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February 2014

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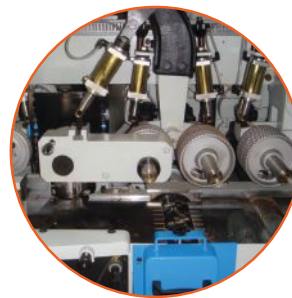
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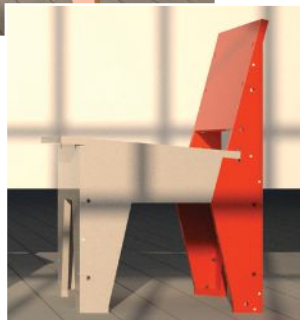
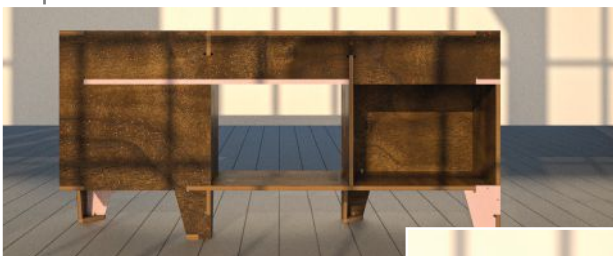
stiles

From classic.

Custom furniture maker Phillip Fletcher founded Durham Bookcases back in 1995. His mid-sized production shop designs and builds entertainment centers, wall units, office and bedroom furniture. Each piece features traditional styling and careful attention to detail, using the finest woods. To keep Durham Bookcases' volume production humming, Fletcher has relied on ShopBot Tools for over 10 years.



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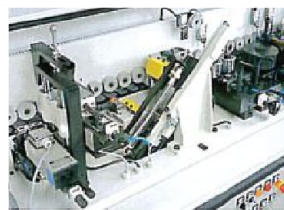
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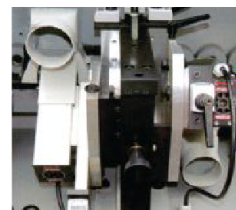
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BLOGS



Over the Workbench

Talkin' shop with former editor A.J. Hamler



This Business about Woodworking

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TAKING STOCK

with JOHN ENGLISH

Obamacare looms large on every shop's horizon

At this point, it's still difficult to tell how the Patient Protection and Affordable Care Act will affect woodshop employees and owners. One thing is for sure: a couple of years from now, the law is going to look a whole lot differently than it currently does. That was true for the rollout of Social Security in 1935. It took almost 40 years to get that program to the point where most American workers were covered. It was also true of Medicare and Medicaid, Supplemental Security Income, the Children's Health Insurance Program and most other nationwide social programs. It takes a while to work out the kinks.

With a Republican majority in the House and opinion polls saying that 62 percent of the public are now dissatisfied with Obamacare, it's pretty certain that there will be some major changes in 2014. How the elections this year will affect things is still up in the air. With a strengthening economy (since its high of 10 percent in October 2009 the jobless rate has declined steadily to its current 6.7 percent), very strong markets (the Dow Jones closed 2013 up 26.5 percent, its best performance in 19 years), and the administration's ability to stay out of yet another Mideast war (Syria), it's going to be very interesting to see if Obamacare will turn the tide against Democrat candidates. If it does, the rules for woodshops and individual woodworkers looking at entering the health care market could be a whole lot different next January than they were this year.

One of the biggest issues with Obamacare has been the website (www.healthcare.gov), which has been an abysmal failure. It's

up and running now, but something very strange seems to be occurring. Many health insurance policies that ran \$400-\$500 before Obamacare seem to have doubled or tripled in cost. So when the Average Joe signs up and gets his new government tax allowance, that deduction might just cover the increase in the price of his premiums. In that case, his healthcare is no more affordable, and is often less affordable, than it was before the Affordable Care Act.

WHO IS ENROLLING?

During December, a little more than two million people signed up for Obamacare. While the data have not yet been fully analyzed, there are strong indications that a majority of those new participants are from more affluent households. One indicator is that only half of them signed up for subsidies. As wealthier Americans usually have insurance, this would imply that the folks whom the law was designed to serve — the 30 million who can't afford health insurance — are not signing up in the same numbers. That's not all bad news: the ones who are signing up now are the ones who will bear most of the cost.

A majority of analysts predict there will be about five million people enrolled by the end of March. One of the biggest reasons that number probably won't reach the administration's estimate of seven million is that too many people are still confused about the basics: who has to sign up and when. The when part is easy. The answer is now (more on this in a minute). The "who" is anyone who doesn't get health care insurance through Medicaid, Medicare or an employer.

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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Canada Post Return Address undeliverable to:

APC-PLI, P.O. Box 503, RPO West Beaver Creek,

Richmond Hill, ON L4B 4R6.

Canada Post Publication Mail Agreement No 40624074.

E-MAIL: circulation@woodshopnews.com.

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So far, only about half the states have authorized the law's expansion of Medicaid, so that's another confusing issue for folks trying to evaluate where they stand. If you don't make a lot of money and you're in one of the states that opposes expansion, getting proper coverage could be a bumpy ride. The map on that looks almost exactly like the red-and-blue election maps. States that voted Republican in the last election are generally opposed and those that voted Democrat have for the most part either already expanded the program or are in the process. (Tennessee, Ohio, Pennsylvania and New Hampshire were still debating as of the first of the year and could go either way.)

Indirectly, we're all going to eventually feel some impact in our premiums and (hopefully) in lower costs. But what is truly amazing about Obamacare is how few of us are actually going to be directly affected by it. Four out of five Americans get health insurance through either employers or the government. The other 20 percent (about 60 million) includes the self-employed and those who can't afford health care. With that in mind, here's how the government explains the role of poverty guidelines for self-employed woodworkers:

"As a rule of thumb, if your family income is less than four times the published Federal Poverty Guideline for your household size and you are not eligible for employer- or other public-assisted health care (such as Medicaid or Medicare), you will be able to receive premium subsidies to help you purchase affordable insurance through your state's health insurance marketplace. Although technically a tax credit, which you will receive when you file your 2014 tax return, a tax credit advance will be paid directly to the insurance provider you choose, reducing the monthly premium you have to pay. If, at the end of the year, your income turns out to be more or less than expected the tax credit will be adjusted and added to or taken from any tax refund or payment due."

In layman's terms, this means that a woodworker making less than the amount shown in the righthand column of the chart for his/her family size (the 400 percent column) will probably qualify for reduced premiums through the marketplace in the form of tax credits the government awards now to insurance companies, but which you will be responsible for at tax time.

A woodworker whose income is less than two-and-a-half times the number shown in the 100 percent column now qualifies for reduced deductibles, co-payments and lower maximum out of pocket costs.

For people who live in one of the 26-and-

Household Size	100%	133%	138%	150%	200%	300%	400%
1	\$11,490	\$15,282	\$15,856	\$17,235	\$22,980	\$34,470	\$45,960
2	15,510	20,628	\$21,404	23,265	31,020	46,530	62,040
3	19,530	25,975	\$26,951	29,295	39,060	58,590	78,120
4	23,550	31,322	\$32,499	35,325	47,100	70,650	94,200
5	27,570	36,668	\$38,047	41,355	55,140	82,710	110,280
6	31,590	42,015	\$43,594	47,385	63,180	94,770	126,360
7	35,610	47,361	\$49,142	53,415	71,220	106,830	142,440
8	39,630	52,708	\$54,689	59,445	79,260	118,890	158,520
For each additional person, add	\$4,020	\$5,347	\$5,548	\$6,030	\$8,040	\$12,060	\$16,080

2013 Federal Poverty Guidelines for the 48 contiguous states and the District of Columbia.

counting states that have agreed to expand Medicaid, if they have a household income up to the number in the 138 percent column, their family will probably qualify for Medicaid.

GOT EMPLOYEES?

A lot of woodshops are one-man outfits that hire their bookkeeper in the same way they work with insurance agents or other suppliers. They don't put anybody on payroll. But how does Obamacare affect a business that has even one part-time employee? Almost half of that 20 percent of Americans without health insurance (prior to Jan. 1 2014) are small business owners and their employees. They are in a tough spot because during the last 50 years the cost of insurance premiums has gone sky high — so high that providing this benefit to employees simply hasn't been an option. It was the difference between surviving and going broke.

One of the olive branches offered by Obamacare to these businesses is the Small Business Health Options Program (SHOP). Through healthcare.gov, businesses with fewer than 50 full-time employees can currently shop for group health plans. In 2016, that will expand to cover businesses with up to 100 employees. Under SHOP, taxes and tax credits are based on the number of "full-time equivalent employees" and

their average annual wages and not solely on the number of employees. And, according to obamacarefacts.com, "small businesses with fewer than 25 full-time equivalent employees with average annual wages below \$50,000 can get tax credits (as adjusted for inflation beginning in 2014) to help pay for employee premiums."

If a woodshop has more than 50 employees (and there are some conditions regarding payroll here), then that company will have to provide health coverage to its full-time employees starting in 2015. At least that's the law today. It has already been changed from 2014.

Another part of the law that concerns woodshops with a few employees (any business making more than \$250,000 profit) is that their contribution to Medicare has increased. That 0.9 percent increase is split between the company and any employees making more than \$200,000 a year.

Initial reaction among some employers to the 2015 mandate has caused a few problems already. These have included employees being told their hours will be cut and some anticipated costs have already being passed on to consumers. Woodshop owners might be best advised to talk with their insurance partner and a tax professional before making any decisions about next year. **W**

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NEWS DESK

N.H. furniture maker wins \$25,000 grant

The Society of Arts and Crafts honors shop owner who will go on a research travel project in the American West **By Jennifer Hicks**

The Society of Arts and Crafts selected Vivian Beer of Manchester, N.H., as its 2013 recipient of the John D. Mineck Furniture Fellowship. The fellowship, in the amount of \$25,000, is awarded to one artist annually.

John D. Mineck was a past president of The Society of Arts and Crafts' board of trustees and a member of Boston's cultural community. In an effort to support the art that Mineck loved and the people who make it, the foundation created the fellowship to encourage and support an emerging furniture artist with the financial assis-

tance to succeed with their career goals.

Beer is an innovative furniture maker who started her own business in 2006. With the grant money, she aspires to create handmade, one-off objects that manifest the nostalgia of history, the speed of progress and the memory of the human hand.

She will be doing a research travel project in the American West desert, in parts of Southern California, Utah and Nevada, where she will spend two months in an RV with a mobile studio traveling around to different locations with the idea of

inspiration, community and adventure.

Essentially, while continuing her own work, she is also trying to encourage and facilitate collaborating with other furniture makers and designers that she's always wanted to work with, with the idea that each collaboration with the individual is going to end up being an entire body of work.

"It's going to be traveling, but the community part is I'm inviting different artists from the different locations to come and collaborate with me so there are a lot of different portions of it," Beer says.

"The first one is going to be a body of work. I started in a residency out in California last year called Desert Impressions and it's a combination of taking photographs and taking different molds of places in the desert and then use them to make furniture that has the texture of the desert, for instance, cracked mud, and partnering it with a panoramic photograph."

Beer plans to package the entire project into a show. To follow her blog throughout the course of her project, visit <http://vivianbeer.tumblr.com>. **W**

Vivian Beer will use the grant to create a mobile studio and a show from the resulting work.



