controlling the vacuum clamping system in the sliding table



(which can securely hold large workpieces), and remembering up to 999 memory settings. And the company’s ElmoDrive option can be linked to a cut-optimization package.

The two top-of-the-line saws from Austrian manufacturer Felder (feldergroupusa.com) also have control panels on swivel arms for maximum ergonomics and the Format 4 line’s Kappa 550 “e-motion” model has infinite storage space for programmed cuts. Felder offers 16 models of sliding saws under its Format 4, Felder and the budget-conscious Hammer branding.

That trend toward more electronic control is also evident in Baileigh Industrial’s three versions of its slider, the STS-14120. The company (baileigh.com) offers its DRO model with digital



Martin Woodworking's T-70 slider with radio-controlled features.

readouts on the fences and a CNC model that lets the woodworker store cut programs.

Robland (robland.com) builds table saws in Bruges, Belgium and its Silverline PS3200 X slider has touch-screen controls plus digital readouts on two flipper stops on the crosscut fence. With ergonomics in mind, this machine also comes with a moveable on-off switch for the blade and the scoring unit.

Laguna Tools (lagunatools.com) offers the PP16/XC, featuring a rip fence that is controlled by a high-precision ball screw and a DC motor. The overhead control panel features a digital readout for the rip fence and, with ergonomics in mind, the arm is extended to make it easier to reach when working with larger panels.

The Si X L'invincibile sliding saw from SCM/MiniMax (scmgrouppna.com) has a sliding table structure with special, patented, ground-arch steel guides. The saw has a telescopic swinging arm that's composed of a large dimensioned extrusion with a linear guide on recirculating ball bearings. And, once again, the Easy Touch control panel is at eye level to help make life a little easier for the operator.

Cantek America Inc. (cantekamerica.com) offers half a dozen sliders, two of which have eye-level control panels. The D405ANC comes with a programmable rip fence (up to 51") with a precision ball screw.

Not every shop can afford state-of-the-art electronics and programmable fences and there

are many saws available that deliver exceptional results for a smaller investment. Among them are the Active 400 from Biesse (biesse.com), the SF-45A from Silver Machine (silvermachinery.com), and the 9610 from Oliver (olivermachinery.net). All of these offer body-mounted controls and manual stops, as do the three families of Italian saws from Paoloni that are available from AMC Machinery Parts in New Milford, Conn. (amcmachineryparts.com).

Italy's Casolin (casolin.com/en) builds four sliding table saw models in this genre and Grizzly Industrial (grizzly.com) carries eight sliders, including model G0772 with a digital console to control blade speed, height adjustment, blade tilt and scoring blade alignment.

It accommodates both 12" and 14" blades and is powered by a 10-hp main motor (single or 3-phase), plus a 1-hp scoring blade motor.

Safety is trending

Taking control a step farther, the Italian manufacturer Griggio (www.griggio.com/en) offers the "Unica Safe" sliding saw that incorporates technology akin to that in SawStop models. This kind of device will definitely become a more widespread trend in the next few years as insurance carriers grow more familiar with it.

But American woodworkers might have to wait a while. On Jan. 27, the U.S. International Trade Commission ordered U.S. Customs to exclude Bosch's Reaxx table saws — and cartridges for those saws — from entering the United States and the ITC issued an order to Robert Bosch Tool Corp., saying it must "cease and desist from conducting any of the following activities in the United States: importing, selling, marketing, advertising, distributing, transferring (except for exportation) and soliciting United States agents or distributors for imported table saws."

Where that leaves woodworkers is anyone's guess. It seems reasonable to assume that overseas manufacturers of larger saws will either license SawStop technology or develop new safety products that don't violate the design copyright. Many woodshop owners

would like to see a device that drops the blade below the table, but doesn't become lodged in a block of aluminum, so that both blade and block need to be replaced every time the device is triggered. That's how Bosch's Active Response Technology platform works: it doesn't damage the blade and, after activation, it can be reset in less than 60 seconds.

