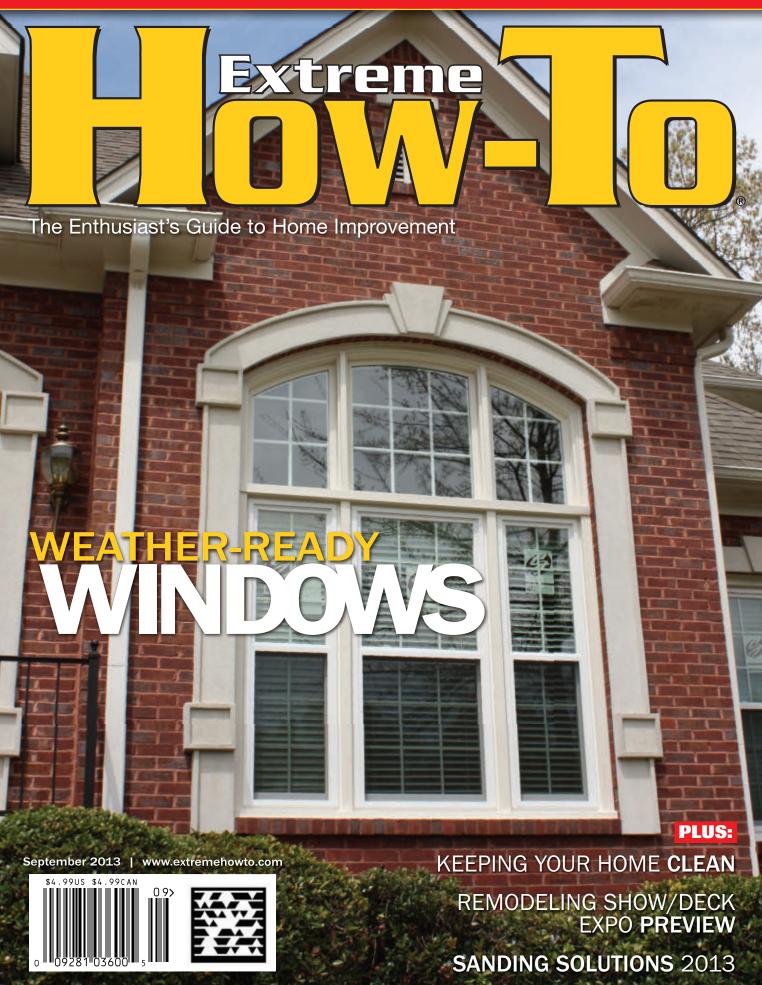
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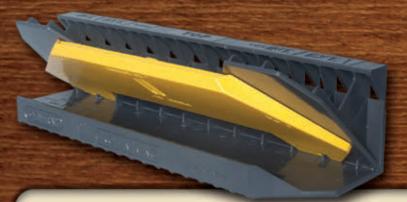


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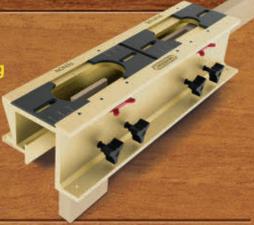


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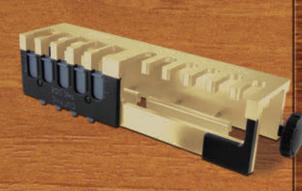
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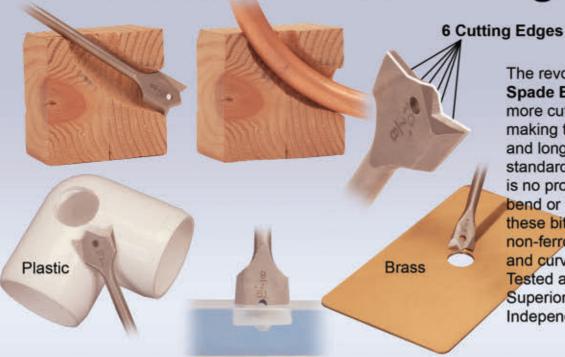
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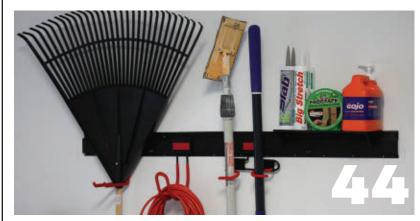
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In this two-phase project old windows are upgraded with energy-efficient vinyl replacements, plus the surrounding wood trim is protected with aluminum wrap.



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From The Editor-In-Chief

obody likes clutter. A messy and disorganized work environment causes a lot of practical problems, acting as a dangerous obstacle course or serving as a mysterious black hole from which lost tools never return. But I'm convinced there's also psychological element to clutter that tends to stifle motivation. Take my workshop as an example. I have a detached two-car garage that serves as my home-project headquarters. It goes through phases where I clean it up nicely but then I get heavily involved in a project and destroy any semblance of order to the place. Once it has descended into the messy phase, my desire to enter the shop and tackle a new job nosedives.

Working in a messy shop becomes a hassle. I might pop in, skirt around the clutter, grab a tool and leave, but I don't hang out when the place is a disaster area. And when I don't hang out in my work shop, I don't get as much work done. Under those chaotic circumstances, the place becomes a maze for the tools I'm trying to find, everything is camouflaged in a coat of sawdust (no matter how much I try to control it), and I'm constantly shifting sheets of plywood to access whatever is hidden behind them.

Recently, I got fed up. I could get nothing accomplished in my shop so I dedicated a Saturday to rearrange my storage shelves, and even built a wall-mounted rack where I could store those pesky plywood sheets. At the end of the day, the place was again reasonably functional and organized. The new sheet-goods rack made me especially happy. The workshop was a pleasant place again, and I didn't dread darkening its door. I rekindled my love for the place and found myself spending more time inside, tinkering with my tools and plotting new projects to dirty it all up again. Once I cleaned up the clutter, I rediscovered my motivation

beneath the mess. Maybe a little reorganization will work for you, too.

We've a got a handful of garage/workshoprelated articles in this issue, including a feature story on getting more of your stuff off the floor and making efficient use of wall space for storage.

Good luck with your next project, and thanks for reading *Extreme How-To*.





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Questions About Home Building, Remodeling? Have Your Own How-To Tip? Visit our blog at **blog.extremehowto.com** and click on Ask Our Experts.

. How is a composite marble shower pan made?

• Composite shower pans fall into several material groups; cultured marble, fiberglass, acrylic and solid surface. Generally all are made by fabrication of flat sheets, thermal-formed from a single piece of material, or molded or cast to form a one-piece unit. The one-piece construction eliminates seams, which in turn eliminates potential leaks. All composite shower pans install on a flat, level floor and do not require the creation of a sloped mud base. Cultured marble is made by spraying a 'gel-coat' onto a mold. This coating is about 1/64 inch or less in thickness. The gel-coat is covered with pigmentation and then backed with calcium carbonate. The calcium carbonate gives the pan its strength. Also, in the casting process it is infused with air pockets to lower the density and weight. The cultured marble floor is cast separately from the sidewalls. The incorporation of a shower pan liner is essential to ensure a watertight, leak-free installation.

:

How does straw-bale gardening work?

• Next spring you would purchase enough straw bales (not hay) to line up as garden rows. Condition the bales with water and fertilizer for two weeks. During the conditioning, the inside of the bales begins to decompose. Plant your seedlings directly into the top of the bales and grow your garden just as if it were soil. You can put tomato cages right on top of the bales. When the season is over, cut the twine on the bales to expose more compost.





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8. △ Got 2

Questions About Home Building, Remodeling? Have Your Own How-To Tip? Visit our blog at **blog.extremehowto.com** and click on Ask Our Experts.

• A broken drain pipe spilled sewage into the house's crawlspace. Plumbers replaced the piping and put down a lot of lime to fight the smell. It helped, but 10 days later the smell is still unacceptable. Should I put down more lime?

• Lime will help, but it won't necessarily solve the problem. Any raw sewage is a biohazard and should be removed and sanitized. Placing chemicals to mask odor is not the correct method of repair. We recommend calling a reputable professional cleanup company, such as ServPro or PuroClean, to clean up any sewage and make sure the water is all dried out. Homeowner's insurance will probably cover this procedure.

How would I go about buying a foreclosed house for a remodel?

• First make sure that you have the resources in place to purchase the property. Get pre-qualified for a loan if you haven't already and enlist the help of a buyer's agent if you're not comfortable contacting the bank or listing agent and negotiating on your own. Determine if this property represents a good bargain or investment opportunity. Compare the list price to the house's estimated market value. If the list price is lower than the market value, the property could represent a bargain purchase. If the house is listed for sale on the MLS (Multiple Listing Service, www.mls.com), you or your buyer's agent can simply contact the listing agent. If the home is not listed, you will need to contact the lender that now owns the property to express your interest. The lender's REO (real estate owned) or asset management department will let you know how you can view the inside of the house and how to submit an offer.





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Sanding Solutions 2013

The Right Tools, the Right Techniques



By Matt Weber

anding is the foundation of any finishing project—or refinishing project. Whether you're removing an old finish or preparing a piece of fine furniture, just about any project that involves wood requires sanding. For very large jobs like refinishing a floor, you'll need to rent a large walkbehind drum and disc sander. But for most carpentry and woodworking projects, investing in quality sanding equipment is money well spent.

Sanding tools not only do the job faster than a handful of abrasive paper and whole lot of elbow grease, they also do the job better. For instance, while pine is easy to sand, it's also easy to damage. The soft wood between the growth rings can wear down quicker than

the rings if not sanded correctly. However, a tool as simple as a sanding block can ensure even application of pressure for consistent sanding action over the wood surface. From sponge-backed sanding blocks to heavy-duty belt models, sanders are used for everything from removing house paint to buffing a smooth, glassy finish on an elegant dining room table

BELT SANDERS

For the most aggressive material removal, your go-to tool is a powered belt sander. This high-production tool will quickly smooth down and level a surface, as well as remove paint or glue lines. As with any power tool, more power produces more work and faster

For the discriminating woodworker, the Porter-Cable Speed-Bloc 1/4-sheet finish sander features a solid metal frame, 100-percent ball bearings and seamless, contoured housing for a comfortable grip. The 1.2-amp motor delivers 14,000 OPM, and rubber posts isolate vibration for exceptional control of the smoothest sanding performance.

cutting. Amperage can range from 5 to 11 in most handheld models. The speed of the belt can range from 700 to more than 1,500 feet per minute, and belt speed also factors into cutting power. Portable sanders usually offer belt sizes running from 3-by-18- to 4-by-24 inches.

Notably, Porter-Cable recently bucked the trend in belt sander size by offering a 2-1/2-by-14-in. model, the 371. It includes an auxiliary handle and dust port, but when these accessories are removed the compact 371 sander measures only about 9 inches. Its textured rubber grip and low center of gravity allows easy one-handed control when sanding vertical surfaces as when scraping paint off metal and wood, flush-sanding against perpendicular surfaces, etc.

The large 4-in. wide and 3-by-24-in. belt sanders may be the best selection for sanding large, flat surfaces. However, the downside of the size lies in the tool's weight and maneuverability. Large single-speed sanders can also prove too aggressive for delicate jobs. The big boys can quickly

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Amber Stain on teak and PT pine

Photo courtesy of Beth and Rod of See Dirt Run!

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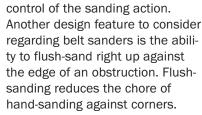
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remove a lot of material to the point that the user can accidentally damage a work surface.

Keep in mind that all belt sanders are unidirectional. This means that if you work them from side to side you'll get some ugly across-grain cuts on the wood surface.

Features to consider on belt sanders include variable speed control, which affords more



Black and Decker's 7-amp Dragster belt sander takes its flush-sanding capability a step further. Not only can the nose of this low-profile sander slip into tight spaces, but the front guard flips out of the way to allow sanding with the top of the belt loop, for work in small nooks and between balusters.

The compact Porter-Cable 371 has a 2.5x14" belt plus a low center of gravity that allows easy one-handed control.









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Also, look for an easy-to-change belt system. Ideally you'll get a nice balance between easy changing and consistent belt tracking (the belt's ability to stay on the platen and wheels during operation). For example, Skil offers the consumergrade 6-amp, 3-by-18-in. Sandcat with an auto-tracking feature, and its belt is super-simple to change thanks to an easy side lever.

DISC SANDERS

After you've knocked down the old surface with your belt sander, it's time to move along to the finishing stages. The popular random orbital sanders use abrasive discs with an oscillating action to remove material with less aggression than belt sanders but more than straight-line finish sanders. Randomorbits are a great intermediate sander for removing any belt-sander marks and preparing the surface for finish. Use



The Black & Decker Dragster belt sander has a low-profile nose and retractable guard that allow sanding in small spaces.





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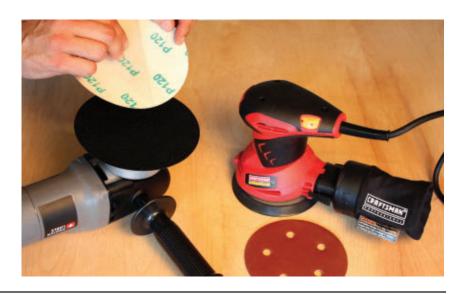
these sanders with progressively finer grits of abrasiveness. The abrasive discs may be held onto the sander by adhesive or with hook-and-loop. Choose from sanders with either a palm-grip or pistol-style handle, whichever you find more comfortable.

You'll find options in disc-sander size, usually in 5- or 6-in. options. The new Craftsman 3-amp 27675

Random orbital sanders are available with both adhesive discs and and hook-and-loop discs. The two models pictured include: The Craftsman 27675, a professional-grade 5" random orbital sander with dust extraction. The Porter-Cable 7346SP features a 6" sanding disc as well as a polishing pad.

random orbit sander is built for professional use and uses 5-in. abrasives that mount with hookand-loop interface. It offers variable speed from 5,000 to 12,000 OPM (no-load speed) and is

engineered with a counter-balance system to reduce tool vibration for smoother sanding action. The popular 5-in. size makes the 27675 sander lightweight and easy to control.









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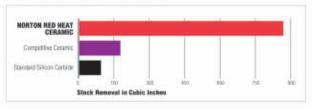
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- ROBERT MYERS CO.

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In the 6-in. category, the Porter-Cable 7346SP offers variable speed between 2,500 and 6,800 OPM powered by a 4.5-amp motor. This contractor-tough sander uses peel-and-stick adhesive discs and

is built with 100-percent ballbearing construction. The counter-balanced 7346SP has a two-position auxiliary handle (right or left) and includes a polishing pad. You'll find that certain professional-grade orbital sanders from companies such as Festool offer variable sanding motion. These models include a dual-action switch—random orbital for fine sanding, and gear-driven rotary orbital motion for rough material removal.