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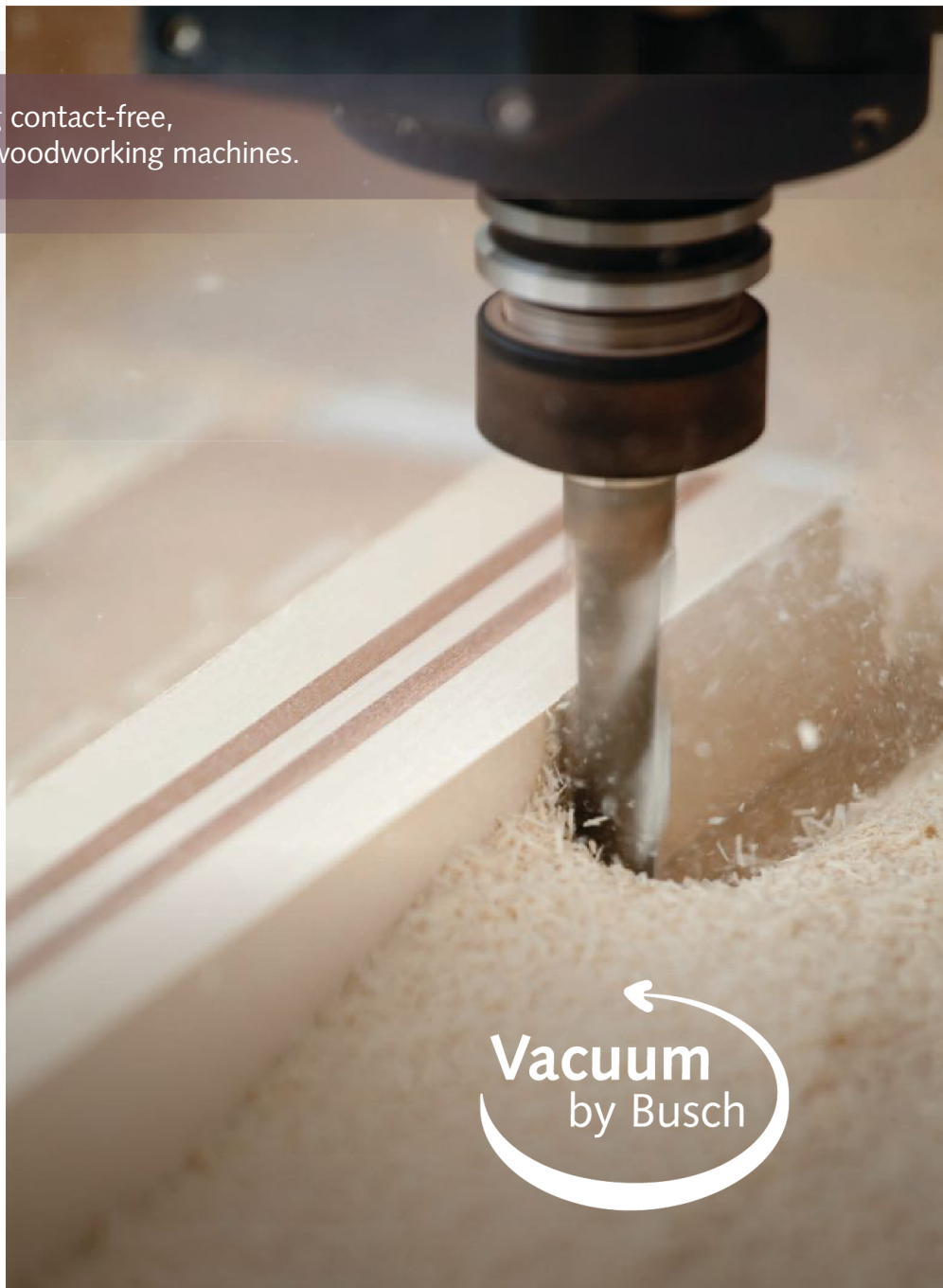
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Cabinet Makers Association seeks 2014 survey data

By Jennifer Hicks

The Cabinet Makers Association is collecting information for its 2014 Benchmark Study, which surveys custom shop owners on their earnings, wages paid to employees based on experience, machinery preferences, customer trends, and industry outlook.

"The primary purpose of the survey is to see as a business owner where you stack up based on what other people in the same business are doing either in your area or across the country, CMA executive director Dave Grulke says.

"It discusses what respondents are feeling about their markets, whether they feel they're going to have better years or worse years. It also compares payrolls and rates and all information that's difficult to find anywhere else."

Last year's study included input from roughly 500 qualified respondents that include business owners or senior managers who hold the financial information for their companies.

"Last year, about 54 percent of the respon-

dents saw higher sales in 2012 vs. 2011 and sales seem to be much greater for 2013, but the responses are still coming in," says Grulke.

He's expecting a similar, positive outlook for sales in 2014.

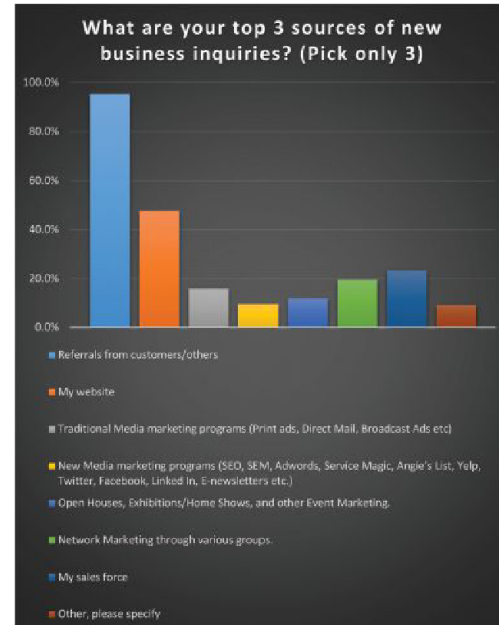
"Last year's study [noted] more forward bookings," Grulke says. "Around 180 people surveyed indicated that was among the reasons they were feeling more optimistic, and they were also finding more leads.

"For those that felt less optimistic, they were citing tighter margins and fewer forward bookings."

Grulke hopes the survey will continue to get a strong response.

"We want the readers to improve their sales outlook and improve their business as a whole, to follow the patterns of folks ahead of them in the evolution by viewing what other businesses have done and what their outlooks are. They can make changes in their operation to hit the higher ground if they choose to do so."

For more information, visit the CMA's website at www.cabinetmakers.org. 



The survey only takes a few minutes to complete and is a valuable resource for shop owners.

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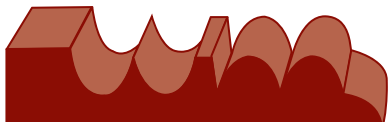


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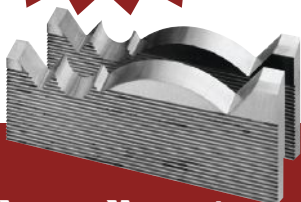


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Maine shop owner receives Hall induction

**Tom Moser added to New England
Design Hall of Fame in the specialty
design category**

By Jennifer Hicks

Tom Moser, founder of Thos. Moser Cabinetmakers in Auburn, Maine, was recently inducted into the New England Design Hall of Fame in the specialty design category.

"I never thought of myself as a designer, but rather as a builder working closely with form," Moser says. "The funny thing is that I learned my woodworking technology from people who preceded me by hundreds of years doing restoration and repair work."

The New England and Design Hall of Fame honors individuals who have had especially significant careers in residential design in New England. A small number of architects, interior designers and landscape architects whose work, influence and community involvement set them at the pinnacle of their profession are inducted annually.

Boston's North Bennett Street School was inducted in 2011.

As a college professor in the mid-1960s, Moser says he felt the compulsion to build, to create something real and physical with his hands. That realization led him on a 40-year journey creating handcrafted furniture pieces.

"I never set out to create a business. I set out to recapture some of the values we lost 100 years earlier. My early designs were based on antecedent forms and they were within the aesthetic forms. A couple years into it I realized if I were going to make a success, I couldn't just sell and celebrate other designers forever," Moser says.

"The model I used for this was George Nakashima, who imposed the Japanese aesthetic on an 18th century American form. If he could bring the Windsor chair to Japan, I could bring the Windsor to the 20th century. That was the impetus of my design. It was time to build a brand, rather than sell a service, and that is how it all started."

Moser extends credit to his employees, saying they gave him just as much as he gave them.

"My workers were pretty serious as to how they were dedicated. Whatever success we had is from our ability to communicate and work as a team. I am looking to retire soon, so my creativity and design is being replaced by the creativity of my son David and several others here in the shop." **W**

Contact: Thos. Moser Cabinetmakers, 72 Wright's Landing, Auburn, ME 04210. Tel: 800-862-1973. www.thosmoser.com





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- Approx. shipping weight: 246 lbs.



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- Motor: 1 HP, 110V/220V, single-phase, TEFC
- Precision-ground cast iron table size: 14" sq.
- Table tilt: 45° R, 10° L
- Cutting capacity/throat: 13 1/2"
- Max. cutting height: 6"
- Blade size: 92 1/2" - 93 1/2" L (1 1/8" - 3/4" W)
- Blade speeds: 1800 & 3100 FPM
- Approx. shipping weight: 247 lbs.



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- Table tilt: 45° R, 15° L
- Cutting capacity/throat: 13 1/2"
- Max. cutting height: 6"
- Blade size: 92 1/2" - 93 1/2" L (1 1/8" - 3/4" W)
- Blade speeds: 1500 & 3200 FPM
- Approx. shipping weight: 196 lbs.



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30TH ANNIVERSARY 17" HEAVY-DUTY BANDSAW

- Motor: 2 HP, 110V/220V, single-phase, TEFC, prewired 220V
- Amps: 20A at 110V, 10A at 220V
- RPM: 1725
- Precision-ground cast iron table size: 17" x 17" x 1 1/2" thick
- Table tilt: 10° left, 45° right
- Floor to table height: 37 1/2"
- Cutting capacity/throat: 16 1/4" left
- Blade size: 131 1/2" long
- Approx. shipping weight: 342 lbs.

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17" HEAVY-DUTY BANDSAW

- Motor: 2 HP, 110V/220V, prewired to 220V, single-phase, TEFC
- Precision-ground cast iron table size: 17" sq.
- Table tilt: 45° R, 10° L
- Cutting capacity/throat: 16 1/4"
- Max. cutting height: 12 1/8"
- Blade size: 131 1/2" L (1 1/8" - 1" W)
- Blade speeds: 1700 & 3500 FPM
- Quick release blade tension lever
- Approx. shipping weight: 346 lbs.



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17" 2 HP BANDSAWS w/ Cast Iron Wheels & Trunnion

- Motor: 2 HP, 110V/220V, prewired 220V, single-phase, TEFC
- Amps: 20A at 110V, 10A at 220V
- RPM: 1725
- Precision-ground cast iron table size: 23 3/8" x 17 1/4" x 1 1/2" thick
- Table tilt: 5° left, 45° right
- Cutting capacity/throat: 16 1/4" left
- Maximum cutting height: 12"
- Blade size: 131 1/2" long
- Approx. shipping weight: 418 lbs.

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- Cycle/RPM: 60 Hz/3450 RPM • Switch: Remote controlled magnetic • Intake hole size: 6"
- Impeller: 12 1/2" steel radial fin
- Suction capacity: 1025 CFM @ 2.6" SP
- Max. static pressure (inches of water): 10.3"
- Filter: 0.2-2 micron
- Collection drum: Steel, 35 gallons
- Overall dimensions: 55 1/2" wide x 87 1/2" high x 36 1/4" deep
- Approx. shipping weight: 312 lbs.

Shown with optional stand



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24" WIDE-BELT SANDER

- Sanding belt motor: 10 HP, 230V, 3-Phase
- Feed motor: 1 HP
- Table elevation motor: 1/4 HP
- Sanding belt: 25" x 60"
- Drum speed: 2565 FPM
- Conveyor speed: Variable, 15-49 FPM
- Maximum board dimensions: 24" W x 6" H
- Minimum board dimensions: 14" L x 1 1/8" H
- Approximate shipping weight: 1573 lbs.

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TOOLS & TECHNIQUES

Bosch introduces half-sheet orbital sander

By Jennifer Hicks

Bosch Power Tools introduced the model OS50VC half-sheet orbital sander, designed to offer woodworkers superior handling for extended sanding applications.

Product manager Jim Stevens says this type of sander is ideal for fine finishing as an alternative to a random orbital sander.

"This is the second of the Bosch sanders to

have a vibration-control suspension system in it. What that consists of is eight heavy-duty foam blocks that isolate the gripping parts of the tool from the motor and the gear housing, which minimizes the amount of vibration that ever reaches the user's hands," Stevens says.

The sander boasts a 3.4-amp motor rating and weighs just 6 lbs., according to Bosch.

Another feature is a clamping system that properly tensions the sanding paper as it is

being clamped.

"This new sandpaper attachment system clamps the paper and also pulls it taught. It gets the paper more tightly fixed against the sanding pad to avoid the puckering situation," Stevens says.

The sander comes with a special backing pad that conforms to different contours. It also accepts stick-on paper.

Other features include variable-speed control, a removable auxiliary handle and two methods of dust collection: the sander can be connected to a vacuum or the supplied dust canister with integrated paper filter and cap.

The sander retails for \$379. **W**

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





Senco updates auto-feed screwdriver line

By Jennifer Hicks

Sen of Duraspin auto-feed screwdrivers, designed to increase productivity by eliminating the need to load and position individual fasteners.

Originally launched in 2001, the updated line includes three corded and three 18-volt cordless models.

"The main reason woodworkers like these is they can help improve efficiency, especially in an industrial setting where you can drive a whole lot more screws in a shorter period of time," product manager Mike Desmond says. "There are 50 screws on a plastic strip that's automatically indexed into position. There's a whole safety element because it allows one hand to be free and you don't have to deal with dropping a lot of screws."

"I know in a lot of woodworking applications it's very useful to be able to hold the workpiece with one hand while driving

screws with the other, whereas if you're doing them loosely you have to clamp everything together and use both hands — one to hold the screw on the end of the bit and the other one to drive it forward."

The drivers also feature a locking depth of drive adjustment and Senco's patent-pending corner-fit feed system for better access and screw placement in tight spaces. There is also a tool-free screw length adjustment (1" to 2") and a belt hook.

The tools are ergonomically designed for use with one hand, while a second, cushioned second hand grip helps minimize wrist and arm fatigue by reducing the exertion needed to complete each drive, according to the company.

The corded versions sell from \$129 to \$159. The cordless models, which come with two lithium-ion batteries, sell for \$249 to \$279. **W**

Contact: Senco Brands Inc. Tel: 513-388-2000. www.senco.com

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Felder debuts space-saving edgebander

By Jennifer Hicks

Zelder offers a new multifunctional edgebander, model G 330, designed to save space in a custom shop. With a total working length of less than 7', the machine offers precise edge gluing without the need for further manual finishing, according to the company.

