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May 2013

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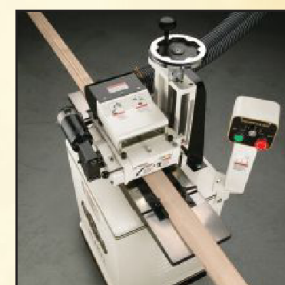
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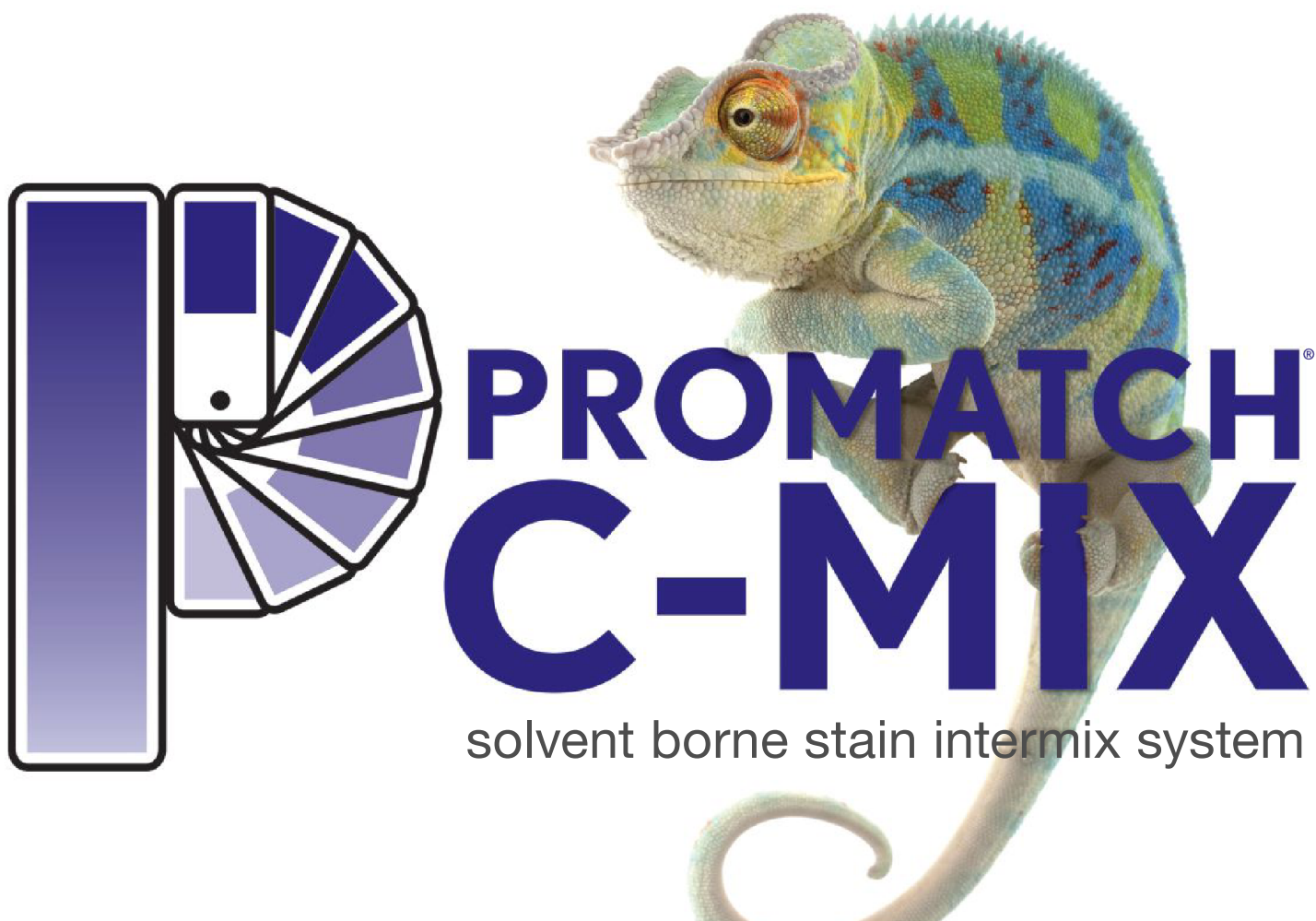
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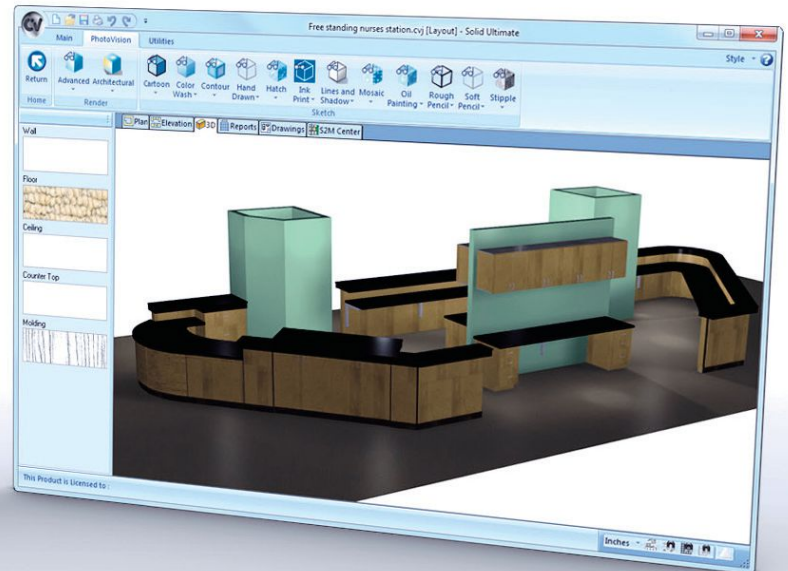
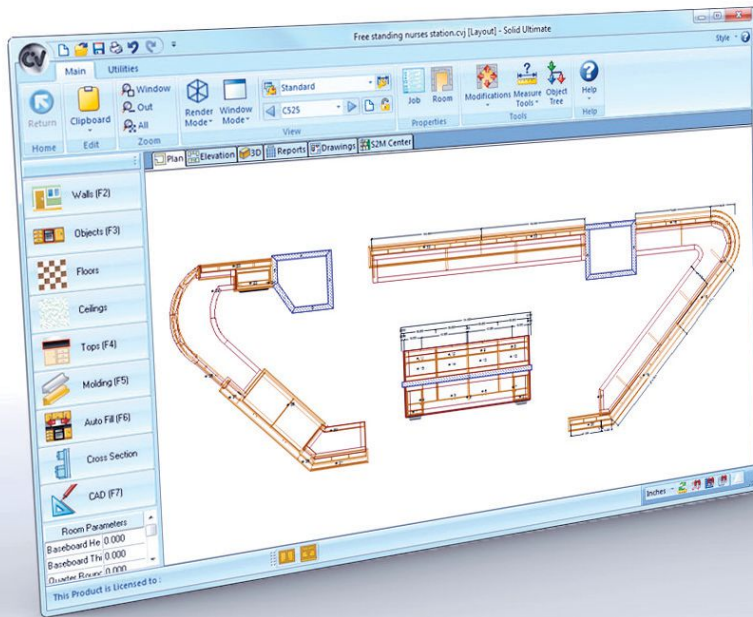
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Over the Workbench

Talkin' shop with
former editor A.J. Hamler



This Business about Woodworking

Share an opinion with
David DeCristoforo but don't
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TAKING STOCK

with TOD RIGGIO

Industry is set to put its best foot forward

Get out your calendar and circle the following dates: July 24-27 for the AWFS fair in Las Vegas as well as May 6-10 for Woodworking Safety Week.

The AWFS fair is the biggest woodworking show of the year. It amounts to one-stop shopping for all of your machinery, tooling and supply needs. The show's educational program offers vital information for shops of all sizes and you won't find better networking opportunities. I urge you to register today at www.awfsfair.org.

And what's more important than safety? Woodworking Safety Week was conceived by blogger Marc Spagnuolo at thewoodwhisperer.com in 2008. It's a community effort to raise awareness of the best safety practices and share them with new and seasoned woodworkers worldwide, mostly via the Internet. But this year there's also a push from Microjig founder Bruce Wang to get shops, schools, guilds, manufacturers, stores and magazines involved as well.

"We're a big believer in this movement and we believe that this wave of enthusiasm for safety is an incredible opportunity for woodworking organizations, companies and schools to take advantage of and impact," says Wang, whose company makes table saw safety aids.

Spagnuolo has called the week a refresher course on safety, which all woodworkers can use. Too many are guilty of letting their guard down around machinery, often in the name of production goals. But all it takes is one careless moment to slow you down permanently.

During safety week, the content of your favorite woodworking site will be dominated with information about best practices, how-to videos and the stories of injured woodworkers. Some will be tough to hear and the pic-

tures gruesome, but if it encourages one person to use a push stick or install a blade guard, then it's mission accomplished. We'll have our bloggers — David DeCristoforo of This Business about Woodworking and A.J. Hamler of Over the Workbench — chime in.

"We have an unparalleled opportunity like no other time because the Internet allows us to make a lasting and continuing change in reducing injury and increasing enjoyment of the craft," says Wang.

"We are prepared to do our part by sponsoring a series of donations to woodworking schools and classroom safety programs with our proven safety products. We are also gifting our products for community giveaways via online blogs, forums and in-store sweepstakes. Furthermore, we will be creating our own contact about the best practices for safety we've accumulated through the years."

For information, visit www.microjig.com.

* * *

I'm made my plea for attending AWFS. Now I want you to be aware of our supporting digital publication called the eXchange.

We've partnered with AWFS to produce this free monthly publication for Woodshop News subscribers, plus show attendees and exhibitors. There will be four issues prior to the event and at least one afterwards. The content will focus on industry issues — the state of the economy and dust collection are slated for the first two publications — as well as the show's educational opportunities, new-product information from exhibitors and much more.

If you haven't already, please sign up to receive the eXchange newsletters at <http://tinyurl.com/d2nh63f>. 

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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Shaping the Successful Shop™

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- Precision-ground cast iron table
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- Amps: 20A at 110V, 10A at 220V
- Power transfer: Belt drive
- Precision-ground cast iron table
- Table size: 17" x 17" x 1 1/2" thick
- Table tilt: 10° left, 45° right
- Floor to table height: 37 1/2"
- Max. cutting height: 12 1/8"
- Blade size: 131 1/2" long
- Blade width range: 1/8" - 1" wide
- 2 blade speeds: 1700 and 3500 FPM
- Wheels: computer-balanced cast aluminum with polyurethane tires
- Wheel covers: pre-formed steel
- Blade guides: Euro-style roller disc with full enclosure protection
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NEWS DESK

Government sector is an untapped market

By Jennifer Hicks

How do local governments and school districts decide to buy furniture? And why do they choose furniture made from metal or plastic rather than wood? A re-

search project, conducted by the Wood Products Extension Department at North Carolina State University and the U.S. Forest Service, sought the answers and concludes that these are untapped markets for small- to mid-sized woodworking shops.

The project surveyed nine locations in West

Virginia, North Carolina and South Carolina with three sizes of local population — large, medium and small counties and adjacent cities. The research team consisted of Harry Watt, a wood products specialist from North Carolina State, and Delton Alderman and Jan Wiedenbeck of the Forestry Sciences Laboratory in Princeton, W.Va.

Watt says project findings convince him that small woodshops would find it worth their while to explore employment opportunities in their local communities for furnishings that go into schools and government buildings.

"This is an overlooked market that is dominated by commercial manufacturers. So our goal is to help the local woodshops get into these local markets that are in schools and the local government. And these entities are our natural allies because they understand when they support local businesses, they're supporting themselves through tax collection and the employment of the people in the local community," says Watt.