However, as handy as the the disc-style orbital sanders are for the pro and DIY woodworker, the



The Dewalt DWE6401DS 5" VSR Disc Sander boats a 6-amp motor with variable speed from 0 to 3,700 OPM. Rather than random orbital action it's designed for high-torque sanding applications to speed up the process. Plus, the mid-handle design with soft grip and side handle provides increased balance and relieves user fatigue during vertical applications.



Available from Woodworker's Hardware, the quiet and powerful Mirka Ceros electric orbital sander features an excellent power-to-weight ratio and a low profile design for enhanced control. The 7 variable speeds range from 4,000 to 10,000 OPM. Visit wwhardware.com.





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rotary action typically leaves tiny swirl marks on the surface of the wood. These tiny marks may be difficult to see with the naked eye but become considerably more prominent when highlighted with wood finish. That's why finish sanding is so important.

FINISH SANDING

Finishing sanders usually operate with a straight-line or vibrating action. They may be large half-sheet sanders or the more common quarter-sheet sanders. Typical finish sanders have the ability to accept virtually any type

of sandpaper, just cut to size if necessary and clamp on the abrasive sheet. Some smaller "palm" finish sanders feature dust-extraction holes and require hook-and-loop sanding pads.

The finish-sanding process begins with medium- to fine-grit abrasive paper used in successive passes over the work surface, progressing to finer grits with each pass until the surface is smooth enough to apply a final stain or other wood coating.

Detail sanders are basically finish sanders with narrow tips



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The Skil Octo sander features eight accessories for a variety of detail sanding applications.

or special accessories for accessing hard-to-reach spaces. The Skil Octo detail sander can be equipped eight different sanding profiles, allowing you to access tight corners, flat faces and numerous shapes and profiles.

Similarly, the Black & Decker's Mouse, which is as small and as lightweight as the name would suggest, contains the three most popular accessory profiles for detail sanding. Detail sanders come in handy when trying to smooth out various corners and rounded profiles.

Although finish sanders do a good job of removing the tiny swirl marks left by orbitals, I always prefer to finish off with a good hand-sanding with a very fine abrasive (180- to 220-grit). Use the sandpaper on a rubber or other soft-backed sander, sanding in the direction of the grain. Hand



For the hobbyist and DIY'er, Black & Decker offers an economical and compact 1/4-sheet and Mouse detail sander, both equipped with dust-control cartridges.



Ali Industries offers a variety of manual sanding blocks, pads and abrasives for exceptional control of the final sanding phase.



sanding simply affords you better control of the finishing touches. Once sanded, clean away any dust with a tack cloth or vacuum before applying a finish.

STATIONARY SANDERS

Serious woodworkers should consider stationary or "bench" sanders. This tool group of sanders consists of disc, belt and drum sanders, with disc and belt sanders often combined into a single tool. Stationary models are

The Dust-Free Sponge Sander from Hyde Tools cuts down on cleanup time by eliminating up to 95% of dust caused by sanding. It has a small profile, easy-to-grip sanding head for use on flat surfaces, edges and corners, and will fit any standard shoptype or industrial vacuum.



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ideal for furniture and cabinetry construction. Much like a table saw differs from a handheld saw, with a stationary sander the workpiece is fed into the tool rather than the operator moving the tool over the workpiece. This method of sanding can afford greater control of tricky, targeted sanding tasks. Bench sanders can be used to shape and smooth convex or concave surfaces like butcher-

block countertop edges, cabriole legs, scroll work and other contoured items.

The Skil 3376 benchtop belt/disc sander is small in size yet powerful enough to tackle most shop sanding tasks. The 4-amp 3376 is sturdy and versatile, featuring tension-spring adjustment for secure belt tracking. You can tilt the 4-by-36-in. belt from horizontal to vertical for

sanding at 0 and 90 degrees. The beveling table top mounts to the belt or the disc for a working range of 45 to 90 degrees. Use the miter gauge in the slotted table top for greater control and more accurate sanding.

DUST COLLECTION

Some sort of dust-collection device, be it a cartridge or cloth bag, is usually a standard feature on today's sanders. The newer cartridge-style filters tend to collect more dust than the bags. And, some sanders have ports that can be connected to a shop vacuum. I've yet to encounter an on-tool dust collector that does a perfect job, but I suppose that any decrease in mess is a help. You should always expect some fallout and the required cleanup.

If you spend a lot of time sanding or handling working indoors, you're best bet is to invest in a dedicated vacuum dust-collection system that attaches to your sander's dust port via a vacuum hose. The vacuum-based collection systems are the closest thing you'll find to a dust-free sanding operation.



The Skil 3376 benchtop unit is a versatile combination of a stationary sanding disc and 4x36" belt. It's a handy tool for detail work such as sanding small end surfaces with the disc.

FULL CIRCLE WALL SANDERS

Full Circle International offers professionals innovative tools for finishing drywall and prepping for paint. The company's signature Radius360 Sanding Tool has a round, no-flip design and a 9-in.diameter head, providing unparalleled range of motion and finish quality. The recently redesigned Radius360 is the same great tool with the added ability to transform your pole sander to a handheld sander.

The Flex Edge Sanding Tool is a much improved version of the traditional rectangular sanding tool. Designed with a low center of gravity and a rubber and foam pad, this tool has shock absorption, much like the sole of your shoe, offering

the end user more detailed pressure when sanding. The Flex Edge won't give you the coverage of the Radius360 but it is great for sanding corners and small areas and between coats of drywall.

Full Circle's newest addition to the sanding line is the Trigon180 Sanding Tool. This tool is a hybrid of the Radius360 and the Flex Edge. The triangular head of the Trigon180 has the no-flip, large surface sanding ability of the Radius360, combined with the shock

absorption and corner sanding capabilities of the Flex Edge. This versatile tool can also be converted to a hand held sander via the cam-lock mechanism of the Pro Handle Adapter. Learn more at www.fullcircleinternational.com.







installation system that is revolutionizing the way floors are being installed around the world. The Elastilon Strong system replaces nails, nailing guns, compressors, messy

adhesives, specialized adhesive trowels and chemical cleaners with one simple installation tool — a utility knife. Installation times are cut in half and installations are so simple that even a home handyman can do it.

Elastilon allows almost any species and thickness of hardwood flooring up to 3/4" thick to be installed over almost any surface, be it wood, old vinyl tiles, linoleum, ceramic tiles and, with the proper installation, directly over **concrete** — above, on or even below grade. No fuss, no mess!

Once your floor is installed with Elastilon there is a permanent elastic bond that allows for the natural expansion and contraction of your floor while always helping to reduce gapping, cupping and buckling. The Elastilon membrane reduces both airborne and impact sound transmission, increase underfoot comfort, allows for installations over in floor heating and can be walked on immediately following installation.



Want to learn more about Elastilon and save money at the same time? Visit us at www.elastilonusa.com/coupon for complete details on becoming an Elastilon Expert and find out how you can receive up to a \$500 cash back rebate on your first purchase.













Repairing a Garage Wall Damaged By a Car



By Rob Robillard

his story starts off simple enough: Last winter an elderly client of mine decided to go the store to get a newspaper and coffee. He said to his wife who was sitting in the living room, "Honey I'm off to the store, I'll be back in a few minutes."

The wife replied, "Okay, see you soon."

The husband walked into the attached garage. The wife heard the car start followed by a loud crash. Running to the garage she saw her husband's car against the rear wall of the garage and the wall pushed out toward the rear yard.

Believe it or not, this is a common accident. In this situation

the husband inadvertently put the car into drive, thinking he was in reverse, looked backwards to leave the garage but drove forward into the wall.

The car smashed into the rear garage wall, destroying the insulated steel door and completely pushing the wall off the foundation.

CALL TO THE CARPENTER

That morning my cell phone rang, and the wife told me what happened. While listening to the story I had no idea how I was going to approach this repair. I had visions of a catastrophic roof collapse on top of a car as well as other structural nightmares.



When I saw the damage I realized that the main problem was the rear personnel door and its frame. The 2x4 bottom plate had been pushed off the foundation by several inches but was otherwise intact. The force of the car had sheared the 16-penny framing nails connecting the 2x4 wall plate to the pressure-treated 2x6 foundation sill plate.

NOW WHAT DO WE DO?

The door that was damaged was located approximately 6 feet from the garage corner. Fortunately the wall plate was still sitting on the foundation sill plate 30 inches from the corner. However, the wall plate at the door was hanging off the foundation sill plate by 6 to 8 inches.

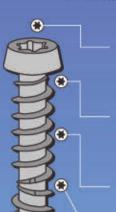


The force of a car collision had knocked the garage wall off its foundation, shearing the 16penny nails that held it in place.

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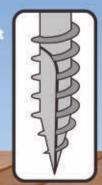
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DO IT YOURSELF

Seeing that 90 percent of the rear garage wall was still intact and only a roof was supported by the wall, we decided that shoring was not needed and the best way to repair the damage was to "pull" it back onto the sill, saving the wall framing.

Our theory was that if we could push or pull the wall with enough force we could slide the wall back onto the foundation sill plate.

THE STRUCTURAL **WALL REPAIR**

We first removed the damaged door, drywall and insulation from the damaged section of wall. Two of us pulling and pushing could not budge this wall; we needed more power. But how?

After a coffee break and some head scratching we decided we would use our van to pull the wall back in place.

To prepare to pull the wall, we drilled two holes in the plywood sheathing on either side of a wall stud. We ran a chain through the holes and around a large staging plank on the exterior of the wall.



Fortunately the corner of the wall was still sitting on the sill plate.



The door side of the wall was 6" to 8" out of position.



We drilled two holes in the plywood sheathing on either side of a stud and ran a tow chain through the wall.

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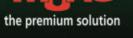
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DO IT YOURSELF

The plank evenly distributed the force of the chain and did not stress one single point or stud on the wall framing.

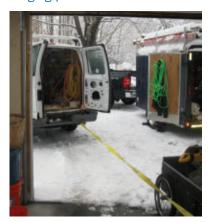
Using sections of tow cable we attached the chain and plank to

our van and applied tension to the chain and cables.

Once the wall was tensioned we used a sledge hammer against the bottom plate to move the wall, starting at the wall corner and



We ran the chain around a large staging plank outside the wall.



The van provided tension on the wall while we used a sledge hammer to move it onto the foundation.

slowly working toward the doorway. We had to continue to apply additional tension with the van as we moved the wall.

This was a slow process, and moving the wall completely back in place took about 15 minutes of back-and-forth sledge work and tensioning. Once the wall was fully on the sill plate we used 6-ft. levels and the sledge to plumb it into position.



Tow ropes helped to move the wall along.



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DO IT YOURSELF

Securing the wall in place was easy. We used 16-penny galvanized nails in all of the 2x4 stud bays, securing the wall plate to the sill plate.

THE COSMETIC REPAIR

We purchased and installed a new Stanley insulated steel door, reinsulated the wall cavity and applied new 5/8-in. fire-rated drywall to the interior of the garage wall.

The car (and our method of wall repair) damaged some of the exterior siding and trim on the exterior of the garage. We replaced the trim and siding as needed.

Editor's Note: Robert Robillard is a remodeling contractor based in Concord, MA, and editor of a www.AConcordCarpenter.com.



The large plank outside the wall helped distribute the towing force across the wall.

Between the sledge and the van we were able to reposition the wall and nail it to the sill plate and framing. We then installed a new door and made the necessary cosmetic repairs.



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Floor Protection for Garages and Workshops



Shown is the G-Floor protective cover after installation.

This article demonstrates the simple installation method of Better Life Technologies' G-Floor Floor Cover/Protector. The *EHT* staff recently installed this in a residential two-car garage. G-Floor is available in seven sharp colors, from Midnight Black to Brick Red, and comes in four widths, from 7-1/2 feet to 10 feet. Custom sizes and grades are available. The covering shown features a diamond tread pattern.

loor protection is a great way to dress up garages, workshops and "man caves". From residential tool cribs to professional auto shops, protective covers are popular anywhere people are tired of looking at ugly oil stains or discolored concrete. Installing a resilient covering is an easy project you can complete in a single afternoon, and the result is a brand-new surface that's impervious to corrosive road materials such as antifreeze, oil, salt and battery acid, Floor protectors reduce dust travel and withstand all sorts of contaminants found in the garage and work environments.

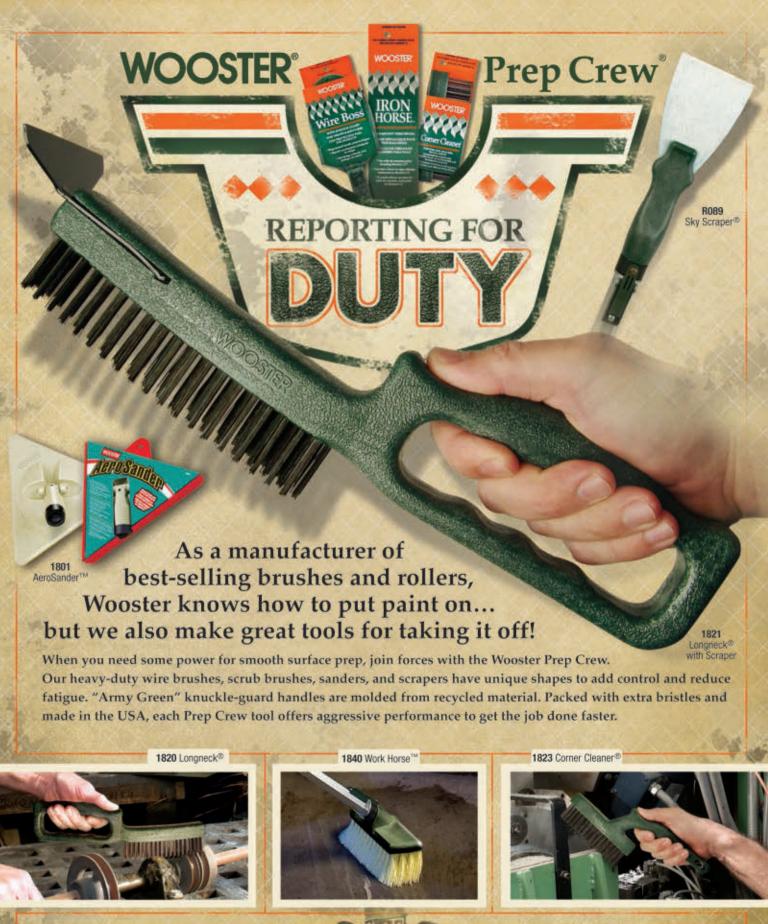
Plus, most garage floor coverings are easy to move. They can be cleaned inside or outside of

the garage, and the nonporous surface allows easy cleanup of oil and antifreeze with soap and water. Vinyl floor cleaners can be used to remove stubborn debris. Floor protectors also provide a moisture barrier, reduce noise, hide pre-existing cracks and stains and they last for years. The ribbed or channeled surface of the floor cover also channels away liquids to reduce the amount of dirt tracked into a home.

