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May 2020

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### Over the Workbench

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### 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

## There's no place like home

Especially when you don't have a choice ...

This is one of the hardest columns I've ever tried to write. To be honest, I'm not sure what to say. I'd like to offer reassurance that everything will eventually return to normal, but I don't know that. I could suggest that the best plan is to weather this storm by doing A, B and C, but I don't have the playbook for a pandemic.

So, like many of you, I'm trying my best to adapt to the situation. After 30-plus years of going to an office, I'm working from home. It's been a major adjustment, but I don't have to shower as often. The dog won't leave me alone, and my son is home schooling, but otherwise publishing is practically made for telecommuting.

You certainly face more difficult challenges. We've talked with a number of shop owners to learn about those challenges and how they are responding. Please read and learn from the story on Page 8.

The best I can offer is information about the CARES Act, which contains \$376 billion in relief for American workers, small businesses, and SBA funding programs, including the Paycheck Protection Program, EIDL Loan Advance, SBA Express Bridge Loan and SBA Debt Relief.

The Paycheck Protection Program provides small businesses with funds to pay up to eight weeks of payroll costs, including benefits. Funds can also be used to pay interest on mortgages, rent, and utilities.

The funds are provided in the form of loans that will be fully forgiven when used for payroll costs, interest of mortgages, rent, and utilities. Loan payments will also be deferred for six months. No collateral or

personal guarantees are required. Neither the government nor lenders will charge small businesses any fees.

Forgiveness is based on the employer maintaining or quickly rehiring employees and maintaining salary levels. Forgiveness will be reduced if full-time headcount declines, or if salaries and wages decrease.

Small businesses with 500 or fewer employees, including self-employed individuals, sole proprietorships, and independent contractors, are eligible.

Small businesses can also borrow up to 2.5 times their total monthly payroll (with a maximum of \$10 million) using their payroll numbers from before the crisis at 1 percent interest. Repayment will be deferred for six months.

You can apply through any existing SBA 7(a) lender or through any federally insured depository institution, federally insured credit union, and Farm Credit System institution that is participating. You should consult with your local lender as to whether it is participating. All loans will have the same terms regardless of lender or borrower.

The EIDL Loan Advance program provides up to \$10,000 of economic relief to businesses that are currently experiencing temporary difficulties.

SBA Express Bridge Loans allow small businesses who currently have a business relationship with an SBA Express Lender to access up to \$25,000 quickly.

SBA Debt Relief provides a financial reprieve to small businesses during the COVID-19 pandemic.

Guidance and more information is available at [sba.gov](http://sba.gov) and [coronavirus.gov](http://coronavirus.gov).

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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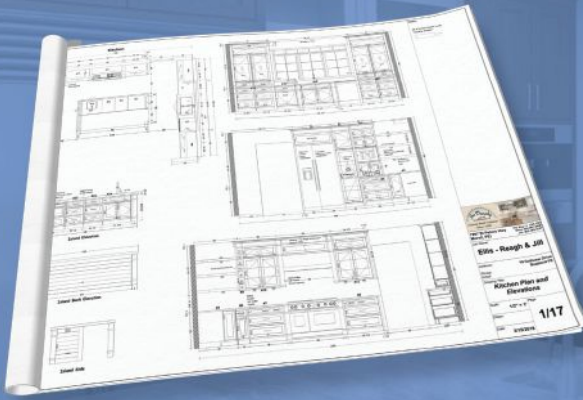
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# NEWS DESK



## ‘Holding tight’ until ‘life returns to normal’

By Jennifer Hicks

**F**rom updating safety and health policies to stringent sanitizing procedures, woodshops of all types have been on their toes since the COVID-19 pandemic took hold of the world.

In March, when the nation began to grapple intensely with widespread shutdowns in all facets of life, Woodshop News surveyed recently featured shops. While their owners and managers expressed everything from uncertainty and fear to positivity and hope, all shared the common sentiment of being in this together with the goal to press on through the challenges they face.

**Eric Criscitello of From the Heart Cabinetry in Potsdam, N.Y. (“Positioned in Potsdam”, February 2020)** says his business was extremely busy as of March and is remaining calm and collective about the whole situation, hoping it subsides.

“We don’t know what the future holds. Obviously, I’d be more concerned with six months from now depending on how long this lasted than I would be for today or in the next six months. We have work scheduled all the way out into fall anyway in some form or

another with some big commercial jobs and things like that,” says Criscitello.

“We’re all in this together. It’s not like it’s just one industry or one thing that got hit, it’s the world. So, you’ve got to kind of slow down the gut reaction and say ‘hey, we have to climb out of this.’ The one good thing about manufacturing and fabrication like we do is that someday down the road people are going to need us. I feel really concerned for service industries because they can’t make that work back up. But as fabricators and manufacturers, I think if we hold tight and try to do the best that we can, we’ll be okay.”

**Greg Bettencourt of Revolution Furnishings in Manchester, N.H. (“Two brands, one direction”, January 2020)** has made significant changes to the retail portion of his business and has applied for an SBA loan. He continues to ensure his team that the situation is rapidly evolving and keeps them updated as much as possible.

“In simplest terms, our plan is to do everything we can to stay open. That is the best-case scenario for us, our customers, and the suppliers that rely on us. That said, with each day that passes this is becoming more difficult.

Most of our furniture retailers have been ordered to close or are not accepting deliveries and our retail traffic for kitchen cabinetry has slowed,” says Bettencourt.

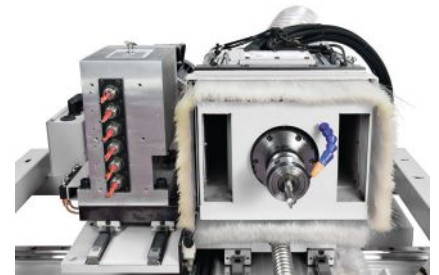
“In response, we have been working on a number of initiatives to connect directly with customers in our local area in order to keep sales flowing: We are working to get a cabinetry site live to sell our bathroom vanities direct ([www.bath.revofurn.com](http://www.bath.revofurn.com)). We’re actively working with [Wayfair.com](http://Wayfair.com) to promote our products within New England to support local manufacturing. We recently worked to develop partnerships with local retailers to purchase low-cost desks to fit the needs of the millions of families now at home trying to make work and school a productive routine. I’ve reached out to numerous companies across the nation, the local governments of New Hampshire, Massachusetts and New York, multiple federal agencies, and the White House to raise our hand to help in the fight producing items that are most needed right now. If only we could make masks and ventilators! We’ve also applied for a disaster relief loan from the Small Business Administration, designed to give us a bridge to keep part or all of the business operational as long as we can in hopes that life returns to normal in the near future.”

**Kurt Echols of Cabinet Fever in Anchorage, Alaska (“Made in Alaska”, November 2019)** has kept on working even though he’s had to close the showroom for walk-in customers.

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"Our mayor has closed all non-essential businesses and apparently that's us too. Although I'm going to keep the guys in the shop and keep them working, we're going to close the store for a while per the mayor's emergency order. That way I can still go to work," says Echols, who remains as positive as he can be.

"You can't let it get you down. We've all got to get through this together. There's very much unknown. We're a little short on money - cash flow's a problem. Several people that we had finished jobs for have not paid for what they owe us. They're hoarding their money just like they're hoarding their toilet paper. But we still have a lot of work on the books. I'm backed up probably six weeks right now."

**Kevin Dean of Dean Cabinetry in Bolton, Conn.** ("Hitting all price points," September 2019) says his team is trying everything it can to keep business going and help the situation, in addition to stressing hand washing and staying home when feeling sick.

"The virus has definitely slowed things down. The leads have slowed, and people are hesitant to move forward with their projects. Projects already in motion and new homes still

need cabinets so that is keeping us busy. We have cut back working hours to balance the workload. We don't want to lay anyone off. We are lucky that construction and manufacturing have not been asked to shut down," says Dean.

"We have started offering remote design consultations through video chat. These have been great so far. In fact, it is easier for our designers and saves time. We expect these types of meetings to increase even after the health concerns go away."

**Jim Shuffler of Exquisite Custom Cabinets in Portsmouth, Va.** ("Where every day is Monday", July 2019) says business is generally good, but uncertainty about the pandemic itself and state of the economy is always unsettling.

"It was a bit of a scare when the non-essential businesses were shut down here and I'm just praying they don't shut us down. We entered this year with five large custom homes to work on, so we've been very blessed and we're working on those. We're doing our part to be healthy and safe. Our benches are distanced far apart, we've ordered cleaning supplies and we've closed down the breakroom. As a nation we're in this as a whole so we'll

just hope for the best and do what we can to stay safe and help others," says Shuffler.

**Dave Grounds of Quality Cabinets in Jenks, Okla.** ("At home in Oklahoma", November 2015) says business has remained pretty much the same.

"We're doing common sense social distancing right now. We're a small, four-man shop so we're spread out in the shop as it is. So, it hasn't been too big a concern and we're just trying to be careful," says Grounds.

"It hasn't really seemed to affect the overall demand and number of phone calls that are coming in. I think it will. I think the longer that it continues I think it's going to have more of an impact, but it hasn't really seemed to impact the number of calls we get a day. I think it really depends a lot on what part of the country you're in. I think the bigger the population density, the more an issue it is and as you get out into more rural areas, Oklahoma of course we do have a number of confirmed cases here but our population density is less and I think that's the big driver of how big an impact it's going to affect any given part of the country." 

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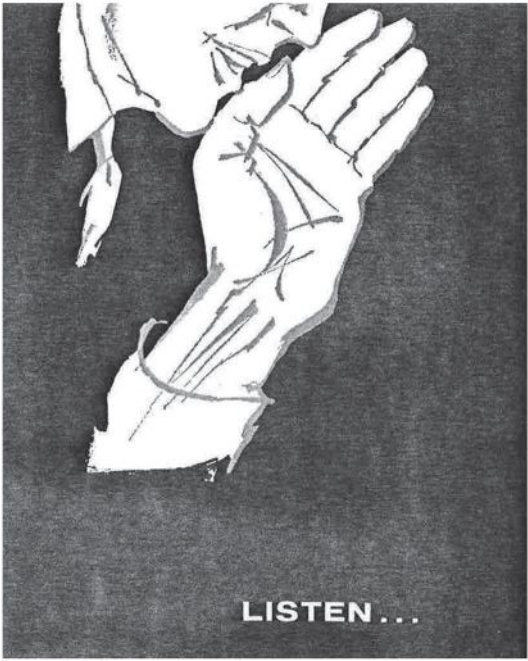
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## KBIS draws big crowd in January

By Jennifer Hicks

**T**he Kitchen & Bath Industry Show, held Jan. 21-23 in Las Vegas, got high marks from its owner, the National Kitchen and Bath Association.

"This was an amazing event. One of the best since 2008. The energy at KBIS was electric," says Suzie Williford, executive vice president of industry relations and chief strategy officer for NKBA.

"KBIS is the time we bring the entire industry together and this year was especially stellar. There was a constant flow of new and exciting products to see and insights to learn, whether walking the show floor, participating in one of our educational sessions, attending a KBIS/Next Stage panel discussion, or reconnecting with an industry colleague. KBIS 2020 was exceptional."

KBIS is held conjunction with the International Builders' Show as part of Design and Construction Week. Total attendance was announced at over 90,000.

KBIS featured over 600 exhibitors, 70 education sessions, award programs and more.