"The biggest reason why we launched the machine was to get a small footprint. It's one of the few machines where you get that size of a small footprint, but it still has a proper chain-feeding system for panels," product manager Ruan du Toit says.

"Normally, small edgebanders like this have a belt-feeding system. This one with a chain is like what you see on very large edgebanders and, of course, for a small shop that means that even with a small ma-

chine they can do a half-decent job."

The edgebander features a simple lever, located on the front of the machine with a large scale, to adjust the height of the top pressure bar. The feed height can be adjusted from 10 to 45 mm.

The operating panel with LCD display and keypad lets the user set the glue temperature, engage operating features and track how much edgebanding material has been used.

The Teflon-coated glue pot is designed for EVA granulate glue, which is applied with an adjustable roller.

The pressure roller unit consists of one large roller followed by a smaller one. The spring-loaded unit can be adjusted exactly to the required edge thickness, according to the company.

The edgebander also features sawing and radius trimming modules and optional



flush scraping and buffing units.

"This has high-frequency trimming stations, where the motors run at high speeds. This is advantageous for the small shops when they're doing PVC edging or even solid edging because the speed of the motor is that much faster so you can do bigger jobs," du Toit says.

The base price is \$16,000. **W**

Contact: Felder U.S.A. Tel: 866-792-5288. www.felderusa.com



DeWalt unveils cordless oscillating tool

By Jennifer Hicks

DeWalt has a new cordless oscillating multi-tool, model DC-S355D1, featuring a brushless motor and 20-volt lithium-ion battery.

"In the past there've been cordless oscillating tools in the market in the 12-volt range and the response wasn't great," product manager Sean Templeton says. "So what we did is use our brushless motor technology on this, which gives it more

power and an estimated 57 percent more runtime compared to standard brushed motors."

The tool features a guide system to set the depth of cut or height for accurate, repeatable cuts.

The tool weighs a little more than 3 lbs. and measures a little over 12" in length, making it for trim carpenters, cabinet, flooring and service installers or any other professional contractor looking to make precise cuts in wood, metal, plastic or dry-wall, perform detail sanding operations or

remove materials such as grout or adhesive, according to the company.

"For woodworkers, this tool allows them to make a very precise cut on materials while they're in place. The most common use is when a cabinet installer needs to cut a piece of base molding, they can make the cut quickly and accurately right on site. But it's also good for working with doors, hardwood flooring, and general trim carpentry," adds Templeton.

The tool sells for \$129. It's also available in a kit — with charger, two batteries and 29-piece set of cutting and sanding attachments — for \$199. **W**

Contact: DeWalt. Tel: 800-433-9258. www.dewalt.com



Pentco Industries Inc. speaks out about great products and great relationships

We traveled to Surrey, just outside of Vancouver, BC, Canada to talk with Pentco about why they like working with Chemcraft products and with their Chemcraft distributor, Omega Coatings.

Pentco Industries Inc. was founded in 1979 and is one of Western Canada's largest manufacturers and distributors of cabinet doors. They produce industry leading products for single/multi residential developments, and commercial and institutional projects.

"We do a lot of multi-family high rises," said John McNulty, one of Pentco's two owners, "You can't have inconsistent colors rolling through hundreds of units. That's when we started using Chemcraft."



"Every company has a good, better, best product. Chemcraft has the greatest - Chemlife 24."

Chemlife® 24 Conversion Varnish

"Chemlife 24 has great fill, you can use it as a self-seal and it has higher solids than most products out there." continued McNulty.

"It's a go-to product. Very user friendly and cost effective. Using this product, you can cut waste by up to 30%. Consistent. Sprays the same every time." said McNulty.

"Pentco is known for quality products. We have to feel confident that every cabinet door lives up to what we say it will. That's why we have to use good coatings - and that's why we have to have good support. We can't wait a 'couple of days' for someone to show up."

"Our Chemcraft distributor representative is in here all the time." McNulty said, "Having



Front, L to R: Dallas McNulty - Manager, Pentco Industries. John McNulty - Owner, Pentco Industries. Sandra Filosof-Schipper - President, Omega Coatings. Back, L to R: Frank Brams - Sales Representative, Omega Coatings. Ian Jackson - Owner, Pentco Industries.

someone like Frank (Brams) to bounce problems off of and bring you solutions is key."

"We have sales reps in here constantly trying to get us to switch," said Dallas McNulty, Pentco's Manager. "So I asked one rep, how many changes of clothes do you have in your car? And he said to me, 'what are you talking about?' I said, 'Exactly!' Frank will stick his head in a machine and get dirty to insure our products are 100%, so he keeps a couple of changes of clothes in his car."

"That's the difference Omega and Chemcraft bring; you're buying insurance when you buy good coatings and work with good people."

Visit chemcraft.com to locate your nearest distributor.



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Revenue opportunities abound in health care sector

The population is getting older and baby boomers need more health care, which means a need for more facilities and more cabinets

What custom woodshops do is they take a basic product and change something about it so that it more accurately meets the needs of a customer. That customization can include altering the dimensions of a box or upgrading the quality of construction or manipulating an aesthetic consideration such as species, stain or shape.

From there, it's not a big leap to change the function, too. The skills and machinery required to build kitchens and entertainment centers for the residential market are pretty much the same as those needed to create industrial casework and furniture for other markets. Most of the time, the biggest difference will be in the materials, especially if the clients are hospitals, clinics, eye-care facilities and dental offices. Hygiene and germ/bacteria management require that these businesses use impervious surfaces, so they tend to build with plastic laminates, glass, solid-surface materials, sealed natural stone, ceramics and melamine products.

Some of the requirements in this market are that the bottoms of countertops are sealed (usually with laminate or a phenolic backer) or perhaps that shelving is edgebanded on all four edges and laminated on both faces. Each job will have very specific needs, but virtually all of these projects involve an architect or a project manager who is well-versed in the minimum requirements. Those professionals will provide detailed specs that will be appropriate to different locations such as labs, operating rooms or patient interview rooms. That is, they'll tell you how to meet the market's requirements.

Building casework or furniture for health care facilities requires the ability to be diligent and conform to instructions. There's a

learning curve here, so most shops start small and expand their scope as experience allows. There are state and federal requirements, hygiene rules devised by professional associations such as the American Medical Association and often site-specific specs developed by the draftsman or architect. In this market, wood filler doesn't fix too many mistakes.

IS IT A MATCH?

Does your shop have what it takes to work in this market and, even if it does, is it worth the effort? Those are two big questions. Let's look at the shop first.

Plastic laminates, melamine and MDF cores all tend to dull sharp edges very quickly, but that's the least of the challenges. The biggest initial question is this: does your shop have access to the right equipment? Is there an edgebander that can handle the volume and sizes required since some counters need to be quite thick. Is there a CNC router with free time available that can handle the doors and panels? Does the shop have the ability to apply laminate to sheet goods in-house and do so safely (fume extraction, adhesive spray equipment, presses, rollers and vacuums)? If not, is there a supplier who can provide laminated sheet stock that meets the casework specs and can deliver it on time without high shipping costs?

Is your team well-acquainted with the new materials or will they need to have some training? A crew that has worked with plywood and hardwoods understands how the tools work, but might not appreciate how the materials work (especially liquids). If your shop already hires a subcontractor to do plastic laminate counters, that could be a good place to start looking for instructors. The laminate product suppliers might also have resources available and, of course, there's a lot of infor-

mation available online.

If this new direction will generate enough business to warrant hiring another woodworker, that can be an opportunity to find somebody who has spent a lot of time working with medical casework. Buying (well, renting) experience is often less costly than gaining it on the job. Hiring the right person can mean that the shop has a go-to guy for questions on water-based contact adhesives or the right mount for a sink or even the correct way to seal a backsplash.

Given how much is involved in changing gears from primarily wood construction to plastics, is it worth chasing this new market? A lot depends on the scale of the transition. Is the shop just adding capacity (that is, will the volume of other jobs be unaffected) or will the business be changing its entire focus to building custom medical casework? How much of an investment is required? How much training?

The best answer is to collect as much data as possible and buy lunch for a good accountant. He or she will ask enough questions to be able to go back to the office and work out an estimate for gross revenue and costs. If the numbers work, then the decision is a whole lot simpler. Now you just need to decide if it's worth the headaches. And those don't stop at training fabricators and supervisors, or redesigning workflow. You'll also need to learn how to sell in this new market.

ENTERING THE MARKET

So how exactly does a shop — small or large — break into the medical furniture market? Sometimes it's as simple as a doctor asking a patient who owns a cabinet shop if he or she can build a specific workstation or reception desk. That first brick in the wall might be very small, but it could lead to more work from the doctor and his/her associates. Doctors working for clinics are usually associated with hospitals and hospitals update and expand.

But that approach seems arbitrary and there are a number of logical ways to familiarize oneself with the parameters and the players. For example, large specialty millwork shops create moldings, stairs and other architectural details and many of them subcontract the box-building part of the process. A little Google time will usually produce a short list of millwork shops within driving distance. Visit them and have a conversation. If they subcontract, they will at least want to know what you can do for them.

Visit with the authority at City Hall who issues building permits (an engineer or building inspector). Permits are a matter of public record and they list the general contractors for every project. If a permit has already been pulled, you're probably too late to bid the

casework on that specific job, but knowing the general contractors is the key here. Go visit with them and bring a portfolio with photos of some jobs your shop has completed. Don't worry too much about the materials: they'll be looking at your quality of the work as much as your capacity to work in different materials.

Larger cities have a venue where jobs are posted for bids. Both general contractors and architects will usually be able to tell you what that procedure is. Nowadays, the venue is often a website. Sometimes bids are solicited through a contractors association and, in addition to the website, they are often advertised in newspapers or trade-specific journals.

Distributors who sell medical supplies, stainless-steel hardware and even plastic laminates might have some good leads.

Trade associations are a great steppingstone, too. The Architectural Woodwork Institute is a non-profit trade association founded in 1953 (www.awinet.org). AWI represents nearly 4,000 members consisting of architectural woodworkers, suppliers, design professionals and students from around the world. Membership in the AWI is a gateway to several specialty markets and a path to knowing your competition, but also to making friends in the field. On the AWI site, click on "Find a Member" and then choose "Manufacturer" as the Membership type. Then scroll down and click on "Architectural Casework, Sect. 10." Pop in your state or zip code or city and hit "Search." The results will reveal shops that are building architectural casework in your area and are already members of AWI. If you call those shop owners, asking them about the benefits of becoming a member of AWI is a great way to break the ice. From there, the conversation can wander where you need it to go.

THE FUTURE

As a nation, we're all pretty concerned right now with the future of health care. But as woodshop owners, there are some heartwarming trends in this field that can give us comfort. First of all, the United States has a birth every eight seconds and a death every 12, so the population is going up. The Census Bureau says that the nation's total population will cross the 400 million mark in 2051. That means a lot more hospitals, clinics and dentists and all of them will need more cabinets.

Secondly, health care is a hot issue and subject to more potential legislation than any other section of the economy. More regulation usually means updating facilities and that means more cabinets.

The population is getting older. Let's face it, we baby boomers (persons born between 1946 and 1964) are starting to unravel at the seams. We need more and better health care all the time and that means more facilities and more cabinets.

By the way, that aging population stat might also warrant a look at getting into the manufacturing of both caskets and urns. **W**

NOMINATIONS OPEN FOR WMMA'S BALDWIN AWARD

The Wood Machinery Manufacturers of America is accepting nominations for its highest honor, the Baldwin Award. The award is presented at Woodworking Industry Conference, scheduled for Apr. 28 to May 2 in Rio Grande, Puerto Rico.

The Baldwin Award is named for Ralph B. Baldwin, long-time member and past president of the WMMA.

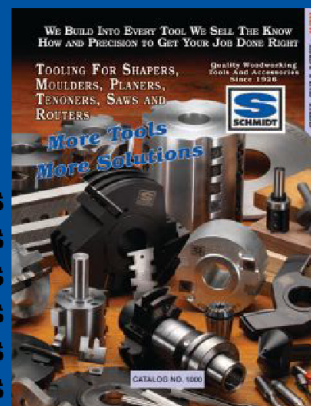
The award seeks to honor individuals who have made outstanding contributions to the industry, regardless of their affiliation with WMMA. Some activities that warrant consideration are leadership in WMMA or the IWF Board, active committee involvement, innovations introduced to the industry, and participation in programs that benefit the industry.

The deadline for nominations is March 9.

Each WMMA member company may submit one nomination. For rules and an application form, visit www.wmma.org.

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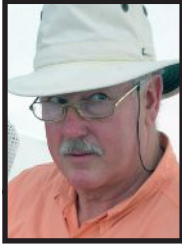
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FINISHING

with GREG WILLIAMS

Leaping over finishing hurdles, step by step

Shop owner battles high humidity and improper protocols

Sometimes it's really the little things that make a difference.