When it comes to floor covers, homeowners have a several different but similar products to choose from. Companies such as Better Life Technologies, LLC, offer vinyl flooring that rolls out for easy installation. The rolls come in a variety of sizes to fit almost any garage.



Garage floor coverings can protect the floor and conceal existing damage, stains and concrete discoloration.





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MATERIAL MARKET



The covering is shipped in rolls.

DIY INSTALLATION

For the G-Floor, the manufacturer notes that the protector will initially have curl marks due to being rolled on a core or folded in a box. For flat results, the company recommends the product be unrolled in the sunlight on a clean driveway. The warmer the conditions, the quicker the curls will straighten out and lay flat. To facilitate the flattening process, use a wide push broom to push the air out from the center and work your way toward the edges from side to side, and end to end.

Another option is to unroll the cover right in the garage. Either way, wipe up any oil and chemicals from the floor and sweep the garage thoroughly before installing. For best results, start unrolling at the garage entrance,

finishing at the back of the garage. In cool conditions, it may take up to 72 hours for the curl marks to lay flat, but you can still park your car on it during this time.



It may help to unroll the covering outdoors and allow the heat of the sun to relax the curls from shipment.



Thoroughly clean the floor prior to installation.



Measure carefully when cutting the floor cover to fit around obstructions.





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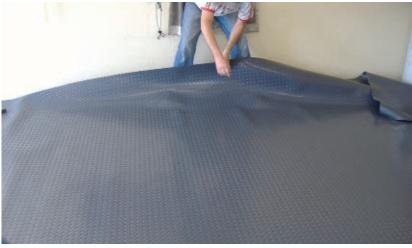
800-333-6700 www.cofair.com

MATERIAL MARKET

For a custom fit, allow the cover to relax in place before trimming around the edges and corners. And believe it or not, that's the gist of the installation: Simply unroll, trim to fit and overlap adjoining sections. Taping is

optional. If taping the edges or seams, use indoor/outdoor carpet tape.

In just a couple of hours, you'll have a new surface to park on, play on and work on—and no more ugly floor. **EHT**



Simply unroll and trim to fit.



If necessary, trim the covering with a utility knife or scissors.



Overlap adjoining edges by 6" or more. Taping the edges and seams is optional.



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UP THE GARAGE

By Matt Weber

Storage and organization make the garage a project-friendly workplace.

s your garage a disorganized black hole where tools and supplies mysteriously disappear for months on end? Is it a cluttered obstacle course with mountains of precariously stacked boxes, crates and athletic equipment? This is the sad case with many garages across the country but it doesn't have to be that way. Today homeowners have an endless array of storage and organizational options, including shelves, hangers, racks and cabinets, which can transform your garage into a neat an orderly work space for home and auto projects.

The *EHT* staff recently equipped a garage with a range of new products to get more off the floor and streamline the workspace. Here's how it went.

TOMORROW'S PEGBOARD TODAY

The traditional upgrade from the nail-in-the-wall approach to garage storage has been pegboards made from pressboard panels. The problem with pressboard is that the material has a tendency to warp, swell, crack or fray when it absorbs moisture. It also stains easily from oil and dirty fingers.

Additionally, one of the installation hurdles of pressboard pegboards is that they require wooden slats or cleats installed behind the board.

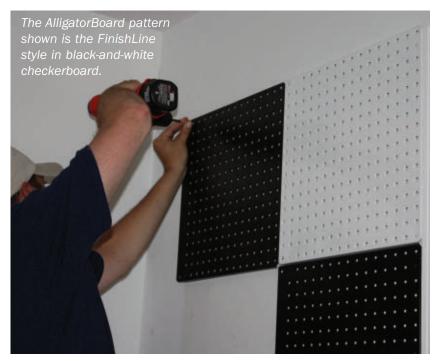
When the solid pressboard is mounted flat to a wall, there is no clearance behind the board to thread a hook or tool carrier through the holes. Therefore, the 3/4-in. thick slats or cleats are required to hold the pegboard off the wall, providing adequate clearance for tool hooks to be mounted.



Traditional pressboard pegboards must be mounted with wood strips to provide the necessary standoff to hang tool hooks. Here we're removing the old strips to upgrade to a new pegboard that requires no strips.

When mounting a pegboard or any wall-mount storage device, you'll always get the most holding power by fastening into the studs.





In response to the shortcomings of the old pressboard design, a variety of manufacturers offer alternative pegboards made with sturdier material that eliminates those problems.

AlligatorBoard from Syr-Tech is a unique metal pegboard manufactured to the highest standards from heavy-duty, 20-gauge steel. Stronger and more durable than ordinary pegboard it comes in 32- and 48-in. long, 16-in. wide panels, and 3-in. wide strips and shelves. It's compatible with standard pegboard hardware and quickly and efficiently organizes garages, workshops, utility rooms and more. Backed by a 5-year limited warranty, the metal pegboard won't rust, and the galvanized line is magnetic. AlligatorBoard has special reinforced dimpled holes, and will hold up to 90 lbs. when mounted on studs. The built-in 5/8-in. flanges let you mount directly to any wall with clearance for tool hooks. Plus, open corners make it easy to run speaker wire or extension cords behind mounted panels.



If you can't fasten into a stud and must mount to drywall only, make sure to use the an anchor that expands in the rear when a screw is inserted.

Drywall anchors require predrilling.



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AlligatorBoard is available in several finishes—galvanized steel, eight powder-coated steel colors and stainless steel. The EHT staff installed one of the specialty

pegboard packages, the FinishLine black-and-white checkerboard, which makes a handsome addition to the new garage. The installation is rock solid, and the FinishLine





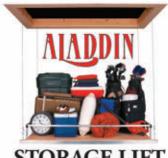
Aladdin Storage Lift automatically lifts

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items you want

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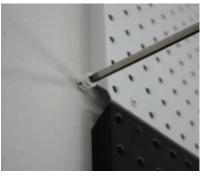
STORAGE LIFT

The Aladdin Storage Lift is a motorized lift system that easily and safely lifts your storage items into the attic and/or lowers them

down to floor level. It eliminates the difficult, time consuming and dangerous task of lifting or pushing items up and down a pull down stairway.

The Aladdin Storage Lift design turns a difficult task into a simple and economical solution for all of your storage needs.

www.aladdinstoragelift.com



Insert in the anchor with a screwdriver, then mount the screw into the plastic anchor.

Attention to detail: The AlligatorBoard fasteners match the powder-coat of the metal panels for a sleeklooking installation.





An almost endless variety of hooks, hangers and tool holders are available for pegboards.



RaceDay Peel & Stick Floor Tile



Peel & Stick Application



package even includes such details as color-coordinated mounting screws to match the paint finish.

Another nice pegboard product is the Racor Pegboard. Each of the 16-in. square panels have five built-in standoffs to easily space the Pegboard from the wall for direct mounting without having to add wood strips behind it. The panels are made of a tough resin base that will stand up to the use and abuse a pegboard will see over the years. The system is also easy to install, built with interlocking screw holes so you can easily add more pegboard panels as needed. The interlocking feature is self-aligning, so after you carefully plumb the first panel, you can forget the hand level and knock out the rest of the pegboard in no

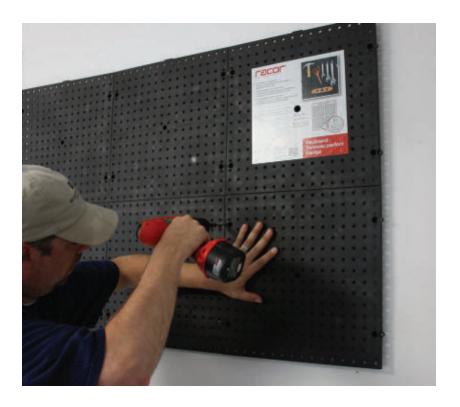


The Racor Pegboard features studs on the rear of the panel for mounting directly to the wall while maintaining the necessary standoff.

The edges of the Racor panels interlock at the screw holes and with tabs at the top and bottom.







time. Racor also offers a 36-piece set of hooks for the Pegboard that includes a variety of sizes and lengths to handle most any small hand tool or item found in the garage, workshop or shed.

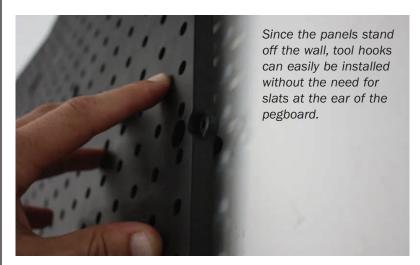
Both of these pegboard systems are designed to mount easily onto the spacing of wall studs, but if your garage layout doesn't allow you to locate the edge of each panel over a stud, then it's very important to use the proper fastener to achieve the most holding power. A 2-in. drywall or decking

The interlocking pegboard panels self-align during installation, so after plumbing the first one you can complete the job without using a hand level.



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GEARING UP THE GARAGE

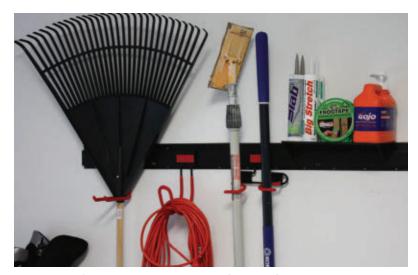


screw should suffice in the studs, and we recommend installing at least two screws per panel into solid framing. When mounting to drywall, be sure to select an expanding drywall anchor that opens at the rear when a screw is inserted. Check the fastener's packaging for specific instructions, but typically the installer should drill a 1/4-in. pilot hole for the anchor and then twist in the threaded anchor with a screwdriver, Place the pegboard panel over the anchor and then drive the screw into the anchor until flush with the panel surface.

EASY WALL STORAGE

From slat-wall systems to homemade shelves, if you can get your gear off the floor and make it more easily accessible, then you'll find a lot more usable floor space.

On our recent garage makeover we installed the Racor GaragePro Universal Rail Storage System. This is a handy nine-piece kit that provides superior strength and flexibility of storage options for use in limited space. The GaragePro starts with two 24-in. rails that can be hung separately or combined to create 4 ft. of



The Racor GaragePro Universal Rail Storage System starts with two 24" rails that can be hung separately or combined to create 4' of storage.

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- JEEPS: INTERIOR/BED, BODY INT/EXT- MUD BOGGER/ROCK CRAWLER, FRAME, ROOF
- MARINE: INT- DECK, GUN WALLS, CABIN/ENGINE SOUND PROOFING, ROOF/FLY BRIDGE, SEATING
- TRAILER: INT- FLOOR-WALLS-CEILING, SOUND PROOFING, EXT- BOTTOM, FRAME, ROOF, PARTS
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The Racor 450 Rack comes with heavy-duty lag screws that must be mounted to stud framing.



The 450 Rack is a multipurpose wall accessory that can hold heavy items—up to 150 pounds on each of three tiers for a total of 450 pounds.

storage. It has adjustable hooks and a shelf that is placed on the rails and easily moved when needed. The rails have a built-in bubble vial to aid in installation, as well as a course of screw holes on top and bottom to mount in both studs and drywall (fasteners and anchors included). The rails can hold a combined weight of 100 pounds, and the system expands as you add further components.

We also hung the Racor 450 Wall Storage Rack, a multipurpose wall accessory that can hold the heaviest of items—up to 150 pounds on each of three tiers for a total of 450 pounds. It holds large ladders, heavy metal piping, dimensional lumber—you name it. The 450 Rack is also handy for long oversized items like patio umbrellas, skis and other bulky items that are difficult to store. The three tiers are 16-in. deep and solidly constructed of steel with a durable epoxy finish.



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The 450 Rack comes with heavy-duty lag screws and must be mounted to stud framing; drywall won't work for this one. To install, just determine your

preferred height, mark the studs, plumb the tiers, predrill 1/4-in. pilot holes and then sink the lags for the most rock-solid storage unit in your shop.

For a quick and easy solution for storing long-handled tools, the new Racor SecureHold is made of rugged steel construction and comes in three different versions: A single tool holder, a double tool holder, and a triple tool holder. Most homeowners have a collection of long-handled tools, including brooms, shovels and rakes.



The Racor SecureHold comes in three different versions: A single tool holder, a double tool holder, and a triple tool holder.

Simply sink a couple of lag screw in a stud and use the SecureHold's patented retention feature for tool storage. The tool handle passes through the steel "spring" opening and then sits in a deep V-groove that holds the tool securely.

For a handy wall-mounted vacuum we installed the GarageVac from InterVac. The compact design saves valuable floor and wall space and keeps the vacuum tools at your fingertips. The vac is simple to install, requiring only four screws and including a fastening template for foolproof mounting. The kit includes a 40-ft. stretch hose, adjustable













Call or email for a free catalog

The wall-mounted GarageVac saves floor space and keeps the vacuum tools at your fingertips. A simple fastening template is included with the instruction manual to help mount it to the wall.



telescoping wand, a variety of hose attachments and a wallmount clamp to secure the wand.

CEILING STORAGE SOLUTIONS

A knotted mass of extensions cords is too often the tangled web we weave in the garage. These necessary evils pose a tripping hazard, snag tools, and generally stay in the way when they're being used, and when they're not. The new RoboReel Power Cord Reel takes away a lot of those associated headaches.

MODULINE ALUMINUM STORAGE CABINETS

Do you know what it's like to be in a garage, shop, service vehicle or trailer and not be able to find what you need, when you need it? That's why Moduline Aluminum Storage Cabinets were developed. Moduline Cabinets are premium modular aluminum storage and tool cabinets designed and manufactured in the United States. Originally designed for professional race teams, the cabinets have a sleek, modern design that will complement most any décor. They're engineered to be lightweight, yet able to withstand the high demands of the shop as well as on the road and at the track. Used by professional and personal shops all over the world, Moduline cabinets are the perfect garage cabinet solution. They include full ball-bearing slides on the drawers, stainless steel, aluminum or

butcher-block work tops, and each cabinet has its own clear sealed and anodized frame so each piece can stand alone, making them truly modular. With almost endless configurations, Moduline cabinets are designed to adapt as your needs change. Visit www.modulinecabinets.com or call 888-343-4463 for a free design consultation.