"We came into this year with a sold-out show floor, more than 500 returning exhibitors and 100 exhibiting for the first time," says Amy Hornby, KBIS show director. "KBIS has experienced double digit attendance growth over the past two years, and hundreds of exhibitors are confirmed to exhibit at KBIS 2021, with many increasing their show presence. Early sales are up over 20,000 more NSF than the same time last year, with more than 85 percent of the show floor space secured."

KBIS 2021 is scheduled for Feb. 9-11, 2021 in Orlando, Fla.

For more, visit [www.nkba.org](http://www.nkba.org). 

## CERF+ launches COVID-19 Response Fund

By Jennifer Hicks

**C**ERF+ has started the COVID-19 Response Fund to support artists working in various craft disciplines. It also asks for donations to be made through its website, [www.cerfplus.org](http://www.cerfplus.org).

"This fund is essential to our rapid and effective response to those artists suffering severe health impacts from the coronavirus, ensuring that CERF+ has the funds necessary to respond to this unprecedented crisis," CERF+ executive director Cornelia Carey said in a statement.

CERF+ was also conducting a national COVID-19 impact survey in March to gather information from artists about their status.

"We need this data to advocate for artists and other self-employed workers to access various federal emergency relief packages from the federal government. This survey will also help us better understand how we can be most helpful to you," Carey said.

CERF+ has assisted hundreds of professional artists working in craft disciplines with emergency financial assistance and has provided resources and educational programs for them to strengthen and sustain their careers.

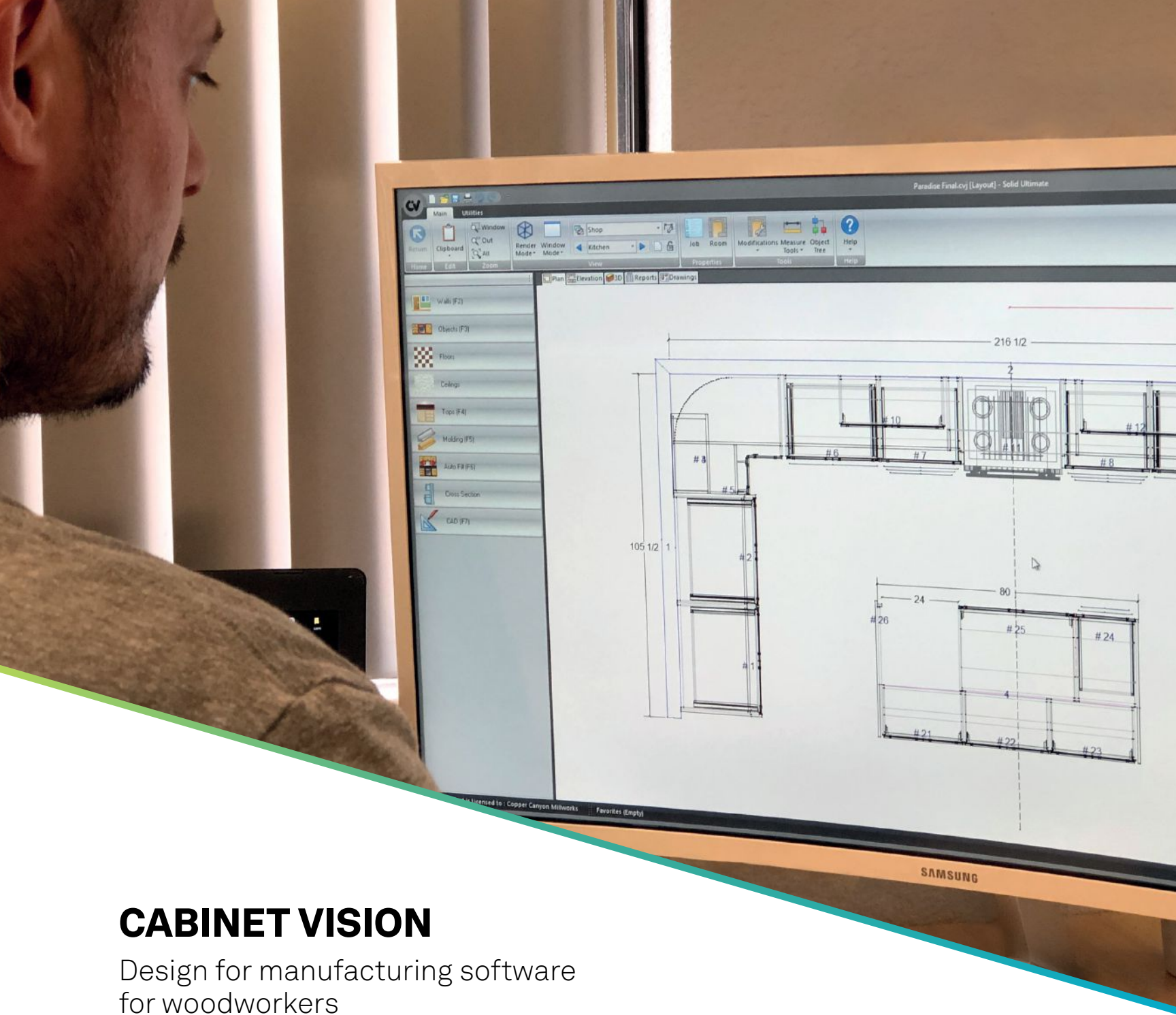
The organization has suspended all workshops and gatherings until further notice.

For more, visit [www.cerfplus.org](http://www.cerfplus.org). 


**COVID-19  
RESPONSE FUND**



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## Mahogany supplies shouldn't diminish

By Jennifer Hicks

**M**ahogany and other imported species haven't been adversely affected by the COVID-19 pandemic, according to U.S. dealers. In the context of Honduran and African mahogany, there have been some dips in sales as well as delivery delays, but advanced purchasing practices have made it so supplies remain readily available.

"Our purchasing is pushed so far out, maybe six to nine months out. We're dealing with rainy season and logging season and the country of origin. There are all these factors that come into play. We're usually aware of the delays and with this whole COVID-19 it just adds one more layer to the delay. How much, we don't know. It just really depends on the country of origin and how they're impacted," says Fabs Corte of Cormark Int., an importer and seller in Weaverville, N.C.

Corte predicts wide-ranging issues at ports will cause the bulk of delays for at least several months. His African mahogany supplier, for example, has already dealt with a lack of containers, new shipping routes, and offloading delays. Corte recently asked one of his Honduran mahogany suppliers to hold on to his next shipment for a few months.

"They were very receptive. A lot of these mills are used to working in a longer range. It's not like you call up and two days later

they've loaded a container and it's on its way. Contracts are made, and it takes up to 90 days just to process them. So, in this case they understand the situation. Also, some of the countries in Central and South America, they are monitoring with the situation themselves and they are dealing with their own casualties from COVID-19, so they understand," Corte says.

Doug Newman of Newman Lumber Co. in Gulfport, Miss. raises the issue of global uncertainty and says it's contributing to lower sales right now, but on a positive note says availability of mahogany and other exotic supplies shouldn't be too much of a concern.

"On the import side the biggest problem I'm facing is sales have fallen off. We're purchasing six months to a year, sometimes a year and a half in advance. So, I've got material coming for the next year and a half based on what we were doing previously. That is probably the biggest challenge for us," says Newman, who always keeps a year's worth of inventory in stock.

"If this continues, and there are a lot of ifs, but if anybody's worried about import species not being available moving forward, I don't think that will be the case. I've got shipments booked all the way through July 2021, so it's coming, it will be here. I don't think there should be any irrational fear about there not

being any exotic material."

Newman is a supplier to Lou Irion of Irion Lumber in Wellsboro, Pa. Irion keeps mahogany in stock, particularly for period furniture makers, but says it's not selling like it used to.

"I try to carry mahogany because it's one of the period furniture woods and we've always had good sources for it. Our personal experience is that sales of mahogany for us are down significantly. It just seems that for our clientele it's passed out of favor which is kind of funny because so much of the 18th century furniture had to be made out of mahogany and we're not even seeing the serious hobbyists that we used to see. We haven't abandoned it, it's just not been a big seller for us," says Irion.

In March, retail quotes for 4/4 FAS Honduran mahogany averaged about \$14/bf, while 4/4 FAS African mahogany averaged about \$8/bf. **W**



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## Take the time and effort to acclimate your lumber

Wood, for all its utility, beauty and workability, has some definite idiosyncrasies and issues, and gaining an understanding of said issues will make your woodworking experiences a lot more positive. All wood by its nature is hydroscopic, a fancy word for the fact that wood will continue to give off and take in moisture to reach an equilibrium with its immediate environment. When it is in a damper environment wood will swell, and in a drier environment it will shrink. You may notice this with your own wooden doors and drawers that closed all winter will expand and stick with the summer humidity, only to retreat come next winter. No matter how long a piece of furniture or millwork has been in existence, it will continue to adapt to its current environment.

The most obvious experience I have encountered of this phenomenon was repairing and restoring period furniture. The best example is probably the antique furniture that was imported from England to furnish American homes. Our shop was constantly taking care of this furniture, which would split, shed moldings, veneers and applied parts with a vengeance. It didn't help matters that the bulk of the furniture was thick mahogany veneers applied to roughly 1/2"-thick oak, and that oak had its decidedly own idea of where it wanted to be. We wondered how furniture that had stayed intact for sometimes hundreds of years could suddenly start to implode, and it took a while to figure out the reason why. The main culprit was the changed environment from the damper English climate and lack of central heating and air conditioning in homes there to homes in the U.S. with central heat and often super dry conditions.

There is also a myth that all lumber you receive is fresh out of the kiln like a baker's bread, and that is hardly the case. I spent a lot of time on the grading stations at a few large lumber distributors and I was amazed at the warehouses chock full of lumber stacked 20' high and many rows deep. I

often wondered how long some of the lumber sat in the back rows of their giant sheds before being distributed. Specialty lumber dealers like ourselves inventory lumber in closed sheds that sit there until the right customer comes along, and sometimes that can be years. The lumber is kiln dried and the core reflects that, but the surface can pick up some moisture and the possibility always needs to be considered.

### Let it adjust

The key to minimizing the variation in your lumber is to properly condition or acclimate it in the shop. This definitely takes some time and some planning, and it may not be practical for larger production shops, but any chance you have to give the wood some time to adjust before starting to machine it will lessen your problems. Wooden floor installers are well aware of this need and will often insist on stacking the flooring in a heated room onsite with space to breathe and move a bit before installation. I know, one more step in the process, but the alternative is along the lines like of an ounce of prevention is worth a pound of cure.