"Also, the U.S. woods, especially the hardwoods, are growing faster than we're removing them, so we've got plenty of wood. And if we use local woods for these local entities like the schools and the government, then they have an inside track to get these jobs. When you look at sustainability and affordability, wood from these local shops is really what these people ought to be buying."

The research project also produced designs of 50 wood products that schools and local governments are buying, creating a 3-D model for each item with supporting parts list and an example costing and pricing worksheet. These 50 items are available as downloads on the project website at www.cnr.ncsu.edu/publicfurniture.

"Woodworkers who are interested are definitely going to have to educate themselves on this market," says Watt. "This is a much more formal market than residential housing because you do things with bids and these government buyers are professional employees. They're good people and they have lots of rules and regulations. But if you can understand them and work within them, this can be a good local market." **W**

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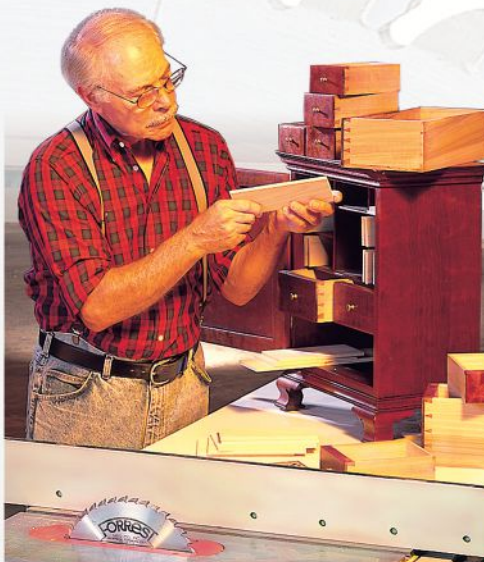
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Thos. Moser seeks to expand in Southeast

Maine-based furniture maker is confident in its growth and wants to build its business in several new regions

By Jennifer Hicks

Thos. Moser, the Auburn, Maine-based makers of fine wood furnishings for the residential and contract markets, is experiencing tremendous growth in the education and hospitality segments.

As a result, the company is in the process of expanding its presence by partnering with carefully selected sales firms that cater to architects and designers in various markets across the United States. Aaron Moser, contract director, explains why the company is putting a significant focus on the commercial market.

"We've been furnishing libraries for 30 years or more and have had great success at doing large-scale university libraries, with the average order being around \$250,000. So that end of our business has gotten quite successful," says Moser.

"But what we really want to do is be a little more proactive about growing our base business. That's the whole purpose around bringing on and recruiting reps throughout the country is to get us a little more local focus with architects and designers."

Architectural Design Specialties in Atlanta is the first agency that has signed on to represent the company and is now officially the agent for Thos. Moser in the Southeast.

Moser says the company is focusing on the Southeast first because it has seen excellent growth in recent years, especially with the colleges, universities and private schools located there. Thos. Moser has furnished four libraries at the University of Georgia in Athens, as well as the Agnes Scott College in Decatur, Ga., Shorter University in Rome, Ga., and law offices of Kilpatrick Townsend & Stockton in Atlanta.

Architectural Design Specialties, known for its expertise in contract architectural and interior design, is also family-owned.

"We needed a firm with a comprehensive understanding of the industry as well as one who could appreciate the authenticity of our brand. The individuals at [Architectural Design Specialties] all possess a deep under-

standing of our products and have a strong artistic sensibility, allowing them to effectively interpret our message just as a member of the Thos. Moser family would," says Moser.

"I've known of Thos. Moser for over 20 years and have always admired and respected their work," Architectural Design Specialties principal Ken Erdoes said

in a statement. "While the company has advanced in the areas of sourcing, engineering, and manufacturing, it continues to revere the original core values inspired by Tom Moser at the company's inception. You just don't find that every day or everywhere."

Contact: Thos. Moser Cabinetmakers, 72 Wright's Landing, Auburn, ME 04210. Tel: 207-784-3332. www.thosmoser.com **W**



Member-based shop opens in N. Carolina

Owner has long-range plans to add more locations

By Jennifer Hicks

Chris Estes says he can't remember what he had for breakfast on any given day, but when he hears about the success of a new member-based woodworking shop or school, he never forgets about it. That's why he recently started a community shop on his own called the Carolina Woodworking Shop in Graham, N.C.

"One of my goals with this shop is to revive a dying trade. Fewer and fewer schools are teaching woodworking today because of everything being manufactured overseas, so we'd like to keep it going," says Estes.

Estes has an extensive background in woodworking. He earned a bachelor's degree in industrial arts from California (Pa.) University and was a shop teacher in Durham, N.C. He's been a custom home builder since 1997, while building such challenging projects as musical instruments, canoes and boats, a carousel horse and furniture pieces on the side.

"I've always been a very active woodworker. I always wanted to open up shop, but didn't want to produce cabinets and furniture for other people, so this year I decided to set



Chris Estes, owner of the Carolina Woodworking School, wants his patrons to learn new skills, have fun, make friends and build the projects they've always dreamed to make.

up a members-based woodshop. Mine's probably not as big as some of the others, but it's heated and air conditioned and in a nice modern commercial building."

The building he leases features a 2,500-sq.-ft. shop, separate finishing room and 1,000 sq. ft. of classroom space. The shop is loaded with professional grade, 3-phase machines that he previously owned or purchased for the venture.

Classes are offered for adults of all skill levels and include How to Make a Bow Saw, Fundamentals of Woodworking 101, Make a Wooden Smoothing Plane, Make a Cherry Hall Table, Make a Small Decorative Box, Ma-

chining Rough Lumber and Make a Cabriole Leg. Estes is currently the only instructor, but he plans to hire help soon. He says he definitely sees potential for expansion, and satellite schools throughout the state, as the interest is high and there are few similar programs offered in his area.

"I hope in several years we'll have other schools in Charlotte and one in Raleigh, both much denser areas than here."

Contact: Carolina Woodworking Shop, 205-A West Hanover Road, Graham, NC 27253. Tel: 336-270-3967. www.carolinawoodworkingshop.com **W**

BIFMA adjusts guidelines for larger bodies

Due to the increasing size of North American workers, the Business & Institutional Furniture Manufacturers Association has revised its ergonomic guidelines for computer workspaces.

"Our customers, and therefore our industry, face constant change in today's workplaces including new technologies, new ways of working, and an increasingly diverse workforce. As a result more employers are pursuing ergonomically sound office environments as a means to improving health, safety and productivity," Lucy Hart, chair of BIFMA's ergonomics subcommittee, in a release. "Up-to-date standards and guidelines are vital resources

that guide our industry and our customers on this journey."

BIFMA undertook revision of BIFMA G1-2002 in 2009, using new civilian anthropometric data which reflects changes in the size and shape of the North American working population. The changes included increased seat width, distance between armrests, support surface height for sitting and standing, and height clearance for legs and knees.

BIFMA is also developing a heavy occupant chair standard, using 253 to 400 lbs. as the basis for testing.

DBS adds pre-finished panels from States Ind.

Drawer Box Specialties of Orange, Calif., has incorporated a line of pre-fin-

ished panel products from States Industries into its line of drawer boxes and accessories.

"This new partnership between States Industries and DBS is already beginning to drive product development and innovation, especially being able to utilize States time-tested pre-finish coatings within our product line," Jim Irving, national sales manager for DBS, said in a company release.

States' topcoat system is a 100 percent solids, modified epoxy acrylate coating that is cured by ultraviolet light. The finish is VOC and HAPS free, compliant with SCAQMD Rule 1113 and contributes towards LEED IEQ 4.2 credits, according to DBS.

For information, visit www.dbsdrawers.com and www.statesind.com.



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TOOLS & TECHNIQUES

Bosch pin nailer allows corner access

By Jennifer Hicks

Bosch recently introduced its first pin nailer, the 23-gauge model FNS-13823. The tool accepts any brand of 23-gauge headless pins ranging from 1/2" to 1-3/8" in length thanks to a magazine that automatically adjusts to nail length.

Product manager Craig Wilson says the

tool's design was based on extensive research of end users, particularly in the woodworking field. High on the list was access to corners, which the tool allows with a recessed magazine and narrow nose.

"This is really designed for a cabinetmaker," Wilson says. "The cutout on the back of the magazine helps to get the tool into tight applications. We also increased the power in

comparison to other pin nailers on the market so it could drive nails into hardwoods."

Bosch has also incorporated a dry fire lockout feature, which prevents damage to the workpiece when the tool is out of nails, and an internal self-cleaning air filter for longer tool life.

Other features include a rear muffled exhaust, low-nail indicator light, slim body and rubber-molded grip.

The Bosch 23-gauge pin nailer sells for about \$159.

Contact: Bosch Power Tools. Tel: 877-267-2499. www.boschtools.com 



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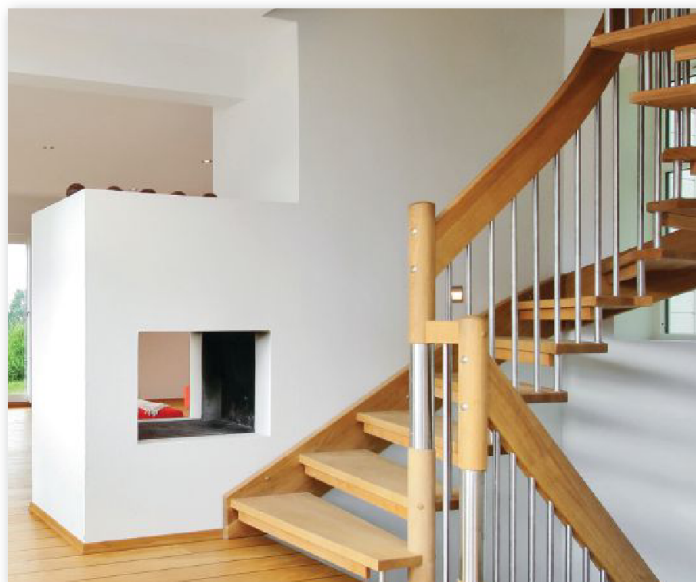
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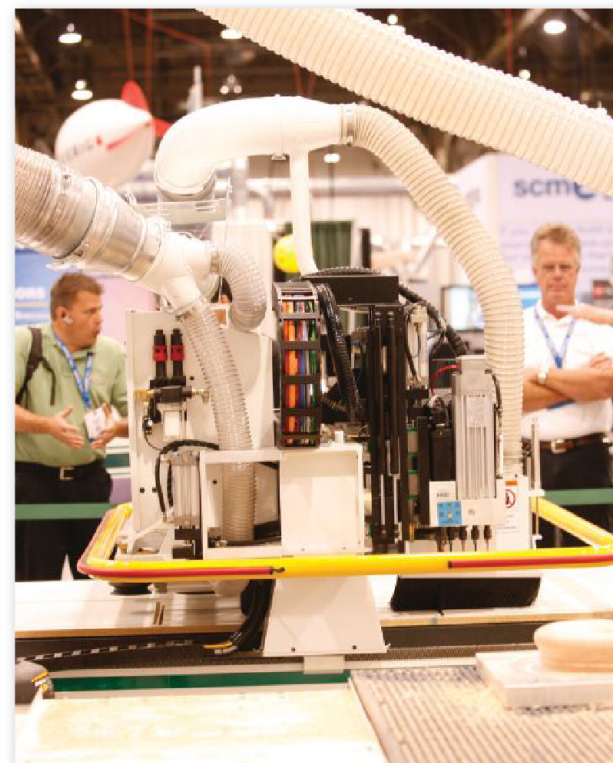


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Cefla offers entry-level spray machine

By Jennifer Hicks

Cefla North America recently introduced Prima, a reciprocating spray system for water- or solvent-based coatings. The system will spray up to 1,400 sq. ft. of material an hour and handles panels up to 1,300 mm wide.

Product manager Dale Dozeman says the system is ideal for use in small to medium-sized custom woodworking shops producing cabinetry for one room per week on average.