The largest saw currently offered by SawStop is a 10" cabinet model with a fixed table.

Cabinet and contractor saws

Here, the trends are making riving knives, blade guards and splitters easier to use; providing locking arbors for easier blade changes; installing better drive belts for more efficient power transfer; and, in some cases, designing better sawdust extraction. Some of the bigger saws are also getting even heavier and more impervious to vibration: the 14" PM2000 from Powermatic, for example, weighs in at a healthy 750 lbs.

Coming out of a long recession, woodworkers have changed the way they think about machines such as basic table saws. During the years when replacing equipment wasn't so easy to do, woodshops began to harken back to an attitude that was more prevalent in prior generations — among those who had witnessed the Great Depression and the shortages of the war and post-war years. In the last

decade, there has been an emerging trend toward taking better care of the machines already owned and performing more routine maintenance. Advances in dust collection and air scrubbing are part of that, as is the inclination toward lean manufacturing where stoppages and breakdowns are intolerable interruptions. Shops are rediscovering routines that involve checking blade and fence tolerances with micrometers; coating surfaces regularly with protective lubricants such as SlipIt (a silicone-free coating that can be used around bare, unfinished wood); updating belts and pulleys from flat to V or segmented versions; replacing frayed or aged wiring and so on.

For shops looking for this type of machinery, the manufacturers of cabinet and contractor table saws (as well as benchtop versions for job-site work) include Black & Decker, Bosch, Craftsman, Delta, DeWalt, General International, Hitachi, Makita, Metabo, Powermatic, Ridgid, Rikon, Rockwell, Ryobi, SawStop, and Woodstock International/Shop Fox.

Woodstock also offers a small sliding table saw, the W1811 (compare to the Grizzly G0623X), which is a 10", 5-hp cabinet saw equipped with a scoring blade. This, too, could become a trend, bringing the versatility and repeatability of a slider to the hobbyist or very small shop — and doing so at an affordable price. **W**

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►► **MILWAUKEE** introduces the Tick, a professional-grade Blue-tooth tool and equipment tracker. The Tick can be easily attached and hidden from sight on any product, regardless of brand, providing users with a way to track anything in their inventory through Milwaukee's One-Key app, according to the company. For more, visit www.milwaukeeetool.com.



◀◀ **BESSEY TOOLS** introduces the Cabinetry Clamp, model BES8511, designed to combine the multiple steps of face frame cabinet installation into one easy process. Face-frame stiles can be tightened, aligned, pre-drilled and fastened while the clamp is held in place. The clamp holds the individual cabinet edges together while also keeping the faces along the joint flush. It works on stiles 1-1/2" to 2" and up to 1-1/4" thick and has a pilot-hole drilling guide on one end, according to the company. For more, visit www.besseytools.com.



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◀◀ **DEWALT** is adding a 60-volt chain-saw, model DCCS670X1, to its Flex-Volt System of cordless tools. The chainsaw features a brushless motor, 16" Oregon bar and chain and auto-oiling system. It sells for \$349 and will be available this spring. For more, visit www.dewalt.com.

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▲ **PALMGREN**, a C.H. Hanson brand, introduced a 24" disc sander for finishing medium-to-large work pieces. The machine can grind, deburr, contour and finish all sizes and types of workpieces including metal, wood and plastic due to its larger area of contact, according to the company. Safety features include adjustable guards and an emergency stop button. For more, visit www.palmgren.com.

► **SNX TECHNOLOGIES** presents the nVision System1 STS, a semiautomatic contour bander featuring a touch-screen Programmable Logic Controller (PLC) to make servo-motor adjustments of the trimming system. Operators enter new board thicknesses or tape preferences and the machine's servo motors make the necessary adjustments. The nVision STS can accommodate tape selections from .5 to 3mm in thickness. The PLC can also make fine adjustments to top and bottom tape trimming results for consistent, high-quality results, according to the company. For more, visit www.snstechnologies.com.