About 10 years ago, I was conducting a training session for a variety of students, including a small manufacturer of kitchen cabinets, a semi-professional woodworker, a distributor of coatings products and about 10 other students of varied background and experience.

All of the students had some problem or complaint with regard to their previous or current

finishing experience, as was to be expected. After all, that is why we were involved in the training. One student in particular, the cabinet shop owner with the most experience, also had the most problems to solve.

He also had the most excuses as to why he could not apply the solutions that were presented in the class.

THE CHALLENGES

Here's the biggest hurdle he had to overcome.

He was located very close to the water in an estuarial area on the East Coast. Average temperatures ranged from 38 to 89 degrees. It was always quite humid.

To avoid blushing, he had to add retarder and complained of the very slow dry-to-stack time. He also had problems days or weeks later with printing or blocking on stacked or packed parts.

The blushing was caused by the application of coating to substrate under such conditions that moisture present in the air immediately adjacent to the surface could precipitate on that surface while the coating was still wet. That happens when the temperature of the surface is at or below the dew point.

When the dew point and the actual (ambient) temperature are close together, the risk of blushing is high. For instance, at 85 degrees, when the humidity is at 61 percent, the dew point is 70 degrees. If the substrate and the coating are above 70 degrees and the coating can be applied with no drop in temperature, there should be no blushing. However, when there is a drop in pressure from a compressed air spray system, there is a loss of heat in the material being sprayed and the air accompanying the material as it travels from the gun to the work. While the coating is still wet, there is a further drop in the temperature of the film because of the evaporation of the fast evaporating solvents, such as acetone, alcohols, MEK and others.

The cumulative effect of this cooling can drop the temperatures of the coating below the dew point. Exacerbating the effect of the evaporation was the practice of having quite a bit of air movement through the finishing booth during the spray operation and the initial drying of the sprayed objects, especially in warmer weather. Some of the increased airflow was due to an effort to cool the employees; some was due to the belief that it would improve the drying by speeding up the release of solvents from the wet film.

While increased airflow will speed up the drying to some extent, it has the greatest effect at the surface of the film. If that surface is dried too much or too quickly, it tends to seal in the solvents lower down in the film. Those solvents will work their way to the surface eventually, and then into the atmosphere, but the end result may be that the complete drying of the film is slowed even more, so that the film might remain too soft for stacking or rubbing for many days.

ATTEMPTING A FIX

While the shop owner knew that the shop's humidity was high, he didn't understand the exact relationship between the temperature and the relative humidity and the thresholds that were critical. He did not monitor either temperature or humidity in the shop, but paid some attention to The Weather Channel's reporting on local conditions.

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I repeatedly tried to lead him to understand that he could alter that environment in the area immediately surrounding the surface he was spraying and that it was not necessary for him to alter the environment in the whole shop. That is, he could heat the surface and the area immediately adjacent to that surface with an infrared or hybrid (infrared and convection) heating system. The equipment necessary could be purchased quite economically and could be moved into the spray booth prior to spraying to warm the object, moved out for spraying and back in for drying when the spraying operation was halted. Or it and the sprayed objects could be moved to a dedicated drying area as necessary.

We advised that the material storage be elevated off the concrete floor to prevent the excessive heat loss from the cool concrete and to allow better warm airflow around the containers. We also emphasized the practice of making sure that the coating material was sprayed at the proper temperature rather than over-thinning or adding retarders. A condensing/coalescing dryer was recommended to remove excess water from the air supply, which also served many air tools.

Supplied with a lot of information that he was having difficulty processing, but willing to continue to work on it, the shop owner left with a certificate of completion, a list of useful resources and some reference tables and graphs.

WE FINALLY GOT THROUGH

About four months later, we heard from the owner. First, he wanted to thank us for not giving up on him. He also wanted to share a success story. He had gradually put in place most of the suggestions we gave him, starting with keeping track of the actual temperature, relative humidity and air movement in the finishing area. One thing he discovered was that on large jobs requiring lots of late hours the humidity spiked when it began to cool off at the end of the day and blushing was more likely to occur. In that case, his finishers would add retarder to prevent the blush, which slowed down the drying of the film. As the air continued to cool, the further overnight drying was retarded even further by the combination of lowered temperature and slower solvent residing in the film. This delayed progress, causing a hurry-up attitude that resulted in more damage because of movement of the cabinets within the shop. I'm sure you can appreciate the cascade of events.

Some of the economies he had realized by improving spray technique encouraged him to invest in the infrared dryers, which along with picking the better times to spray almost eliminated blushing and blocking of poorly dried films, freeing some of his bottlenecks. His finishing costs continued to go down as more and more employees bought in to the changes.

He claimed that it took him about three

months to decide to be serious about accepting the changes and another month for his employees to become believers.

The keys to the shop owner's eventual success in solving his finishing problems were:

- > Learning and accepting the principles governing the behavior of the finishing materials.
- > Measuring and recording the environmental conditions present when the problems occurred.
- > Accurately assessing the costs of continuing what he was doing vs. making changes in the environment under his control.
- > Implementing new protocols to control the immediate environment in which the objects were sprayed and dried.
- > Providing training to his spray technicians and other employees concerning applying those

new protocols.

> Providing encouragement and incentives for changing their procedures and performance.

> Allowing time for the changes to become the norm.

Because he applied the changes incrementally, he and his employees were able to see the effect of each improvement and the resulting cost savings. That savings encouraged and financed the next step, so the investment was quickly rewarded. **W**

Greg Williams, formerly senior touchup and finishing instructor for Mohawk Finishing Products, is now a freelance instructor and consultant for finishing and touchup. He can be reached at gregatwil@yahoo.com.

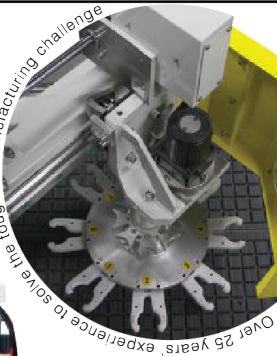
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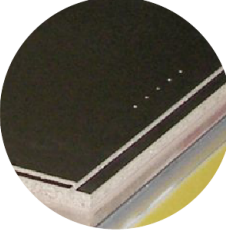
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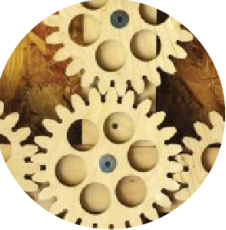
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THE CUTTING EDGE

with JOHN ENGLISH

CNC and your ROI

Is your shop ready to make the move? Here is a primer on how to get started and make money doing it

The following is a starting point for shop owners thinking of making the leap into CNC machinery. It might also be useful for shops that are already up and running as they can use it to introduce new employees to the process.

The first thing to note is that computer numerical control is a somewhat archaic term used to describe how a computer takes a design, reduces it to numbers and uses those numbers to control the movement of a cutting or milling head in two or three axes. It is often referred to nowadays as digital fabrication tooling.

CNC machinery can be a big investment for a woodshop. While it automates certain processes in the shop and replaces some man-hours, the addition of CNC capability usually involves a lot more than just the cost of purchasing or leasing machines. People need to be hired or trained to run it. There will be cutters and inserts to buy and sharpen. The new parts being made might require bins or carts. There will be wiring and dust collection to install. Floor space will be sacrificed — not just for the footprint of the machine, but for new aisles and walkways for people and materials.

COMPUTER-AIDED DESIGN (CAD)

To run a CNC machine, the parts that will be fabricated are first designed on a computer using a CAD program. Most of these programs work in three dimensions (width, length and height) and they create a visual model of the item or part that needs to be fabricated. The design program a woodshop purchases or rents usually depends on how complex the parts will be. For example, it takes a lot less design capacity to create a single flat-panel cabinet door than it does to design an entire back bar for a restaurant. However, both of these projects are designed in much the same manner as the bar is bro-

ken into smaller components, which are then individually designed in 3-D models and combined to create the whole.

Many design programs are sold or rented as modules. A shop only needs to buy or lease the modules that cover the kinds of work being done. This alleviates the need for woodworkers to become computer program-

mers or learn how all aspects of massive programs work.

A 3-D model is merely a mathematical expression, a visualization that takes a flat two-dimensional image and adds perspective to it using simple geometry. The model is a series of lines connecting designated points and nothing more complicated than that, although sometimes the lines are curved. As such, it can be rendered on a 2-D computer screen and printed on paper. It can be rotated and manipulated, scaled and distorted.

Through the years, 3-D design programs have become easier to use and less complicated as more and more of the geometry is buried and the experience becomes less about programming and more about simply drawing parts on a screen. Some programs now even include a concept called digital sculpting, which allows a designer to blow up an image and create new, small, custom details.

The bottom line here is that CAD delivers scaled images that make sense to people and then those are converted to a numerical code that make sense to the actual CNC milling machine.

ShopBot offers several full-sized, gantry-based CNC routers in its PRSalpha series. For information, visit www.shopbottools.com.





Biesse's gantry Klever CNC router is designed for small-to mid-sized shops, featuring a monolithic steel bridge frame and the ability to process wood, plastic or aluminum. For information, visit www.biesseamerica.com.

CODE LANGUAGE

Most design programs generate G-code to run the CNC machine. This programming language tells the tool head where to move (left, right, back, forward, up or down), creating the tool path. It also tells the head how fast to move, which is important because of the relationship between the cutter's size and the properties of the material being cut.

Many design programs allow a woodworker to program the CNC machine without knowing anything about G-code. They use conversational programming, which either hides the code or sometimes eliminates it entirely. New versions of the code include constructs. Initially, G-code couldn't do any figuring on its own: it could just tell the cutter to travel from one point (dot) to the next. Constructs allow the code to "think" in a rudimentary way, calculating a solution when enough

Vertical CNC machining centers are also available. Weeke offers several models, including the BHX 055 shown here. For information, visit www.stilesmachinery.com



variables have been identified. For example, instead of the operator having to manually locate a long series of very close dots to describe a curve, the code can automatically figure out the arc and length of the curve.

HOW MANY AXES?

CNC machines come with a different number of axes. When more than three axes are offered (those being side-to-side, back-and-forth, up-and-down), the machine is said to be multi-axis. Essentially, this means that the head can swivel, so it's not always in a strictly vertical position. By tilting a certain amount and then moving diagonally, the cutter can make a whole lot more cuts than its simple 3-axis cousins. For example, it can countersink a hole that is located in a 45-degree plane, so it can drill screw holes for door

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CUTTING EDGE

hinges in complex corner cabinets. And the number of axes doesn't just describe the cutter's ability to move: it can also include the table's movement. Some tables can now tilt in either direction or in compound slopes (that is, they tilt to the right and the front end also dips down), so that more advanced CNC machines can actually manufacture in true 3-D.

Tooling can contribute enormously to the overall versatility of a CNC machine and complement the ways in which the axes add to the machine's potential. There are lots of tools available for cutting, but also for drilling, milling, shaping, grinding, boring, shearing and forming. These tools are secured in a spindle (the simplest ones are portable routers without the base) and, as the years go by and collet technology improves, it takes less and less time to change out heads. Spindles are usually described in terms of their horsepower, but a woodshop investing in a CNC machine should also ask the salesperson about a spindle's speed, load ratings, power requirements and the collet type and size.



The Busellato Easy Jet is available in 4x8 and 5x12 table sizes with a new optional panel unloading device with integrated dust collection. For information, visit www.casadei-busellato.com.

STEPPER AND SERVO MOTORS

A CNC machine can use stepper or servo motors or a combination of the two. First-time buyers often find this issue a little complicated. Essentially, a stepper motor runs on DC and moves in a number of controlled minute 'steps,' while a servo motor is usually AC

and has continuous motion, so it is usually smoother.

Shops that upgrade from steppers to servos sometimes have a difficult time tuning the new motors and often they need to upgrade the controls, too. Some experienced CNC operators actually prefer steppers because of



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their ability to lock into a position and stay there (holding torque), while a comparable servo might take a split second to “find” the best position and then it is constantly using current to maintain that new position.

NEW OR USED?

A CNC machine is usually a big investment (depending in large part on size, but also on brand and age), so some shops opt to buy a used or refurbished model rather than purchasing brand new.

A couple of the issues involved in buying on the used market are the probable lack of a warranty and the potential inability to upgrade software. But perhaps the biggest drawback is the lack of support. Most brands have some kind of users group online, but that’s never a satisfactory substitute for a qualified, trained service technician. [W](#)



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Exotic hardwoods see price spike

Demand increases, but supply gets tighter as regulations multiply **By Jennifer Hicks**

Sales of imported exotic hardwoods are on the rise, which lumber suppliers interviewed by Woodshop News attribute to an improving economy and a renewed interest by woodworkers to use unique materials.

But combine increased demand with tighter supplies and you get higher prices.

"Some of the very exotic species are getting difficult to get," says Fabs Corte of Cormack International, an importer based in Weaverville, N.C. "You start thinking about certain ebones and certain types of rosewoods and the more exotic ones, there are a lot of new regulations with CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and permits, not only with cutting but also exporting. There are a lot of new checks and balances in place because of new regulations that were issued last year."