I want to share knowledge that I had to learn the hard way, and there were some painful lessons. I ran a custom furniture shop for 20 odd years and we specialized in matching the lumber in each piece, especially the panels, drawer fronts, and if a slant front desk, a matching lid. The biggest problem we encountered was with the doors on pieces, which could twist due to a balky panel or obstinate rails and stiles. Drawer fronts could warp or bow, but they were less of an issue. The call would come and we would go to the scene of the crime, assess the damage and generally come away with a delinquent part, sometimes with the whole piece. It was a real pain to remake a door, match the wood and finish and remount it. If a matching panel was the culprit, we had to figure a way to skin the panel and apply it on similar substrate to maintain that match. By the time we retraced all our steps, most if not all the profit



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What we often don't realize about lumber is that only at the time of construction is it finally free to move and assume the position that its structure intended. If you think about the lumber, it is stickered in layers shortly after being

The biggest problem we encountered was when ripping multiple pieces out of a wider board in situations like producing molding stock and rails and stiles for doors. Now you have to deal with the dynamic of tension in the board itself when you release those individual pieces. There is by its very nature often tension in each board, as there is variation between the plain, rift and even quarter sawn areas in the board, tension from the way it grew or the way it was dried. For whatever reason, you still have to account for that movement. We would rough rip our rails and stiles and keep them as wide as the

multiple cuts from the board would allow, and that was our margin for potential movement before the lumber underwent its final milling. This doesn't have to be a long-term process, although the more time the better, of course. We found that the wood moved pretty quickly if inclined to do so, and that a week or so was enough time for it to settle into its new configuration.

Over time we did develop different strategies to acclimate the lumber. Rails and stiles, drawer fronts and panels were generally leaned against a vacant wall with exposure to all the surfaces. If you are working on concrete, it is necessary to put a barrier like a piece of wood down first to keep the lumber from wicking moisture from the floor. For larger jobs we used lumber carts, stacking the wood with a few spacers cut from waste wood to allow the wood to breath and move about. The carts gave us the advantage of being able to move the wood to a less trafficked area and then move it to the machining area when we were ready to start milling it. We would often make a rudimentary lumber presses for wider pieces with spacers between the boards and bunks on the top and bottom that were

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clamped together to allow the wood to breathe while holding it flat. How and where you acclimate the lumber depends on the size and spacing of your shop as well as finding the methods that work best for your operation, but I guarantee you that any effort you can make will make your shop life better.

Another rule of thumb is to not mill the lumber too far in advance, and to try to work with it as soon as possible after milling. Like case pieces that are tamed by their construction, the lumber in a door will be mortised into another piece that will help hold its position, a drawer will be stabilized by the sides being fastened to it and the door frame will hold a panel flat and help keep it from even getting started in a bad direction. I know a shop that routinely milled and installed the panels in their doors the same day, as they could cup overnight and make the task of fitting them much more difficult.

We didn't jump on this bandwagon. It was a gradual learning process. But as we saw our problems diminish it became a way of life in our shop. I would keep an eye on the cabinetmakers and the progress of the pieces, and wasn't the least bit afraid to inquire if they had their material roughed out and acclimating. I confess, I was the mild but insistent fanatic. They didn't always understand the importance, but when the customer called, I had to answer that call, and I hated those calls as much as any of the bad parts of the business. They were almost as bad as trying to get paid when the work was done and delivered.

The funny thing is that the importance of acclimating lumber is rarely discussed, and certainly not emphasized. We slowly figured it out, but it was nothing that was ever pointed out to us. I have seen occasional casual mentions of it, but have never seen it clearly stressed, as important as it is. It should be part of the curriculum of Woodworking 101.

*Louis Irion operates Irion Lumber Co., a hardwood supplier in Wellsboro, Pa. [W](#)*

#### IWF SAYS THE SHOW WILL GO ON

The International Woodworking Fair is proceeding as scheduled on Aug. 25-28 at the Georgia World Congress Center in Atlanta.

"IWF 2020 is growing, on track and on plan for opening day Tuesday, August 25," the IWF announced on its website. "With the largest footprint in show history, attendee registration pacing well ahead of 2018, demand for exhibit space expanding and all-new branding powering the marketing push, IWF 2020 is set to deliver another winner.

"At the same time, we know that many are concerned about the COVID-19 Coronavirus and its potential to impact IWF Atlanta 2020 this August. As we proceed on course to produce the show as scheduled, we're closely monitoring developments related to the COVID-19 Coronavirus in line with local and national authorities and public health advice from the CDC and WHO. We are prepared to address any significant changes as the year progresses. Meanwhile, it is business as usual at IWF."

For updates, visit [www.iwfatlanta.com](http://www.iwfatlanta.com).

#### DEADLINE EXTENDED FOR IWF CHALLENGERS AWARD ENTRIES

The International Woodworking Fair has extended the deadline for the 2020 Challengers Award to April 24.

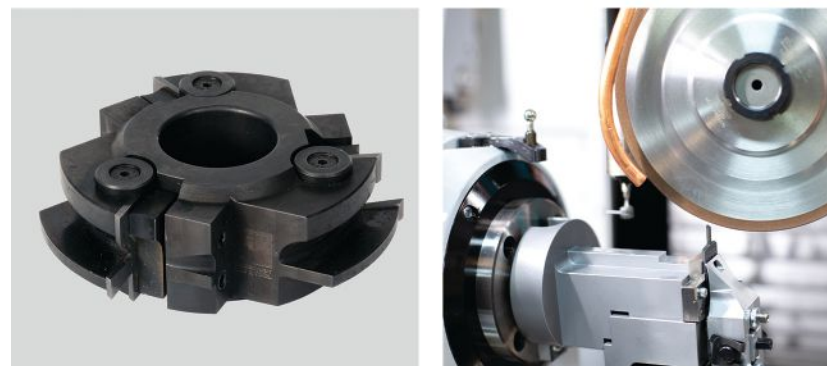
"We have received calls from exhibitors requesting a deadline extension to submit Challengers Award entries," JP Roberts, IWF's director of sales, said in a statement. "To accommodate IWF exhibitors the judging panel has agreed to a compressed evaluation time, so that the deadline can now be extended from April 1st to April 24th."

For more, visit [www.iwfatlanta.com](http://www.iwfatlanta.com).

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# TOOLS & TECHNIQUES

## New Powermatic lathe converts to 3-phase

By Jennifer Hicks

**P**owermatic introduces the PM2014 lathe with an inverter that converts 115-volt, single-phase power to 230-volt, 3-phase output for industrial performance, according to the company.

"The operator-friendly PM2014 lathe is an ideal choice for many professional woodworkers, woodturning enthusiasts, furniture

makers, bowl and plate turners, students and instructors. It handles a wide variety of wood-working projects with ease and precision, from turning custom spindles and table legs to crafting bowls, vases and pens," the company said in a statement.

Features include a 1-hp motor, cast-iron bed, 20" working distance between centers, 14"

swing over the bed, and magnetic moveable control box with digital spindle speed and indexing readout.

The lathe weighs 185 lbs. The headstock, tailstock and banjo slide off to lighten the load for transport.

There's an optional stand, adjustable from 34" to 46" off the floor, and a 13" bed extension.

The PM2014 sells for \$1,999 without the options.

For more, visit [www.powermatic.com](http://www.powermatic.com) 

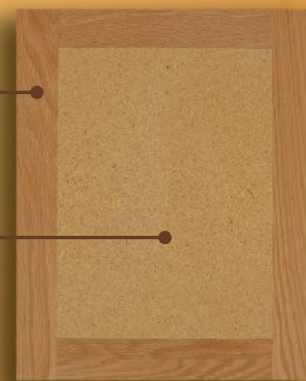


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# DeWalt brings Power Direct to select cordless tools

By Jennifer Hicks

**D**eWalt has added its Power Detect technology to four of its new 20-volt XR brushless tools, including a 7-1/4" circular saw, reciprocating saw, 5" angle grinder and hammer drill.

Power Detect can identify the battery the tool is paired with and adjust the power output accordingly, the company says.

"This is ideal for commercial contractor applications where premium power, performance, runtime and productivity are required," the company said in a statement. "The new tools also feature upgraded motors and components compared to their predecessors and durable housings."

They are paired in kits with DeWalt's new 20-volt 8.0Ah battery and charger, selling for \$279. The 8.0Ah battery sells separately for \$179.

For more, visit [www.dewalt.com](http://www.dewalt.com). 



DeWalt's new Power Direct circular saw.

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# Festool adds compact CT 15 dust extractor

By Jennifer Hicks

**F**estool USA introduced the new CT 15 dust extractor in March, a compact, mobile model for the jobsite or shop.

The CT 15 is the smallest and lightest in Festool's dust extractor line.

"The CT 15 is an exciting new product for Festool as it is a great solution for our customers and the wide range of jobs they complete each day," says Rick Bush, Festool USA's vice president of marketing. "It also delivers the same German-built quality that our customers expect from Festool at a very attractive price."

The CT 15 sells for \$349 and features Variable Suction Force that regulates air flow for applications like fine sanding, according to the company.

"It's fully HEPA certified featuring a HEPA filter to meet or exceed all requirements of EPA RRP guidelines," the company said.

The CT 15 weighs under 24 pounds and also features a touch-screen control and tool-triggered activation. It has a four-gallon capacity.

For more, visit [www.festoolusa.com](http://www.festoolusa.com). 



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### ATLANTIC PLYWOOD ADDING ATLANTA, CHARLOTTE LOCATIONS

Atlantic Plywood, a wholly owned subsidiary of Parksite, is expanding its business into the Southeast and will be the exclusive Formica distributor in the Atlanta and Charlotte markets effective April 6th.

"With this expansion, our sales associates will look to increase demand for the Formica brand by supporting growth with existing customers and targeting opportunities to develop new relationships," Tony Millhouse, Parksite's vice president of sales, said in a statement.

"Customers can expect fully stocked warehouses with every color of Formica laminate, next-day delivery, highly knowledgeable customer service and sales teams, combined with best-in-class operations and logistics teams."

For more, visit [www.atlanticplywood.com](http://www.atlanticplywood.com).

### RSA HAS SOLUTION FOR RAMPING UP WEBSITE COMMERCE

RSA Solutions is now representing Allmoxy, a fully customizable, cloud-based, e-commerce and e-manufacturing solution for manufacturers, suppliers, dealers and cabinet shops.

Allmoxy subscribers can sell and manage their entire business online, using Allmoxy's cloud-based 3D Web Designer, which is loaded with a subscriber company's products and other buyout products, according to RSA.

"Allmoxy is a contemporary MRP that includes supply chain optimization. It's a low-cost (\$250/month), alternative that allows unlimited users and is trigger-enabled. Allmoxy also includes CRM," RSA said in a statement.

For more, visit [www.rsasolutions.com](http://www.rsasolutions.com).

# Minwax offers new water-based stains

By Jennifer Hicks

**I**nterior wood stain manufacturer Minwax recently introduced Wood Finish Water-Based Color Stains, a new line of semi-transparent and solid stains in more than 200 colors.

"Minwax Wood Finish Water-Based Color Stains are ideal for those who want to bring out the natural beauty and protect wooden furniture while adding a pop of color to their home décor," says Sue Kim, Minwax senior color designer.

"Our new quick-drying formula makes it easy for do-it-yourselfers to finish projects in a single day; the hard part will be choosing from the more than 200 color options."

Stains in the new line are thicker than previous formulas to provide one-coat coverage that dries in an hour. The solid stains deliver a rich, saturated color while staying true to the wood's texture, while the semi-transparent stains are an option for those who prefer the look of grain but prefer a touch of color, according to Minwax.

For more, visit [www.minwax.com](http://www.minwax.com) 



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### Spindle monitoring at the speed of light

**I**ndustry 4.0, Internet of Things (IoT). Buzzwords? Sort of. You can't read any woodworking publication and not see this terminology today, especially from machine builders touting they are IoT ready or they are Industry 4.0 compliant.