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From calamity grows a traveling exhibition

Sculptural wood boxes were formed from a father-and-son collection of seeds and samples gathered after a 2010 storm

By Jennifer Hicks

Now through Apr. 16, the Fuller Craft Museum in Brockton, Mass., is presenting "Bartram's Boxes Remix," a traveling exhibition of sculptural wood boxes. The exhibition is a col-

laborative project between the Center for Art in Wood and Bartram's Garden in Philadelphia.

"In 2010 a devastating storm knocked down a number of trees at Philadelphia's historic Bartram's Garden, home of America's great 18th century botanists. John Bartram and his son William gathered and catalogued Ameri-

ca's flora and then sent seeds and other samples in special boxes back to collectors in England. The Center for Art in Wood asked artists from around the world to use the fallen timber from Bartram's Garden to create art works that would honor the legacy of the Bartrams. The result is a show, Bartram's Boxes Remix,

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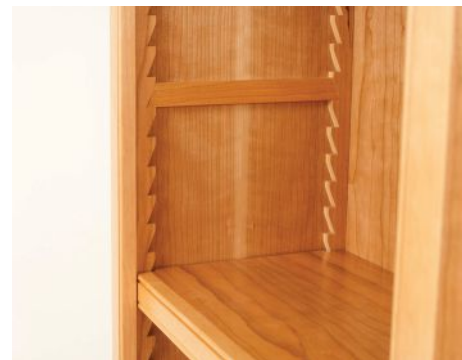


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with 40 very talented artists,” according to a statement from the galleries.

The show also includes sculptural objects and installations created out of salvaged wood and other materials found in Bartram’s Garden.

The Peabody Essex Museum in Salem, Mass., presents “World of Wearable Art,” featuring wood, aluminum, fiberglass and other unusual materials to make clothing. The exhibit opened Feb.18 and runs through June 11.

David Walker, a woodworker in Juneau, Ala., has two entries. “Beast in the Beauty” is an ensemble made with maple and padauk veneers, while Walker’s “Lady of the Wood” dress features mahogany, lacewood, maple and cedar.

World of Wearable Art — or “WOW” as it’s commonly referred — is an annual design competition in New Zealand that challenges sculptors, costume designers, textile artists and makers of all stripes to explore the boundary between fashion and art, according to the gallery. [W](#)

Contacts:

Fuller Craft Museum, 455 Oak St., Brockton, MA 02301. Tel: 508-588-6000. www.fullercraft.org

Peabody Essex Museum, 161 Essex St., Salem, MA 01970. Tel: 866-745-1876. www.pem.org



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CALENDAR

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, at 17015 Burbank Boulevard in Encino. www.sfvw.org

April 26-28 — Woodworking Industry Conference. Annual event, open to members of the Wood Machinery Manufacturers Association, Wood Machinery Industry Association and other trade groups, focuses on business development, networking and education. Location: Omni Rancho Las Palmas Resort & Spa, Palm Springs. For more, visit www.wmia.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. For information, visit www.tampawoodcrafters.org.

March 17-19 — Woodworking Show at Tampa, offering tools and machinery for sale, hands-on demos and skill training seminars. Location: Florida State Fair Entertainment Hall. www.thewoodworkingshows.com

GEORGIA

March 10-12 — Southern States Woodturning Symposium. Scheduled demonstrators include Stuart Moritmer, Dixie Biggs, Dennis Pallus and Windsor chair maker Greg Pennington. Other events include a gallery, trade show and auction. Location: Clarence Brown Conference Center in Cartersville. www.southernstatessymposium.com

March 17-19 — American Craft Show Atlanta. A three-day celebration of hand-made work featuring more than 225 top artists of furniture, home décor, jewelry and other custom items. Location: Cobb Galleria in Atlanta. www.craftcouncil.org

March 31-April 2 — Woodworking Show at Atlanta, offering tools and machinery for sale, hands-on demos and skill training seminars. Location: Cobb Galleria. www.thewoodworkingshows.com