"We tried to design an entry-level spray machine for the smaller shops. The whole idea is purely to automate a spray application. It's as simple as we can make it. It's designed as a reciprocating sprayer. It

has a transport belt that runs through it. You run paper on top of it so the clean paper rolls up on the exit end and you don't have to worry about cleaning it because the spray

goes on the paper belt. It simplifies cleanup at the end of the day," says Dozeman.

The machine is easy to set up and includes a 6" touch-screen control. The automated part detection system instantly communicates panel size and position, greatly enhancing production speed and reducing coatings waste. A flat conveyor system eliminates overspray on the underside of panels, according to Dozeman.

"It does have sensors on the front so that if you're running a narrow part you don't have to spray the whole width of the paper transport belt, so you get a savings on not losing paint," he says.

The machine sells for \$115,000.

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Makita debuts a cordless random orbit sander

By Jennifer Hicks

Makita expanded its lineup of 18-volt lithium-ion cordless tools with the new LXT 5" random orbit sander. It is offered in a kit version, model LXOB01, and as a stand-alone model LXOB01Z.

"With three speed settings, superior ergonomics and up to 40 minutes of run time on a single charge, the new LXOB01 delivers increased efficiency and mobility to woodworkers," says product manager Joe Soto.

The three speed settings (7,000, 9,500, and 11,000 OPM) are easily changed with a one-touch electronic control switch. The large 1/8" random orbit action is engineered for efficient sanding, fast material removal and a swirl-free finish, according to Makita.

A pad brake reduces free spin, while a control system regulates pad speed at startup. The sander, which uses quick-change hook-and-loop abrasive paper, also offers a dust-sealed power switch and oversized sealed ball-bearing construction for longer life.

Additional features include an ergonomical-

ly-designed body and grip and an overall tool weight of just 3.6 lbs. with the battery installed.

Makita reports a 30-minute charge time with the supplied rapid charger.

The kit sells for \$299 with two 18-volt

batteries, charger, dust bag and a tool bag. The sander can be purchased separately for about \$115.

Contact: Makita Tools. Tel: 800-462-5482. www.makitatools.com 



Makita's new random orbit sander is part of the company's growing lineup of more than 50 cordless tools.

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Rikon adds features to new band saw

By Jennifer Hicks

Rikon released its new 14" band saw, model 10-321, featuring an 8" resaw capacity and two-speed 1-hp motor.

"This is going to replace our 10-320, which was our most popular band saw 10 years ago. This new model features a bigger resaw height, open stand, larger table and micro-adjustable guidepost height, which the original did not have," Rikon vice president of customer service and technical

support Rod Burrow says.

"It has all of the benefits and features that most of our saws currently have. The 8" cutting capacity is a good compromise because it's bigger than our standard 6" model, but not as large as our 13" one either."

The saw is equipped with a large, 15-3/4" x 20-3/8" worktable, providing ample room for large workpieces and freehand cutting. It has a 13-5/8" throat that will allow the user to cut thicker material on a compact saw.

The two blade speeds (1,620 ft. and 2,240

ft./min.) offer ample power for resawing wood and cutting other materials such as non-ferrous metal, plastic composite and foam materials. The motor operates on 120 or 220 volts, according to Burrow.

The machine comes standard with a 2-1/2" dust port under the table and a 4" dust port in the lower wheel compartment. It also features upper and lower ball-bearing blade guides, a rack-and-pinion guide post, two T-style miter slots and cast-aluminum wheels.

The band saw retails for around \$600. Optional accessories include a mobility kit, model 13-321; a fence, model 13-900; and a miter gauge, model 13-912.

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Rikon's model 10-321 saw with optional mobility kit.

Hard maple sales are making a comeback

By Jennifer Hicks

Whether they prefer the soft or hard variety, most woodworkers can relate to using one or both maple trees for their projects. Sales of both have been steady during the last year, according to suppliers who attribute its popularity mainly to its clarity and widespread availability.

"Maple sales have always been good. It's definitely popular as far as cabinetry goes with both the hard and the soft. A lot of guys will buy the soft because they prefer it as a step up to poplar for paint-grade projects. Soft maple is also a pretty common

choice for stained or clear work. Sales have been stable in both over the years and it's easy to get. I can just make a phone call and place an order anytime," says Josh Furbish of Maine Coast Lumber in York, Maine.

Maple trees grow mainly in the eastern U.S. and parts of Canada. Furbish says he's commonly asked the difference between the two varieties. The species that are classified as soft maple (*Acer rebrum*) are red maple, silver maple and big leaf maple. Hard maple (*Acer saccharum*) is traditionally known as the sugar maple and is the denser of the two.

Steve Gebhart, owner of Steve's Hardwoods, a retailer and wholesaler in Bucyrus, Ohio, says maple is generally selected by his cus-



tomers who are making cabinets because of its light hue. He also sells a lot for cutting boards and countertops.

"Right now, hard maple sales are good. Soft maple sales are kind of slow, but it always comes back around. A couple of years ago hard maple was hot, then died off for cherry and then everyone wanted soft maple. Now hard is back in demand. The same thing happened with walnut where I couldn't get rid of it four or five years ago and now everybody wants walnut," says Gebhart. **W**



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THE CUTTING EDGE

with JOHN ENGLISH

How to avoid those ever-lingering VOCs

We're hearing a lot in our industry lately about volatile organic compounds, commonly called VOCs. The Environmental Protection Agency says they "include a variety of chemicals, some of which may have short- and long-term adverse health effects." In the woodshop, common sources for these potentially dangerous chemicals are paint, lacquer, paint stripper, cleaning solvents, sheet goods, glues and adhesives. All of these can release organic compounds while you are using them and, to some degree, when they are made into furniture and cabinetry and installed in a client's home or office. That is, the volatility often continues past the manufacturing phase in a

product's life cycle. That means there's a potential danger for both your employees and your customers, especially as the government notes that concentrations of many VOCs are consistently higher indoors (up to 10 times higher) than outdoors. And, of course, that's where most cabinets and furniture are built and used.

It's a complicated topic. For example, the EPA defines a VOC as "any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions, except those designated by EPA as having negligible photochemical reactivity."

Huh? Speaking as an average woodworker

(and one without a degree in chemistry), I have to admit that their definition went way over my head. So let's take a quick look at the problem in layman's terms.

These are compounds. That is, they all have more than one element from the periodic table. One of the elements always seems to be carbon, hence the "organic" part of the name. And volatile just means that these chemicals evaporate (enter the shop's air) at very low temperatures. Well, low for chemicals in general. Room temperature, if you will. They also break down at normal levels of atmospheric pressure, which means they can bleed some of their elements into your workshop's breathable air year-round. In fact, the lower a compound's boiling point (the temperature at which it turns from a solid or liquid to a gas), the higher its volatility or ability to break down. The U.S. government talks about VOCs in those terms — rating them according to their volatility. In Europe, however, the government defines VOCs simply by their boiling point, which is much easier to determine and understand. According to the European Union, a VOC is essentially "any organic compound having an initial boiling point less than or equal to 250 degrees C."

However, just to add to our confusion, the World Health Organization categorizes indoor organic pollutants in amazingly simple terms as "very volatile, volatile and semi-volatile."

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Local governments in the U.S. seem to have a better handle on the whole concept than any of these larger bodies. The Air Quality Management District is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside and San Bernardino counties, which the agency itself describes as "the smoggiest region of the U.S". People in those parts of Southern California have a special interest in VOCs, because the chemicals are an important source of smog. According to the district website (www.aqmd.gov), "VOCs, or solvents, are one of the key ingredients in coatings that contribute to ozone formation. VOCs are emitted from coatings from the containers themselves, as the coating is applied, and as the coating dries on the surface. The VOC emissions from the coatings can then mix in the air with other ground-level pollutants (nitrogen oxide, carbon monoxide, sulfur dioxide, hydrocarbons ...) and the energy from the sun acts upon this mixture to form the brown gunk in the air known as photochemical smog."

Ugh! For most woodshops, thankfully, the VOCs don't show up as visible "brown gunk" in the shop's air. But, nonetheless, they are present.

What's available?

So what's the best way for a woodshop to avoid VOCs in coatings? That's easy: just switch to low- or no-VOC finishes.

While international giants such as Akzo Nobel, Henkel, Britain's ICI Group, PPG and BASF are all serious players in this field, American companies are also taking this issue very seriously. That's not surprising, because the EPA is leaning on states (and actually, in some cases, following state initiatives) in an effort to lower the country's VOC emissions. Nowadays, local VOC regulations have to at least meet a level of stringency the feds call Reasonably Available Control Technology (RACT). That's defined as "the lowest level of emissions that can be achieved, taking into account technical and economic considerations." In other words, lawmakers and finish manufacturers are trying to find reasonable common ground on this issue that serves the best interests of both woodworkers and their customers.

With that in mind, Sherwin-Williams has developed a line of product called SherWood LoVOC Lacquer that's ideal for high-volume, high-speed finishing lines and offers a solution that not only satisfies current federal hazardous air pollutants (HAPs) regulations, but also meets proposed VOC limitations. The system is free of lead and chromate hazards, too.

DuPont has developed Capstone, which

has allowed them to formulate both low-VOC and VOC-free paints and coating applications. They are also leading the charge in cleaners (Final Klean) and automotive finishes (ChromaSystem), that have low or no VOC emissions.

Valspar has developed Zenith Low-VOC wiping stain base and its Zenith Waterborne pre-catalyzed lacquer is low in VOC, HAPS-free, contains no formaldehyde or isocyanate, and is Greenguard-certified. (Greenguard is part of Underwriters Laboratories and helps manufacturers create interior products and materials that have low chemical emissions.)

Mohawk's Waterborne Pre-Catalyzed Lacquer is a water reducible, self-crosslinking, low-VOC-emitting technology that has good color retention and is suitable for cabinet, millwork, furniture and other high-traffic interior wooden surfaces. Mohawk Finishing Products is a division of RPM Wood Finishes Group and this lacquer is also Greenguard-certified.

Green Building Supply in Iowa sells Safecoat wood stains and sealers that are non-toxic and are low- or no-VOC. Some are food-grade for toys, countertops, salad bowls and kid's furniture.

Minnesota-based 3M Co. offers a variety of low VOC products. For example, any woodworker who regularly applies printed patterns to wood is probably familiar with its low VOC Super 77 spray adhesive. The company has a great online resource at <http://solutions.3m.com> that can help shop owners and managers search their vast product lines for similar adhesives.

H.B. Fuller's waterborne adhesives are an extremely versatile and logical choice for bonding many types of substrates. Some of their advantages include the absence of VOCs, and ease of cleanup after application. The company develops low-VOC content and VOC-free polymers for interior paints as well as high performance formaldehyde-free polymers for insulation fiberglass and wood composite applications.

Minwax's 250 VOC Compliant Wood Finish is a penetrating oil-based wood stain, available in 22 wood tone colors. This stain has been matched to the standards of the company's traditional Wood Finish line, so there are no surprises.

Other leading paint and finish manufacturers such as Rohm and Haas, Behr and Benjamin Moore offer low- or no-VOC products for various woodshop applications. For example, Monocoat has been around since 1906 and is now a division of Special Hardwood Products. The company says that its oil finish (without accelerator) contains no VOCs, nor does it contain other harmful chemicals. Its clear-color

See Cutting Edge, Page 23

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Orange peel can leave you feeling bitter

There really are only three main causes of the bumpiness that forms on a surface after using a spray gun and here's how to avoid them

Orange peel is the most universal defect in a sprayed finish. It is a bumpiness on the surface that resembles the skin of an orange, so hence the name.

No matter what brand or quality of spray gun you're using or how well you clean and tune the gun or what you're spraying, you can still get orange peel. You want to avoid it if possible.