Corte also notices that with certain exotic species falling out of the loop, people are looking for alternatives and that is putting a strain on other species. He says the mainstay species remain as popular as ever, particu-

larly the mahoganies. For example, prices for sapele have increased 8 percent in the last four months.

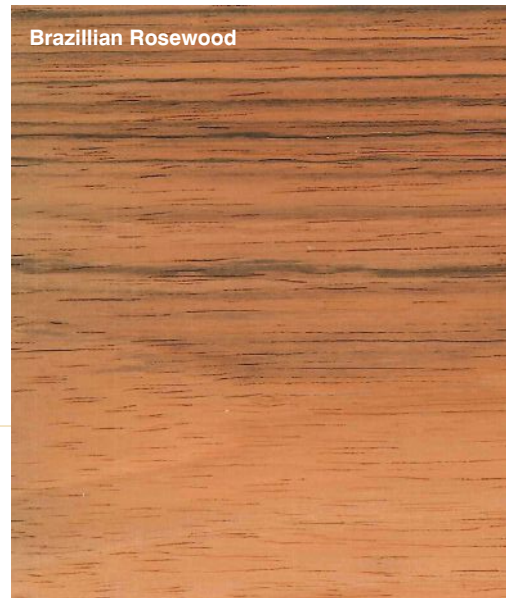
"The woods that remain popular are your true rosewoods, cocobolos and tulipwood, which you can't get at the moment. All of these species that three to four years ago were available are no longer available, but the demand remains," says Corte. "We're also seeing a lot of calls for species such as bubinga, purpleheart and padauk."

Younger customers, in particular, seem more interested in exotics. While woodworkers were happy to use oak exclusively 20 years ago, the next generation likes variety.

"I think the uptick on exotics continues to climb," says Corte. "We've been in the U.S. since '97 and I remember in our area in North Carolina, a lot of the locals would only stick to domestics, like cherries, walnut and oaks. Today contractors come in looking for things more unusual that they've probably seen in a magazine. I guess people are being more educated and exposed to it."

According to Clayton Eisenbrand, owner of Eisenbrand Exotic Hardwoods in Torrance,

Brazilian Rosewood



Padauk



Purple Heart



Calif., buyers now appear to be more comfortable spending money on beautiful woods.

"We sell a lot of ebony, rosewood, pink ivory and that sort of thing. We have so many different kinds of customers who buy it for making fine furniture or one-off pieces," says Eisenbrand.

Prices are hard to pinpoint for exotics because they're constantly changing. According to Corte and Eisenbrand, material pricing depends on the supplier, date of shipment and whether it's a retail or wholesale purchase. They say suppliers who've stored certain species for several years might sell their product for much less than a recent shipment.

Corte says ebony, for example, used to retail for \$40 to \$50/bf, but over the past three years he's seen it go for \$100 to \$140. Eisenbrand has seen African padauk climb from \$8 to \$12/bf. **W**



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- Capacity @ 90°: 3½", @ 45°: 2½"
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- Min. board length: 6"
- Min. board thickness: 1/8"
- Sanding drum size: 4"
- 2 1/2" dust collection port
- Overall size: 35" W x 50" H x 24" D
- Approx. shipping weight: 328 lbs.



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- Motor: 3 HP, 220V, single-phase
- Precision-ground cast iron table size: 15" x 20"
- Min. stock thickness: 3/8"
- Min. stock length: 8"
- Max. cutting depth: 1/8"
- Feed rate: 16 & 30 FPM
- Cutterhead speed: 4800 RPM
- Approx. shipping weight: 660 lbs.

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IN TUNE WITH TECHNOLOGY

Bryce and Doyle Craftsmanship in Rochester, N.Y., has dove head-first into Web-based and social media marketing with positive results.

BY JENNIFER HICKS

PHOTO: KEN PAMATAT

Richard Doyle has been running a cabinet shop for nearly 20 years and doesn't hesitate when asked about the biggest changes that have taken place.

"It used to be the woodworking skills were most important, but now I think it's having computer skills," says Doyle, president of Bryce and Doyle Craftsmanship in Rochester, N.Y. "What you really need to do is be able to use spreadsheets and keep current with technology."

"Woodworking skills for my employees are still very important, though. Craftsmanship is part of our name and who we are and that's at every level. From the proposal stage to installation, it means something more to us."

Doyle and his team have been growing the business through creative online marketing, something he wishes he'd done years ago. He's gone back to school, taking classes to learn how to compile pricing information and create drawings that can be accessed quickly and accurately by customers.

"The CAD drawings, they have to be so specific now. Before, you could start a project and people know who you are; it's by referral and they trust you. It's not quite like that anymore," Doyle says.

"If I knew how beneficial the Internet was, I would have put myself out there much earlier. We just started two years ago and we should have been on it ages ago. We had a website but it was just basic, so two years

The shop's extensive portfolio includes this dining room furniture (opposite page); at right is woodworker Tom Kilminster; and below, from left, is office manager Amy Flynn, owner Richard Doyle, designer Amy Kruger and junior designer Kristin Krug.



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PHOTO: KEN PAMATAT

Matt Crane in the shop's spray booth (opposite page.) At right, a recently completed kitchen.

ago we hired someone to build a good site and we get compliments now."

A NOVEL APPROACH

Doyle, a Rochester native, didn't set out to be a woodworker in the early 1970s. Any job will do when you're young and unemployed. His cousin happened to need help making novelty items sold at crafts shows — and that was that.

"I just fell in love with woodworking immediately," says Doyle. "The minute I started, I knew what I wanted to do."

Doyle and his cousin formed a partnership running a business called Almost Ordinary Wood Products. Doyle learned by trial and error and graduated to furniture and cabinetry in the early '80s. The partnership dissolved and Doyle carried on with three employees.

Today, the shop's territory extends to Buffalo and Syracuse. Most of its work is done in high-end residential homes. The shop has an annual gross of about \$2 million.

It completes about 50 to 60 projects a year with about eight jobs in various stages of production at any given time. Kitchens and baths account for about 70 percent of the company's work, followed by entertainment centers, dining sets, bedroom suites and other built-in items. The company's design team embraces modern looks, which bucks the longstanding traditional furniture preferences of many locals, Doyle says.

"Rochester is so conservative that larger companies test products here to see if they can sell them, because if they can sell them here they can sell them anywhere. But it is getting more contemporary. Most of the people that come in here have an idea of what their style



is. Our showroom has made more contemporary people come in."

Quality and service are an easy sell, says Doyle. The price? Not so much.

"Since the economy took a hit, the margins are tight for everybody. So what we do is do all of our research upfront for quoting. Before a tool's even lifted, all of the questions about the product have to be decided. If we go into anything to do a project to build something and it's open-ended, you're not going to make money. So we make sure all of the homework is done before the work starts and that's true in any part of our job now."

BEHIND THE SCENES

The company has a 4,000-sq.-ft. shop and 6,500-sq.-ft. showroom.



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Doyle is an active member of several trade organizations and partners with regional artists.

Finishing is done in-house, but veneer work and CNC machining is outsourced.

"We are talking about how we'd like to introduce a CNC to the shop, maybe sometime this year. We've looked at a few. If I knew how valuable they are a while ago, we would have been automated earlier in the game," says Doyle.

The employee breakdown includes two designers, an office manager, three installers and two craftsmen. The staff was down to four at the height of the recession and only came back to its current level last year.

"I'm looking to hire more in the near future," Doyle says. "If things pick up we always have the opportunity but usually if it's only going to be a surge we just outsource. I'm absolutely interested in growing if things keep steady, but it hasn't been like that in a long time. It's been spiking a little, so if we see consistency for six to eight months then hiring on more workers can be justified.

"We'd love to expand and increase the volume and we're always looking for different way to do it. I manage the projects and I will get involved at any stage if I have to. Sometimes I'll get in the shop and work all day. That's not even work; that's a treat."

The recent recession forced Doyle to do the unthinkable: underbid projects just to stay afloat.

"There would be five companies trying to get one job so we had to bid within dollars and the people weren't even looking at service or quality, they were just looking at the bottom line. It was horrible, the worst five years I ever spent in this business. It wasn't about quality, it was about price. And that's not who we are."

The company's redesigned website features an extensive portfolio, an explanation of services offered, a virtual tour of the showroom and vendor links for kitchen appliances, cabinet hardware and other

PHOTO: KEN PAMATAT

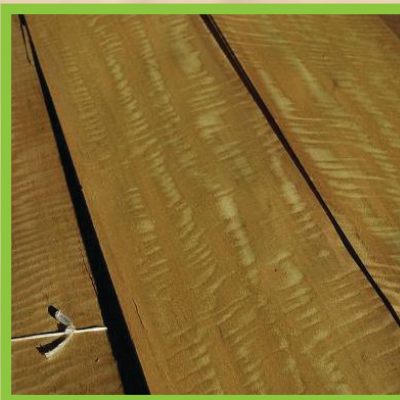
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Kilmisnter and Kirk Parsons, right, help the shop produce about 50 to 60 jobs per year.

accessories. There's also a blog on design ideas, updated about once a month.

"We're constantly upgrading the social media stuff, Twitter, Facebook and we have a Pinterest account, so we keep ourselves out there," says Doyle. "We constantly change our website so if you do [a generic] search for it, we usually we come up in the first few results. We update daily because people are shopping online. Our Yellow Page advertisement is now nothing; it's just a bolded listing."

But the Internet can be a double-edged sword, Doyle says. There's almost too much information available for a potential customer.

"People go on the Internet and they think that everything they see on it is true. So where they used to always hire us because of a trust factor, now at times it feels as if the customer knows more about us than we do. We notice that's challenging. It makes the projects go on a little longer. They're researching things on their own because it's so easy just to Google something and find out what's going on," says Doyle.

"But we know what's going on in the marketplace, too. We change things as it changes; we don't stay stagnant." 

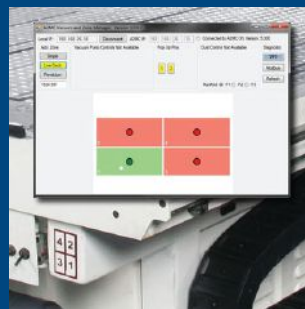
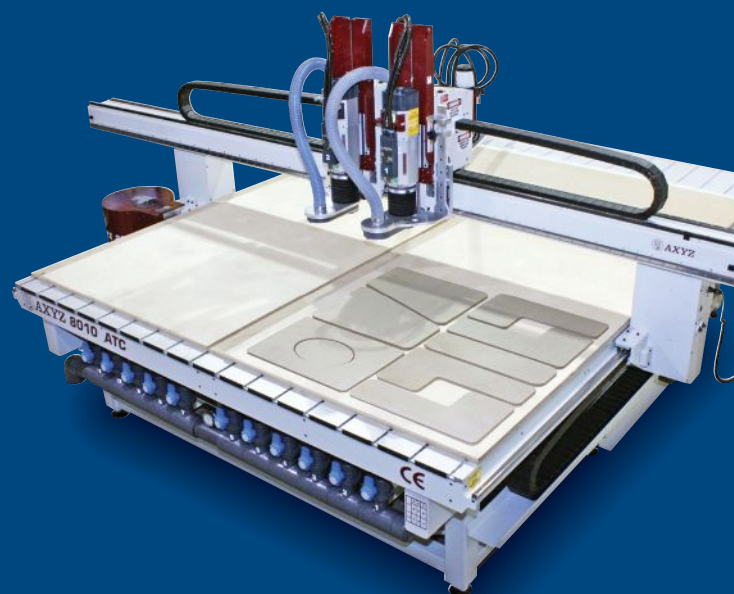
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Ted Watts in his art studio and shop.

STILL CHARGED UP ABOUT HIS JOB

Ted Watts is still finding inspiration in taking on new projects at his one-man shop in South Carolina

BY JENNIFER HICKS

Custom furniture maker Ted Watts, principal of Watts Woodwork in Murrell's Inlet, S.C., opened his first shop 35 years ago and hasn't lost his passion for the creative side of the craft. In fact, it might be burning brighter than ever.

"I love the artistic aspect of woodworking, especially when I get challenged to do something different," Watts says. "I had a guy call me the other day and I had no idea what he wanted, but took on the project and he's happy. I love when people call me and say that their idea sounds crazy, but want to give me their idea anyway."

Watts says he has made more than 1,000 pieces. He started with commercial work, mostly for bars and restaurants, and specialized in spiral staircases for a time. But he's always preferred making furniture on commission or for gallery sale. Dining room furniture has been a top seller lately. Cabinets to feature a flat-screen TV are popular, too.

SOUTHERN ROOTS

The Watts go back to the 19th century in Myrtle Beach, where Ted's father and maternal grandfather worked as contractors and paved the way for his woodworking career. Watts attended the Ringling School of Art in Florida and the Virginia Art Institute before settling in Murrells Inlet.

With his father and brother, he opened his first shop in 1978, mostly

building tables for local restaurants.