OK, so what is Industry 4.0? It refers to the fourth Industrial Revolution where machines can talk to each other and make decisions without human intervention. Some time ago we connected (wired) machines to toolrooms. Then we connected machines to machines to monitor production in the plant. Another milestone was when we could track, in real time, an individual part as it went through production. And thanks to the Internet, now I can know, at the speed of light, what's going on with just about anything in my plant.

This brings me to spindle condition monitoring.

We now have the ability to sit in the production office or glance at our smartphones and see the health of some of the most important components running on any machine in the plant. A spindle must run perfectly balanced and true. If it fails, we stop production until the problem is repaired. By utilizing a condition monitoring system, we can predict when the spindle is getting ready to fail. We can monitor spindle speed, see excessive vibration, and keep tabs on the heat generated, specifically in the bearings area of each component. We've come a long way from putting a hand on the housing to see if it's hot.

These nanotechnology devices, when run through their comprehensive software, can shut down a spindle in a millisecond if it gets too hot or exceeds pre-determined vibration levels. They can record the events of a crash and most importantly, store this data for use in predicting the life of your spindle.

The computer, by managing the ongoing data collected from each device, will see trends and adjust the prognosticated death of your spindle based on all the variables I mentioned earlier: vibration, speed and heat. These systems, and there are many available, can help the production/maintenance team dominate the downtime necessary to exchange or repair a spindle.

#### NHLA ADDS IMPORTANT RESOURCE

The National Hardwood Lumber Association has created a new COVID-19 resource page on its website.

"The page is designed to help you stay informed and provide resources to help you and your company deal with the ever-changing situation. We also developed a video to show how important the hardwood and forest products industry is in developing the much-needed essential materials to combat the virus," the NHLA said in a statement.

"We have also developed a quick four-question survey ... The answers to these questions will allow NHLA to examine the economic and operational challenges and impacts of COVID-19 and what resources we can provide to help."

For more, visit [www.nhla.org](http://www.nhla.org).

Some of the products available will also help production see how a tool is wearing because as it dulls, it will start to affect the normal or baseline vibration signature that the software is used to seeing from that spindle. It may also run hotter as the tool wears.

Based on the parameters set up on each monitor device the production team can get real time alerts on what is happening. This can be one or all the following:

- A red, yellow, green condition light on the machine itself
- An alert on the computer in the production office, remote or local
- An alert on a smart phone device
- Complete shutdown of the problem spindle

All this data can be sent to the Cloud for viewing from a distant location, allowing remote monitoring from multiple plants. Think of a multi-plant company with key equipment in different geographical areas. Now one person can monitor all of them in real time from wherever they are. All this and we have only scratched the surface of Industry 4.0. **W**

#### ROCKLER HELPS REVIVE WOOD TALK

Rockler Woodworking & Hardware has signed on as the primary sponsor of Wood Talk to help bring back the long-running woodworking podcast, which recently relaunched in February following a year-long hiatus.

"Wood Talk has educated and entertained woodworkers for over a decade," says Scott Ekman, Rockler's vice president of marketing. "The Rockler team has been fans of the show for years and we are proud to help bring it back. The show brings such great conversation and insights to the woodworking hobby, and appeals to both beginner and advanced woodworkers."

Wood Talk is hosted by Matt Cremona, Shannon Rogers and Marc Spagnuolo.

#### FRED CARTER JOINS ROO GLUE

Roo Glue, a division of Specialty Polymers Inc., has hired Fred Carter as the company's new Adhesives Technical Service Manager to support existing customers and develop new business partnerships.

"With more than 25 years of experience in adhesives and a high level of technical, manufacturing, and sales knowledge, Fred is well-suited for this job," the company said in a statement. "We are very fortunate to have him join our team."

For more, visit [www.rooglu.com](http://www.rooglu.com).

#### HARVEY HIRES NEW NATIONAL SALES MANAGER FOR GYRO AIR

Curt Corum, Harvey Industries' new Gyro Air national sales manager, brings 40 years of experience in dust collection and system design, according to the company.

"Prior to joining the Gyro Air team, Corum worked as technical sales manager for Air Handling Systems, where he delivered problem-solving solutions for small shops and major corporations," the company said in a statement.

"Curt is a recognized industry leader in the field of dust and fume collection. He has presented at over 30 seminars throughout his career and authored, co-authored and served as technical advisor for articles published by Fine Woodworking, Wood & Wood Products, FDM, Woodshop News and Powder & Bulk Solids, to name just a few. Curt also served as technical advisor for the installation of dust collection systems for The New Yankee Workshop hosted by Norm Abram and This Old House television shows.

"For over 15 years, Curt has served as technical moderator for the Woodweb, an online forum on dust collection, plant maintenance and safety. If you're looking for dust processing solutions or have questions about setting up a Gyro Air in your shop, Curt has the knowledge and technical know-how to guide you through the process."

For more, visit [www.gyroair.com](http://www.gyroair.com).



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- Precision-ground cast-iron table
- Floor-to-table height: 35¾"
- Arbor: 1"
- Arbor speed: 3600 RPM
- Max. dado width: ¾"
- Max. rip capacity: 52"
- Blade tilt: Left, 45°
- Table size with extension 69½" x 78¾"
- Capacity @ 90°: 4", @ 45°: 2¾"
- Overall dimensions: 9½" W x 79½" D x 42½" H
- Approx. shipping weight: 854 lbs. (G0605X1), 854 lbs. (G0606X1)



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**G0605X1 ONLY \$2850<sup>00</sup>**

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**7½ HP HP, 3-PHASE WITH FOOT BRAKE**

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**WARNING! †¹**



## 21" SUPER HEAVY-DUTY BANDSAW WITH TILTING GEARED TABLE AND MOTOR BRAKE

- Motor: 5 HP, 230V, single-phase, 16A
- Throat capacity: 20"
- Height capacity: 14¾"
- Table size: 29½" x 20¾" x 1½"
- Table tilt: 5° L, 45° R
- Standard blade length: 165"
- Blade widths: ¼"-1½"
- Blade speed: 4600 FPM
- Quick-change blade release/tensioner
- Micro-adjusting rack & pinion table tilt
- Cast-iron wheels with polyurethane tires
- Includes 1" blade
- Overall size: 39½" W x 28¾" D x 78" H
- Approx. shipping weight: 684 lbs.

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ISO 9001  
FACTORY**



**WARNING! †¹**

**G0531B ONLY \$2395<sup>00</sup>**



## 24" INDUSTRIAL BANDSAWS

- Motor: 5 HP, 220V, single-phase or 7½ HP, 220V/440V\*, 3-phase
- Precision-ground cast-iron table size: 33½" x 23¾" x 2"
- Table tilts 45° for bevel cuts
- Floor-to-table height: 34½"
- Cutting capacity/throat: 24½"
- Maximum cutting height: 16¾"
- Blade size: 180" L (¼"-1½" W)
- Blade speed: 5300 FPM
- Shielded and permanently lubricated bearings
- Overall size: 48" W x 32" D x 83½" H
- Approx. shipping weight: 951 lbs. (G0568), 962 lbs. (G0569)

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**WARNING! †¹**

**5 HP G0568 ONLY \$3150<sup>00</sup>**



**WARNING! †¹**

**7 ½ HP G0569 ONLY \$3250<sup>00</sup>**

## 16 ½" DOVETAIL MACHINE

- Motor: 1 HP, 110V/220V, single-phase, prewired 110V
- Table size: 19½" x 7"
- Floor-to-table height: 38½"
- Spindle speed: 18,500 RPM
- Max. dovetail height: ¾", Min.: ⅜"
- Max. thickness: 1¼", Min.: 1/32"
- Max. stock size: 11¼" W x 28" L
- Min. stock size: 2¾" W x 7½" L
- Overall size: 28" W x 23" D x 57" H
- Approx. shipping wt.: 373 lbs.



**WARNING! †¹**

**G0610 ONLY \$2995<sup>00</sup>**



## 21-SPINDLE LINE BORING MACHINE

- Motor: 2 HP, 110V/220V, prewired 220V, single-phase, 20.8A/10.4A
- Air requirement: 70 PSI
- Table size: 43½" W x 15¼" D
- Floor-to-table height: 33¼"
- Spindle travel: 3¾"
- Max. stock width: 8"
- Number of spindles on boring head: 21 (10 left and 11 right)
- Distance between spindle centers: 32mm
- Shank size: 10mm
- Fence length: 74¾"
- Stroke operation: Pneumatic
- Overall size: 75" W x 28¾" D x 58½" H
- Footprint: 36¼" x 28¾"
- Approx. shipping weight: 514 lbs.



**WARNING! †¹**

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\*440V operation requires additional conversion time and a \$250 fee. Please contact technical service for complete information before ordering.



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- Motor: 3 HP, 220V, single-phase, TEFC, 16A
- Cutterhead: (4) HSS knives, 12" x 1 1/2" x 1/8" (G9860); (84) indexable carbide inserts (G9860ZX)
- Cutterhead diameter: 4"
- Cutterhead speed: 5900 RPM
- Max. depth of cut: 3/16"
- Max. width of cut: 11 3/16"
- Precision-ground cast iron table size: 12 1/2" x 80"
- 23,600 CPM (G9860); 35,400 CPM (G9860ZX)
- Approx. shipping weight: 1265 lbs. (G9860), 1241 lbs. (G9860ZX)

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SPIRAL CUTTERHEAD

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### 16" X 99" Z SERIES JOINTER WITH SPIRAL CUTTERHEAD

- Motor: 5 HP, 220V/440V\* (prewired 220V), 3-phase, 14A/7A
- Table size: 16 1/4" x 99 1/4"
- Fence size: 43 1/2" x 6 1/2"
- Maximum depth of cut: 3/16"
- Maximum width of cut: 16"
- Cutterhead type: 6-row spiral with 120 indexable carbide inserts
- Cutterhead speed: 5000 RPM
- Cuts per minute: 30,000
- Floor-to-table height: 30 3/4"
- Overall size: 99 1/4" W x 45 1/2" D x 32" H
- Approx. shipping weight: 1742 lbs.

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### 25" EXTREME-DUTY PLANER WITH HELICAL CUTTERHEAD

- Cutterhead motor: 15 HP, 220V/440V\* (prewired 220V), 3-phase, 37A/18.5A
- Table elevation motor: 1/2 HP
- Max. stock width: 25"
- Max. stock thickness: 9"
- Max. cutting depth: 1/4"
- Min. stock thickness: 1/4"
- Min. stock length: 10"
- Cutterhead type: 6-row helical with 170 indexable carbide inserts
- Feed rate: 20, 25, 30 FPM
- Cutterhead speed: 4900 RPM
- Overall size: 57 3/4" W x 54 3/4" D x 60 1/4" H
- Approx. shipping weight: 2054 lbs.

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### 14" SLIDING TABLE SAW WITH DIGITAL CONTROLS AND FENCE

- Main motor: 10 HP, 220V/440V\*, 3-phase, 26A/13A
- Scoring motor: 1 HP
- Main blade size: 14"
- Main blade tilt: 0-45°
- Depth of cut at 90°: 4"
- Depth of cut at 45°: 2 3/4"
- Main blade speed: 3000, 4000, 5000 RPM
- Main blade arbor: 1"
- Scoring blade size: 120mm (4 3/4")
- Scoring blade arbor: 20mm
- Scoring blade speed: 8000 RPM
- Scoring blade tilt: 0-45°
- Sliding table size: 15 1/2" x 126"
- Maximum rip capacity: 51 1/2"
- Length of crosscut: 126"
- Overall size: 132" W x 155 3/4" D x 65 1/4" H
- Approx. shipping weight: 2176 lbs.