The RoboReel Power Cord Reel is the world's first extension cord with its own computerized brain. With the push of a button (on the reel or the end of the cord), the cord automatically retracts 50 feet of heavy-duty 12-gauge power cord in less than 10 seconds at a controlled speed. The portable, motor-driven power cord system rotates 360 degrees for easy access to any tool within a 100-ft. diameter. Furthermore the RoboReel's "brain" is a microprocessor installed in the reel's high-impact plastic shell that allows users to program a "docking point," a slow-down point in the cord during retraction, preventing the dangerous whipping-action found in spring-loaded reels. The "brain" inside RoboReel also provides other safety features. If the

cord is accidentally severed, the unit will sense it and shut off the power in less than a second. Redundant thermostats will sense if the unit is overheating and will turn off the power until the reel cools down to help prevent fires. If the cord is stepped on it stops retracting, and it will not retract while a power tool is in use.

The RoboReel is available as a ceiling-mount accessory for easy 360-deg. usage, or mount the portable version temporarily on the wall with the included storage hook for grab-and-go convenience.

For ladder storage, the Racor LadderLift does exactly what it sounds like. The "number one" pain-in-the-neck storage problem in the garage is where to put the large, heavy ladder. The new Ladder Lift is an easy way to



The RoboReel Power Cord Reel is the world's first extension cord with its own microprocessor "brain."



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store any ladder overhead and free up garage space.

Ladders can weigh up to 150 lbs., so it's not easy to lift them onto wall hooks. The Ladder Lift uses a rope-and-pulley system along with a fixed hook that is mounted on the ceiling. Homeowners can easily lift and lower a 150-lb. ladder up to 12 ft. by simply lifting the ladder onto the fixed hook, attaching the strap to the bottom of the ladder and pulling on the rope with an 8:1 mechanical advantage.

To learn more about the products featured in this article visit the following manufacturer websites:
AlligatorBoard, www.alligatorboard.com
InterVac, www.garagevac.com
Racor Storage Solutions, www.racorstoragesolutions.com
RoboReel, www.roboreel.com



EASY DIY WORKBENCH

Here's a simple weekend project that will stand the test of time. For a sturdy, flat work surface that you can access from all sides you can build the bomb-proof workbench pictured here. This beefy bench is constructed from 2x6's, 2x4's and 2x2's. I first ripped the rounded edges off the lumber, so each 2x4 measured 3 inches, and each 2x6 measured 5 inches. Then I assembled the bench according to the diagram shown below, sizing the height for a 6-ft. tall person to work comfortably, but you can adjust the height of your bench accordingly. I used 2-1/2-in. No. 8 wood screws when nailing through 2x lumber into the face of another 2x board. However, I used 3-in. screws when nailing through 2x lumber and into the edge of a board.

You have the option of making the legs from 4x4 lumber and notching them as nec-

34-1/2" 19" 57" 16" 57" 57"

essary. However, I made them from 2x4's, spacing the blocks to accept the table top and lower shelf.

The sturdy top is nothing more than a solid-core door from Lowe's, centered on the table frame and screwed to the 2x4 brackets from beneath. You can also construct the table from doubled sheets of plywood or even build a butcher-block top—you've got plenty of options to customize this table in any way that better suits your needs.







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PROFLEX™ HYDRA SEAL is a semi-fluid applied product designed for waterproofing and moisture control applications.

HYDRA SEAL can be applied to concrete and exterior grade wood surfaces, and will adhere to a variety of irregular forms such as base flashing and walls.

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Renew the look of your home's exterior to boost its curb appeal. By Matt Weber

he same dirt and debris that covers your car does the same to your house, dulling the paint finish and clouding the color tones that the world was meant to see. And whereas many American's wash their car several times a year—several times a month for others—they rarely give the same care and attention to the outside of their house, which is likely their most valuable asset. I'm always surprised to see an otherwise nice house marred by grime, mud or mildew, when these are problems that can be addressed much more easily than any sort of structural deterioration, and greatly add to the curb appeal of the home.

SECURE YOUR PERIMETER

At least twice each year, preferably more often, you should fully assess your property from the outside inward to make sure no major maintenance issues have gone unnoticed. Professional home inspectors typically begin their job





Remove accumulated organic matter from outdoor wood where the debris can contribute to moisture problems and rot. Shown is the Black & Decker LSWV36 Mulching Blower/Vac.

with a site analysis. Check that the grading around the building is sloped away from the home to shed water, and that all irrigation paths are clear and unobstructed to divert runoff away from the building envelope. Any accumulated brush, leaves or other organic matter that blocks drainage from the home's perimeter can causewater accumulation that could lead to moisture intrusion, mold and mildew problems, and eventually even structural problems due to hydrostatic pressure behind the home's foundation wall

Check all downspouts for any sort of blockage. If the gutter system cannot adequately drain then water could back up at the roof line. Scoop away the old material and dispose of it properly.

Keep an eye out for dead wood near the house foundation. Dead wood is dinner to termites, and leaving any such accumulation near the foundation is effectively baiting termites from the ground toward the home. Whereas the latest scientific studies suggest that the high bark content in landscaping mulch does not have enough nutritional value to serve as a food source for termites, most experts still suggest keeping mulch 12 to 14 inches away from the home to avoid providing the type of moist, dark environment that termites like to explore when searching for dead wood.

This same type of organic matter—dead leaves, downed limbs, etc.—can pose similar problems to



outbuildings and other wood structures around the home. Shovels, gloves, rakes and wheelbarrows will likely be the only tools you'll need to remove it. A powered blower can make quick work of clearing away rubbish. Keep decks and porches clean from leaves to reduce staining from mold and mildew.

For similar reasons, clean the bottoms of deck posts and the bottoms of fences. Accumulated organic matter can retain water and transfer it to the wood, which may wick moisture up the end grain of the wood, contributing to rot and providing a pathway for pest infestation.

The EHT staff recently used Black & Decker's new LSWV36 Cordless Handheld Mulcher Blower Vac to clear some lawn debris. Powered by a 36-volt lithium-ion battery, this lightweight unit works well as a directional blower and performed well when equipped with the larger inlet tube to vacuum dead leaves along a fence line. However, once we tried to clean up some fresh

thatch left from edging a driveway, the mulching blades tended to bog down with the thick roots. Complete with debris collection bag and battery charger, the LSW36 is handy combo unit but one that's best suited for lighter landscaping fare.

OUTDOOR WOOD

Wood decks and fences are common outdoor amenities, but they do require occasional maintenance. When wood is exposed to the sunlight, the ultraviolet rays can damage the fibers, causing the surface to turn gray over time. When wood is exposed to moisture and restricted to the shadows. mold and mildew can become a problem. The most direct way to renew the appearance is to sand or pressure-wash the surface. However, sanding can be very difficult and time-consuming for large areas, and pressurewashing must be approached with caution. The problem with pressure-washing is that too much pressure can damage the wood surface, removing the gray



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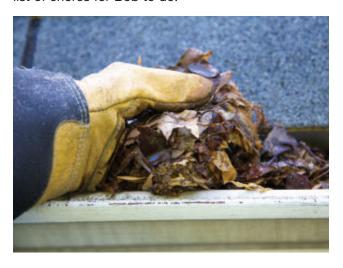




HISTORY OF GUTTERBRUSH:

It began in a cabin in the woods, the year 1980, when Bob Schreiber bought a cabin retreat tucked away in the Allegheny National Forest of Western Pennsylvania to enjoy with family and friends for vacations, and leisure activities like fishing and hunting.

The cabin is nestled under a thick canopy of debris shedding trees and the never ending need to clean out the gutters was always high on the list of chores for Bob to do.



In 1990, on one of Bob's quest to tackle the chore of gutter cleaning, he came across an old twisted brush in a storage area and thought this might be useful to handle the twice yearly task of gutter cleaning. What transpired is nothing short of luck, it was accidentally left in the gutter where it remained until his return in the spring to open the cabin for the season.

What Bob saw on his return was the usual gutters loaded with leaves, acorns, pine needles, etc. except for a small area where the old brush still rested, which was debris free!

From this finding, an idea was born and over the next several years the concept of filling the gutter channel with a cylinder shaped brush was explored, developed and tested to see if this

"eureka" moment might solve the problem of clogged gutters and gutter cleaning.

Engineered Simplicity – the results from all the testing and perfecting of the product under all types of weather conditions to make sure this really was a viable solution to prevent gutter clogs and reduce or eliminate the dangerous and tedious task of gutter cleaning from that to-do –list were incredibly favorable and a product was born.

In May 2004, "GutterBrush" was introduced to the public primarily through grassroots effort in both Ohio and Rhode Island. The reception was overwhelmingly positive.

Some 20+ years since Bob conceived his idea; Home Improvement Experts such as Gary Sullivan (National Home Improvement Expert and Radio Host) discovered GutterBrush and recommended the product to their listening audience. Others followed touting it as a simple, affordable, and very effective solution to clogged gutters.

With the buzz in the Home Improvement industry HGTV contacted Bob to feature GutterBrush on "I Want That!" a television program showcasing innovative home products.

GutterBrush Simple Gutter Guard is made in the USA and available on-line at www.gutterbrush.com, in Do it Best Hardware locations and For the Do-It-Yourselfer, it is easy to install and for those who would rather keep your feet on the ground any service professional with a ladder can install this for you.

Nine years later, since Bob brought GutterBrush to market, the product continues to gain momentum and has proven over and over that this simple solution to an age old problem is effective, economical and virtually maintenance free – Try

this for yourself today!.



CLOGGED GUTTERS CAN CAUSE EXPENSIVE DAMAGE TO HOMES: Water damage to interior walls and ceilings, rotting fascia boards, ice dams, cracked foundations and wet basements. Paying for regular gutter cleaning is expensive and climbing a ladder to clean them yourself is dangerous!

- GutterBrush is Simple! A cylinder shaped brush that fills your gutters blocking leaves and debris while allowing water to flow through. Just slide 3 ft. sections end to end into your gutter... Install it yourself, or get help from any contractor, handyman, or friend with a ladder!
- GutterBrush Works! Prevents clogged gutters, reduces gutter cleaning and eliminates the expensive property damage associated with gutter problems.
- GutterBrush is Affordable! The average home will only cost you \$250 \$300 to do it yourself or a little more to have it installed for you. Either way, you will save thousands over most gutter guard alternatives.

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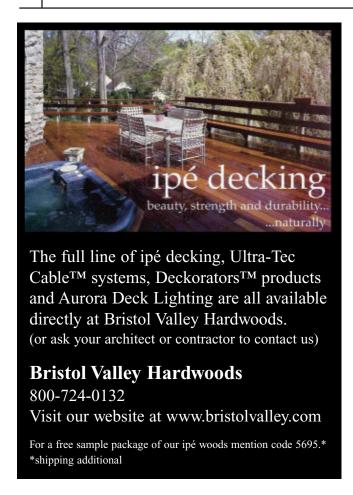


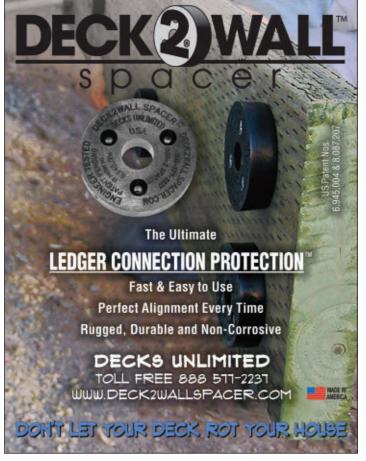
and green but causing the surface to fuzz or splinter. This can not only affect the wood's appearance, but can pose a "touch" hazard for areas such as deck surfaces where people may walk barefoot. When using a powerwasher, limit your pressure to no more than 1,000 or 1,200 PSI and carefully work in the direction of the grain—never against it.

A less aggressive but effective method of cleaning is to scrub outdoor wood with a stiff-bristle nylon brush, just like you would your car. The *EHT* staff recently tried the new Deck Washer tool from HomeRight, which combines a scrub brush with pressurized water. The Deck Washer is a 13-in. wide broom on an extension handle that is lined with 14 nozzles. When attached to a standard



The Deck Washer from HomeRight uses a standard garden hose combined with a long-handled brush to scrub the boards with pressurized water.







Spot cleaners such as Concrobium Mold Control can be used on targeted applications like the mildew forming on this deck.

garden hose, the nozzles direct pressurized water right in front of the broom head for the most efficient scrubbing action. It's an effective design for cleaning deck boards, getting between cracks, and the cleaning action won't damage the wood surface.

Hyde Tools offers the new PivotJet, a spray wand that attaches directly to your garden hose and features a patented nozzle that pivots up to 135 degrees to redirect the water stream. The pivoting helps you get over, under or into difficult spaces without having to bend, kneel or stoop. This method directs pressurized water, but is again safe enough for wood without damaging the grain.

A wide variety of outdoor wood and deck detergents are available



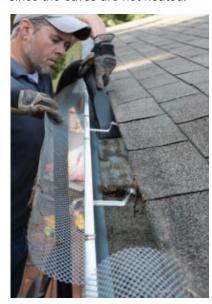


online and at most home stores to facilitate the cleaning process. Most products come in concentrated formulations and can be applied with a brush or sprayer, but some products are available pre-mixed for spot application. The *EHT* staff tried the Concrobium product in a spray bottle on a few problem spots of deck mildew. It

did a good job of addressing the areas without requiring a full bucket of detergent.

GUTTER SYSTEMS

Gutter systems direct rainwater off the roof and away from the house, so a clogged system can pose a variety of problems. Accumulated organic matter can contribute to wood rot at the roof line as well as insect infestation. And, in cold climates clogged gutters can lead to ice dams. Ice dams can usually be prevented with proper attic insulation and ventilation, as well as waterproof shingle underlayment on the roof deck, but the water must have a way to first leave the roof in proper fashion. Insulation and ventilation keep the roof cool in the winter when you're heating your home. However, if these systems aren't functioning properly, then the accumulated heat in the roof can melt snow in the winter. The water from the melted snow runs to the eaves and gutter. If the water can't drain due to a clogged gutter then it refreezes to form an ice dam since the eaves are not heated.



Clean gutters ensure proper drainage and help to prevent ice dams in cold climates.





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As the ice builds up, the melting and refreezing water backs up the roof, working into nail holes and between seams in the shingles. As the dam melts the water can then leak into the house and damage the walls and ceilings.

For asphalt roofs, some degree of granule accumulation in the gutter is normal, but if you see a lot then it may be time to replace the roof. Clean out gutter debris with a scraper and a garden hose, or use a powerful shop vacuum. The *EHT*

staff recommends installing some type of gutter guard over the system which keeps large organic debris out of the trough.

ROOF CLEANING & PREVENTION

One common complaint about aging roofs is the presence of black streaks or stains that may develop over time. The dark streaks are usually algae, and without the right chemicals, they can be difficult to address. Whereas a chlorine bleach or sodium hydroxide solution applied with non-pressure methods will kill black algae and generally rid the stains with the rinse phase, this method alone won't prevent the algae from returning in just a few months. These methods can also accelerate corrosion of metal





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The Deck Wedgee is proven to eliminate the mold, mildew, rot and staining caused by plants or décor sitting on your deck. The wedge shape minimizes contact while the height adjusting elevator allows precise leveling ability. Made from durable recycled plastics and stainless steel, the Deck Wedgee is sure to provide years of satisfaction and protection.