The problem is that there are so many causes (and thus so many solutions) that eliminating the problem can become very confusing. Here's one manufacturer's list of causes:

- Material is too thick
- Failure to deposit a wet coat
- Spray gun is moving too rapidly
- Insufficient air volume or pressure
- Incorrect fluid nozzle or air cap

- Spray gun is being held too far or close from surface
- Thinner is too hot (evaporates too fast)
- There's too much draft
- Temperature is too low or high
- Humidity is too low

That's a lot of causes. All can be correct, but there are so many that I'll bet you stopped reading after the first two or three and skipped to this paragraph. The trick is to compress these causes into just three or four so you can keep them in your head. This can be done as follows:

- The liquid material is too thick for the amount of air
- The gun is being moved too fast over the surface or being held too far from it
- The liquid material is drying too fast
- The gun is being held too close to the surface

These four can be reduced to three by eliminating the last one. Holding the gun so close that it causes the finish to ripple is so obvious and rare that you don't need a separate instruction pointing out not to do it. Let's take each of the three remaining causes in turn.

Viscosity and air

The most common cause of orange peel is an imbalance between the viscosity of the finish and the amount of air atomizing the liquid as it exits the gun. The thicker the liquid, the more air that is required; the thinner, the less air needed.

So the obvious fix is to increase the air pressure or thin the material.

Increasing air pressure is the most efficient way because there's no solvent waste or loss of finish build. Both compressors and turbines produce enough air to atomize most finishes in normal conditions. But turbines are limited on the upside if you need more than the usual amount of air.

Compressors are not limited. You can increase the air pressure well beyond that obtained by a turbine. Keep in mind, however, if you live in a strictly regulated area, increasing the pressure beyond 10 psi at the gun's air cap takes you out of HVLP compliance.

Thinning is often the easier method of reducing orange peel. But the price is reduced build, which might cause you to have to apply more coats.

There are two additional possible solutions: warm the finish before spraying or use a smaller-diameter fluid nozzle and corresponding needle.

Liquids are more viscous in colder temperatures and less viscous in warmer temperatures. Keep this in mind because in cold weather, your finish will likely be thicker in the morning unless you keep the thermostat up all night.



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There are a number of methods of warming a finish. These include putting the container of finish in a larger container of hot water or using a bucket warmer or even an electric blanket — if you're careful — wrapped around the container of finish. You can even use an oven or microwave if the amount of finish is small.

Smaller diameter needle/nozzle sets spray less fluid material, so less air is required to achieve good atomization. But there are two problems. These sets are usually fairly expensive and might not even be available for your spray gun and, more importantly, they will cause your spray pattern to be narrowed and slow your production.

Speed and distance

The second most common cause of orange peel is moving the gun too fast over the surface or holding it too far from the surface. The result is that you don't fully wet the surface so the finish can't level out.

There is no proper speed or distance because there are too many variables. For example, how fast the finish dries, what volume of finish is exiting the spray gun and whether the pattern is narrow or wide.

The goal is to spray a wet-enough coat so the finish flows out and levels well, but not so wet that it puddles or sags. The only way you can know the correct speed and distance is to watch what is happening in a reflected light.

Doing this is more difficult when spraying vertical and complex surfaces. It's harder to hold the gun at a set distance from the surface than when spraying a flat horizontal panel. So you tend to get areas of orange peel everywhere you pull your hand back a little.

It's also harder to arrange enough lighting. But working with reflected lights is probably the single most important rule in finishing, whether spraying or brushing, and it is rarely mentioned.

To get the best results, arrange your position and the lighting so you can see how the finish is behaving at all times. Notice in the accompanying picture how much more visible the very bad orange peel is in the light reflection.

Drying rate

A finish needs time to level before it begins setting up. If the balance between the temperature and the evaporation rate of the solvent (or solvents) isn't right, there might not be enough time for leveling. You will need to either lower the temperature in the spray area or add a slower evaporating solvent.

Lowering the temperature, usually with air conditioning, can be quite expensive because the cooler air is being exhausted so fast. Thinning with a slower solvent, or retarder, is usually the better way. But this, of course, could cause you to have to apply more coats.

One step past orange peel caused by the finish drying too fast is "dry spray" (also sometimes referred to incorrectly as "overspray," which is the spray that misses the object). Dry spray has a sandy texture.

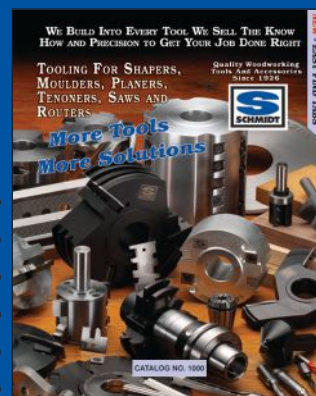
The fix for dry spray is to thin the finish with retarder or hold the gun closer to the work. **W**



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Keep it simple and check your ego at the door

You are probably familiar with the saying, “Jack of all trades, master of none.” This refers to someone who is adequate at performing many tasks, but not an expert in anything. There’s nothing wrong with being that way, but it does limit how far you can go in a specialized profession.

Most of you reading this column are custom woodworkers of some kind. That means you’re involved in a very specific industry. But woodworking in itself is still very generalized. Being a woodworker 300, or even 100, years ago meant something very different than what it does today. Back then, the world was predominantly rural and small communities could not sustain a specialist. Much like having ‘ole Doc Shoemaker, the country doctor delivering a baby, setting the broken leg and diagnosing Betsy The Milk Cow’s lack of production, woodworkers and carpenters could

easily be lumped together into one profession. But our world today is much different. Ever since the Industrial Revolution, people have been gravitating toward the city. And because the population continues to grow, there will be much more competition with which to contend. These facts force us to specialize. If we don’t, we’ll be relegated to doing low-paid handyman work.

Modern society has been operating under these specialist-type principles for quite a number of years. A single journey into the medical field to get a symptom diagnosed can easily demonstrate how many specialists there are out there. Rarely do you visit one doctor for all your medical needs. There are specialists for each part and function of the body — and for good reason. It’s because there is just too much complexity and knowledge to acquire to be able to figure out everything about everything. When you concentrate on your

area of expertise instead of attempting to do everything, you simplify your business plan. Don’t try to reinvent the Jack-of-all-trades wheel. It’s impossible to gain all the needed knowledge and tooling to perform every task.

Let’s take a look at how we can better run our business, along with being a benefit to our colleagues in this related field.

Drop the act

One of the first things in simplifying your business model is dropping the act. You know how difficult it is to base a story on a lie. It never takes one lie to complete an objective, it always takes several. Being an overly prideful craftsman puts you in the same boat of spinning lies for self gain. The prima donna thinks he’s creating an image that profits him, but in reality it is limiting his full potential.

On a recent job, I met a fellow craftsman who was a specialist in a niche field. Although our talents overlapped, he made it clear that his abilities and area of expertise were of more value than mine. As he continued to talk about himself and answer my pointed questions, it became clear that he was digging a deep hole of arrogance that prevented any trust from being established. Propping up the act of being the man really didn’t benefit my colleague at all. I wouldn’t feel comfortable subcontracting to him or recommending him to others. The focus on himself rather than the product even became evident to the unhappy client, who later asked me to spend several hours fixing and cleaning up the so-called expert’s work.

Specialize

Enough cannot be said about the importance of specialization. There’s nothing wrong with doing many different things as long as that is your specialty. But if you’re trying to do everything just because you see it as potential income, you’ll struggle to be profitable.

Specializing or having a niche isn’t just a buzzword to sound knowledgeable; it really works. Consider the medical field example we talked about above. Doctors understand the importance of specializing because it allows them to concentrate on what they do best. It’s not that fields of study don’t overlap; you’ve just got to know how far over the dividing line you cross. Going too far into another field can bog you down. Not because you’re unable to do the work, but rather unable to do the work efficiently.

Suppose you are a wood turner. It’s the one thing you want to do. You’re good at it, you’re fast and you have found a niche that allows you to sell your product. Let’s say you come across a job opportunity for an intriguing and potentially profitable custom stair system. It includes turned balusters and newel posts, treads

CMA puts new website online

The Cabinet Makers Association has completed a two-year redesign of its website, featuring separate portals for homeowners and contractors, shop owners, suppliers, and students and educators.

“When we began this process, we knew the way people use the web had dramatically changed from the time we launched our old site,” Dave Grulke, CMA’s executive director, said in a release. “Therefore, our efforts were focused to design and implement not only a brand new look, but to integrate functions and features our members wanted with an eye to the future for needs, expectations and desires of other constituents we serve in our part of the woodworking industry.”

Features of the new site (www.cabinetmakers.org) also include:

- A new and upgraded “Shop Finder” search page
- Industry news and CMA member press releases
- A job board and classifieds page
- Member forum
- Online educational opportunities

Kaeser’s new blog debuts

Kaeser Compressors has started a new blog, “Kaeser Talks Shop,” featuring technical articles on various compressed air topics.

Several blog entries have already been posted on a wide range of topics, including piping, adaptive control in blower installations, compressed air audits, and energy savings tips for compressed air systems, according to the company.

To follow the blog, visit www.kaesertalkshop.com.

and risers, and railing with drop easing and volute turnouts. The first question to ask is will you take on the entire project? You might feel comfortable doing the straight-line millwork of the custom treads and risers. And the molding work required for the railing is a doable proposition, but you're admittedly slow at it. The turning is where you're proficient.

To remain profitable, the rule of thumb is to stick to your niche. But that does not mean turning away work that you're not good at, it just means managing the work between yourself and other shops. Hence, the importance of networking and referrals.

Network and referrals

The egotistical friend I referred to earlier was sadly too shortsighted when he was boasting about himself. Had he made a better impression, I could have referred work his way for projects I get involved with that require his level of expertise. Don't underestimate the power of first impressions. If you successfully drop the act of how important you are and accept the fact that your colleagues in this shared profession are your partners, you'll learn a key ingredient in becoming more profitable.

My own business has gone through a progression of hiring specialists through the years. As I've learned how they help me in my business, I no longer see them as the competition, but rather as partners in profit. But you must use common sense when referring. Not everyone in the industry is going to play nice. I've referred work to colleagues who, in turn, tried to take other related work away from me, even when I was already contracted with the client. Colleague

referrals are built on trust, just like client referrals. Good networking is reciprocated. In other words, the work flows back and forth between the two companies.

Establishing a good business model often takes years of honing. Most entrepreneurs write their first business plan with an idealistic view of how their business is going to operate. But real business plans are developed through a period of years after the dust settles and the company figures out what they're good at and what is profitable. Keeping it simple cannot be overstated.

Take an honest look at your business model and determine where you are profitable. This is where you should focus. To get an accurate assessment of your business, you might need to bring in an outside party with an objective viewpoint. When you're emotionally involved, it's too easy to fall into the same idealistic trap of your first ideas. This is very common and happens all the time in the business world. Even Ben Cohen and Jerry Greenfield of Ben & Jerry's Ice Cream came to a point where they had to step down as the leaders of their company and hire an outsider to manage the company as CEO.

Objective viewpoints make logical decisions based on facts. Subjective viewpoints (developed by the owner of the company) are too often based on emotion. Facts generate profits, emotions don't. So drop the act, specialize and network more than you already do and help build a more profitable and long-lasting woodworking industry. **W**

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

CUTTING EDGE from Page 19

oil is a pigment-free, natural finish that adds a slight amber tone to wood. It's expensive in small quantities (about \$116 a liter, which delivers roughly 500 sq. ft. of coverage on hardwoods, less with color added), but when it comes to VOCs, it's safe.