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### STRAIGHT LINE RIP SAW

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

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### COMPACT AUTOMATIC EDGE BANDER

- Required power supply: 30A, 220V, single-phase, 60 Hz
- Feed motor: 3/4 HP
- Glue spindle motor: 1/2 HP
- Flush trim motor: 3/4 HP
- Heating element: 1135W
- Table size: 10 1/2" W x 69 3/4" L
- Min. panel dimensions: 4 3/4" W x 11" L
- Panel thickness: 1/2" - 1 3/4"
- Tape thickness: 0.5mm - 2.0mm
- Air requirement: 6 SCFM @ 100 PSI
- Glue pot capacity: 34 oz.
- Edgebanding coil capacity: 31 1/2"
- Panel feed speed: 16 FPM
- Approx. shipping weight: 770 lbs.

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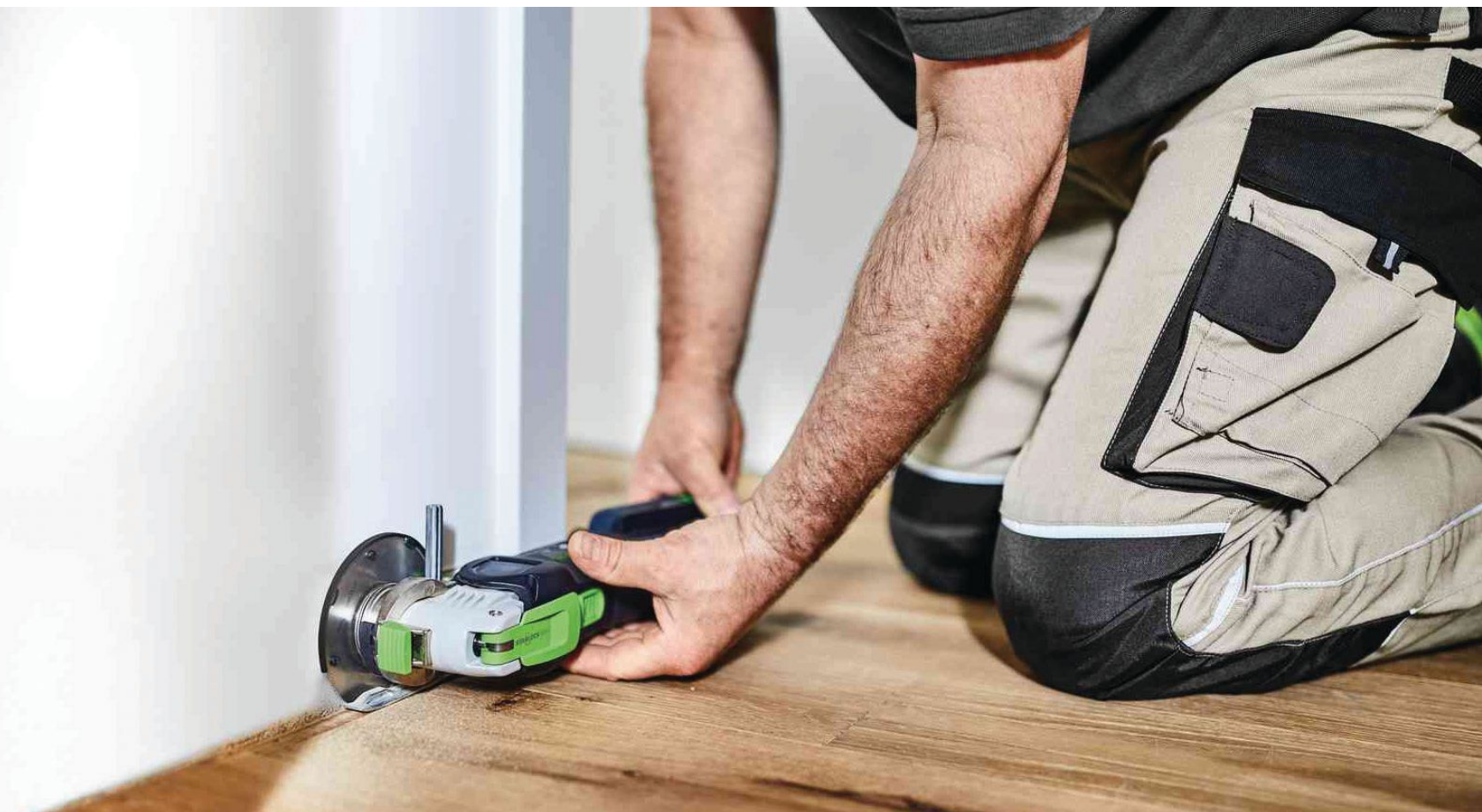


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# TOOLS FOR THE





# JOBSITE

More power, more safety, more choices ...

By John English

**L**ast December, a California company named Amionx granted a license for SafeCore to Stanley Black & Decker. The system acts like a circuit-breaker to prevent lithium-ion batteries from being the source of a fire or explosion, and Stanley Black & Decker was the first publicly announced licensee. This is just one in a series of advances in lithium-ion technology over the last year or two – changes that are bringing more and more formerly corded tools into the mobile world of the jobsite.

One of the more dramatic upgrades is increased Amp-hour batteries that are making it possible for tool manufacturers to build more powerful and longer-lasting tools. An Amp-hour (Ah) describes the amount of energy stored in a battery that will allow one ampere of current to flow for one hour.

Interchangeability is growing, too, where the same tool can use different voltage batteries, albeit only from the same manufacturer so far. (Voltage is essentially the strength of the juice, while current is the speed.) Unfortunately, woodworkers are still a long way from seeing universal battery technology, where brands can interchange power supplies. Still, progress is in the air and that versatility is bringing us a whole lot of new tools.

## Cordless solutions

In November, Makita introduced 25 new cordless power tools at the Specialty Tools & Fasteners Distributors Association (STAFDA) trade show, including the Quiet Series air compressors. There are also a couple of new 18-volt X2 backpack dust extractors that use two batteries in tandem to deliver 64 cfm of suction power. The larger unit (XCV18PTX) holds up to 1.6 gallons of debris, while the smaller model (XCV10PTX) holds a half gallon. They have a two-stage HEPA filter and are compliant with OSHA standards for exposure to respirable crystalline silica.

The new 18-volt Rocky CL cordless router from MLCS Router Bits & Woodworking Products delivers 10,000 to 30,000 rpm with a brushless motor and is available in various kit configurations – fixed base, plunge, and both. Height adjustments are rack and pinion, the body is aluminum, and the router has LED lights.

Bosch has introduced a couple of new battery-run jobsite lasers. The Revolve2000 runs on standard A and D has a working range of up to 2,000', according to the company. The 18-volt Revolve4000 has a range of up to 4,000'.

New products from DeWalt include a 20-volt

Festool's Vecturo (left) cordless oscillating tool with saw attachment and Makita's new Quiet Series air compressor.



(Clockwise from bottom) A new jobsite storage box from Better Built; Festool's Vecturo and Systainer; Grizzly's portable sawmill, and the Dremel Lite with accessories.

quarter-sheet sander (DCW200) and the ToughSystem 2.0 radio/charger (DWST08820) with four speakers.

The new 2739-20 from Milwaukee is a dual bevel sliding 12" miter saw that features a brushless motor and the company's Redlink Plus tool intelligence. There's a shadow cut line LED light, an adjustable stainless steel detent plate, a cam-locking miter system and easy-to-carry side handles. It's also equipped with One-Key, which lets users track, manage, and secure the miter saw through a phone app.

Ryobi Tools' newest kits include the P1819 with a drill/driver, impact driver, reciprocating saw, circular saw, multi-tool, work light, two 18-volt batteries, one charger and carry bag.

The compact and powerful new Dremel Lite has a 4-volt lithium-ion battery and a USB port. It's variable speed and the integrated EZ Twist nose cap makes accessory changes very simple. It comes with a 10-piece accessory kit and is compatible with the full range of Dremel rotary accessories.

Festool's new cordless, variable speed OSC 18 Vecturo multi-tool has an optional tool-less plunge base and depth-stop, a brushless EC-TEC motor, and a keyless quick-change system with the StarlockMax tool holder. It can be hooked up to dust collectors and has noise and vibration damping for optimum comfort.

### Corded tools

The new Jobsite Saw Pro from SawStop has the company's patented finger protection technology and also features upgrades from the previous version. These include a deeper table, an active dust collection blade guard and a T-Glide high/low fence. It has a 1.5-hp motor and weighs 113 lbs., which is a good balance between portability and sturdiness. This is full 10" saw that will also handle an 8" dado set.

Shops that work with unusual species or need green lumber for turning and bending will like Grizzly Industrial's new 28" portable sawmill (G0901). Optional additional 6'-long sections allow for any length of lumber. The cut thickness is set in 1/16" intervals with a locking hand crank, and the four-column saw carriage has ball-bearing rollers.

Beaver Industrial Supply (Beaver Tools) in St Louis is now carrying the Shaper Origin, a hand-held CNC machine. On the jobsite, an operator can



The Dust Right Mobile Dust Collector (top) and a kit from Ryobi.

apply special tape to wood, laminates or solid surface materials and the machine will make perfect sink cut-outs, cord routes and other specialty cuts. The router self-adjusts in small increments inside the housing as a woodworker moves it along the tape, so the cutter stays exactly where it needs to be (both left/right and up/down). If the operator strays too far off track, the cutter automatically retracts, avoiding costly mistakes.

Woodworker's Supply now carries the newest Maksiwa Cbc Flex Countour edgebander, a hot melt system for small shops and portable jobsite use. It works on straight, concave and convex arcs, and accepts tapes from 1/64" to 5/16" thick. The tool weighs about 20 lbs., has a digital temperature control and adjustable feeder speed.

### Jobsite maintenance

A new Dust Right Mobile Dust Collector from Rockler is a plug-in unit (750 cfm) that has large casters to get around the shop or jobsite, and a basket in the base to store the hose and nozzles during transit. There are mounting holes in the frame to hang accessories, a 1-micron canister filter with a crank-style agitator, and easy bag changes with a snap band ring.

Oneida Air Systems has introduced a new 14-gallon dust collector that the company says generates ten times higher suction than standard collectors, allowing it to effectively capture dust and

# Lamello



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Left to Right: David Gause, Paul Gause and Billy Harrington  
Select Millwork, Irving, TX

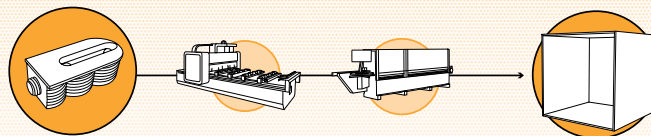


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(From left) Oneida's 14-gallon dust collector; the Shaper Origin, and Maksiwa Flex edgebander.



debris through up to 100 feet of 4" hose and ductwork. Its compact design makes it very mobile and it has a certified HEPA filter with an internal pulse cleaner.

Ridgid has added several new features to its 6-, 12-, 14- and 16-gallon NXT portable vacs. Those include new handles and clasps, a larger power switch, a built-in cord-wrap, and hose. The larger units can also be made OSHA/HEPA compliant.

Craftsman has increased its Versastack jobsite storage options with a 216-piece, three-drawer mechanics tool set, 17" tool bag, and a 30-quart cooler.