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Why Choose Perma-Boot?

Rubber boots around plumbing vent pipes can deteriorate when exposed to the sun and high temperatures on the roof causing them to crack and leave a gap where water can enter the house.

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gutters, downspouts, flashings and roofing fasteners, and chlorine can harm surrounding plant life.

An alternative option is to use a a product such as Defy Roof

Cleaner, a blend of detergents, coupled with a unique buffered Sodium Metasilicate—a chemical made from sand and soda ash, which is recognized as a non-pol-

lutant. With spray-on/rinse-off application, this product will clean the algae without harming the roof or surrounding vegetation.

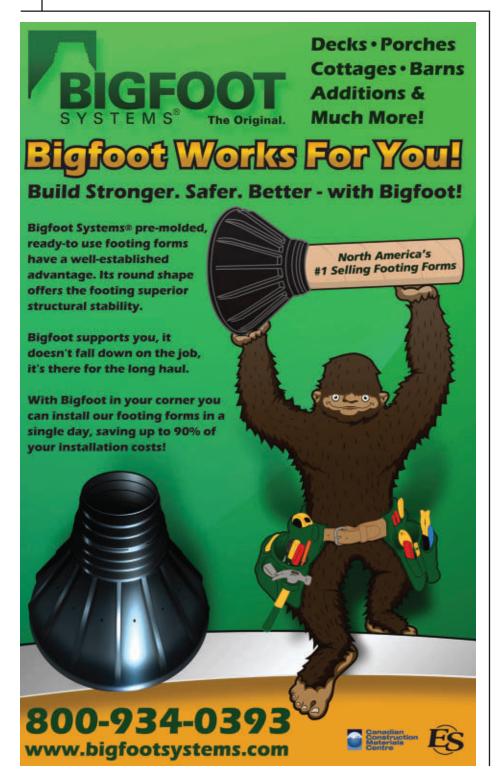
You can then follow the cleaning with a stain-blocking agent to inhibit new growth, or install zinc strips at the roof line. With the zinc system, when rain flows over the zinc, harmless zinc oxide is created. The invisible zinc oxide then coats the roof surface and inhibits the growth of fungus, moss and algae. Zinc strips are available from a variety of manufacturers and can be used on new or existing roofs. To install zinc



Algae stains on a roof can be removed with the proper cleaning agent and prevented from returning with the installation of zinc strips at the rood ridge.



You'll find a wide array of house and siding bleaches at your local home store. The Concrobium product shown here conveniently attaches to the end of a garden hose for easy application.



strips, start at either end of the roof peak and install a continuous row under the ridgeline. Apply roofing cement along the sealant edge and slide the strip beneath the shingle, leaving the lower half exposed to treat the rainwater.

As long as you're on the roof, inspect roof penetrations for damage or signs of corrosion. Rust can be removed with a wire brush, and a new coat of paint or primer can give a quick facelift to weathered roof accessories.

SIDING SOLUTIONS

Whereas wood siding may have its own set of maintenance issues, metal, concrete and masonry siding can be cleaned fairly easily with a long-handle scrub brush or a pressure washer. Furthermore, many of the recent spray-on bleach products are designed to clean on contact, requiring only a rinse coat to do the job without the work of scrubbing. Read the product's instructions carefully, as some cleaners require mixing with chlorine bleach and necessitate that you spray surrounding vegetation with water prior to cleaning the siding.

The *EHT* staff recently tried the Concrobium House & Deck Wash, which conveniently connects to a garden hose and mixes with water



Many house and siding cleaners claim to work without scrubbing—but we scrub anyway.

as you spray it from the container. The container also features a valve to rinse off the cleaner with pure water. Although the manufacturer's instructions stated that

scrubbing was not necessary, I did it anyway to ensure even coverage and to encourage any stubborn grime to let go of the siding. The cleaner worked well at brightening







Cleaning a home's siding can brighten the color tone by several shades.

the house wall, a notable difference that you can see in the accompanying photos.

PRESSURE WASHING

Although the concentrated power of a pressure washer may be too intense for certain woodcleaning applications, these tools work wonders on metal, masonry and concrete. The PSI (pounds per square inch) rating of a power washer refers to the pressure that the washer unit is capable of producing. Pressure washers rated up to 2,200 PSI are generally used only for light-duty tasks, like cleaning away mud and dirt from automobiles and lawn equipment. Washers rated 2,200 to 3,000 are intended for more frequent use or larger jobs, like cleaning the siding of a house.



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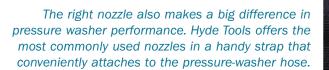


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The Pivot Nozzle Wand from Hyde Tools allows the user to direct the stream of a pressure washer at the most optimum angle of attack, while holding the tool in a comfortable and ergonomic position.



The right nozzle also makes a big difference in washer performance. Most manufacturers offer color-coded nozzles for easy selection that attach to the end of the washer wand through a standard quick-coupler. Some nozzles spray a fine fan of water for easy coverage when spraying a cleaning agent. When you need to blast away tough stains on concrete, switch to a zero-degree nozzle, which shoots a concentrated jet that can cut through stubborn dirt and discoloration.

STUBBORN STAINS

For stains on brick and masonry, try hitting the areas with a wire brush. The harsh abrasion will often remove the stain by actually scraping away the surface of the material.

For deep-seated stains that you can't otherwise remove, there is

the option of muriatic acid to effectively remove rust from concrete, green algae on sidewalks, brick efflorescence, smoke and creosote stains. However, this is a caustic and potentially dangerous chemical. If this last resort is necessary, you might consider a product such as MasonrySaver Safer Brick & masonry Cleaner, which uses muriatic acid with proprietary additives that virtually eliminate the dangerous, toxic fumes and potential acid burns normally associated with muriatic acid. **EHT**

The Turbo Nozzle from Hyde is a powerful ceramic tip designed for blasting and removing stubborn and encrusted stains. It produces a high-pressure (0°) pencil jet stream and rotates it at 3,000 RPM creating a 4" to 8" cleaning circle.





A drill-mounted wire brush can clean dirty masonry accurately and efficiently.

Recipro Tools offers wire-brush attachments for reciprocating saws that mount with a standard quick-coupler.









REMODELING SHOW/DECK EXPO

ach year the Extreme How-To staff spends a few days at the Remodeling Show/Deck Expo. The 2013 show is to be held in October in Chicago, Illinois. Launched in 1991 by National Association of Home Builders, the Remodeling Show brings together the entire remodeling industry face-to-face annually. The event has expanded to represent all facets of the remodeling community-kitchen and bath; home improvement; aging-in-place; sustainable remodeling and more. The show is held in conjunction with the DeckExpo, the only trade event focusing exclusively on the deck, dock, porch and railing industry. Here's a preview of some the products to be exhibited at the show.

BARAMNINE TECHNOLOGY FOR COPPER AZOLE-TREATED WOOD

Lonza Wood Protection is developing an additive for treated wood that provides

enhanced defense against common fungi, as well as against certain aggressive rogue fungi that can tolerate commonly used preservative systems on the market. The BARamine additive, for which a worldwide patent is pending, is being incorporated into the treatment of Wolmanized Outdoor Wood, the production of which is licensed by Lonza Wood Protection. It will be officially introduced to contractors and consumers at this year's DeckExpo. The standards of the American Wood Protection Association for treated wood require testing against damage from common fungi. These criteria do not include fungi in the genus Antrodia or Serpula, which we have seen more prevalently and are capable of destroying wood. These fungi are copper tolerant and resist control by many systems; however, with the addition of BARamine technology, Wolmanized Outdoor Wood delivers a knockout punch.

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Scan QR code or go to Treatedwood.con to see the video demonstration.







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Better Wood Decks

Saves Time and Money with reduced maintenance

- Factory built-in water repellent lasts up to 3 years
- Reduces cracking, checking and splitting by up to 50%
- Longer lasting natural beauty Easy to paint or stain
- Building Code Approved Meets stringent (AWPA) standards American Wood Protection Association
- Lifetime Limited Warranty







It works with both micronized and dissolved copper and increases the protection against the more common forms of fungi. Plus, it results in a fresher wood appearance due to improved mold protection. Visit booth 2628 or www.wolmanizedwood.com.

PREFABRICATED SHOWER NICHE IMPROVES TILE INSTALLATION

A shower niche is an ideal spot to keep shampoos and soaps in a tiled shower. But building a fully waterproof, properly sealed tiled shower niche has traditionally been a detailed and time-consuming task. Schluter-Systems has developed four prefabricated and completely waterproof shower niches that are ready to tile. Made of Schluter-Kerdi-Board, the shower niches are completely compatible with surface applied waterproofing systems, such as the Schluter-Kerdi shower assemblies. All four shower niches feature a 1/2-in.thick by 2-in.-wide integrated bonding flange that sits perfectly





Redwood's reputation as a reliable building product is well earned. History has proven that redwood can stand up to the elements for decades. When it comes to choosing between natural redwood and man-made plastic decking, why choose artificial wood when you can have the real thing? Only genuine redwood delivers beauty and durability that comes from nature. It's the natural choice for your decking, fencing and outdoor living projects.

Get Real. Get Reliable. Get Redwood.



Find a retailer in your area at californiaredwoodco.com



















flush with the surrounding wall area. The larger sizes include an optional prefabricated shelf that can be installed at any height to create separate compartments within the shower niche. Visit booth 1427 or www.schluter.com.

R4 MULTIPURPOSE SCREW

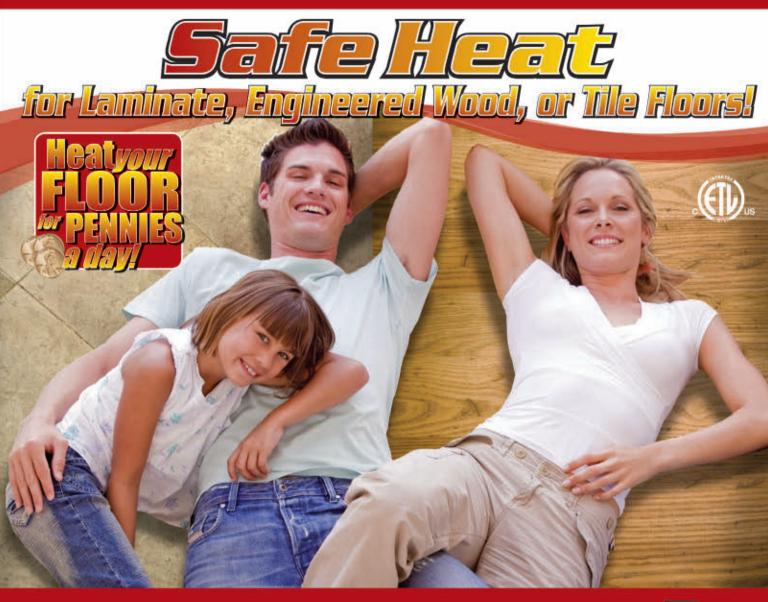
The EHT staff has used GRK Fasteners for a wide range of projects over the past several years, and we've never had a screw break or cam-out. One of our stand-bys, the company's R4 screw, has a new under-head with saw-like teeth and six self-contained cutting pockets for steadfast holding power. Together these features act like a circular saw blade, transporting the "drill dust" away from the edge of the screw while cutting a perfectly clean hole into even the most brittle materials without cracking any surface treatment. Plus, the enhanced design gives the R4 the ability to selfcountersink into even the hardest woods, so you can ditch that extra drill bit. The

screw head closes off the hole with precision, leaving no damaged fibers around the head. R4 screws, which are 2 in. and longer, also have a CEE thread that enlarges the screw hole for the non-threaded portion of the fastener. This technological advancement allows the wood to settle easily and increases the screw's drawing strength, reducing the friction on the screw shank and lowering the driving torque. The R4 is a multipurpose screw that can be used in all woodworking and plastic applications. Visit booth 2234 or www.grkfasteners.com.

OUTDOOR LIVING WITH BERGER BUILDING PRODUCTS

Improving outdoor living spaces is currently one of the hottest trends in home improvement. Accentuate your existing outdoor areas or create an outdoor paradise with ProDeck Vinyl Railing System and DrySnap Under Deck Rain Carrying System from Berger Building Products. The ProDeck railings provides a low-maintenance alternative to pressuretreated wood. It provides an economical solution for homeowners tired of yearly upkeep. With three color options, two different styles and an optional continuous handrail system, it is easy to customize a rail that's perfect for any project. The DrySnap Under Deck Rain Carrying System is more than a ceiling that channels water away from a structure. It is a revolutionary system that allows you to take advantage of usable space under your deck, creating an outdoor living area to be enjoyed for years to come, without the high cost of enclosing a patio. Visit booth 1539 or www.bergerbuildingproducts.com.







RADIANT HEAT UNDERLAYMENT

Floating radiant heat panels ideally suited for floating laminate, and wood flooring Can also be used with other hard surface flooring like tile and glue-down wood Much easier to install than most other systems, no need to bury components in thick concrete The perfect compliment to SnapStone or Avaire Tile Systems

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MAZE NAILS CELEBRATES 165 YEARS

This year Maze Nails is celebrating 165 years in business. The company began in 1848 and is now in its 6th generation of family ownership, proudly engineering and manufacturing a line of specialty nails that's 100percent Made in the USA, Maze StormGuard double hot-dipped galvanized nails (HDG) meet and exceed the ASTM A-153 Class D specification for hot-dipped galvanizing. StormGuard Nails are recommended for the new lumber treatment formulations. Plus, as an environmentally conscious company, the nails are made from the highest quality domestic recycled steel, packaged in cardboard boxes made from recycled paper products, and the waste zinc is recycled into useful materials used in paint pigments, car tires, etc. Visit booth 2028 or www.mazenails.com

SKYLIFT ROOF RISER HARDWARE

The SkyLift Roof Riser Hardware is an innovative and elegant solution to the problems caused by low-pitch flat patio covers. The hardware is designed to elevate a patio roof above an existing structure's roof. Engineered to hold the weight of standard beam construction, the brackets are cut through

the existing roof, bolted to a structure's exterior weight-bearing walls, and sealed with a standard pipe jack waterproof flashing to form the roof support system. The elevated roof increases pitch that helps water flow and discourages debris accumulation, solving most of the leakage and rot problems of low-pitch or flat covers. The higher roof also provides the patio with an airier feel and opens up the view. The brackets create a gap between the two roofs, allowing natural light to spill in and releasing trapped heat. Weather protection is not compromised because the roofs overlap. Visit www.skylifthardware.com or stop by booth 2339.