"We do very little commercial work nowadays, except for an occasional decorative bar top," says Watts. "I like residential work because it feels that gives me a better chance to show off and do unique and challenging projects."

His primary market ranges north to Virginia Beach, Va., south to Savannah, Ga., and west through Tennessee.

"The most challenging part of the business is finding clients with the willingness to understand that a fine piece of furniture can last a lifetime and be handed down for generations. Some people still understand that, but most people don't and only expect furniture to last four to five years. I was taught a long time ago by this lady who told me that she couldn't afford fine furniture all through her house, but that she could afford one piece a year. Now her house is full of hand-made furniture, including my dining room table and a bed," says Watts.

Watts says a typical order is a single piece of furniture that he designs about 98 percent of the time. He's fulfilled requests for traditional and contemporary designs, but most clients prefer something in the middle. His work often features intricate carvings.

While most of his work comes through referrals, his website offers an extensive portfolio and retail purchases can be made at the Ebb & Flo Art Co-op, within walking distance to his shop.



Watts' furniture features hand-rubbed finishes and intricate carvings.



WORKING SOLO

Watts has run a one-man shop for the majority of his career, only occasionally hiring part-time help when there's quite a bit of sanding to be done. While working alone provides him with the bliss of making his own schedule, he admits it's a challenge to keep pace with all facets of running a successful shop.

"Some [shop owners] don't know the first thing about building cabinets or furniture, but they're great salespeople. To do it by yourself, you need all of the woodworking skills and the sales ability to talk the person into what you want them to have. If you do it by yourself, you

have to do it all. You have to have a vision of what it looks like before you put it on paper and then make the sale," he says.

His 7,200-sq.-ft. shop is nothing fancy — an old chicken coop off the main road — but it serves its purpose. His machinery includes a Rockwell 18" planer, Woodpecker 12" joiner, Rockwell/Delta table saw, Vega lathe, Jet dust collection, Laguna 16" band saw and a SCMI combination machine, featuring an 8' sliding table saw, planer and joiner.

Watts draws by hand, applies hand-rubbed finishes and builds mostly with cherry, walnut, mahogany and knotty pine.

If he could start over, Watts says he would have built a shop behind his house and skipped the commercial work that got him started.

"Commercial work was better money, but I hate repetitious work," he says. "My dream is to build a shop on the two lots behind my house and I'm looking into that now to move everything in that direction."

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Watts with one of his bigger commissions, a huge conference table.

KEEPING BUSY

Watts is enjoying a steady volume of work after a difficult four-year stretch following the recession. He's currently making about 15 furniture pieces a year.

"I've seen more return customers recently and things have picked up quite a bit. I'm getting better clientele and I'm not getting beaten down on the price. I used to make circular stairways and seriously considered doing them again because that was about all customers were asking for (after the recession). Someone called me up the other day so I gave them a price just to keep busy."

Watts says no matter how the economy is performing, he tries to keep his pricing consistent, which is calculated by him guessing how long it's going to take to build the piece. He says he needs to charge \$50 an hour to make a profit.

"In the area where I am, advertising would be good, but I don't have the luxury to charge people enough money to afford advertising. I have to get my prices down so low that I usually just break even."

In his spare time, Watts enjoys time with his family and on the water. He's been surfing since he was 9 and is a longtime competitive member of the Eastern Surfing Association.

"I would never be able to retire because I love my hobbies too much," he says. "I would like to teach someday if I can set up my shop to do it." **W**

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The Goldilocks Rule of Wood Moisture

Humidity changes with the seasons, but we can come up with a decent average where stability will occur most of the time.

By John English

When a board neither gives nor takes moisture from the surrounding air, it is said to be at its equilibrium moisture content. The problem is that EMC is a fantasy. It doesn't exist or, at best, it exists only for moments because the humidity and temperature of the air around us are constantly changing.

What a woodworker needs to know is that the boards he or she is using are close to the average humidity in the place where they will live. That way, the furniture or casework that he builds won't warp, check, split, expand, contract or do other things that cause joints to fail, doors to stick, floors to buckle and a host of other problems related to wood movement.

There is no exact and perfect amount of moisture because, in the average woodshop and also in the average home where the cabinets will

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be installed, humidity changes with the seasons, weather systems and even from day to night. But we can come up with a decent average (see Table 1). We can estimate roughly where stability will occur most of the time and shoot for that.

For example, if the average temperature inside buildings in a given market is about 70 degrees and the average annual humidity in the geographical region is roughly 30 percent, then lumber that has been dried down to 6.2 percent moisture content is in the ballpark. By using lumber that gives this reading on a moisture meter, we'll avoid a lot of potential problems related to wood movement.

Pin meters

There are two primary types of meters used in the woodworking industry. Invasive meters have pins on them that are pushed into the wood to take a reading. These usually come with a number of different pin lengths to reach the wood's center.

The way it works is rather simple. It's based on the fact that water conducts electricity and dry lumber doesn't. So the area between the two pins is asked to act as part of a circuit (much like the filament in an incandescent light bulb). The meter actually measures electrical resistance and converts the ability of the wood and water to conduct current between the two pins into a number that represents how much water there is and how much wood.

Invasive meters also allow a woodworker to take readings at the surface



A wood species chart is available with most meters. When using any meter, corrections for species should be done to get the right moisture values.

and in the center of the board and compare the two. This is especially useful during kiln operations, as it is one way to track the drying process.

Pinless meters

The second option is a pinless meter, which uses electromagnetic wave technology. The meter sends out electrical waves at a certain electro-

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Moisture can depend on your shop's location By John English

Woodworkers already know that solid wood needs to be monitored for moisture. Unfortunately, most of us simply don't bother. It's never been a big problem, so why waste the time, right?

Well, one reason is technology – but not in moisture meters. The structures in which we're building cabinets, and also those where we're installing them, are changing. Updates in insulation and sealing products, the popularity of radiant as opposed to traditional forced air heat and new construction materials are changing the ways that we heat and cool buildings.

WHAT IS MOISTURE CONTENT?

Natural boards (as opposed to processed sheet goods) can change dramatically in both size and shape as they respond to changes in humidity. Furniture and accents such as turned and carved products are even more susceptible to moisture than cabinetry. And it's not so much the presence of moisture as it is a lack of moisture that's changing the way we do things. The tighter and more energy-efficient our buildings become, the less ambient moisture migrates into them. If a new home doesn't have a central humidifier (and they are still rare in most parts of the country), the air can dry down to uncomfortable levels for people and wood products.

In its simplest definition, moisture in wood is the weight of the water in a board compared to the

weight of the wood in a board. The weight of the water is expressed as a percentage of the weight that the wood would be if it were perfectly dry.

In freshly harvested wood, most of the moisture is "free," in the form of sap sitting inside cell voids. Some of it is also "bound," which means that it lies within the cell walls. A loose rule of thumb is that about one quarter of the water is bound and three quarters is free. As a board dries, essentially all of the free water leaves first, along with a very small amount of the bound water. When the free water is gone and only the bound water remains, the board is considered to have reached its fiber saturation point. The board will not noticeably change in size or shape in the first stage of the process as free water leaves, but once drying begins to reduce the volume of bound moisture, then the board will begin to shrink.

A board that has reached its saturation point will not exceed that moisture content again as long as it is not submerged in water. That is, a board that has been reduced to 28 percent moisture content (the average saturation point where all of the free water is gone) will no longer absorb humidity from the air. Airborne moisture will settle in the fibers of the cell walls, but not in the voids. So, after a board has been seasoned, a woodshop need only be concerned with moisture levels below approximately 28 percent.

That's still a heck of a range.

WOOD IN THE SHOP

Some furniture shops and most turners purchase or harvest green wood, but woodshops building case-work generally buy lumber that has already been kiln-dried. The vast majority of cabinet lumber is hardwood, but there are some applications where softwood is also brought in kiln-dried. The initial moisture content in green softwoods can be quite a bit higher than it is in hardwoods. Softwoods tend to grow faster and they often have wider grain (larger cells), so they tend to have more sap flowing. That's not always true, but lodge pole pine does grow faster than, say, black walnut.

Construction-grade softwoods are often kiln-dried down to about 18 percent moisture, especially in Western states where they grow on the lower slopes of the Rockies. The kiln process takes less than a week. As the ambient humidity is low at higher elevations, the logs are stored outside in relatively dry air before milling and the boards are stored in open sheds or outdoors in the dry air after their brief time in the kiln. They continue to dry until they reach something akin to the ambient humidity (in Wyoming, for example, that's about 5 percent).

Hardwoods, on the other hand, are most often harvested in places such as northern Minnesota or in the Appalachians, where humidity is higher. After milling, hardwoods are generally dried down to be-

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Pinless meters, such as the Proscan from Delmhorst, scan a large area and average out the readings.

magnetic frequency that creates an electromagnetic field in the area under the sensor pad. The meter then produces a moisture content correlated to the signal it reads back.

There are some shortcomings with these meters. For example, if there is a wet spot on the surface of a board (perhaps where stickering sat or where a worker laid a snowy glove for a minute and it melted), they might pick up on the presence of that excess moisture and report it as an average reading. The reason is that pinless meters scan a large area and average out the readings.

The biggest advantage to pinless meters is, of course, that they leave no holes. They can estimate moisture in three dimensions (one can dial up desired depths), but it is difficult to use them to measure the difference between surface and interior moisture levels.

Ideal readings

The readings on meters are scaled. That is, some meters read a wide range of moisture, while others read only within a small range. Some

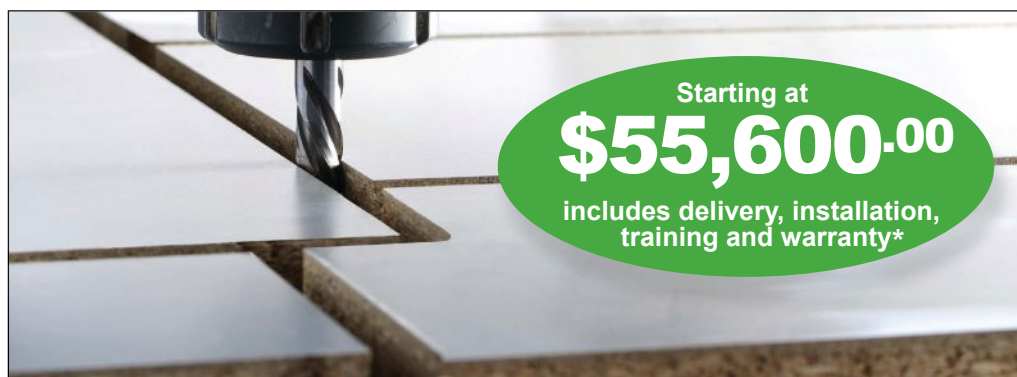


meters have a button that allows the woodworker to switch between different ranges. For example, somebody at a sawmill or loading a kiln, who is working with green, wet lumber will need a meter that measures high levels of moisture (maybe 50 to 120 percent). On the other hand, somebody who is checking to see if kiln-dried boards are ready to use only needs a meter with a very small range (perhaps 5 to 28 percent).

Moisture can be more than 100 percent when the amount of water in the wood outweighs the actual wood. And that magical 28 percent is about where boards reach saturation point: after kiln drying, they can't absorb moisture above that level unless they are physically submerged in water.

Most of the better meters allow a woodworker to dial up a species by name or at least enter a specific gravity rating for the species being measured.

For almost all kilns and hardwoods, drying down to between 6 and 8 percent is going to be the best choice. However, if a woodshop is located in an exceptionally wet or dry area, it's a good idea to keep control boards on hand. These are simply samples of the most commonly used species, cuts and sizes that the shop uses. By hanging them in the middle of the shop (rather than stacking them against a cold exterior wall or right in front of a furnace), one can take a moisture reading every now and then and determine the actual equilibrium level. Stock that has just arrived from a mill or warehouse or has just been shipped in from a distance can then be allowed to acclimate to this level. That is, it can be given enough time to absorb or lose moisture so that it settles at a moisture content that is close to



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DETERMINING EQUILIBRIUM MOISTURE CONTENT

	Relative Humidity																			
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	98
Temp																				
30	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.8	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5	18.5	21	24.3	26.9
40	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.8	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5	18.5	21	24.3	26.9
50	1.4	2.6	3.6	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.3	11.2	12.3	13.4	14.8	16.4	18.4	20.9	24.3	26.9
60	1.3	2.5	3.6	4.6	5.4	6.2	7	7.8	8.6	9.4	10.2	11.1	12.1	13.3	14.6	16.2	18.2	20.7	24.1	26.8
70	1.3	2.5	3.5	4.5	5.4	6.2	6.9	7.7	8.5	9.2	10.1	11	12	13.1	14.4	16	17.9	20.5	23.9	26.6
80	1.3	2.4	3.5	4.4	5.3	6.1	6.8	7.6	8.3	9.1	9.9	10.8	11.7	12.9	14.2	15.7	17.7	20.2	23.6	26.3
90	1.2	2.3	3.4	4.3	5.1	5.9	6.7	7.4	8.1	8.9	9.7	10.5	11.9	12.6	13.9	15.4	17.3	19.8	23.3	26
100	1.2	2.3	3.3	4.2	5	5.8	6.5	7.2	7.9	8.7	9.5	10.3	11.2	12.3	13.6	15.1	17	19.5	22.9	25.6

tween 4 and 11 percent in kilns, which takes about a month in most situations (thicker cuts and some species require more time).