SawTrax has updated a bracket on its 30" x 25" yellow dolly that now accepts a caster that allows the jobsite cart to move in the direction of the wider 30" side. This lets one person carry 20" wider material such as furniture, sheet goods or casework up to 1,000 lbs.

And for woodworkers who need to sharpen chisels or planes on the job, M.Power Tools has released the FastTrack MK2 diamond sharpening system. This new jig improves on the design of the popular original by adding the ability to hone secondary bevels. [W](#)

# Cabin

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# A LABOR-SAVING OPTION

Thermofoil is a solid value for customers and makes life simpler in the shop

By John English

**B**ringing thermofoil in-house is a viable option for many small- to medium-sized woodshops because of advances in the technology, both in terms of machines and patterns. Foil makers are constantly introducing new solid colors and woodgrains, and the machines are getting small, more powerful and more efficient.

The theory is relatively simple. The shop mills one-piece flat or panel MDF doors on a CNC, and then wraps the backs first and

then the fronts with vinyl in a heated, vacuum packing machine. The doors and drawer fronts are laid out on the bed of the machine, often with sophisticated platens that raise them off the surface or make it easier for woodworkers to apply or handle the hot-melt adhesive used to create a bond between the foil and wood products. After baking, the parts are trimmed from the sheet and turned over and the process is repeated for the front faces. The vacuum and heat suck the foil tight

to the door profile, revealing flat or raised panels or details such as arched tops.

The advantages of thermofoil are that the material can be significantly less expensive, and the process is less labor-intensive than more traditional assembly and coatings options. One or two workers can turn out a full set of doors and fronts in a day, and there's no overnight cure or multiple coating required.

The biggest disadvantage is that thermofoil is shaped by heat, and usually lies on an MDF



(From top) The Cyclone 4896 from CNC Factory; G-TVP from Global Vacuum Presses, and Barth Corvus-S, available from Martin Woodworking Machines.



core. The foil is susceptible to heat after installation such as hair dryers, coffee machines and toasters, and if the seal deteriorates the MDF core may absorb moisture and become distorted or swollen. It can also meet some client opposition as there is a conception that these doors are a low-end solution for a high-priced custom job.

Other concerns are handling vinyl with preapplied glue, dust or dirt that telegraphs through the vinyl, and delamination. Sometimes, the doors can be repaired with contact adhesive, but the normal solution is replacement. And that can be a problem if the vinyl pattern or color has been changed or discontinued, or if the tone or shade of adjacent doors and fronts has reacted to an environmental influence such as direct sunlight or cleaning chemicals.

But overall, thermofoil doors can really simplify life in the cabinet shop while offering the customer a solid value.

### Options

Vac-U-Clamp ([vacuclamp.com](http://vacuclamp.com)) in Oceanside, Calif. offers the FT 900 thermofoil vacuum press that can handle work up to 52" x 105" and it has a low-profile top that decreases the interior volume. That delivers optimum heat distribution, while shortening the cycling time. The machine has 24,000 watts of heating power; which is delivered through infrared quartz tubes. The top tubes are curved to more evenly distribute heat. And there's a tube at each end for complete, even heating of the film. The temperature of the film is accurately measured by an infrared sensor, and there's a centrally located 300-watt interior light so the operator can visually check progress through the front viewing window.

In a Vac-U-Clamp exclusive, optional platens are bonded with a very high-tech non-stick coating that prevents pre-glued film from sticking to the platens during processing. That makes removal of excess film a snap. Previously, shops that wanted to use pre-glued film had to spray the platens with a food-type non-stick spray- which worked but was a mess and required frequent repeat applications. The new platens can save a lot of set-up time between cycles and contribute to both a cleaner work environment and better results. Experienced users will also appreciate the Constant Row low level of vacuum, which helps eliminate wrinkles.

The FT 900 also comes with a 48-cfm vacuum pump and a new IDEC 8.5" color touch-screen that can handle up to five separate pro-



**MARTIN**  
Woodworking Machines

**Barney Rigney, shown with Vac-U-Clamp's model FT 900 in the open and closed positions, has been building vacuum presses for more than 30 years.**

grams for different kinds of film.

Vac-U-Clamp also makes the larger FT 1200 that's designed to turn out 8,000 to 12,000 panels a week, compared to the FT 900's 1,000 to 1,500 capacity.

CNC Factory in Santa Ana, Calif. offers the Cyclone 4896 thermofoil press. Highly automated, the controls on this short-cycle 3D press allow a single person to produce over 300 pieces in an eight-hour shift, the company says. It has a one-button digital monitor and a mobile footprint. It's powerful enough to produce virtually any 3D shape using PVC sheets, rigid sheets, PS sheets, acrylic, ABS and wood veneers.

Shops that need to veneer shaped parts might want to take a look at the MVP 300 membrane press from the Felder Group ([felder-group.com](http://felder-group.com)). The membrane can stretch up to 700 percent as vacuum pressure is applied from below. Then heat from above cures the glue and delivers parts in just minutes, according to the company.

Black Bros. has locations in Mendota, Ill. and High Point, N.C. The company supplies two ranges of machines. Its Thermaformer is suited for heavy or thick parts such as desktops and counters. The larger Thermolaminator has Teflon coating to handle pre-applied adhesives, an automatic door and panel trimmer, and a modular design that allows for increased capacity as a shop grows. It operates with or without a membrane and has a touchscreen panel with a modem for diagnostics.

JKL Machinery ([jklmachinery.com](http://jklmachinery.com)) in Brighton, Mich. offers a full range of production equipment for panels including presses for veneer, laminate and composites, as well as glue spreaders, thermal heating units and veneer saws.

Global Vacuum Presses ([govpna.com](http://govpna.com)) is in Valencia, Spain and has offices in Lincoln, Neb. The company's G-TVP model does 3D foil thermoplastic lamination of both films and sheets. It features a PLC automation system, operated by a touchscreen interface, that offers the possibility of temperature curves and vacuum pressure steps.

### Smaller choices

Martin Woodworking Machines Corp. ([martin-usa.com](http://martin-usa.com)) in Charlotte, N.C. offers a number of Barth brand vacuum press





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The Thermoformer (top) from Black Bros. and output from the company's larger Thermolaminator machine.

options including the Corvus-5 and W models that have a small footprint. The S is a wheeled unit that flips from horizontal to vertical, so it can be moved around the shop if needed. An optional cover plate is not only a protection for the membrane, it also offers a flat work surface. Shops making extra-long or a large number of parts may be interested in the Taurus, which is the flagship of the line. It combines flexibility in part processing and mass production by offering the largest possible workspace. With lengths up to four meters and custom lengths beyond that, these presses are designed for big projects. The elasticity limits of the membrane can also be customized so that higher and longer parts can be glued in a convenient way.

Quality Vacuum Products ([www.qualityvak.com](http://www.qualityvak.com)) in Hudson, Mass. offers smaller solutions that are popular with fine furniture builders and luthiers. The company supplies both pneumatic and electric presses, and numerous stock bags in both polyurethane and vinyl. The bags are made in-house, so custom sizes are not a problem.

Lenderink Technologies, Inc. ([lenderink.com](http://lenderink.com)) offers wood veneers, dry film, web and powder adhesives. The company also supplies laminating equipment for flat panels.

Smaller woodshops that only have an occasional need for thermofoil doors have a lot of choice when looking for an outsource. Many of the standard door suppliers can handle custom shapes and profiles, so a shop can try outsourcing for a while until the volume grows enough to consider bringing this function in house. **W**

# DESIGN, MACHINE AND INTEGRATE

SOFTWARE EXISTS TO COVER EVERY ASPECT OF A SHOP'S OPERATION

BY JOHN ENGLISH

It wasn't so long ago that the owner of a CNC router thought of software as just two packages, CAD and CAM (design and machining). These still get much of the initial focus, but woodshops practicing lean manufacturing tend to integrate those functions into broader software now.

Enterprise resource planning (ERP) is a way for the woodshop to track and manage business data, while a manufacturing execution system (MES) monitors, connects and controls the machinery and equipment on the shop floor. The machinery is advancing too, as companies such as Biesse and Fanuc lead us toward CNC support robotics that load and unload, and move parts and supplies. More and more, the controls for those functions need to correlate with the basic software that runs the CNC router.

For example, Biesse says that its Selco WN6 ROS (Robotically Operated System) can actually take the place of an operator, so that idle times are drastically reduced and the risk of damage to material due to panel handling by the operator is essentially removed.

Almost all CNC router manufacturers either package CAD and CAM software with the machine, or offer it as an option, or else recommend a certain package. But not all woodshops process jobs the same way, or work in the same materials and have the same requirements. Because of the custom nature of the industry, factory software may not always be the most suitable. Aspects to ponder here include the learning curve and whether somebody on staff is already familiar with certain software, or how the assigned package works with other machines and fits into the production process.

Woodworkers need to explore their options because software is an increasingly important facet of efficiency, and thus profit. Software is a very competitive market, and somewhat overwhelming. A package that seems to offer all the answers may have that jack-of-all-trades syndrome, where it does everything okay but nothing really well. The solution may be two or even three complementary software programs that can work together.

Software is such a critical element that woodshop owners may want to consider involving an expert before settling on a solution. If hiring a consultant isn't an option, there are several ways to garner recommendations and lists of available programs. Industry organizations such as the Cabinet Makers Association ([cabinetmakers.org](http://cabinetmakers.org)) or the Architectural Woodwork Institute ([awinet.org](http://awinet.org)) offer ways for members to exchange ideas and discuss challenges such as this. And the trade show sites

often list their exhibitors by category. For example, one can go to the IWF website ([iwfatlanta.com](http://iwfatlanta.com)), click on Exhibitors and then on 2020 exhibitors. The entire list is then searchable by product such as 'Computer Software - Design to Manufacture'.

Following is an update on what's out there, and what's new in the CNC software you may already use.

## CAD, CAM and more

KCD Software ([kcdsoftware.com](http://kcdsoftware.com)) offers a very customizable design package that's tailored to CNC manufacturing. There are no annual maintenance fees and upgrades are free as they become available. It's easy to try out because there's a rent for 31 days option. Some features include a focus on lean manufacturing, the ability to design and price on the fly so that changes are easy, and one-button machining. There are packages for building custom cabinets, closets, doors, CNC manufacturing, traditional manufacturing and also Cabinotch integration (an outsourcing option where a shop can direct order and have the job machined and delivered along with hardware, doors and drawers).

KCD also offers a touchscreen option that converts a PC tablet or touchscreen laptop into an onsite sales/design tool. And the company offers seamless data sharing between its software and popular optimization, cabinet shop management or laser measurement software, without the need for double entry. The software comes pre-loaded with digital designs for more than 300 of the most popular door and drawer front styles plus moldings, countertop edging and various industry accessories. A shop can change the door panel sizes, stile and rail widths, colors, textures, countertop edging and much more. The software is parametric and cabinet-smart, so it will automatically change pricing, parts lists, door lists and CNC as dimensions change.

Mastercam ([mastercam.com](http://mastercam.com)) provides both CAD and CAM solutions for woodshops. Among those are built-in software for nesting, engraving and aggregate tools, plus streamlined multi-axis cutting, trimming, and drilling. A unit named Dynamic Motion is designed to boost tool life and decrease cutting time. The software lets a furniture builder program free-flowing surfaces and geometry in minutes, and then save machining strategies to a library for use on similar parts. It simplifies detail and relief work with Mastercam Art, and translates 2D artwork to 3D machinable pieces quickly and easily.