Wax, oil and water-based

It's no surprise that the hardwood-flooring sector has played an important role in developing low- and zero-VOC finishes for the woodworking industry. One noted leader in this area is Stang-Lund, which produces its own brand of hard wax oil finish, which it says is an all natural, non-pollutant, non-toxic, no-VOC product with no biocides or preservatives and it's also free of lead and benzene. The company's hard wax oil finish is produced from natural materials such as vegetable oil and natural waxes made from

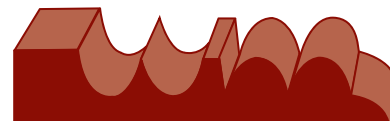
purified renewable natural raw resources. The idea is that the oil penetrates the wood, while the wax stays on the surface. That wax and oil combination seems to be one key to the new generation of low- or no-VOC finishes.

Many water-based products, including latex finishes, are offered as low-VOC compounds and, in most cases, these have less than 250 grams per liter of volatile organic compounds. Similar oil-based products range up to 380 g/L. Products that the EPA considers as no-VOC are rated at less than 5 g/L, but those measurements are made by the manufacturer before pigment or any other additives are included and these can bump the VOC content a little.

Bottom line: Ask your current finish supplier what they offer in terms of no- or low-VOC finishes and, as soon as you switch, let your customers know that you have their best interests, and your employees' best interests, at heart. **W**

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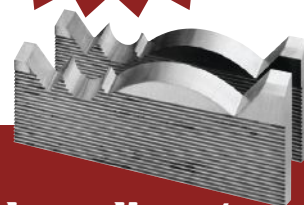


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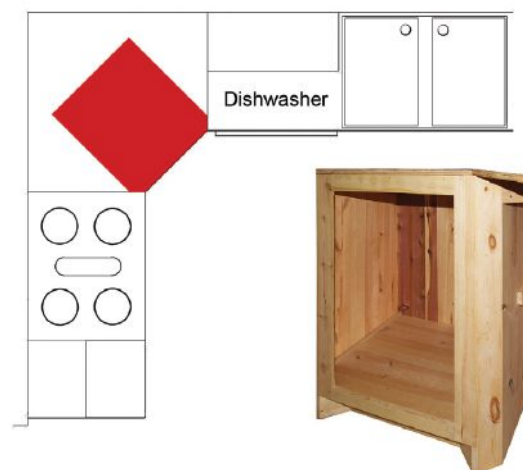
Sacrifice some efficiency by voluntarily abandoning valuable space to build good corner cabinets

By John English

Inside corners are the bane of kitchen designers everywhere. What's the best way to handle this awkward zone? Should one always try to use every cubic inch of available space? Or is there an easier solution?

I built a kitchen this spring for a new apartment in an old commercial building and it needed to fit in an area that was created by combining a closet with a small, unused former bathroom. The client wanted painted pine cabinets and, as the customer is always right, that's what we did. She also made it very clear that she absolutely abhorred Lazy Susans. Being in her 50s, she was no longer interested in getting down on her knees to see what was on the bottom shelf.

The solution she arrived at was, for me, a little painful. It left a lot of dead space on either side and behind the base cabinet and, while building it, I was having some serious doubts. But once installed, I saw immediately that she was right. The countertop (granite tile with ceramic bullnose and backsplash) cuts into the room a little more than I'm used to, but the net result is a very usable, standard-depth cabinet with an opening that's more than 20" wide. It has a custom toe-kick to accommodate the appliances on either side: the ends are mitered. And



above, the countertop's inside corner is a perfect spot for an appliance garage or, in this case, a microwave.

The biggest problem I had with this design was not working out the geometry, but getting my head around the fact that we were voluntarily abandoning valuable space. The whole idea behind custom kitchens is that they are efficient. Did we sacrifice that sacrosanct efficiency for mere ergonomics here? Did we break the rules just because it would be easier for my client to see inside?

You bet we did.

The solution

This was — wait for it — thinking outside the box. And it took somebody outside the trade to go there. She didn't want a Lazy Susan, which actually wastes a lot of space anyway because it's a circle inside a square and the corners are forfeited. She didn't want a trapezoid with a narrow front and a wide back, because it's difficult to reach into those distant corners. She didn't want an L-shaped front with a hinged door, because the door gets in the way and the opening is just too small. One after another, she gave me sound reasons not to use each of the standard solutions.

She also gave me a couple of problems to solve.

First off, this cabinet would not butt against the wall, but it still needed to be placed so that it fit perfectly against its neighbors (in this case a dishwasher and stove). Next, as it didn't occupy much space, how would it support the countertop, which in this case needed to be quite rigid because it was going to be tiled?

The easiest way to deal with placement is to set all of the other cabinets and appliances first and then just measure and build. As this is not very practical on most jobs, I did the next best thing. I mitered the front corners of the



Hafelë's Magic Corner II.

box and gave each of them a 3" return, so their neighbors would have something traditional to butt up against. Continuing that 3" line all the way to the wall (on paper) made it quite easy to create a layout. And by only going 3", I didn't compromise my client's wishes by creating hard-to-reach corners inside the cabinet.

If the neighbors are both base cabinets, the 3" mitered corner allows one to screw it to their face frames or carcass. If, as in this

continued on next page



The KitchenMate blind-corner cabinet organizer.

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The Half-Moon Pivot and Slide (left) and Optimizer from Rev-A-Shelf.

DEAD ZONE from previous page

case, the neighbors are appliances, then a little carpentry is called for. I simply mitered the ends of a couple of 2x4s and screwed them to the cabinet from the inside, flush with the top. Then I secured them to 2x4s screwed to the wall, which also solved my other problem. Those wall cleats perfectly support the plywood under the cement board that carries the granite tile.

Other options

If you don't like the idea of giving up those three triangles of empty space that a square cabinet in an inside corner creates, there are lots of other choices available. I spoke with Jessi Connolly, the e-commerce manager at *Kitchensource.com* in Stratford, Conn., who recommended the following solutions.

Omega National makes a KitchenMate blind-corner cabinet organizer (model NA-P0650MNL1) that comes with a reversible

piano hinge. That means it works in left- or right-hand applications. The hardware is heavy duty and the slides are premounted, making installation a whole lot easier. There are two shelf rollout kits included and the caddies have a 15-mm prefinished maple storage bin designed for bulk storage. This organizer is designed for 15" or larger openings and it's small enough to ship via UPS or FedEx. Retail is about \$320.

Hafële's Magic Corner II (model HA-548.10.240) comes in left or right configurations. Designed for use with hinged doors (although it attaches to the cabinet and not the doors), it requires a minimum opening of 494 mm (19-1/2") and additional clearance for the door hinge. The front baskets swivel out of the way and, at the same time, the back baskets move into the cabinet opening. The back baskets also slide forward individually, which provides full access to everything that used to be stored way back in the corner. Hafële's Soft and Silent feature slows the action just

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Knap & Voight's corner cabinet solution.

before final closure, creating automatic and silent closing. The baskets shown in the photo are sold separately, as are other shelf and basket options. The Magic Corner II runs about \$744 to \$781 retail, depending on options.

Rev-A-Shelf has an interesting take on the Lazy Susan. Its Half-Moon Pivot and Slide (model RAS-4WLS882-38-570) is made of maple and can be adapted to left or right corners. The same unit can be used in a full-height cabinet or one with a drawer and, because the pivot is offset to one side of the moon-shaped shelves (as opposed to being centered on a traditional half-round shelf), it reaches out farther into the room. That saves backs and bending, which is the biggest complaint about standard Lazy Susans. It retails for about \$300.

Rev-A-Shelf also makes a blind-corner cabinet organizer called the Optimizer (model RAS-5PSP-15-CR) that has two large and two small baskets, all of which are vertically adjustable. The unit is easy to assemble and it attaches to the cabinet floor. It has full extension ball-bearing slides and what's really nice here is that the second unit fully clears the cabinet, making for great access. Retail is in the region of \$350.

Knap & Vogt offers a very sturdy and innovative slideout (model KV-BBCS-L-15-FN) that has frosted nickel baskets with Baltic birch bottoms that keep pots and pans or whatever you need securely in place. A quick initial pull on the handle lets the unit glide out of the cabinet on quiet, ball-bearing slides. One more pull exposes the entire unit. When you're done, simply slide the corner unit back into its hiding place. Like the Rev-A-Shelf Optimizer, the second unit here also clears the cabinet. Retail is about \$730.

If none of the above solutions quite hit the spot, there is always the corner drawer. Based on an original concept that was designed for Blum, it is now offered in three configurations by Max Hunter's Western Dovetail (www.drawer.com). The first dovetailed corner drawer was developed to launch Blum's Space Corner concept in 2005. Since then, Western Dovetail has been leading the industry with angled dovetails, curved front drawers and just about anything their customers can dream up. It now stocks standard corner drawer boxes for immediate shipment (supply your own slides and fronts), all of which have dovetailed corners. The Blum drawer is compartmentalized, a second-generation version called the Chevron has no interior dividers and now they offer wide-angle corner drawers and even boxes where one side is a different dimension than the other. That means that one wall



Western Dovetail's corner drawer (above) and Blum's version.

of cabinets might have, say, 12" of space left when it comes to the corner, while the other has maybe 15", and you can still order a stack of drawers to fit.

Corner drawers leave a little void on either side of the drawer, much as my own custom cabinet does, and it takes a little willpower to allow that to happen. Of course, one could change the shapes of the adjacent cabinets, making them wider at the backs than the fronts, but now you're building three custom boxes instead of one. If budget isn't an obstacle, then maybe that's the way to go.

There is one nice thing about inside corners. Even though the base cabinets are a pain, the wall cabinets are easy to manage, because their shallow 12" depth doesn't create any hard-to-reach corners. **W**

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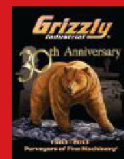
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MICHAEL KOULLIAS

Owner of: Manhattan Cabinetry

Location: Long Island City, N.Y.

Shop size: 42,000 sq. ft.

Employees: 40

About: High-end residential cabinet shop with a primary market in Manhattan.

Quotable: “My advice to other cabinetmakers is to pay attention to keeping good employees. This business is not a McDonald’s. It’s not like you can bring in new people and train them. It takes forever to train them. Every time somebody leaves — and believe me hundreds of people have come and gone here — it takes money to train them according to your standards. They’re unique.”

BY JENNIFER HICKS

THE BIG APPLE

Manhattan Cabinetry has a good perspective on just how much the woodworking business has changed in the last 37 years

Since it was established in 1976, New York's Manhattan Cabinetry has been designing and producing custom furniture and cabinetry for high-end

clients, primarily in the borough that shares the company name. It's a big operation, with about 40 employees, and was even bigger in the past when 70 workers were needed to

meet the demands of a flourishing economy.

The economy hasn't been so great lately, but owner Michael Koullias has never been one to *continued on next page*





Manhattan Cabinetry focuses almost solely on the residential market.

MANHATTAN from previous page

back away from a challenge. He'll go the distance until he decides to downsize, retire or sell.

"I like success," says Koullias. "I thrive on success. To me, money is not something I will worship. It's a measure of my success. I'm hoping for that and I'm driving for that because maybe I will get there. I don't want to go under. I will be happy to get out by selling. That's an honorable exit. But I will not let it go under."

Delivery guy to owner

Koullias grew up in Greece where he started working various jobs as a handyman at the age of 8. He then worked with his father, a professional fisherman and diver, for the next 12 years. He served in the Merchant Marine and headed to the U.S. in 1973, settling in New York.

In 1974, he landed a job as a deliveryman for a cabinet shop in Manhattan. There, he witnessed ways things could be done differently and seized the opportunity. Two years later, he hired a cabinetmaker and a salesperson and opened a shop at 84th Street and First Avenue in Manhattan.

"When I worked for the other cabinet shop and saw the mistakes they were making as deliverymen, I always thought I could do better than that, and I did. I learned from their mistakes. After I opened my first shop, my leftover money was \$500. It was very scary. I didn't know how I made it, but I did," says Koullias.