One reason they are dried longer is that most hardwoods are a bit more temperamental than softwoods: it takes less moisture to make them misbehave. Another is that cabinet shops need to work to closer specifications than framing carpenters.

The other issue is joinery. Softwood framing lumber is connected with butt joints and inter-fibrous friction fasteners (nails). Hardwood joints are most often precisely fitted, glued and clamped. If they are mechanically secured, that's usually done with

screws, which give less than nails.

IT'S GOT MOVES

Ambient humidity, in the simplest terms, describes the amount of water in the air around us. Relative humidity, on the other hand, is a more complex measurement and is perhaps easiest to understand in terms of how it affects people. On a warm day, if the humidity is low, then the weather is bearable. At the exact same temperature, if the humidity is high, then we become quite uncomfortable.

Wood doesn't care a whole lot about relative humidity. It's mostly concerned with absolute humidity

This chart shows the relationship between air temperature and relative humidity in determining the equilibrium moisture content in lumber.

– the actual water content in the air and not how it feels to us.

Of course, wood isn't completely impervious to variations in relative humidity. In general, it gains or loses about 1 percent moisture content with every 5 percent change in relative humidity.

So, once it has been kiln-dried, it still gains and loses moisture, but it's far less sensitive to rapid changes than we are. 



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the level in the control boards. Equilibrium is defined as that moisture content where a board is neither gaining nor losing moisture.

Meters and specific gravity

Some moisture meters compensate for changes in the specific gravity of different boards by allowing the woodworker to dial up different species of wood before a reading is taken.

Specific gravity measures wood's density as compared to the density of water. If a species of wood is as dense as water (that is, the same volume of water and wood weigh exactly the same), then the wood is considered to have a specific gravity of 1.0. The trick here is to measure the wood when it's completely dry — which, of course, never happens.

For almost almost all kilns and hardwoods, drying down to 6 and 8 percent is going to be the best choice.

And no two samples of the same species are absolutely identical. So, the industry has developed educated guesses as to the average specific gravity of various species. It does that by weighing samples twice. The first measurement is taken when the wood has just been cut down during full sap flow (the time of year when the most sap is flowing) and then it's measured again when the sample has just come out of an oven and is as light and free of moisture as it can possibly be. Then, the two readings are averaged and the result is called base or basic specific gravity. Some labs use only one reading taken when the species reaches 12 percent moisture content.

The reason specific gravity is important when using a moisture meter is that the meter expresses the ratio of the weight of the water in a board to the weight of the wood in that board. As all boards don't



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weigh the same (that is, they have different specific gravities), then one must compensate for those differences or the results are not comparing apples to apples. Most of the better meters allow a woodworker to dial up a species by name (or a range of species) or at least enter a specific gravity rating for the species being measured. Others provide printed tables that allow the woodworker to make manual calculations and adjust the results accordingly.

Buying a meter

As with virtually any product, you get what you pay for. Better meters are durable and not as susceptible to common errors. For example, the pins on some inexpensive meters will actually lodge in the wood and physically break off. Many of the better meters have a cap that is placed over the pins between use and it actually recalibrates the meter by taking a reading through the cap material and resetting the base every time. Some meters allow the user to press a button that keeps the reading displayed for as long as it's needed, rather than disappearing as soon as one's grip relaxes. Some meters use a series of small LED lights to give a range reading, while others have a digital LCD display large enough for old eyes to read. Others offer audible results — a tone



Lignomat's offerings include the pinless Scanner SDM and the mini-Ligno DX/C, shown with the Depth Electrode E-12 accessory.

or sound that helps a lot when a screen is hard to see in bright sunshine or a dark warehouse.

Meters with different pin lengths allow the user to make readings at different depths, and those extra pins need to be stored with the meter and easily found. Some meters are large and bulky, while others fit in a shirt pocket. Some come with cables that allow the reading to be taken in places that the meter won't fit or perhaps where a remote reading is better (such as in a kiln). And some come with a decent warranty; so don't forget to check the fine print. **W**



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NEW

WOODSHOP NEWS 2014 Resource Guide

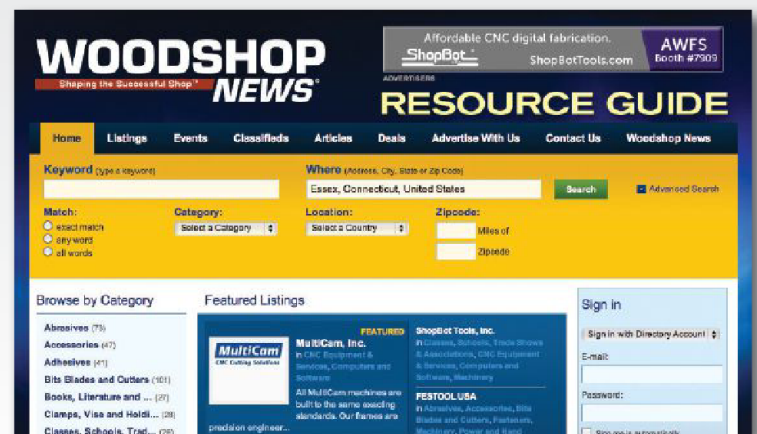
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NEW PRODUCTS

► **STANLEY** introduced two redesigned FatMax hand saws, available in 15" and 20" models. The new saws offer 25 smoother cuts compared to the previous model and are four times sharper than traditional tooth saws for fast cuts, according to the company. The saws feature a comfortable handle and BladeArmor. They retail for \$17 and \$20, respectively. For information, visit www.stanleytools.com.



▼ **MILWAUKEE** introduced the Inkzall Jobsite Markers, a new line of writing tools designed and optimized for job-site use. Featuring clog-resistant tips and the ability to write through dusty, wet or oily surfaces, the line includes fine- and medium-point permanent markers, as well as a stylus/marker combination tool that was designed for use with gloves on touch devices such as iPads and iPhones, according to the company. The company says the markers will be available in February. For information, visit www.milwaukeekeetool.com.



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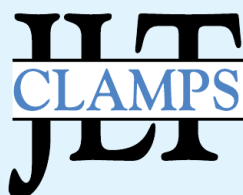
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NEW PRODUCTS

▼ BOSCH POWER TOOLS offers a new 8" single-bevel sliding compound miter saw, model CM8S 8". The saw weighs 37 lbs. and offers maximum cutting capacities of 12-1/4" for cross cuts at 0 degrees, 8" miter at 45 degrees, 2-3/4" for upright base and 3-1/2" for crown molding, according to the company. Features include a top handle for carrying, easy-to-read miter scale, 10 adjustable miter detents preset for common cuts, a detent override, and a 12-amp motor. The saw retails for about \$469. For information, visit www.boschtools.com.



▲ BESSEY's Double Force clamps are available with two different rail stock offerings and a choice of rail lengths and accessories. They feature sliding arms and no fixed jaw, allowing for multiple clamping or spreading operations on the same rail. Removable end stops make it possible to change the sliding arms and slip the clamp through narrow openings. For information, visit www.besseytools.com.

▼ PORTER-CABLE expanded its 20-volt MAX Linked System with six new cordless tools: a reciprocating Tiger Saw, 6-1/2" circular saw, oscillating tool, cutoff tool/grinder, jigsaw and pivoting flashlight. The reciprocating and circular saw are available in a four-piece combo kit that also includes the flashlight, a drill/driver, two batteries, charger and extra blades for \$239. For information, visit www.porter-cable.com.

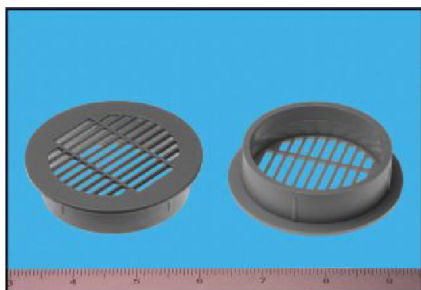


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◀ BOSCH also offers a portable solution for job-site dust collection with a new lineup of 9- and 14-gallon vacuums. The models VAC090S and VAC090A 9-gallon vacuums and models VAC140S and VAC140A 14-gallon vacuums feature two options of on-board filter cleaning; semi-automatic and automatic. These features are especially important in applications

that require premium dust extraction, according to the company. They are also compatible with Bosch's Click & Go storage system and have a power tool activation feature, integrated cord and hose storage solutions, and a wet vacuuming water level sensor that protects the motor by automatically shutting down the device when water reaches a maximum height during wet applications. Users can also add the VF120H HEPA filter to create an EPA-compliant HEPA vacuum. The vacuums retail for \$549 to \$669. For information, visit www.boschtools.com.

REGISTRATION OPENS FOR IWF

Online registration for the IWF in Atlanta is now open for exhibitors, attendees and housing accommodations.

The IWF, scheduled for Aug. 20-23 at the Georgia World Congress Center, is the largest showcase of machinery, materials, supplies, and services in the Western Hemisphere for woodworking and related industries.

By registering online, you're supporting the IWF, getting the lowest rates on hotels, and getting immediate booking confirmations, according to the IWF.

To register, visit www.iwfatlanta.com.

WHOLESALECRAFTS.COM REPORTS YEAR-END SALES RESULTS

Wholesalecrafts.com, an online marketplace for retailers to source handmade American and Canadian artist made craft, says sales increased 18.3 percent in 2013.

Total sales placed by retailers to artists through Wholesalecrafts.com's online shopping cart for 2013 came in at record \$5,614,087. There were 20,766 orders were placed online, a 13.2 percent increase from 2012. The website also reports 885 new retailers enrolled in 2013, for a total of 21,942 registered retailers and 1,172 current artist members to date.

"I am simply thrilled with these results," Wholesalecrafts.com vice president Nancy Vince said in a statement. "These numbers once again prove what a valuable and convenient resource we provide to the craft industry. I cannot wait to see what 2014 will bring with the roll-out of our new web site design, expanded catalog offerings, and new ACRE show coming this summer to the Northeast."

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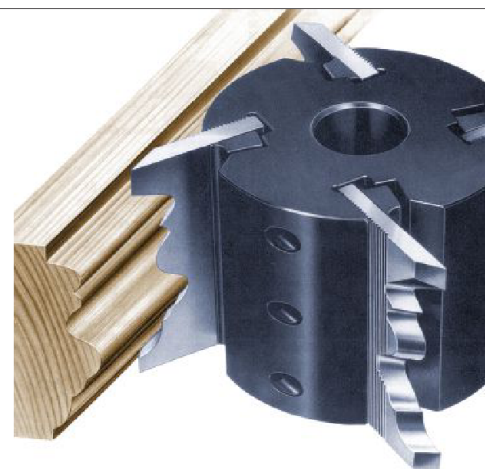
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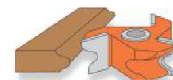
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Maine Wood 2014 showcases state's skills

Forty furniture makers and wood artisans are featured in school's biennial exhibition at the Messler Gallery

By Jennifer Hicks

Maine Wood 2014 opened in January at the Messler Gallery at the Center for Furniture Craftsmanship and will run through April 2. This biennial exhibition in Rockport, Maine, showcases the breadth, creativity and excellence of the state's furniture makers, turners, carvers and sculptors.

"This is our fourth biennial and the submissions just keep getting better and better," says Peter Korn, the school's executive director. He reported 88 submissions from 40 artists and artisans.

Furniture makers in the show include Nick Barboza of Bangor; Virginia Blanchard of Thomaston; Eben Blaney of Edgecomb; Judy Bonzi of Rockport; Ray Carbone of Steuben; Wayne Hall of Orland; Gregg Lipton of Cumberland Center; Brian Reid of Rockland; Kevin Rodel of Brunswick; Michaela Crie Stone of Rockport, and



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"Rorschach's Table" by Judy Bonzi and Brad Reid's hall table (opposite page) are part of the Maine Wood exhibit at the Messler Gallery.

David Talley of Tenants Harbor.

Woodworkers, sculptors and turners are Clara Cohan of Cape Elizabeth; Richard Kaeyer of Owls Head; Abert Kolodji of Yarmouth; Jim Macdonald of Burnham; Jonathan Moro of Rockport; Stephen Porter of Searsmont; Malcolm Ray of Damariscotta; Cynthia V. Smith of Gorham, and Hank Tyler of Hallowell.

Many of Maine's leading craft associations co-sponsor the exhibition. These include the Kennebec Valley Woodworkers Association, Maine Crafts Association, Maine Wood Products Association, Maine Woodturners, Maine Woodworkers Association, and Southern Maine Woodturners. Maine Home and Design is the media sponsor.

Nearly \$2,000 in prizes were awarded at the opening reception. These include gift certificates from Maine Coast Lumber for Best New Maker; DMT Diamond Whetstones for Best Original Design; Rare Woods for Best Use of Wood; Lie-Nielsen Toolworks for Best in Show; Fat Andy's Hardwoods for Outstanding Craftsmanship, Woodcraft of Newington for Best in Furniture. There is also a cash prize from Holt & Bugbee for the People's Choice award.