Hexagon's Manufacturing Intelligence division released Version 12 of Cabinet Vision design-to-manufacturing software. The program can

create shop drawings, generate cut and material lists, do bids and optimize material. The new version features an all-new connection manager that controls and automates machining that occurs where two parts meet, such as RTA fittings. Version 12 also introduces a new direct connection to the Leica 3D Disto laser measuring system.

Hexagon's latest release of its AlphaCam CAD/CAM software speeds up how jobs that require several processes are managed. A new job type has been introduced in the 2020.1 release of that program, called Multiple Process Jobs. It makes it simpler to create jobs and orders in the Automation Manager for jobs that need to be output to more than one machine, or that require secondary processing at the same machine. And Hexagon's Workplan software addresses machine events, monitoring, CMMS (computerized maintenance management system), CAM supervision, workflow and part traceability.

## Simpler solutions

Mozaik Software ([mozaiksoftware.com](http://mozaiksoftware.com)) offers inexpensive and complete CNC software options that include Mozaik Design, which provides the tools needed to design kitchen, bath, and closet custom layouts. Mozaik Manufacturing is design-to-manufacture software that includes all the features of the Design program and also generates door lists, drawer lists, cut lists, material requirements, hardware requirements, part or cabinet labels and other essential manufacturing details. This product is recommended for traditional non-CNC custom cabinet shops and closet fabricators.

Mozaik Optimizer uses cut lists to quickly estimate material requirements and optimize parts for manual table saws. And Mozaik CNC Complete has everything a woodshop needs to run a flat table CNC router. It includes all the features of Design, Manufacturing and the Optimizer, as well as true-shape nesting, G-code creation, post processing (for most popular CNC Routers), CNC MDF doors and CNC dovetail drawers.

Mozaik's CNC Operator is a stand-alone, real-time nesting solution designed to be used live at the CNC router. It lets the woodworker remake parts, cut and paste parts, re-nest sheets, add sheets, generate G-code on the fly, and label parts. For shops using Sketchup, Mozaik also offers ArielVision which is a low cost, easy-to-use rendering plug-in that can create near photo-quality renderings.

Kitchen Design from CabMaster ([cabmastersoftware.com](http://cabmastersoftware.com)) provides the tools to create a 3D photo quality rendering for presentation to clients, and the Kitchen Manufacturing software features full integration with ATP software to 'talk' to your machine. EzyNest comes standard with true shape nesting, automatic tool paths, and a touchscreen labeling interface. A variation, EzyNest Wood, adds a full suite of CAD tools, including automatic clean-up of imported files and 3D engraving using V-groove tooling. Another upgrade, EzyNest Pro, adds 3D design tools and the ability to mix and match 3D, 2D, and bitmap artwork that is either imported or created in the program.

Cabinet Pro ([cabinetpro.com](http://cabinetpro.com)) offers software packages that support CNC routers using any variation of G-code. The company's Cabinet Pro CNC produces code directly from the cut list and panel optimized parts. Its user-defined setup allows automatic machining based upon a shop's preferences, and its Smart CNC rules will automatically place machining for adjustable shelf holes and dado cuts, or for dowel holes in vertical and horizontal partitions. Its ability to locate drawer guide holes, hinge plate holes and so on means that it can support various methods such as dowel and blind dado construction, and the operator can switch from one style of CNC machining to another by simply changing construction methods. The CAD element lets a woodworker design casework in 3D, and then all of the appropriate CNC machining is automatically inserted. It works with modular or custom face frame or frameless cabinets, and offers the ability to match the grain and grain direction of doors and drawers on a given panel.



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Door Pro CNC, also from Cabinet Pro, lets a woodshop create machining for a single door style, and it will then shrink or enlarge the machining based upon door dimensions. It will place the pull and hinge holes, grain match doors and drawers if the doors are drawn as part of a cabinet, optimize all door panels according to user preferences, and can incorporate multiple or single door styles on a sheet of stock. It supports the shaping of MDF doors including cathedral and rounded top rails, and it assigns a unique tracking number to each part of a door. The woodworker can select a panel, frame or edge detail at the order entry stage, and have the corresponding machining occur automatically. The program writes CNC code directly to the router without requiring any other software.

Cabinet Solutions ([cabinetsolutions.net](http://cabinetsolutions.net)) offers a comprehensive suite that handles estimates, 3D rendering, cabinet customization, panel optimizing and cut lists. There are two different 3D views that a shop can show to customers. The basic 3D is a quick view of how a kitchen will look from a variety of angles and can be re-drawn on the fly. The Enhanced 3D view can include various wood species and color changes, crown moldings and easy room rotation. The estimating unit can calculate by the lineal foot, or break the project down into material, labor and profit. The design software will handle various construction methods and has a library of door styles.

Cabinet Solutions' CNC Exporter can go from designing a kitchen to setting up tooling information, to using EnRoute (required) for nesting parts and creating G-code. Exporter even has a feature for adjusting material thickness by up to .05" to allow for variations due to factors such as swelling or contraction due to moisture in the air.

Microvellum's design platform is built on AutoCAD and includes abilities such as project cost planning and estimating, flexible customization, easy standardization, and streamlining the manufacturing process with a single software package ([microvellum.com](http://microvellum.com)).

## Other resources

Vectric Ltd. ([vectric.com](http://vectric.com)) publishes Aspire and VCarve Pro. The company's new Version 10 includes a Photo VCarving toolpath strategy that will convert photographs and images into toolpaths producing stylized engraved designs and a new tool database that will manage machines, materials and tool names.

Eurosoft Inc. ([eurosoftinc.com](http://eurosoftinc.com)) offers BlueCell, an optimization, nesting and automation software that can explore hundreds of thousands of solutions in just a matter of seconds.

Global Shop Solutions ([globalshopsolutions.com](http://globalshopsolutions.com)) is now offering free downloadable product sheets that explain each of its ERP software units. These can collect, save, organize and ultimately use data from all of the different activities in a woodshop business. The data then informs decisions, so a shop can track and better manage jobs, materials, staff and other resources.

EagleEyeERP is a new program from RSA Solutions ([rsasolutions.com](http://rsasolutions.com)) that earned a Visionary New Product Award at AWFS. This is a management suite that was designed specifically for cabinet, fixture and closet manufacturing. It works with Cabinet Vision and most commonly used casework design programs.

TopSolid ([topsolid.com](http://topsolid.com)), a provider of CAD, CAM and ERP solutions, recently signed a partnership agreement to use ModuleWorks 5-axis machining components to enhance the performance and functionality of its 5-axis solutions. The new technology will be available in 2020 for selected TopSolid users and is scheduled for general release in 2021.

Virtual Zero Unlimited from Next Wave Automation ([nextwave-automation.com](http://nextwave-automation.com)) is software that lets a woodworker map the entire surface of raw material (a board, sheet stock etc.) by registering an unlimited number of reference points. The program then uses these points to auto-adjust the G-code to conform to the actual surface of that material. [!\[\]\(fb022bad7091bb98f6dfab6a105b78b0\_img.jpg\)](#)

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(Clockwise from top left) Work by Paradise City exhibitors Mark DelGuidice and Peter Handler, and NHFMA chairmen Richard Oedel, Terry Moore and David Lamb.

## NHFMA honors past chairmen in exhibit

By Jennifer Hicks

The New Hampshire Furniture Masters Association presented Leadership at Work: Works of the N.H. Furniture Masters' Chairmen, Jan. 17 at its gallery in downtown Concord, N.H.

The guild is celebrating its 25th anniversary by reflecting on its growth and accomplishments. The exhibit is an opportunity to also honoring its 10 past chairmen.

"Each acted as a leader for the organization, diligently working to uphold their mission: to preserve and promote the art of fine furniture making," the guild said in a statement.

Exhibitors include David Lamb of Canterbury, N.H.; Terry Moore of Wilmot, N.H.; Howard Hatch of Portland, Maine; Bill Thomas of Rindge, N.H.; Garrett Hack of Center Thetford, Vt.; Tom McLaughlin of Canterbury, N.H.; Richard Oedel of Boston; Jeffery Cooper of Portsmouth, N.H., and Roger Myers of Stratham, N.H.

For more, visit [www.furnituremasters.org](http://www.furnituremasters.org).

### Paradise City rescheduled

The Paradise City Marlborough Arts Festival was postponed from its Spring dates

(Mar. 20-22) to June 12-14 at the Royal Plaza Trade Center in Marlborough, Mass. due to the COVID-19 pandemic. An award-winning fair of fine craft, art and sculpture in the Boston area, the show features 175 exhibitors of various mediums from across the country, and also has food, live music, woodturning demonstrations and more.

The Paradise City Northampton Show has also been postponed to Aug. 1-3 at the Three County Fairgrounds in Northampton, Mass.

"Event dates are a moving target these days," show director Linda Post told Woodshop News in March. "We have just made the decision to move our Northampton show from Memorial Day Weekend to the first weekend in August. Right now, we are sticking with the June dates for the rescheduled Marlborough show, and I'm keeping my fingers crossed that it stays on those dates."

For more, visit [www.paradisecityarts.com](http://www.paradisecityarts.com). [W](#)

# NEW PRODUCTS

►► **SOUTHWORTH PRODUCTS** introduces a new gaylord tilter, model GTU-500, that tilts loads up to 110 degrees to provide controlled emptying of container contents. It features a unique pan-style platform that sits essentially flush with the floor when lowered, allowing gaylords to be placed and retrieved by a hand pallet truck. It has GTU-500 has a 500 lb. capacity when fully tilted, according to the company. For more, visit [www.southworthproducts.com](http://www.southworthproducts.com).



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The screenshot shows the Woodshop News Resource Guide website. At the top, it says "WOODSHOP NEWS Shaping the Successful Shop". Below that is a navigation bar with links: Home, Listings, Events, Classifieds, Articles, Deals, Advertise With Us, Contact Us, and Woodshop News. The main section is titled "RESOURCE GUIDE" and features a search bar with "Keyword" and "Where" (Address, City, State or Zip Code) fields. There are also filters for "Match" (exact match, any word, all words), "Category" (Select a Category), "Location" (Select a Country), and "Zipcode". Below the search bar, there are sections for "Browse by Category" (listing various categories like Abrasives, Accessories, etc.) and "Featured Listings" (highlighting MultiCam, Inc. and ShopBot Tools, Inc.). A "Sign in" section is also visible on the right side of the featured listings.

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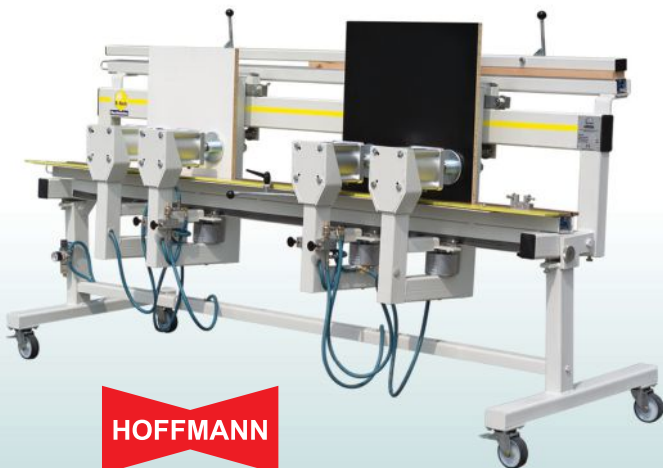
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◀ DEWALT introduces the 12-Amp Fast Charger, model DCB1112, and 60-Amp Charger, DCB1106, both designed to increase productivity and minimize downtime, according to the company. The 12-Amp charger retails for \$99; the 6-Amp for \$79. For more, visit [www.dewalt.com](http://www.dewalt.com).