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Entirely self-taught at woodworking, Koullias built anything he could for his first clients and hired additional help when needed. He became adept at navigating through the city to make deliveries in a timely fashion. He also opened three showrooms. The volume of work increased quickly and a much bigger shop was needed, which is how Manhattan Cabinetry ended up in Queens.

The growth finally stopped — with a bit of a thud — about five years ago.

"Business was great from '86 to 2008," says Koullias. "On and off we did well, but the big disaster was 2008 until now. The economy took a nosedive. I have seen many recessions over the years. All recessions were short, about six months at a time. Right now we're talking about five years and it's still very bad. I had to lay off 30 employees since then and not only that, if we go back 10 years, I had 20 to 30 competitors or more and now I can count them on one hand."

Clients and products

Manhattan Cabinetry focuses almost solely on the residential market. The customer base is concentrated in Manhattan, particularly in the affluent areas of Park and Fifth avenues.

"My clients used to be from Long Island, Connecticut and New Jersey. People were spread out more when the economy went the other way. Now Manhattan is our primary service area. We do mainly residential, except for a few commercial desks for lawyers' and

doctors' offices," says Koullias.

Work offered includes any type of casework, cabinetry and stand-alone furniture pieces for the home, except for millwork and chairs. Prospective clients can see it all at a 3,000-sq.-ft. showroom on East 59th Street in the heart of the city's design district.

"We do kitchens, but there are so many ready-made ones that I don't care for them. But I don't refuse them either," says Koullias. "I prefer the living room. There is plenty of ready-made stuff out there, but no custom furniture for the living room. Murphy beds have

also become our specialty, since they are popular in the city with the smaller living spaces."

With the big city showroom and high-end clientele, it was surprising to learn that most jobs are brokered directly with the homeowner. Koullias says only about 1 percent are arranged through a designer or architect. And, if it's not broke, don't fix it.

"People know us in the city," Koullias explains. "We've been told this many times when we get together with clients. We've been in business for 37 years concentrating

continued on next page

Koullias prefers the living room over the kitchen.



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in Manhattan. We used to spend a lot on advertising; about half a million per year. That's now down to \$500 a year."

Style preferences have changed dramatically through the years. Koullias remembers the demand for unfinished furniture in the late 1960s through the 1970s. In the 1980s, it had to have rounded corners covered with Formica

or a matte gloss finish. A traditional took over in the 1990s, while a contemporary European style has reigned since 2005.

The shop works mostly with hardwood veneers over a plywood substrate. The most



Murphy beds have become a shop specialty.

PHOTOS: MICHAEL GORDON

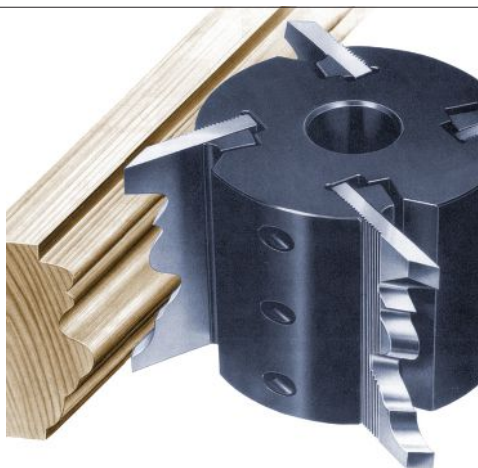
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popular species include mahogany, cherry, English sycamore and maple. Clients tend to prefer light and medium colors and more natural finishes. Stains coated with varnish and polyurethane account for about 80 percent of the finishes, while paint rates second, usually with a high-gloss texture.

The daily grind

The shop features an in-house design department and foreman-led crews of cabinetmakers. Employees are offered the chance to participate in a health plan and can earn two to four weeks of vacation time. Many have worked here for decades and a few from beginning.

Koullias is concerned about health care reform, particularly the part that requires employers to provide insurance if they have 50 or more employees. The ups and downs of the economy are nothing compared to the challenges of dealing with employees.

"Because this work is very customized, there's no production line, every one of them becomes indispensable. So the minute he knows that, I don't know who is boss," says Koullias.

The well-equipped shop includes two Martin table saws, six Delta Unisaws, a Powermatic table saw, Stabil veneer press, Paoloni DR 415 planer, Butfering Classic belt sander, Invicta TI-14 shaper, Makita chop saws, and a Holz-Her edgebander.

Koullias says he's not interested in purchasing more machinery at this time, but he does



want to continue growing his clientele. That might mean a bigger advertising budget or something more drastic.

"I don't know exactly what I want to do yet," he says. "I'm 65 years old. I might sell and downsize or sell and retire. It's not worth it anymore here being in business by just breaking even. We used to make very good money and we don't

anymore. I hope to maintain what I have. I have stayed in business since the recession, but the money I have brought in over the past five years is not supporting the business." **W**

Contact: Manhattan Cabinetry, 9-03 44th Road, Long Island City, NY 11101. Tel: 718-937-4780. www.manhattancabinetry.com

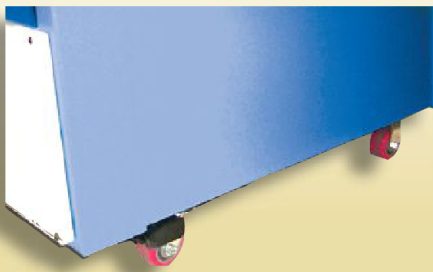
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IMAGE is everything

The latest in CNC software is allowing woodshops to see the endless possibilities in wood product development

By Jennifer Hicks

When it comes to design, manufacturing and shop-management software, particularly CNC-related programs, speed and simplicity are what woodworkers need to boost their businesses. Likewise, manufacturers interviewed by Woodshop News said streamlining the production process continues to be their chief goal behind the development of their latest offerings. The end result, though certainly debatable, is that computers are contributing to much of the work on products that are labeled as custom.

Take, for instance, the latest Commander package from KCD Software. Product developer John Murphy says the program, updated in December 2012, sends cabinet or closet designs directly to the CNC machine with the press of a button. The key lies in the program's "built-in" intelligence feature.

"It actually knows what a cabinet or closet is. It understands its construction," says Murphy. "With a drawer unit, for example, it would understand how to build the drawers, how to locate all the holes to mount hardware in all the sides of the boxes, move the holes that would hold the drawer tracks into the cabinet that the CNC would drill."

Delcam's Mary Shaw discussed some of the highlights in the company's latest ArtCam packages released in December, which include ArtCam Express, Artcam Insignia, and ArtCam Pro.

"We added a number of enhancements to the full range of products that have to do with the availability of machining in 64-bit, which makes calculations much faster. With all of the enhancements of different Windows platforms, we've enhanced our software products so users can get the maximum benefit of hardware

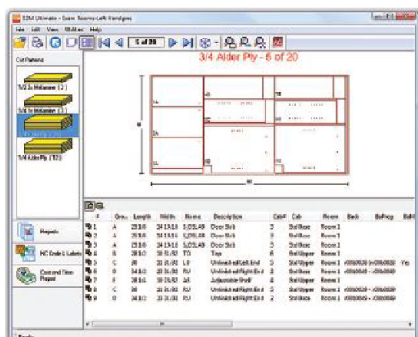
technology, so you're gaining extra speeds using the 64 application. We also have it in the 32-bit format as well," says Shaw.

ArtCam Express is an entry-level product geared for shops that are new to CNC machining. ArtCam Insignia is used more often in mid-sized production facilities because it has many nesting application features. ArtCam Pro is considered the high-end package for custom woodworkers with large production requirements.



IMAGE: COURTESY OF KCD SOFTWARE

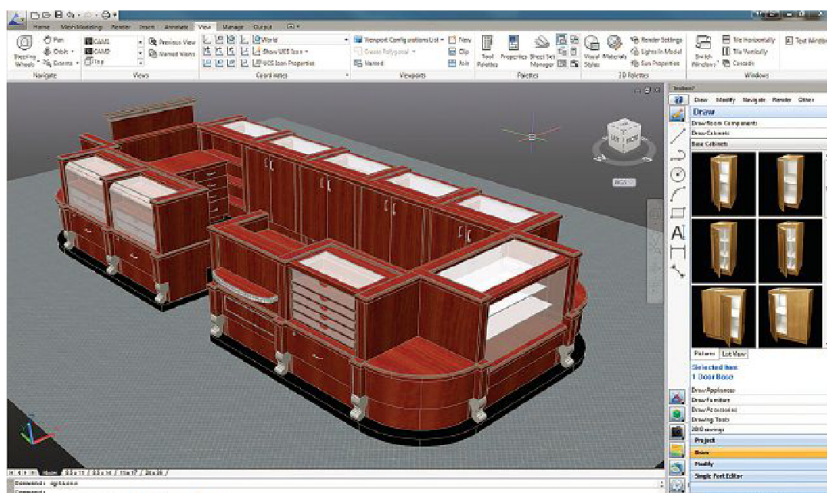
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"The S2M Center brings a new level of automation to the woodworking industry, providing a single-source solution for processing all parts. Now any CAD user can experience true screen-to-machine functionality, greatly reducing programming time and the opportunities for errors by streamlining the process of sending designs straight to computer controlled machinery, as opposed to using separate software applications for each type of machine," Losavio says.

“Residential cabinet manufacturers can produce photo-realistic presentation renderings for their clients and generate accurate reports for projects. Time-saving tools such as automated 2-D drawings and 5-D drawing allow

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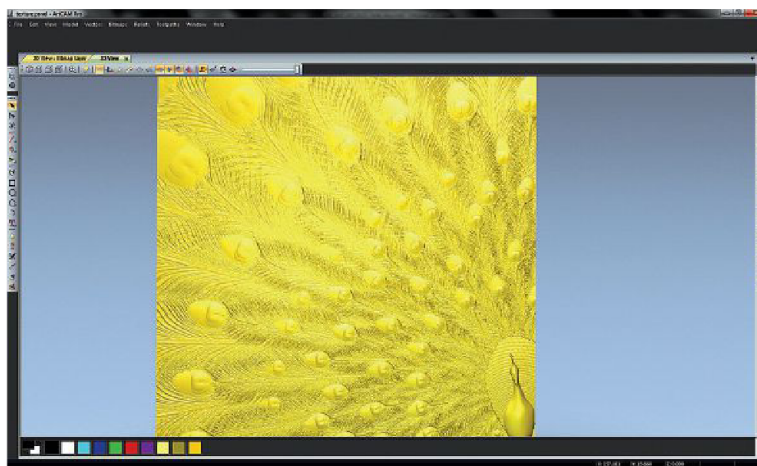
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you to work seamlessly with architects and deliver detailed drawings for your assemblers and installers," says Swayze.

"Commercial shops can engineer complex and unique reception counters, storage systems, and intelligent cabinetry. The system is designed to minimize duplicate processes, so once the products are drawn, you can produce high-quality and detailed plan and elevation views for clients and architects and everything else needed for manufacturing."

In regard to business management, Thomas Spillane of **Computer Associates** discussed the new Ponderosa Sales Portal, a complete

B2B e-commerce solution that enables millwork distributors to increase sales, improve customer service, reduce errors and better manage transactions with customers. The sales portal includes a suite of integrated Web-based self-service tools that let customers interact online with your business 24/7. Customers can build and view their own unique millwork products, request product quotations, submit sales orders and view account information.

Additionally, the Ponderosa product configurator (ProCon) simplifies production ordering and reduces errors for interior and exterior wood,

steel and composite doors, window units, stair systems, trim packages and other shop units. Users choose their desired options, each with rules or constraints to ensure that the options are compatible and can be properly ordered.