BUZON PEDESTAL

Buzon pedestals are used for the construction of roof terraces, pedestrian areas, walkways, roof gardens, pool decks, green roofs, and can be used with any type of decking material, such as natural stone, concrete slabs, wooden tiles or slates, and industrial gratings. To support all sorts of raised flooring applications, the Buzon pedestals are adjustable in height from 3/4 to 42 in. and can support 2,200 pounds. In addition, they're provided with a unique slope corrector that adjusts up



to a 10-degree slope to create a level surface while the roof slopes below. The original brand of pedestal created 26 years ago, the Buzon product is made of high-strength recycled polypropylene to exact specifications that satisfy the precision requested by architects, specifiers and contractors. Learn more at www.buzonworld.com or booth 2133.

QUIET GLIDE HARDWARE PRODUCTS

Quiet Glide products from Custom Service Hardware have taken the remodeling and DIY industry by storm. The company's Rolling Barn Door hardware comes in traditional spade or fleur-de-lis styles, as well as many modern traditional styles and colors. The Rolling Library Ladder is sold as a complete kit or simply the



hardware—and you build your own ladder. The patented rolling system makes the ladder roll smoothly and quietly across any type of floor. The InvisiDoor, a book case that opens up into a room, is the company's hottest new product. Built for a standard 32- or 36-in. opening, the InvisiDoor is the first high-quality, production secret door system. Since 1977, Custom Service Hardware products have been proudly made in America. Visit www.cshardware.com or booth 1839.

INVISIDECK FASTENERS

The InvisiDeck Hidden Scrail Fastening System can dramatically save you time and reduce costs. The threaded fasteners drive in with a pneumatic nail gun but back out

like a screw. All work can be done from the top of the deck boards, significantly reducing labor installation time. The company's I-CLP hidden fastener clips can be installed much faster than conventional installation and provide outstanding hold down power. Available for synthetic, hard, and soft wood decking, as well as for grooved and non-grooved board applications, InvisiDeck fasteners greatly improve a deck's appearance and value. Constructed from heavy gauge stainless steel for strength and durability, the beauty of decks is preserved while splitting, splintering, cupping and rotting are eliminated. The EHT staff built a 12-by-40-ft. deck with Scrail fasteners and stand by their reliability. Visit booth 2511 or www.fascoamerica.com.



AZEK RAIL METAL BALUSTERS

The new AZEK Rail Metal Balusters are available in round and square styles and come in four lengths (29, 31, 35 and 37 in.) as well as stair balusters in two lengths (31 and 37 in.). These popular lengths are designed to meet rail building codes in all areas. The new metal balusters are uniquely designed to include an extruded screw "chase" or channel to allow a direct screw attachment to the railing. This design allows for a stronger baluster connection as the baluster is connected directly to the railing. It also eliminates unattractive plastic connectors to give the railing a clean, uncluttered look. All balusters, straight and stair, come ready to install with no cutting required on the jobsite which ensures there is no bare aluminum exposed after installation. The stair balusters are



pre-cut to a typical 35-deg. angle to accommodate the majority of stair designs. Both metal baluster styles are available in black with an aluminum powder coating certified by the American Architectural Manufacturing Association (AAMA). The coating certification ensures successful endurance of 3,000 hours of salt spray and humidity. Visit the AZEK at booth 2611 or www.azek.com.







SPAX CONSTRUCTION SCREWS & POWERLAGS

For both professional contractors and weekend do-it-yourselfers, the German-engineered/Americanmade SPAX Construction Screws and PowerLags offer a wide selection of premium quality fastening solutions to help ensure professional results in less time. The unique patented features of SPAX fasteners reflect nearly two centuries of cold-forming fastener innovation. See the complete SPAX product linemulti-material screws, cabinet screws, deck screws, and PowerLags for structural wood connections-including hands-on demonstrations, in booth 1439. Learn more online at www.spax.us.

THE CALIFORNIA REDWOOD COMPANY

FSC-certified redwood from The California Redwood Company is a great choice for your outdoor living and home improvement needs. Not only is redwood beautiful, it is undoubtedly strong, easy to work with and eco-friendly. It is naturally resistant to insects, rot and decay and can withstand high heat and pressure. It reassuringly shrinks and swells less than other woods when exposed to water, which means that it's less likely to warp, split or check, making it one of the most durable building materials available. Redwood also meets California's strict fire codes. Because redwood is one of the most pliable softwood species

available, it is easy to saw, nail and drill. Redwood also has little to no pitch or resins. It is lightweight but extremely strong and durable and is easy to customize as styles change and new trends evolve. It is extremely easy to paint, stain and glue. In fact, a redwood deck can be restored repeatedly with minimal effort and cost. Redwood is also one of the greenest building materials available. It stores more carbon than it emits over its entire lifecycle, and is renewable and completely recyclable. Visit booth 2623 or www.californiaredwoodco.com.

TG TOOLS KIK FORSTNER BITS

Forstner bits are the best choice for drilling precise, flat-bottomed holes in wood. The radial cutting edges shear wood fibers at the edge and bottom of the hole, creating a smooth bore with an exact diameter. The Kik Forstner bits

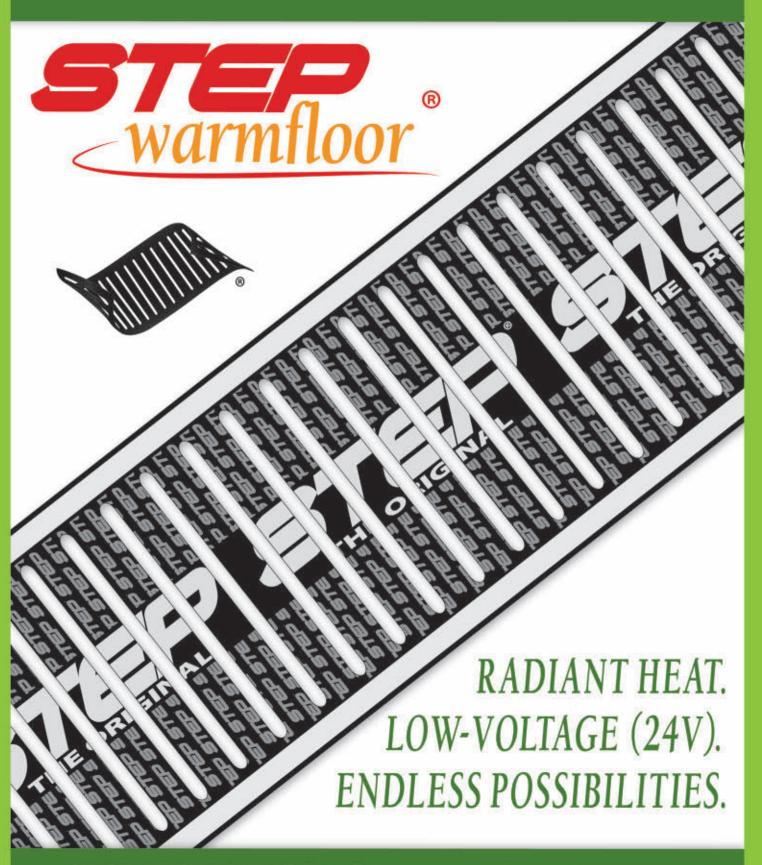


from TG Tools actually have nine cutting edges, which permit cutting curved paths, channels, routing and milling in wood and plastics. They can cut on the edge of a block of wood to create channels, and can also be used to create overlapping holes. The Kik bits set also come in a nice, dovetailed wooden box to protect the cutting edges. Visit mytgtools.com/kik or booth 525.



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Made with a patented process using 100-percent recycled carpet fiber instead of wood or PVC, ecofriendly NyloDeck combines the best properties of today's decking materials into one product. The result is a deck board that's beautiful, strong and high-performing. NyloDeck's unique composition means it is completely impervious to water, mold, mildew, termites and swelling so it's even more reliable than woodplastic composites, while stronger than PVC and other leading composites. NyloDeck not only looks great, it's also incredibly durable. Backed by extensive testing and a 25-Year Limited Fade and Stain Warranty, NyloDeck creates the

ideal, worry-free deck for both contractors and homeowners.
Visit www.nyloboard.com or see
NyloDeck in Chicago at booth
2615.

SURE DRIVE DECK FASTENERS

Sure Drive
USA manufacturers a wide
variety of deck fastening solutions. The hidden
deck fastener line includes the
Mantis clip for grooved boards,
one of the easiest hidden fasteners to install for both contractors
and DIY homeowners. The Mantis
clips can be installed with the

Eliminator RCS with E-Z Slide attachment, a pneumatic installation tool that uses Ballistic Nail Screws to fasten grooved decking up to 70 percent



Link fastener for solid edge decking is available in two varieties:
One offers 1/8-in. deck board spacing while the other provides 1/4-in. spacing. ShadoeTrack, one of the original hidden deck fastening systems on the market, is available in 4-ft. and 8-ft.

lengths and can be used

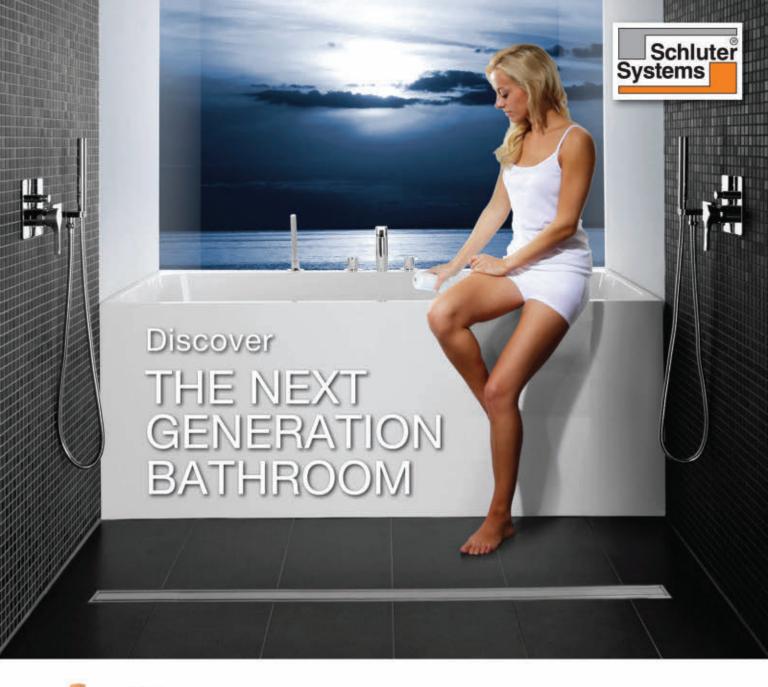




for all types of decking. Sure Drive USA / Pan American Screw also manufactures a wide variety of specialty deck screws and made-to-order specials. The company is also a sponsor of the Deck Workshop Clinic at Deck Expo 2013. Visit booth 2533 or www.suredrive.com. **EHT**

SHARING WITH SIMONTON WINDOWS

At this year's Remodeling Show, the *EHT* staff will share an exhibition booth with our friends from Simonton Windows. Simonton will showcase a Simonton Reflections 5500 window with a driftwood exterior and an interior woodgrain. The Reflections 5500 series is highlighted by a classic frame design, the most popular designer options and high-performance glass packages for maximum energy efficiency. This replacement window product line also comes with Decorum® exterior colors of brick, bronze, chocolate, cream, driftwood, pine and tan. On the interior, woodgrain options include antique cherry, contemporary oak and maple. And, for added style, premium metal hardware finishes are available in brushed nickel, oil-rubbed bronze, dark bronze, polished brass and pine. Come visit *EHT* and Simonton at booth 525 or check out Simonton online at www.simonton.com.





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By Matt Weber

In this two-phase project old windows are upgraded with energy-efficient vinyl replacements, plus the surrounding wood trim is protected with aluminum wrap.

ew windows look great, save energy and require less routine maintenance, making window replacement a top project on many homeowner wish lists. The *EHT* staff recently participated in a window project where old, rotted wooden windows were replaced with energy-efficient vinyl units from Simonton Windows. This article chronicles the job, from pulling out the old to putting in the new.

The replacement units from Simonton not only look beautiful, but the Low-E design significantly reduces heat transfer to save on energy bills. Plus, the vinyl construction won't require constant repainting, glazing or other associated maintenance.

When it comes to maintenance, wooden windows require a lot. If the windows aren't maintained with glazing, caulking and exterior-grade paint, the wood will rot. That's what happened to eleven windows, a mix of double-hung and bay styles, on our project house. The most evident rot was along the sill of the bay windows in the front and back of the house. The lack of overhang above the windows meant that the sill was taking the full brunt of the rainfall. In fact, the sill of the single-pane bay in the front had rotted to the point that the wood could no longer support the weight of the glass. The bay window actually sunk down into the rotted wood and opened a gap at the top of





Wood rot is caused by a fungus that thrives on dead wood in moist environments. It can wreak havoc on wood windows.

the frame, allowing significant airflow in and out of the home.

The solution was to remove the old window, rebuild the sill plate, then replace with a new vinyl unit. As a belt-and-suspenders approach to protection, the installers at Lifetime Windows & Doors "wrapped" the surrounding wood trim with aluminum. Here is how it's done.

BENEFITS OF REPLACEMENT

The necessary maintenance of older windows is one of the biggest complaints of homeowners, particularly of those with wood-framed windows. Painted windows require regular TLC—scraping, glazing, caulking, repainting—to seal out the water and protect the wood from rot. New windows made with vinyl or aluminum can eliminate this hassle. The need to prevent or repair rot is one of the main reasons homeowners across

America are opting for "non-wood" window replacements.

Vinyl replacement units offer smooth operation, modern decorative options and less maintenance. Unlike wood, vinyl windows and doors will never rot or require repainting. And unlike aluminum,

On some windows water intrusion had resulted in sills that were completely ruined by rot.

First step is to cut away all rotten wood for replacement. vinyl windows and doors will never pit or flake. Today's windows are made from the highest quality vinyl and require almost no maintenance. In fact, an occasional washing will keep them looking like new for years.

Plus, energy-efficient vinyl windows offer increased comfort and lower utility bills. New units constructed with double-paned, Low-E glass filled with harmless Argon or Krypton gas can reduce the home's power bill in the years to come. The gasses are denser than air and serve as an thermal barrier, reducing the transfer of heat and cold through the window.

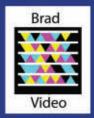
REPLACEMENT SIZE

This project involved same-size replacements of the existing windows. The homeowner selected Simonton's 5500 Reflections Series. Most manufacturers will offer standard size windows, and the homeowner/contractor should order a size that most closely matches the existing units. Keep in mind that if a window is slightly smaller than the window frame, then it can be shimmed for a tight fit. However, if the window is too large, then it will not fit without substantial reconstruction of the wall.