KENTUCKY

April 3-4 — Architectural Woodwork Institute Spring Leadership Conference. A professional development event featuring keynote speakers, interactive workshops, plant tours and networking opportunities. Location: Hyatt Regency in Lexington. www.awinet.org

MARYLAND

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

Feb. 24-26 — American Craft Show Baltimore. A three-day celebration of hand-made work featuring more than 650 top artists of furniture, home décor, jewelry and other custom items. Location: Baltimore Convention Center. www.craftcouncil.org

MASSACHUSETTS

March 24-26 — Paradise City Marlborough. Celebrating its 20th year, the juried arts festival features fine furniture and other handmade items by over 175 exhibitors. Location: Royal Plaza Trade Center in Marlborough. www.paradisecityarts.com

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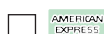
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April 23-25 — Executive Briefing Conference hosted by Stiles Machinery. Hear from company leaders with knowledge, strategies and forward-thinking attitudes for manufacturing success in today's economy. Location: Westin Book Cadillac Hotel, Detroit. www.stilesmachinery.com

MINNESOTA

April 7-9 — American Craft Show Saint Paul. A three-day celebration of hand-made work featuring more than 225 top artists of furniture, home décor, jewelry and other custom items. Location: Saint Paul RiverCentre. www.craftcouncil.org

NEVADA

July 19-22 — AWFS fair. A biennial show featuring new products and machinery with some of the latest technology, educational seminars and panel discussions addressing business-related topics, networking opportunities, a student design competition and much more. Location: Las Vegas Convention Center. www.awfsfair.org

NEW YORK

Monthly — Sawdust and Woodchips Woodworking Association meetings are held on the

first Wednesday of each month at 6:30 p.m. at the Cold Springs Fire Department in Baldwinsville. www.sawdustwoodchips.org

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

June 22-26 — Society of American Period Furniture Makers Mid-Year Conference. Annual member gathering that features training seminars, museum tours, networking, and discussion of American period furniture. Location: Old Salem historic district and Museum of Early Southern Decorative Arts in Winston-Salem. www.sapfm.org

PENNSYLVANIA

March 31-April 2 — Philadelphia Invitational Furniture Show. Annual curated show featuring handmade artisan furniture and furnishings. Now accepting exhibitor applications. Location: 23rd St. Armory, Philadelphia. www.philadelphiafurnitureshow.com

RHODE ISLAND

Nov. 3-5 — Fine Furnishings Show offering handmade furniture, accessories and fine art. Location: Pawtucket Armory Arts Center in Pawtucket. www.finefurnishingshows.com

SOUTH CAROLINA

Oct. 29-31 — Architectural Woodwork Institute Convention featuring panel discussions and networking opportunities for industry professionals. Location: Charleston (venue TBA). www.awinet.org

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

TEXAS

Nov. 12-14 — Specialty Tools & Fasteners Distributors Association 41st annual convention and trade show. Manufacturers, distributors and other industry professionals will convene and take part in educational programs, seminars and new product debuts. Location: Austin Convention Center. www.staftda.org

WISCONSIN

Sept. 15-17 — Fine Furnishings Show, featuring handcrafted furniture and accessories. Location: Muellner Building in Hart Park, Wauwatosa. www.finefurnishingshows.com

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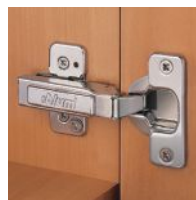
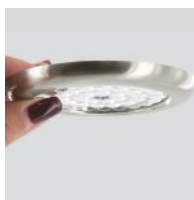


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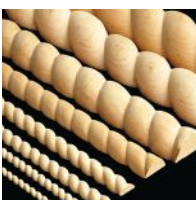
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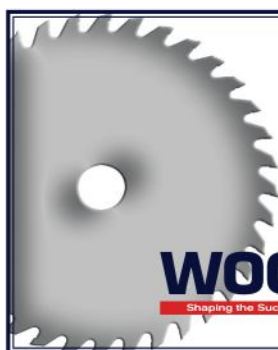
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Old Salem and the Museum of Early Southern Decorative Arts will host the SAPFM's mid-year conference in June.