"For example, if someone is interested in a custom entry-door system, they view, select and price the specific door slab type, sidelights, exterior trim and other options to fit their project, without having to wait for the customer service department to open. Once the order has been submitted, the dealer can confirm specs and pricing with the customer, commit inventory, schedule assembly time and track associated labor," says Spillane.

continued on Page 45

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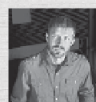


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and working the job site



Every now and then somebody revolutionizes the way that we work. In Wallingford, Connecticut, that would be Brian Way. He has taken a panel truck and converted it into a portable workshop. Yup, that's been done before - but not like this! Brian has come up with hundreds of innovative ways to set up and store tools and supplies in the spirit of "lean", using state-of-the-art products like Kaizen Foam to customize every drawer and nook in the truck. He believes in efficiency and even has a Festool dust collection system built into the truck.

Speaking of Festool, their new TS 55 REQ Plunge Cut Saw is so efficient that it's capable of replacing a table saw, miter saw and panel saw on the job site. Compact and exquisitely engineered, it has snazzy new features like micro-depth control and a riving knife.

And speaking of saws, the ultimate update for a miter saw just has to be Saw-Gear, a stop system that makes measuring obsolete. Just dial in the dimension you need and the stop slides to that precise position. It's fast, accurate, and totally portable.

As is the unbelievably quiet JC10 air compressor from Rolair. This oil-less, two-cylinder, 1HP unit is so quiet that a finish carpenter can run it on a job while the homeowners enjoy a peaceful lunch in the next room. Now, that's working the job site!



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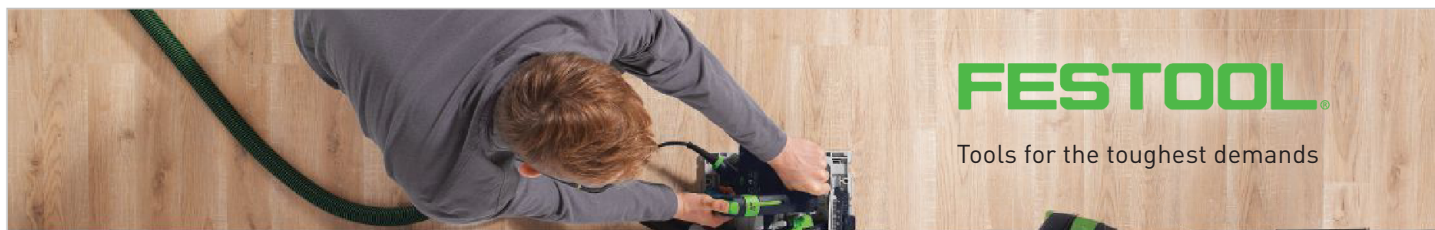
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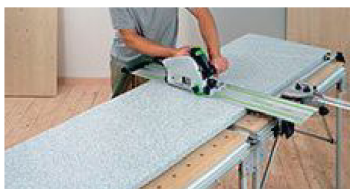
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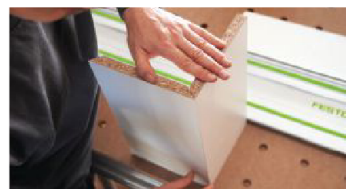
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The World's Most Advanced Track Saw

How do you haul a table saw, miter saw and panel saw to the jobsite? A better question is: why would you? The new TS 55 REQ Plunge Cut Saw from Festool offers all the advantages of these tools in a compact, durable, exquisitely engineered piece of equipment. With its micro-adjustable depth controls and a flat housing for flush-cutting against walls or adjacent surfaces, the TS 55 REQ is the world's most advanced track saw.

What's a track saw? Festool has developed a high-quality plunge cut saw and guide rail system that generates precision cuts anywhere on a panel quickly and safely—cuts that should never be attempted or can be made with a traditional circular saw. The pivoting action and minimal blade exposure are ideal for starting a cut in the middle of a panel. The design of the TS allows the blade to pivot into the material smoothly and accurately. The TS can be used for many common tasks such as ripping sheet goods, creating straight edges on rough stock, jointing boards, cutting to scribe lines on doors and cabinets, cross-cutting, and creating openings in panels, sections of flooring, and cabinets. It's a remodeler's or carpenter's dream—all those solutions in one small, superbly designed package.

Complementing the TS is the FS Guide Rail System, which offers laser- straight, splinter-free cuts in seconds. Simply lay the Guide Rail between two points, and you have your cut line. It really is as simple as that.

for making cuts either on or off the guide rail. (A self-adhering Imperial scale is included). One of the most revolutionary changes is the addition of micro-adjustable depth control to the TS 55 REQ. An integrated micro-adjust knob lets a woodworker dial up very precise depth adjustment, so you cut only what's intended. That means no more guessing about substrates or laminations. With a new integral splinterguard with flush-mount design, achieving splinter-free cuts is easier than ever.

Ever tried to flush-cut with a traditional

“Festools' original track saw changed the way that woodworkers work. The new version is changing the way they think.”

circular saw? The Festool TS 55 REQ has a flat housing designed especially for this task. Offset to 12mm (1/2") it allows you to make straight cuts that are perfectly parallel to any edge. And a redesigned riving knife emerges before the saw blade for easier positioning in existing cuts lines. That means you can pick



an installer can compensate for minor miter problems on the job, achieving better glue lines and bonding.

The new saw also delivers upgraded dust control. An improved dust channel and sight window boosts the efficiency of the extraction system, so you can work right in the customer's space with less cleanup.

If you're dragging around a jobsite table saw, or trying to lug heavy sheets of plywood to a stationary saw back in the workshop, you're making cuts the hard way. Beyond the frustration, you're also wasting a lot of time on site and in the shop. Time is money, and the construction trades are a lot leaner and more competitive than they were before the recession. Our new marketplace demands that we work intelligently and efficiently. Bring the tool to the work, rather than the work to the tool. Immerse yourself in Festool's legendary engineering. Your only regret will be that you didn't get a TS 55 REQ sooner.



Over the years, Festool's tracksaw designs have changed the way woodworkers work, and the latest updates truly establish the TS as the best saw of its kind on the market today. The new TS adds an easy-to-read, dual-depth scale with large, visible scale depth indicators

up where you left off, every time, right on the money.

The new TS also offers a greater bevel range. A simple detent-override function lets the operator extend angle cuts from -1° to +47°, with positive stops at 0° and 45°. That means



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SawGear is a portable automatic length mea-

suring system for your miter saw. Just dial in the dimension you need and the stop slides to that precise position. It's fast, accurate, and incredibly simple. It eliminates tape measure fumbling and repetitive measuring. Over the course of a standard framing or trim job it will save man-days, not just man-hours. That helps your bottom line and your schedule, and keeps you competitive in this new and challenging market.

SawGear is portable, rugged, accurate and easy to both set up and use - it delivers results to 1/128". Being such a durable and rigid system, you can slam your material against the



stop while maintaining your straight or mitered cuts with precision.

SawGear has taken portability to the next level; not only is the system extremely easy to move between jobsites, the new SawGear Tables are a superb alternative to hefty benches and sawhorses. These optional table systems collapse with a unique hinge system, and attach to virtually any brand of miter saw.

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Over the course of a standard framing or trim job, SawGear will save man-days, not just man-hours.

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SawGear even comes with Crown + Miter-Pro™, a built-in program that takes the guesswork out of cutting crown molding. Enter the lengths and angles of the room where you need to hang crown, and watch SawGear do the math! It will tell you exactly what angle to select, and then position the stop for a perfect cut every time. SawGear can even store cut-lists, accept decimal and fraction input, and understand English or Metric measuring units.

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According to Dr. Gregg Vanderheiden of the Trace R&D Center at the University of Wisconsin in Madison, the approximate sound pressure level of normal conversation is around 60 dB (decibels). That also happens to be the tested rating for the amazingly quiet model #JC10 compressor from Rolair. Delivering 2.35 CFM @ 90 psi, this oil-less, two-cylinder unit is so quiet that a finish carpenter can run it on a job while the homeowners enjoy a peaceful lunch in the next room.

Not only is it unbelievably quiet, it's also powerful. With a 2.5 gallon tank, this 1HP rig is small enough for one worker to carry around the jobsite. When it comes to portability, compressors just don't get much better than this. The JC10 is very lightweight (just 39 lbs), and it's compact, too (only 17" x 16" x 15"). That makes it an ideal tool for trim carpenters and cabinet installers. It only draws 8 Amps, which means it won't trip sensitive ground fault circuit interrupters (GFCIs) in your customers' kitchens and baths.



The top bar of the JC10's protective cage doubles as a handle that balances the weight of the unit, which helps make it easier to carry. Rubber feet also reduce vibrations, and that helps keep it quiet.

From a woodworker's point of view, this isn't your first choice for running a framing

nail-gun. It'll handle occasional use, but it's not going to keep up on all-day jobs. It will, however, support finish nailers and brad guns with ease, so it's an excellent choice for cabinet and furniture-building applications.

Street price on the JC10 is about \$225. Also in the family is a 1.5HP model (FC1250LS3), which runs at 73 dB. That's about as loud as traffic on a 25 MPH street. To watch a review of the JC10, use the QR code or digital play button above.



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Lean Machine

When it comes to jobsite portability, nothing comes close to Brian Way's work truck. A true American innovator, Way has incorporated hundreds of space- and time-saving "lean" ideas into his mobile masterpiece. From an inventive security system to a brilliantly simple custom stairs, the B.P. Way Millwork & Installations vehicle is nothing less than state-of-the-art. Way has installed compressed air fittings inside and

outside the truck, and he brings 5000 watts of portable power to every jobsite. His toolbox

drawers are all lined with Kaizen Foam™, a product that peels away in layers making it very easy to create perfect pockets for each tool. Thin aluminum tracks throughout are designed to accept clips on his drills and other portable

tools, making them easy to store and to grab.

"Our shop, showroom and office are located



in Wallingford, Connecticut," Way says. "We only have 4000 square feet, so it's important to set up for proper workflow, to optimize the volume of work we produce."

That efficient philosophy is nowhere more apparent than in his truck, where sliding rails can stretch out six feet beyond the back door to support long work. A large pullout platform below one workbench locks onto a small bench-top drill press to expand its potential, and a row of ProCarpenter™ tape measures (the ones that come with a built-in pencil sharpener, erasable notepad and other innovative features) are lined up above the worktable with speed clips, instantly available. The truck even has a built-in coffeemaker, microwave and television!

Way designed a simple system to secure a mobile workbench so it doesn't roll around when the truck takes a corner, and all the drawers in that unit are lined with foam pockets, too. That not only makes for efficient storage, but it also lets Way know when a tool hasn't been replaced. The portable bench even has power on board for charging drill batteries on-site.

To watch a video about Brian Way's remarkable work truck, visit the link below.

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All Master Software North America offers a host of CNC machining software in its CabMaster suite. CabMaster Machine is the most advanced of the products. It allows users to generate layered DXF and a list file to import any nesting and tool-path engine that accepts them. CabMaster Free Form offers a new way of designing cabinets and components from scratch, automatically adding the machining operations after the cabinet is specified and added to the overall design.

Source list

- All Master Software North America. Tel: 410-753-2214. www.amsna.net
- Cabinet Pro. Tel: 541-664-2808. www.cabinetpro.com
- CNC Software Inc. Tel: 800-228-2877 www.mastercam.com
- Computer Associates. Tel: 800-422-4782. www.caisoft.com
- Delcam. Tel: 877-335-2261. www.delcam.com
- KCD Software. Tel: 508-760-1140. www.kcdsoftware.com
- Microvellum. Tel: 800-204-0913. www.microvellum.com
- Planit Solutions. Tel: 800-280-6932. www.planit.com
- SA International. Tel: 800-229-9066. www.saintl.biz

More software providers can be found in the Woodshop News Resource Guide at www.woodshopnews.com.

The Ponderosa Sales Portal.



CNC Software offers a selection of Mastercam CNC programming products, including Router, Plus, Pro and Multiaxis versions that help woodworkers make the most of their machines. Mastercam Router is the standard product, an associative CAD/CAM program specifically designed for routers that includes the full Mastercam CAD engine plus 2-D feature-based machining on solids, advanced part and tool-path nesting, block drill and aggregate head support, and support for raster-based files.