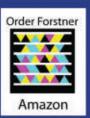














Spade



Brad



Forstner

















If you're considering replacing windows with a larger size, you should keep in mind how a window is framed. A header above the window distributes overhead weight to the framing members on each side of the window, and a sill plate on jack studs supports it from beneath. If you want to increase the width of a window, you will have to remove the wall covering and framing to recon-

struct a header and sill to fit the larger width, which is substantially more complicated than a samesize replacement.

OUT WITH THE OLD

Once the windows are on site, always double-check the measurements for fit before removing the existing units. The Simonton replacement units are designed to fit into the window frame and rest on the existing sill. Windows are "clamped" in place with stop molding on each side of the wall. The first step to pulling out the old windows is to remove the stops.

The contractors on our project used hammers, putty knives and pry bars to dislodge the old stop molding surrounding the windows on the outside of the house. With the stops gone, the wood windows could then be carefully pushed out of the frame and recycled or disposed of.

In some cases the new windows can be installed from inside the house by removing the interior stops, pulling the old window, and leaving the exterior stops in place. However, because the aluminum trim wrap would serve as the exterior stop, the installers did the reverse. They opted to remove the outer molding, leaving the inner stops in place, and install the replacement windows from outside the home.

As mentioned, some of the windows had significant rot



To remove the windows, remove the stop molding along the edges.



Stop molding surrounds the top and sides of the windows.



Once the stops are removed the windows can be carefully pulled out of position.

damage, requiring not only the stops and the windows to be removed, but the sill plate to be replaced as well.

PREPARING THE FRAME

Because of the rotted sills on some of the windows, the old wood was demolished and removed and a new sill plate made of rot-resistant PVC was leveled, shimmed and nailed to the framing.

Next, since the replacement window sits on the sill, the sill was covered with aluminum casing that was custom-fabricated by the installers to fit the new sill. (This step is optional.)

To help fit the window into the opening, Simonton offers accessories such as a sill extender or snap-on flange, which help

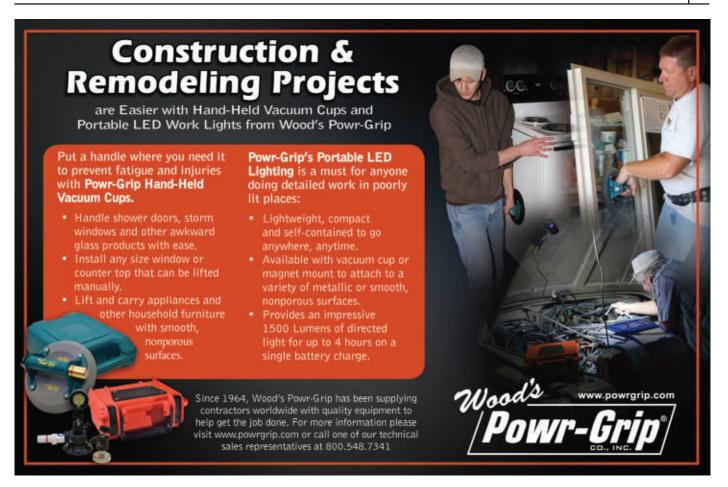


conceal any gaps between the window and the house frame. These vinyl accessories are installed prior to window installation and are weather-sealed along the joint to prevent leaks.

If the window will be installed on a sloped sill, then wood blocks should be installed along the sill to help support the window and keep it level.

When installing, tilt the new window into the opening with the sash closed and locked, setting the bottom on the sill (or wooden blocks).

It's important to remember that the replacement window must fit





WEATHER-READY WINDOWS



The Simonton windows arrive with weather stripping around the perimeter of the units. This helps the window to fit snugly, and adjustments to plumb, level and square can be made with wood shims.

into the opening level, plumb and square, otherwise it won't open/close properly and air and water could infiltrate around the edges. Check both sides for plumb. To check for square, measure both window diagonals from corner to corner to make sure they match. Adjustments to the windows fitment can be made with shims, which should be installed at all anchor points and anywhere necessary to keep the unit correctly in place.

The Simonton windows come with thick weatherstripping around their perimeter that helps the windows fit snugly. The more closely a new window fits its frame, the less shimming and adjusting will be required when installing it.

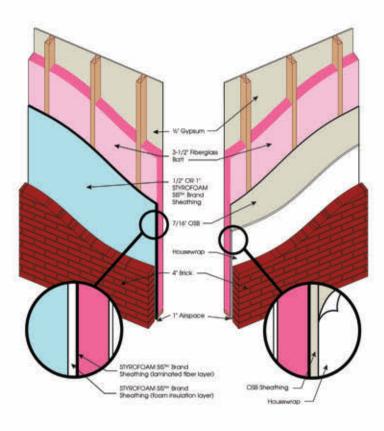
Once the window is plumb, level and square, drive the installation screws (provided with the window) into the prefabricated holes in the jamb. However, don't over-tighten, or the window could bow and not function properly. Check the sash for proper operation once the screws are in place.



Because the installers were replacing the outer stop molding with aluminum casing, they opted to leave the interior stop molding in place and install the windows from the outside.

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If any gaps greater than 1/8 inch exist between the window and frame, loosely pack insulation on the interior. Using spray foam is acceptable as long as the product is designated for "windows and doors", meaning the foam won't expand to the point where it could flex the window material



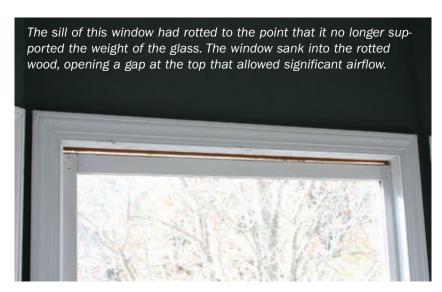
Once the window is correctly positioned, mount the window with the supplied screws into the prefabricated holes.



Seal all joints on the interior and exterior with caulk/sealant.



This bay window sill had rotted to the point that it could not support the weight of the window glass.



and prevent proper operation.

Seal all joints on both the interior and exterior of the windows with caulk, including the holes in the jambs.

At this point, new stop molding can be installed, painted and caulked to complete the window installation. Or, as in this case, the aluminum alternative can be installed.



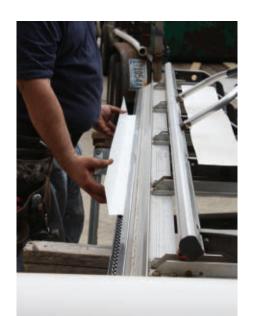
A reciprocating saw is a handy tool for digging out the rotted wood.

ALUMINUM TRIM WRAP

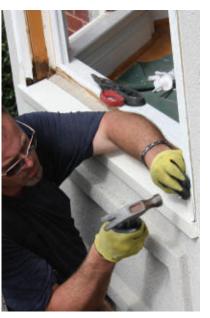
The specialized equipment and required metal-crafting skills probably push this latter phase of the project outside the realm of most DIY'ers, but this method of weather protection conceals the brick mold and window sill. The wood trim is covered in overlapping aluminum casing that is fabricated on-site using a sheet-metal brake.



Damon Gassaway of Lifetime Windows & Doors installs the new window sill.



The aluminum trim wrap is fabricated on site to match the size and shape of the wooden window trim.



The sill wrap is the first piece to be installed so the window can be placed over it.



Large units require some assistance when installing. A worker on the inside lifts the window with a suction cup.

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The BESSEY Auto-Adjust Toggle Clamp automatically adjusts to variations in work piece dimensions while maintaining constant clamping force from 25 to 550 lbs.



BESSEY Tools offers two horizontal versions and an Inline version with new offerings coming Fall 2012.



WEATHER-READY WINDOWS

The aluminum roll is cut to length and then bent on the brake into a profile that closely matches the window trim's size and shape. Metal snips and hand brakes are used to adjust its final shape. The sill piece is installed first (prior to window installation) using finish nails. Next come the side pieces that shed water over the sill plate. Finally the top piece is nailed in place overlapping the sides to shed water like flashing or roof shingles. Once completely installed, all the aluminum joints and fastener holes were sealed with silicone sealant.

The windows are carefully measured to determine the length of the aluminum wrap.

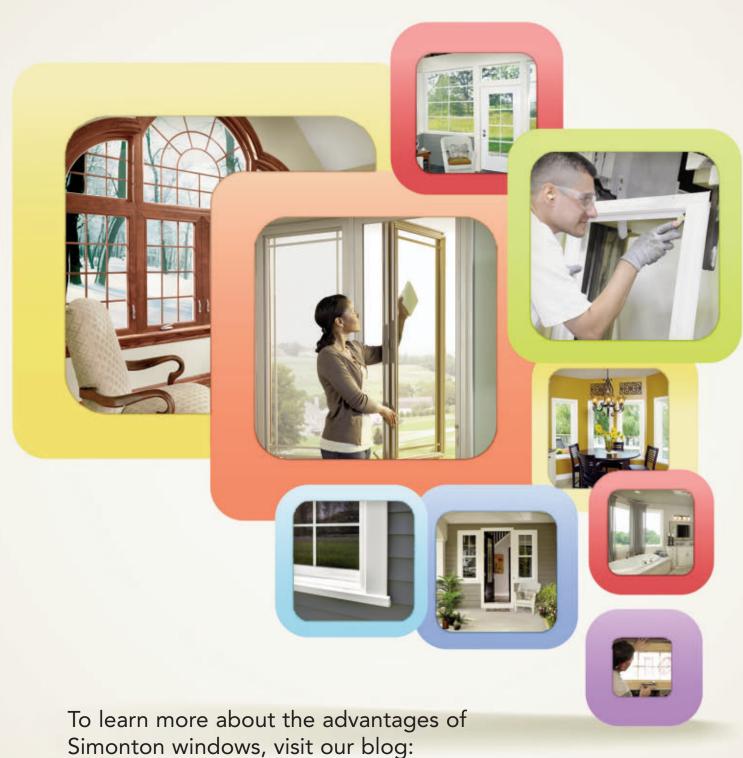




After the sides are wrapped, the final piece goes on top to divert water away from the building envelope.







simonton.extremehowto.com



The aluminum wrap is available in a selection of colors to match or complement the home's décor. The end result is "bulletproof" protection of the wood trim that surrounds the energy-efficient new vinyl windows, ensuring the entire system will stand up to weather and rot for years to come. **EHT**



All seams of the window and aluminum casing are sealed with a high-quality exterior sealant.

The finished bay window looks great and will last for years.







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DIY Floating Shelves

How to make Floating Shelves with a Table Saw



By Matt Weber

y appearing to hover on the wall with no visible mounting hardware, floating shelves are an interesting design element that provides surface storage while optimizing space. With no brackets to contend with, shelves can often be situated more closely together, granting more room for more shelves. Floating shelves are essentially made of flat, hollow boxes. Depending on the method of construction, the hollow shelf mounts to either metal rods or a wooden cleat that fit inside the rear of the box and supports it from within. The rods or cleat are fastened securely into the

wall studs for the strongest holding power.

DESIGN

The first step is to decide the size and shape of your shelf as determined by its location. I was mounting to a partition wall to the left of a bar pass-through, giving me about 4-1/2 ft. of room. On the other side of the wall is entry to the kitchen. I wanted to prevent having people turn the corner and get hooked by the shelves, so I decided to keep the depth close to the wall and the shelves narrow enough to avoid the walkway. (A kitchen island also rested beneath

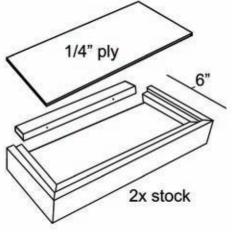
the mounting location, which kept traffic safely routed away from the shelves.)

Another consideration when designing the shelves is the hollow nature of the construction. Since the mounting cleat only extends about 2 inches into the shelf, the shelf must be lightweight and well-balanced so as not to pull away from the fasteners. For my design, the upper and lower panels are made of thin 1/4-in. plywood—not exactly heavy-duty material. For this reason, it's smart to limit the shelf size to a fairly shallow depth. My floating shelves extended only 6 inches away from the wall.

CONSTRUCTION

My first step was to rip the rounded edges off 2x4 stock using my table saw. I then ripped the the 2x4 in half lengthwise into two nominal 2x2's.

The edges of the shelf are made of the 2x2 pine material, while the upper and lower panels are made of 1/4-in. stain-grade birch plywood. To ensure a flat, flush shelf surface, I cut 1/4-in. deep rabbets along the upper and lower edges



Basic construction







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PROJECT NEXT



Rip 2x4's into 2x2's and square the edges of the 2x stock.

of the 2x2's. When arranged as the sides of the box, these rabbets would form an interior channel or trough for the plywood.

For a solid mounting surface with plenty of nailing room, I cut the edge rabbet 1 inch wide on the top and bottom. I simply used a combination square to mark "mirror-image" 1/4-by-1-in. rabbets on both sides of the 2x2. The grooves were cut by adjusting the

blade depth to make intersecting partial rips on the table saw.

Next, cut the 2x2 channeled blocks at 45-degree miters on a chop saw, according to your shelf size. When cutting, hold or clamp the stock firmly so it does not rock beneath the blade since it now has a partial bottom side. The shelf requires two side rails with opposite 45-deg. miters on one end, and square cuts on the other will butt against the wall. The front rail should extend the length of the shelf and have matching 45-deg. miters on each end. The back side will be left open for the cleat.

Loosely assemble the rails to check the miters for fitment. Note: When measuring for the plywood



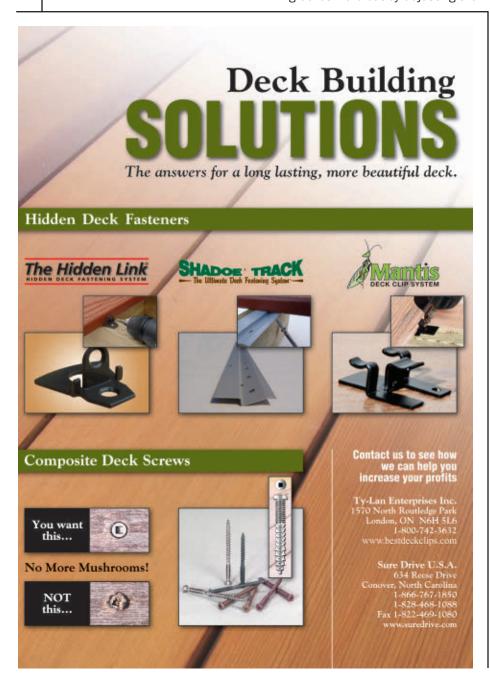
Sand the wood to prep for stain.



Measure and mark rabbets to seat the 1/4" plywood.