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# CALENDAR

Organizations sponsoring meetings, classes or shows of interest to professional or hobbyist woodworkers are invited to submit items to: Calendar, Woodshop News, 10 Bokum Road, Essex, CT 06426; [editorial@woodshopnews.com](mailto:editorial@woodshopnews.com).

— Compiled by Jennifer Hicks

**\*All events subject to cancellation or change due to COVID-19**

## CALIFORNIA

June 5-July 5 - The 39th annual Design in Wood juried competition, sponsored by the San Diego Fair in association with the San Diego Fine Woodworkers Association. Over \$20,000 in awards in 26 entry classes. Location: Del Mar Fairgrounds. [www.sdfair.com](http://www.sdfair.com)

## GEORGIA

Aug. 25-28 — International Woodworking Fair. Location: Georgia World Congress Center in Atlanta. [www.iwfaatlanta.com](http://www.iwfaatlanta.com)

## MASSACHUSETTS

June 12-14 — Paradise City Arts Festival Marlborough. Juried mixed media craft show

featuring 175 exhibitors from throughout the country. Location: Royal Plaza Trade Center in Marlborough. [www.paradisecityarts.com](http://www.paradisecityarts.com)

July 31-Aug. 2 — Paradise City Arts Festival Northampton. Juried mixed media craft show featuring 230 exhibitors from throughout the country. Location: Three Country Fairgrounds in Northampton. [www.paradisecityarts.com](http://www.paradisecityarts.com)

## NEW YORK

Monthly — The Woodworkers of Central New York hold meetings on the first Thursday of each month at 6:30 p.m. at the Belgium Cold Springs Fire Department in Baldwinsville. [www.woodcny.org](http://www.woodcny.org)

Monthly — Northeast Woodworkers Association meetings held on the second Thursday of the month at various locations in the Albany area. [www.woodworker.org](http://www.woodworker.org)

Monthly — The Long Island Woodworkers meet on the first Wednesday of each month at 7 p.m. at the Frank Brush Barn of the Smithtown Historical Society in Smithtown. [www.liwoodworkers.org](http://www.liwoodworkers.org)

## NORTH CAROLINA

May 19-21 — Stiles Manufacturing Solutions Seminar. Machinery and software demonstrations, workforce development discussions, network opportunities with industry col-

leagues and more. Location: Stiles Machinery in High Point. [www.stilesmachinery.com](http://www.stilesmachinery.com)

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

## OHIO

Ongoing — Cincinnati Woodworking Club meets the second Saturday in the months of Jan., March, May, Sept. and Nov. from 8:30 a.m. to 12:30 p.m. at the Northminster Presbyterian Church, 703 Compton Road, Cincinnati. [www.cincinnatiwoodworkingclub.org](http://www.cincinnatiwoodworkingclub.org)

## SOUTH DAKOTA

Monthly — The South Dakota Woodworkers Guild meets the last Thursday of every month (except August) at various members' shops. [www.sdwoodworker.org](http://www.sdwoodworker.org)

## VIRGINIA

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

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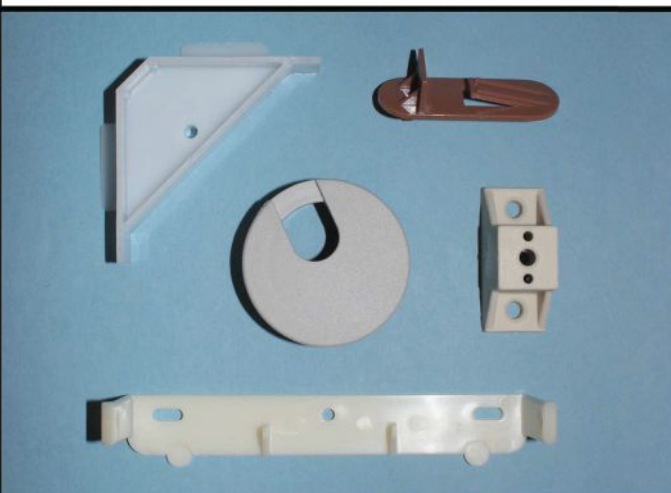


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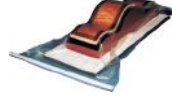
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Students from California's San Jacinto High School got the grand tour of two hi-tech cabinet shops, courtesy of SCM North America.

## SCM promotes learning by doing

Earlier this year, woodworking machinery manufacturer SCM North America, along with two Southern California cabinetry companies, hosted a job shadow program for a local high school to give its students an in-person tutorial on modern cabinet-building technology.

Over a two-day period, the students from the Industrial Wood Technologies program at San Jacinto High School visited Excel Cabinets in Corona, Calif. and Reeves Enterprises in La Verne, Calif., where they got an inside look into factory performance optimization, SCM machine research and acquisition, and general day-to-day business operations. School instructor Roy Castillo says it was an invaluable in-person experience for his students.

"My students have a very manual and tactile experience in wood technology, and it is in that background that many of the lessons we took part in with SCM were meaningful," says Castillo.

The first day covered CNC nesting cell installation at Excel Cabinets. Students were able to see the placement and leveling of SCM's X200, followed by the final assembly, calibration, and quality assurance inspection orchestrated by one of SCM's field service engineers.

The second day included a factory tour at Reeves Enterprises where the students saw the process of building high-end commercial cabinets in a fully automated environment.

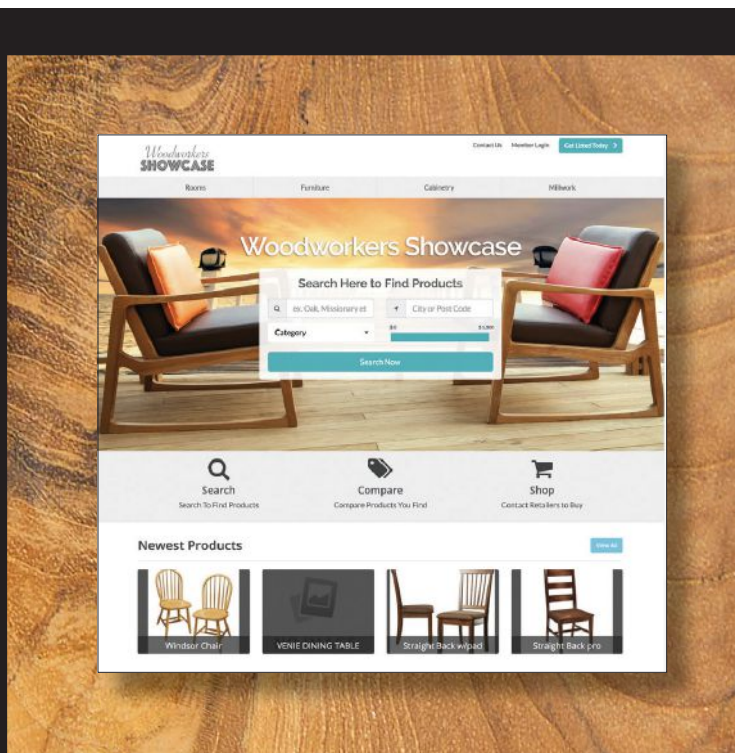
"The scale, efficiency, and workflow of these sorts of facilities gave my students access to what it might be like as a contemporary machine operator. The depth of parametric design and Screen-To-Machine operations supported our expectations in project planning. We found parallels in our plan of procedure project paperwork and the post processing/G-code used at Reeves Enterprises," says Castillo.

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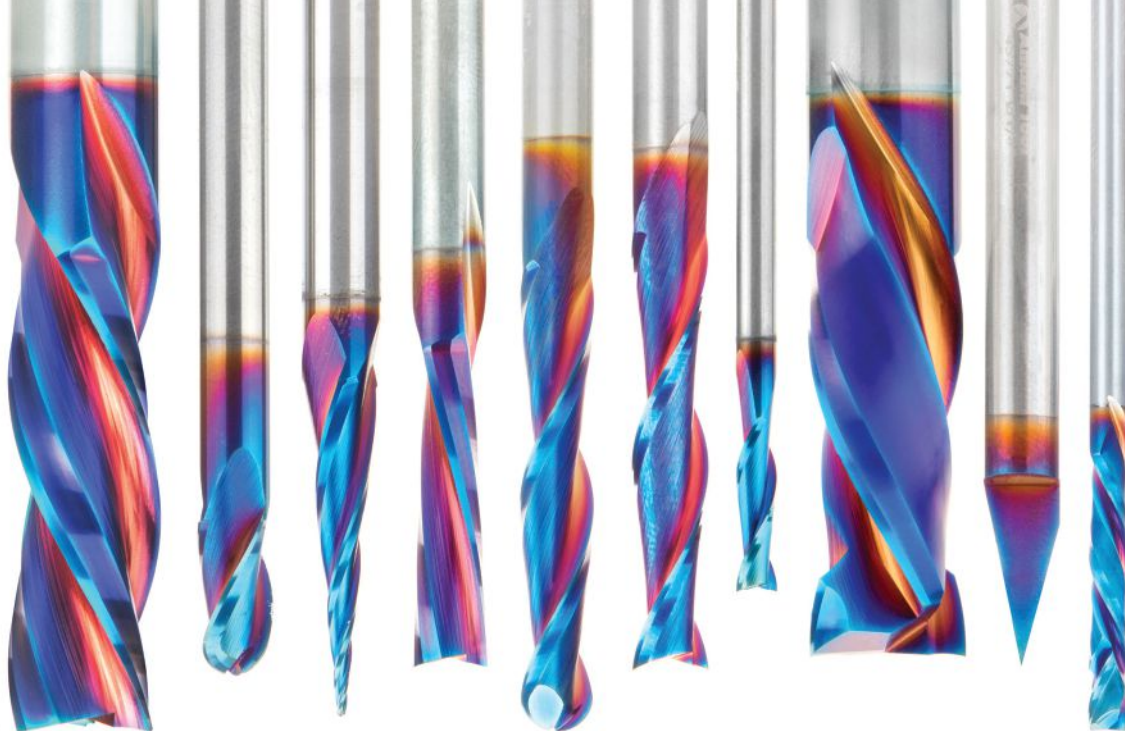
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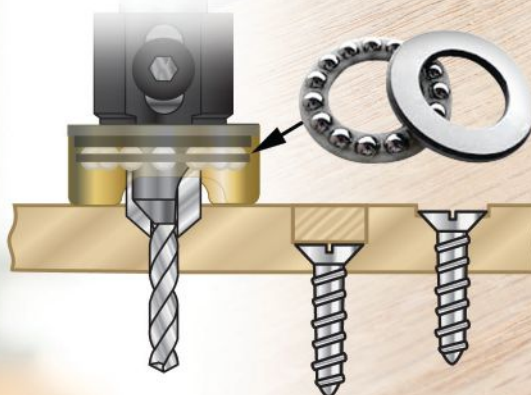
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