Jurors were Asa Christiana, editor of Fine Woodworking magazine; Jonathan Fairbanks, director of the Fuller Craft Museum in Brockton, Mass., and Laura Mays, director of the Fine Woodworking Program at College of the Redwoods in Fort Bragg, Calif. **W**

Contact: Messler Gallery, 25 Mill St., Rockport, ME 04856. Tel: 207-594-5611. www.woodschool.org

DISTRIBUTOR CONVENTION EARNS HIGH MARKS

The 2013 NAFCD + NBMDA Annual Convention was a huge success with more than 700 distributors and manufacturers in attendance from the building material, cabinetry and woodworking industries, according to the producers.

The convention is co-hosted by the North American Association of Floor Covering Distributors and North American Building Material Distribution Association.

Attendees took advantage of many opportunities to foster new and existing relationships at the event held at the Sheraton Hotel & Towers in Chicago.

"We are very pleased with the outcome of the event," said NBMDA executive vice president Kevin Gammonley, in a statement. "From record high attendance numbers to exceptional presentations by business experts, the event provided quality time for attendees to connect with business partners and discover new ways to grow their business."

The convention featured more than 90 exhibiting companies.

The 2014 convention is scheduled for Nov. 18-20 at the Sheraton Hotel in Dallas.

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CALENDAR

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

Include name, dates, location, description of event and a contact address or telephone number. Calendar items, which should be typed or printed clearly, must be received a minimum of 60 days before the event.

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

— Compiled by Jennifer Hicks

CALIFORNIA

Monthly — San Fernando Valley Woodworkers meetings are held on the third Thursday of each month at 7 p.m. at the Balboa Park Sports Complex, Gym Building, at 17015 Burbank Boulevard in Encino. www.sfvw.org

March 20-21 — West Coast One2One, hosted by Biesse and Intermac. An open house event for industry professionals to exchange ideas, gain hands-on experience, and consult one-on-one with product managers. Location:

Anaheim. Contact: marketing@biesseamerica.com or call 877-824-3773.

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.

Feb. 12-16 — The International Wood Collectors Society is hosting the Southeast Regional Winter Woodfest meeting at the Lake Yale Conference Center in Eustis. Sessions will focus on wood technology and identification, carving and turning, and craft programs. Contact: Tom Kinney. Tel: 630-667-8468. E-mail: thomaskinney@msn.com

GEORGIA

Aug. 20-23 — IWF, the largest showcase of machinery, materials, supplies, and services in the Western Hemisphere for woodworking and related industries. Location: Georgia World Congress Center in Atlanta. [\[lanta.com\]\(http://lanta.com\)](http://www.iwfat-</p>
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March 7-9 — The Woodworking Show, Atlanta. Location: TBD. www.thewoodworking-shows.com

IDAHO

Feb. 22-23 — The 2014 Idaho Artistry in Wood Show. Competitors from all skill levels will submit their wood carving, turning, scroll work, fine woodworking and more for public display, sale and judging. Location: Boise Hotel and Conference Center in Boise. www.idahoartistryinwood.org

Feb. 21-23 — American Craft Council Baltimore show. A three-day show featuring custom furniture and other items from juried artisans around the country. Location: Baltimore Convention Center. www.craftcouncil.org

MAINE

June 9-Aug. 29 — Twelve-week Furniture Making Intensives at the Center for Furniture Craftsmanship. Designed to meet the needs of aspiring professional furniture makers, curriculum focuses on design, lumber selection, joinery, traditional hand skills, machine techniques, surface preparation and finishing, shop maintenance, advanced techniques and professional practices. Tuition: \$7,230. Location: Rockport. www.woodschooll.org

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MISSOURI

Feb. 7-9 — The Woodworking Show, St. Louis. Location: Gateway Center Hall in Collinsville. www.thewoodworkingshows.com

Feb. 28-March 2 — The Woodworking Show, Kansas City. Location: Kemper Arena Grounds. www.thewoodworkingshows.com

NEW JERSEY

Feb. 21-23 — The Woodworking Show, Somerset. Location: Garden State Exhibit Center. www.thewoodworkingshows.com

NEVADA

Feb. 4-6 — Annual Kitchen and Bath Industry Show held in conjunction with National Association of Homebuilders International Builders' Show at the Las Vegas Convention Center. One entry fee for both shows. www.kbis.com or www.buildersshow.com

NEW YORK

Feb. 15 — Lecture and workshop by wood carver Mary May, hosted by the Rochester Woodworkers Society. Location: St. John Fisher College in Rochester. www.rochesterwoodworkers.org

May 17-20 — 26th annual International Contemporary Furniture Fair featuring the latest global designs by artisans from around the

world. Location: Jacob K. Javits Convention Center in New York City. www.icff.com

NORTH CAROLINA

April 5-10 — High Point Market. The largest furnishings industry trade show in the world, bringing more than 75,000 people to High Point every six months. www.highpointmarket.org

April 10-11 — Charlotte One2One, hosted by Biesse and Intermac. An open house event for industry professionals to exchange ideas, gain hands-on experience, and consult one-on-one with product managers. Contact: marketing@biesseamerica.com or call 877-824-3773.

ONTARIO

April 3-4 — Toronto One2One, hosted by Biesse and Intermac. An open house event for industry professionals to exchange ideas, gain hands-on experience, and consult one-on-one with product managers. Contact: marketing@biesseamerica.com or call 877-824-3773.

PENNSYLVANIA

April 4-6 — The 20th annual Philadelphia Invitational Furniture Show featuring fine furniture and other handcrafted items from custom artisans around the country. Location: 23rd St. Armory downtown. www.philaifs.com

QUEBEC

April 24-25 — Montreal Coast One2One, hosted by Biesse and Intermac. An open house event for industry professionals to exchange ideas, gain hands-on experience, and consult one-on-one with product managers. Contact: marketing@biesseamerica.com or call 877-824-3773.

TENNESSEE

April 16-19 — National Wood Flooring Association's 2014 Wood Floor Expo. Location: Music City Center in Nashville. www.nwfa.org

TEXAS

March 28-30 — The Woodworking Show, Houston. Location: Montgomery County Fairgrounds in Conroe. www.thewoodworkingshows.com

WISCONSIN

Feb. 14-16 — The Woodworking Show, Milwaukee. Location: Wisconsin Expo Center Hall C in West Allis. www.thewoodworkingshows.com

Oct. 3-5 — Milwaukee Fine Furnishings Show. Annual retail show offering handcrafted furniture and accessories. Location: Harley-Davidson Museum. www.finefurnishingsshows.com

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E-mail: j.hicks@woodshopnews.com
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The events are also listed at no charge on the Internet: www.woodshopnews.com
Be sure to include: event name, date, location, sponsor, contact name and telephone number, and Web site URL if applicable.

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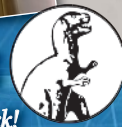
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Dreams do come true for lucky few

Wood-Mizer, a portable sawmill manufacturer, announced the winners of its 2013 Personal Best Contest, a tradition since 1985 that recognizes customers who have fulfilled their dream projects by sawing their own lumber.

The biennial contest is open to Wood-Mizer sawmill owners who compete for \$20,000 in prize credits.

"We had more entries than in 2011," company spokesman Chase Warner says. "We had 158 entries, compared to 118 in 2011 when we started allowing online entries. This year we also allowed them to use past entries and that also helped increase the number of entries."

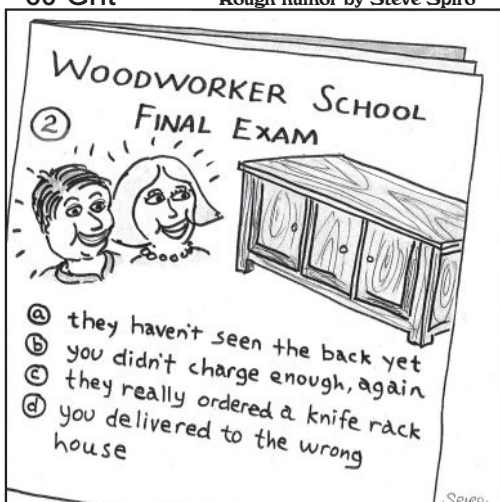
The contest categories included homes and major structures, small homes and cab-

A gazebo captured the exterior project category, built by Gary Allison of Turlock, Calif. Below is a portion of a 2,000-sq.-ft. wraparound porch, built by Craig Forman of Meadville, Miss., which placed second place in the same category.



60 Grit

Rough humor by Steve Spiro



ins, large barns and garages, small barns and sheds, interior projects, exterior projects, goodwill and "wide open," or anything that didn't fit one of the previously listed categories.

Each entry was judged on creativity, originality, complexity, quality of workmanship and overall use of the Wood-Mizer sawmill to complete the project.

"Every year, we receive more outstanding projects and are overwhelmed with the craftsmanship and dedication of our sawmill owners. Their projects are extraordinary," Wood-Mizer sales director Dave Mann says.

To view all of the winning entries, visit www.woodmizer.com. **W**

Jennifer Hicks



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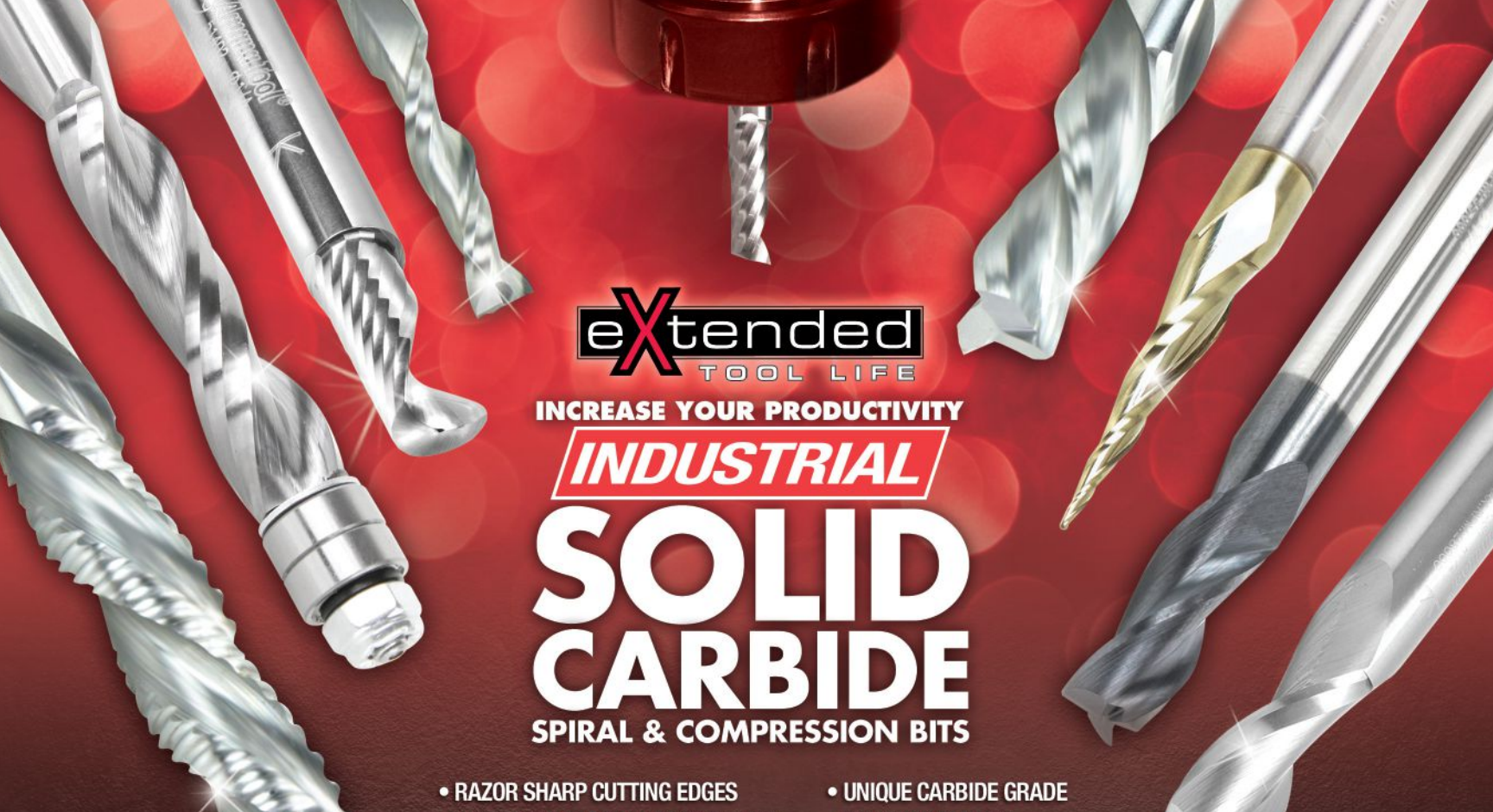
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