SA International's new EnRoute 5 program, introduced at IWF 2012, provides intuitive creative tools and accurate tool-pathing for carving and engraving needs. Among the major features is a fully-equipped interface containing enhanced nesting options.

Cabinet Pro offers the Cabinet Pro CNC edition designed to produce G-Code directly from a cut list and panel-optimized parts so that a CAD software package is not necessary. **W**

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N.H. gallery take a new look at chairs

New Hampshire Furniture Masters Association will feature the work of current and former members through June 11



By Jennifer Hicks

An exhibition from the New Hampshire Furniture Masters Association is taking a fresh look at the chair. "Just Chairs: A Survey of Side Chairs," features more than 20 chairs created by current and former members and invited guests. It will be on display through June 11 at the Furniture Masters' Gallery in Concord, N.H.

The chair, a commonplace object that can be found in some form or fashion in virtually every American home, can take many different forms, each a reflection of the vision of the individual designer or maker, association and gallery director Ted Blachly says.

"The chair is obviously not a new type of furniture. It probably came into being when an unknown cave person decided to dovetail a stick onto a rock to make a backrest. Yet a chair is one of the more challenging pieces of furniture that a maker can build. The knowing craftsman understands the




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stresses that will be imposed upon it during its life and strives to address these structural concerns in an elegant way."

"Just Chairs" includes work by Blachly and members Jon Brooks, Garrett Hack, Howard Hatch, David Leach, Tom McLaughlin, Terry

Moore, Jere Osgood and Thom Walsh, as well as former members Brian Braskie and Lenore Howe (two of the group's founders), Omar Clairmont, John McAlevey and Jon Siegel.

Also included are works by David Friedline, David Masury, Tim Rousseau, Walker Weed and Brian Weir, as well as historical examples by George Nakashima, Duncan Phyfe and Hans Wegner.

Call for entries

The Center for Furniture Craftsmanship in Rockport, Maine, is seeking entries for the fourth juried Maine Wood biennial. The exhibition is scheduled for Jan. 24 to April 2, 2014, at the school's Messler Gallery.

It's open only to Maine woodworkers and entrants are encouraged to submit original pieces that were made in state during the last five years, exhibit excellence in craftsmanship and design and have wood as their primary material. The entry deadline is Aug. 31.

Contacts

Center for Furniture Craftsmanship, 25 Mill St., Rockport, ME 04856. Tel: 207-594-5611, www.woodschoo.org

New Hampshire Furniture Masters Association, P.O. Box 5733, Manchester, NH 03108. Tel: 603-898-0242. www.furnituremasters.org 

PHOTOS: DEAN POWELL AND BILL TRUSLOW



The "Just Chairs" exhibit includes work by David Masury (above), Jere Osgood (right) and Tom McLaughlin (facing page).



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► **HERKULES EQUIPMENT** has introduced a new paint gun washer called the FastTrack that speeds up the paint-gun cleaning process anywhere in the shop, according to the company. It is designed to work with Herkules Sparkle Clean Blast aerosol can cleaner to remove waterborne and solvent paints. The Blast can is fastened, upside down, to the top of the FastTrack. The cleaning process begins when the FastTrack's nozzle is pushed up with the paint gun. The Blast's cleaner is then released down into the gun's paint channel with just the right amount of pressure to clean the inside of the gun. The outside tip of the gun is easily cleaned with the attached brush. For information, call 800-444-4351 or visit www.herkules.us.

◄ **ROCKLER WOODWORKING AND HARDWARE** has introduced the Trim Router Circle Cutting Jig, a device that interfaces with trim routers for precise circle routing applications. The jig allows an infinitely adjustable range of 6" to 36" circle cutting diameters and is compact enough to fit in most tool boxes. It's predrilled to fit many popular router models. The jig, model 48871, retails for \$36.99. For information, call 877-762-5537 or visit www.rockler.com.





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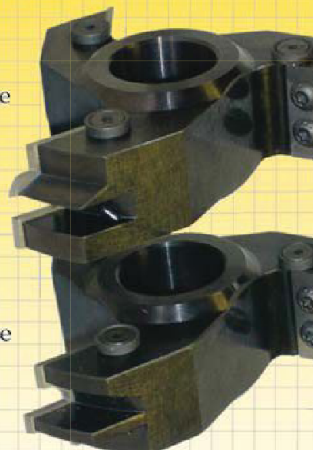
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▼ **KEYSTONE WOOD SPECIALTIES** has introduced a prototype door program. By ordering up to two sample doors at discounted prototype prices, cabinetmakers can provide customers with a hands-on look at door styles and finishes. Lead times range from two to six days. Options span most Keystone doors and finishes including stains, solids, glazes and more. Some restrictions apply. For information, call 800-233-0289 or visit <http://keystonewood.com>.



▲ **BOSCH POWER TOOLS** has introduced a half-sheet orbital sander, model OS50VC, featuring vibration control, the Sheetloc Supreme paper clamping system and 3.4-amp power rating, according to the company. The clamping system automatically tensions sanding paper as it is being clamped to ensure that it is held taut for each use. The sander comes with a backing pad that conforms to different contours, but it can also be used with stick-on paper. It also has variable speed control, a removable auxiliary handle and dust-collection features. The sander retails for about \$379. For information, call 877-267-2499 or visit www.boschtools.com.

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▶▶ **GENERAL TOOLS & INSTRUMENTS** offers the new EZ Pro Crown King jig for cutting crown molding. Out of the box, it enables the production of interior and exterior corner joints with the three most common crown molding spring angles, according to the company. The Crown King comprises two pieces: the jig itself and a versatile insert/adaptor. Without the insert, the jig is positioned for cutting 45-degree spring angle moldings. With the insert, it is quickly reconfigured to accommodate 38- or 52-degree spring angles. For information, call 212-431-6100 or visit www.generaltools.com.



▼ **CHARLES G.G. SCHMIDT & CO.** has added mortising chisels and bits to its product line. The tools cut clean, square mortises in both hard and soft woods using less horsepower because of the extremely sharp cutting edges, according to the company. They are available in seven standard sizes and two rectangular sizes. For information, call 800-724-6438 or visit www.cgg Schmidt.com.



▶▶ **AMANA TOOL** offers a carbide-tipped countersink with non-marring, adjustable ball-bearing depth stop. The new tool creates pilot holes and varied-depth countersinks in a variety of materials without causing burnout or other marks. Users can adjust the depth of both the pilot hole and countersink so that the resulting opening is either flush with the surface or recessed. The resulting countersinks can be shallow to accommodate a only a screw or deeper to allow for insertion of a plug. The countersink also features an opening to allow for chip evacuation. The tool sells for about \$37 and is designed for use in a drill press, handheld drill or boring machine. For information, visit www.amanatool.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.

The complete national calendar of events is updated monthly at www.woodshopnews.com.

— Compiled by Jennifer Hicks

CALIFORNIA

June 10-14 & 17-21 — Stage I: Boulle and Stage II: Classic method (piece by piece) classes at the American School of French Marquetry in San Diego with W. Patrick Edwards and Patrice Lejeune. Tuition: \$750 (for each stage), including materials. www.americanschooloffrenchmarquetry.com

June 20-22 — FS13: L.A. Symposium. Hosted by The Furniture Society, this three-day event will feature panel discussions, studio tours, and exhibitions. Location: L.A. Mart in Los Angeles. Contact: www.furnituresociety.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 for information.

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

MAINE

July 15-26 — Cabinets and Casepieces: Focus on Modernism with Thomas Hucker and Brian Reid. Improve casework skills while exploring the mid-century modern style. Fee: \$1,280. www.woodschoool.org

MASSACHUSETTS

July 15-19, Aug. 12-16, Oct. 16-20 — Five-Day Bare Bones of Wood Carving Classes with David Calvo in Gloucester, Mass. www.davidcalvo.com

Sept. 25-29 — Traditional Timber Framing with Jack Sobon and Dave Carlon. Fee \$480. Location: Hancock Shaker Village, Pittsfield, Mass. Contact: Jack Sobon at 413-684-3223, jacksobon@verizon.net.

NEVADA

July 24-27 — AWFS Fair at the Las Vegas Convention Center. www.afwsfair.org

July 29-Aug. 2 — Summer Las Vegas Market, an international furniture trade show. Location: World Market Center in Las Vegas. www.lasvegasmarket.com

NEW JERSEY

June 15-16 — 25th annual Spring Fine Art and Crafts at Brookdale Park in Montclair. www.rosesquared.com

Sept. 21-22 — 30th annual Fine Art and Crafts at Anderson Park in Upper Montclair. www.rosesquared.com

NEW YORK

Monthly — Sawdust and Woodchips Woodworking Association meetings are held on the first Thursday of each month at 6:30 p.m. at the Canton Woods Center in Baldwinsville. www.sawdustwoodchips.org

NORTH CAROLINA

July 29- Aug. 3 — Ladderback chair class with Drew Langser. Students will make a bent-back, double slat, post-and-rung chair in this six-day summer workshop. Fee: \$975. www.countryworkshops.org

Oct. 19-24 — Fall High Point Market. One of the largest furniture industry trade shows in the world, bringing more than 70,000 people to High Point every six months. Location: High Point. www.highpointmarket.org **W**



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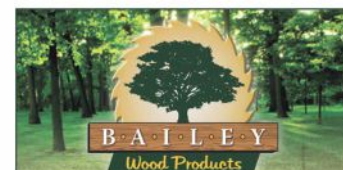
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Last year's winners included Block & Chisel of Atlanta (wet bar) and Ipswich Cabinetry of Ipswich, Mass. (spiral staircase).

CMA's Diamond Awards

The Cabinet Makers Association is accepting entries for its 2013 CMA Wood Diamond Awards Program. Open to all current members of the CMA, regardless of shop size, the program offers participating companies the chance for a credential that can boost their local reputation.

Now in its fourth year, CMA president Tracy Yarborough says the number of entrants has increased every year with more than 50 entrants anticipated this year. He says the contest was initially started to allow members to show off their work and also use the awards as a marketing tool for their companies.

"What the participating shops are getting out of it, of course, is the ability to market their shops to their customers and say they are award-winning companies with award-winning projects. Each one that has won already has continued to enter each year because they say that it does help in their marketing campaigns for their businesses," says Yarborough.

"Winning a Wood Diamond is one way to set yourself apart from your competition. Having a

panel of your professional peers proclaim you to have the 'best of' in any category will only help you gain favoritism with your customers."

The program will be accepting entries until May 31 and the winners will be announced in July at the AWFS fair in Las Vegas. All first-place winners will get a solid cherry plaque declaring their excellence in their respective category, while other entries will receive a certificate of achievement.

"We see everything, believe it or not," adds Yarborough. "We thought that when we first opened it up that all we would see would be the typical kitchen and baths, but we found that these guys are not just woodworkers, they're craftsmen that love what they do. They've done everything from libraries to wine cellars to entertainment room surrounds and huge theater rooms. Some of the commercial projects they get into sometimes deal with modern architecture and it just blows my mind how they build these things."

Contact: Cabinet Makers Association, P.O. Box 14276, Milwaukee, WI 53214.

Tel: 414-377-1340. www.cabinetmakers.org

— Jennifer Hicks

60 Grit

Rough humor by Steve Spiro



Dan does the dovetail jig.



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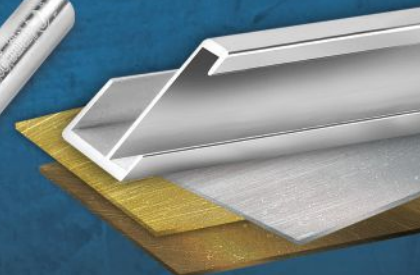


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