Carolina in their minds

The Society of American Period Furniture Makers is returning to the Old Salem Historic District in Winston-Salem, N.C., for its mid-year conference, which is scheduled for June 22-26.

The group of furniture makers and collectors had a sold-out show at the venue in 2012.

"Old Salem is a Moravian community that celebrated its 250th anniversary last year and has always been a very active community," says Tom Sears, chairman of SAPFM's Back Country Carolina chapter. "It has great history and we have the Museum of Early Southern Decorative Arts here, which is the absolute premium museum if anybody's trying to study Southern decorative art."

The conference is limited to 90 attendees on a first-come, first-serve basis. Registration opens April 1.

"We'll have expert presenters, such as Steve Latta who will be repeating a two-hour presentation," Sears says. "We'll also divide attendees into groups of 30, so everybody can get up close and personal with the presentations."

Other scheduled presenters include Ronnie Young and Martin O'Brien.

For more, visit www.sapfm.org. 

— Jennifer Hicks



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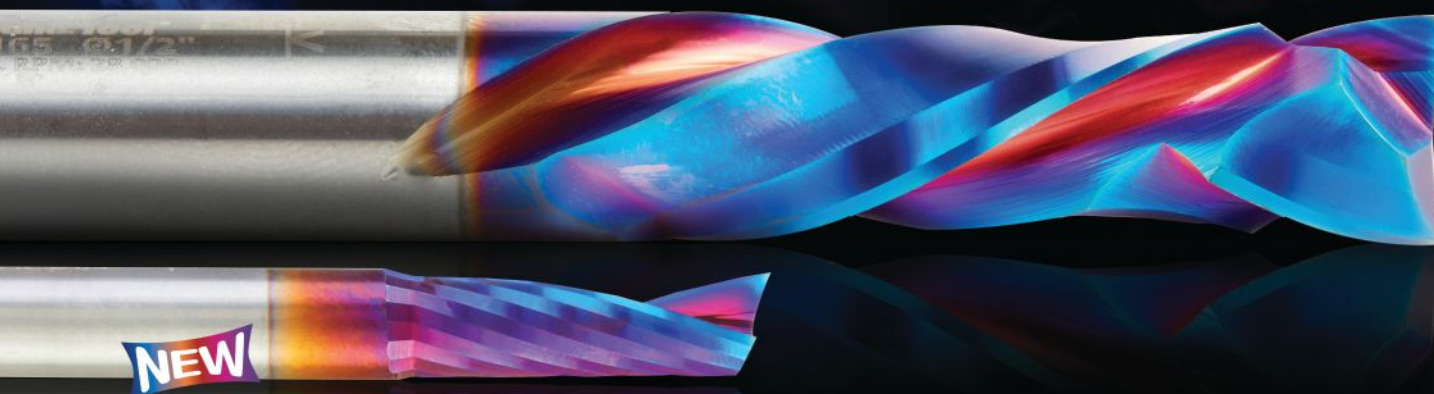
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SOLID CARBIDE COMPRESSION SPIRALS FOR MDF/LAMINATE



Tool No.	Dia.	Cut Height
46169	1/4"	7/8"
46167	3/8"	7/8"
46161	3/8"	1"
46166	3/8"	1-1/8"
46162	3/8"	1-1/4"
46165	1/2"	1-5/8"
46163	1/2"	1-1/4"

For complete tool specifications please see website.

NEW

SOLID CARBIDE SPIRAL 'O' FLUTE BITS FOR PLASTICS



Tool No.	Dia.	Cut Height
51441-K	1/16"	1/4"
51410-K	1/8"	1/2"
51446-K	1/8"	3/4"
51417-K	3/16"	5/8"
51404-K	1/4"	3/4"

For complete tool specifications please see website.

UP TO
2.5X
LONGER LIFE
COMPARED TO UNCOATED BITS



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