Make intersecting partial rips to cut the rabbets.





Cut the corners for the shelf at 45-deg. miters.



When measuring for the plywood, take the measurement from the corner of the rabbet, not the outside corner of the stock.



Trim the plywood to fit inside the groove.

panels, place the end of your tape at the corners of the rabbets and not at the outside corners of the rails, otherwise you'll cut the panels too large.

I trimmed the plywood to size using my table saw and miter gauge. Dry-fit the panels in the rails before final assembly.

To join the mitered rails, I used a combination of wood glue and finish nails. To ensure a supersolid joint, I used 3-in. finish nails. You should always predrill the nail holes, and finish hammering with

a nail set to bury the head below the wood.

Be sure to select the most attractive panel side for the top, keeping the unfinished surface facing inside the box. The panels should fit snugly into the groove. I anchored them with wood glue and pin nails.

To make the mounting cleat I used the leftover T-shaped 2x rail material with the rabbets. I simply

ran the piece flat-side downward on the table saw, shearing off the "ears" of the profile so that the "T" became shaped like an "I". I then cut the length to fit snugly between the two side rails of the hollow box. Test-fit the cleat in the hollow shelf before mounting to the wall studs.

Before mounting, I filled all fasteners holes, sanded the shelves, and added wood stain and varnish.



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PROJECT NEXT

INSTALLATION

For this project, I was centering the shelves on the wall, so I used the wall's mid-point as the control point for my shelves. I marked the midpoint with painter's tape at the approximate height on the wall, and then aligned the mid-point of my shelf to get my horizontal orientation. It may help to mark the ends of the shelves on the wall with painter's tape.

Within the span of the shelf's

mounting cleat, mark the wall framing using a stud finder. Use a level to mark the studs in a level plain. Avoid marking within 1 inch of the end of the cleat, because the mounting screw will likely split out the wood. You'll achieve



Test-fit before assembly and make any necessary adjustments.



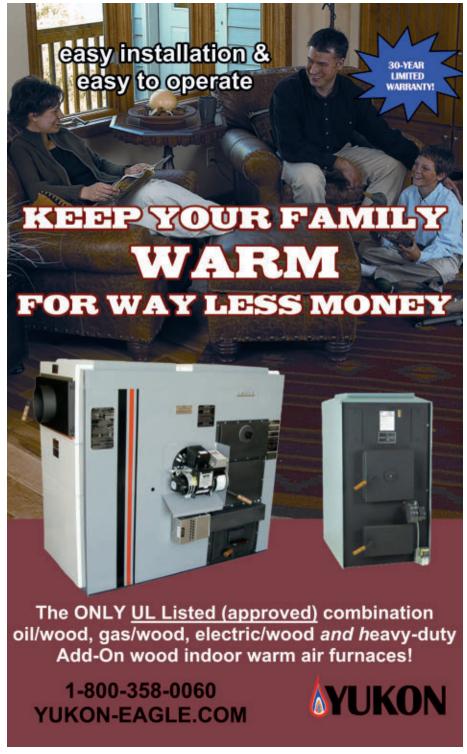
Predrill holes for the fasteners.



I fastened the corners with a combination of 3" finish nails and wood glue.



Apply glue to the corners and clean up any excess that squeezes from the joint.







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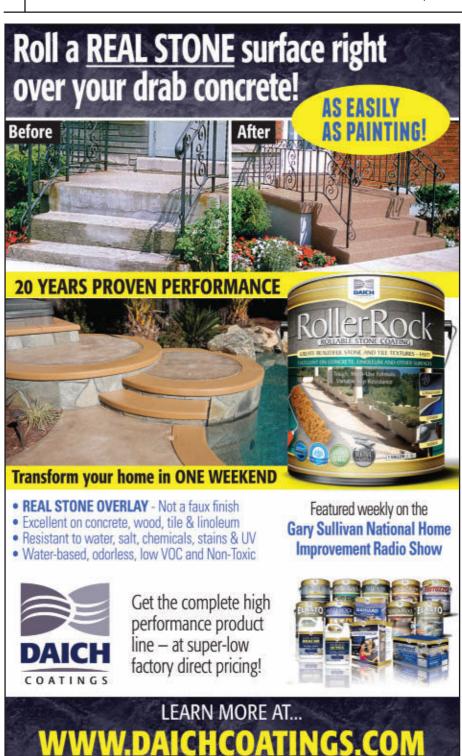
REWARDS

PROJECT NEXT

the most holding power with a studmounted screw on both ends of the cleat, but if necessary you can use a bracketing wall anchor on one end.

Next, transfer these measurements to the wood cleat and

predrill holes for your mounting screws. You want the screws to penetrate through the cleat, through the wall board (5/8-in. drywall) and sink at least 1 inch into the studs. I used a couple of





Set the nail heads below the wood surface to leave room for wood filler.



The plywood should fit snugly in the grooves along the top and bottom of the shelves.



Apply wood glue to the rabbets.



I fastened the 1/4" ply with a pin nailer while the glue set.

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Rip the "ears" off the grooved 2x stock to create the mounting cleat. Make sure the cleat fits inside the hollow shelf.



I chose to align the center of the shelves with the midpoint of the wall.



Locate and mark the wall studs.



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PROJECT NEXT

3-1/4-in. RSS screws from GRK Fasteners. For shorter screws, you may have to countersink the screw heads to ensure a solid bite.

Next, align the mid-point of the cleat, check for level and then

sink the mounting screws into the studs so the cleat tightens to the wall.

The floating shelves should fit snugly over the cleat and flush with the wall.

Position the cleat where you want to mount the shelves. Transfer the stud locations onto the cleat.

Next, drill pilot holes along the back edge of the shelf for a few wood screws spaced 8 to 10 inches apart. Drive the screws through the plywood and solidly into the wood cleat.

In my case, I repeated the process for Shelf Number 2, although you may opt for Shelves 3 and 4, as well. **EHT**



Predrill the cleat for the mounting screws.



Level the cleat and screw into solid wall framing.



Slide the hollow shelf over the wood cleat for a snug fit.



Fasten the shelf to the cleat with wood screws.



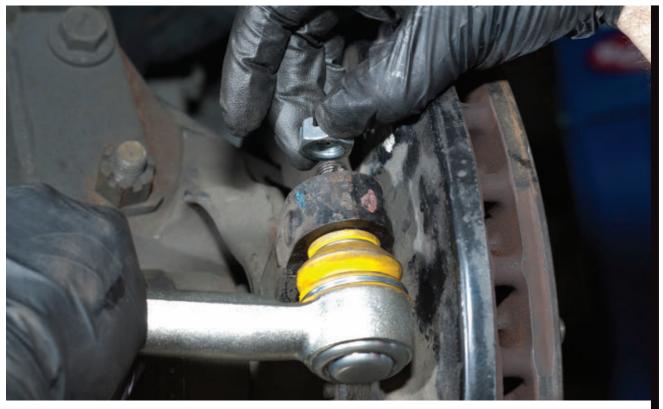
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Joint Health

Removing and Replacing Tie Rod Ends and Ball Joints



By Tim Walton Photos by Larry Walton

orn out suspension components can lead to tire wear. This condition also makes the vehicle less responsive and generally unpleasant to drive. The number and location of ball joints can vary depending on what type of suspension your vehicle has. The ball joints allow movement in your suspension so it can conform to the contours of the road.

If a ball joint goes bad, it does not allow the wheel and tire of the vehicle to move as intended, which can not only cause undesired tire wear but also be potentially dangerous if the joint itself fails completely. Most of the joints are designed to be non-serviceable. However, if the boot wears out or is torn, they will lose their grease and wear at an accelerated rate. Some joints do have grease fittings where you can reapply grease and should be inspected when the vehicle is serviced.

A ball joint failing often makes a clicking noise, grinding noise or even a clunking noise when going over a bump. One way to diagnose ball joints is to lift the vehicle until the tires clear the ground and apply pressure to the wheel. You are feeling for extra movement or "slop". Check to make sure the movement is from the ball joint and not from something else such as the wheel bearing.

On this Subaru, we're also

addressing another issue that comes with vehicles that have aftermarket suspension, which is to reduce bump steer that can occur when you lower the vehicle. This kit from Whiteline includes extended ball joints and outer tie rod ends to move the pivot point of both suspension components to correct for the change in ride height.

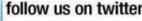
When a vehicle is lowered, the angle of the tie rods and lower control arm can add more body roll in addition to the undesirable bump-steer feedback in the steering wheel. While this installation addresses these issues on a lowered car, the same installation process applies to replacing worn parts on a stock car.













EVERYTHING AUTO



Whiteline's Roll Center
Adjustment Kit comes with a pair
of outer tie rods and a pair of ball
joints to replace the stock units. If
you're replacing factory equipment
parts with similar geometry, the
parts will be sold individually
rather than in a kit.



We removed the wheels from the vehicle. If you're not lucky enough to have a lift, be sure to place jack stands at the proper points to safely support the vehicle.



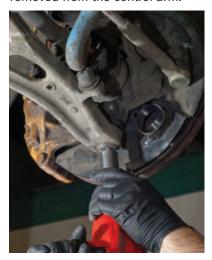
Removing the front sway bar end links allows the control arms to move independently, which gave us the movement in the control arm we needed to remove the lower ball joint.



The outer tie rod is connected to the spindle using a castle-type nut. A cotter pin holds the castle nut in place and must be removed before the 19 mm nut can be removed.



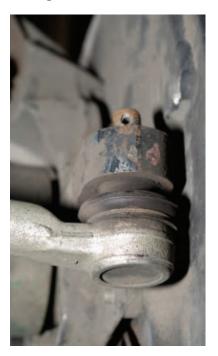
The cotter pin and castle nut needs to be removed from the bottom of the ball joint so it can be removed from the control arm.



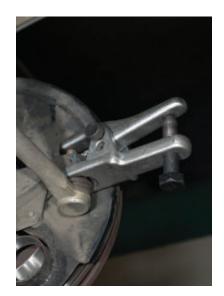
We used a pneumatic impact wrench to make short work of removing the castle nuts that hold the lower ball joints in place.



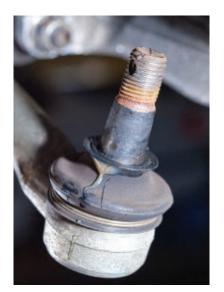
A deep socket gave us the clearance over the rotor and dust shield, to remove the castle nut holding the outer tie rod.



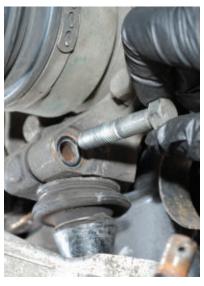
Depending on the age of the car and the amount of rust on the ball joints, they may come out easily or be a real challenge.



A ball joint removal tool makes short work of removing the ball joint. The tool can also save the stock ball joints and grease-filled boot, which in this case were still in good condition.



The constant force applied to the ball joint by the tool will pop it loose and won't damage threads or other components that might come with trying to hammer them loose.



Remove the bolt that holds the top of the ball joint in the steering knuckle.



EVERYTHING AUTO



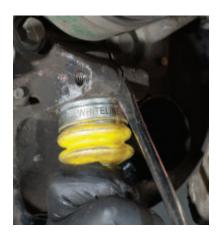
You can use a small pry bar or a sturdy flat-blade screwdriver to pry apart the knuckle to release the ball joint from the steering knuckle.



This model of Subaru Impreza, the STi, uses alloy sleeve inserts that fit over the steel tapered stud on the ball joint to adapt them to the aluminum lower control arms. Make sure to transfer them over to the Whiteline ball joints.



You can apply anti-seize on the ball joint to aid in removing them at a later time. It prevents the ball joint from rusting into the steering knuckle as well.



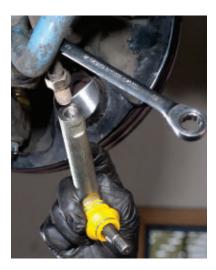
Installing the ball joint required some prying. A floor jack can help push the control arm into position, which allows you to insert the bolt to hold it into place.



Measuring and/or marking the length of the tie rod ends can help you keep the vehicle's alignment close to what it was before the install. However, you should take the vehicle to get an alignment check any time you do a major overhaul of the suspension components.



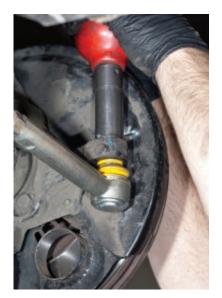
We used two wrenches to free the lock nut, which holds the outer tie rod end in place.



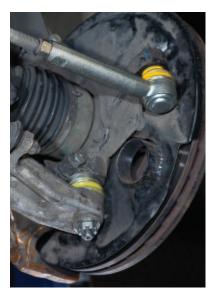
Once the tie rod is loose, you should be able to spin it off freely and replace it with the Whiteline replacement tie rod end. Try to get it close to the same location as the original tie rod. We locked the tie rod end into place using the lock nut and manufacturer's torque rating.



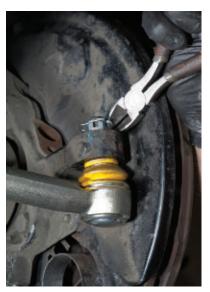
We reinstalled the tie rod ends and ball joints using the new castle nuts supplied in the kit.



Tighten and torque the ball joint and tie rod end components to the manufacturer's specified torque ratings, which can be found with some research.



We reattached the sway bar, which we removed earlier to move the control arms. Double-check that everything is tightened and torqued.



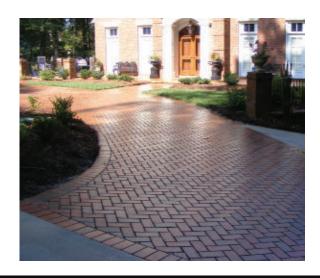
You may have to rotate the castle nuts to get the cotter pins to fit into the holes. Bend them over so they don't fall out. **EHT**



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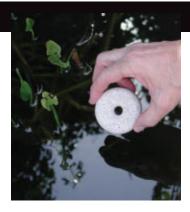
The company's 2-in. collated auto-feed screwdrivers come in traditional corded versions as well as new, compact 18-volt Li-ion battery-powered units that can drive between 500 to 700 screws per charge, depending on the screw length and substrate. For repetitive fastening, the DuraSpin drivers make sinking screws faster and more efficient, with design enhancements including higher torque motors, application-specific tool speeds (2,500 or 5,000 RPM), a variable speed trigger (with lock and reverse options), and a patent-pending corner-fit feed system for better access and screw placement in tight spaces. A locking depth-of-drive adjustment enables the user to set the precise depth needed for flush drives or countersinking screws. The DuraSpin system is ideal for drywall, sheathing, decking and structural steel fastening. Visit www.senco.com.

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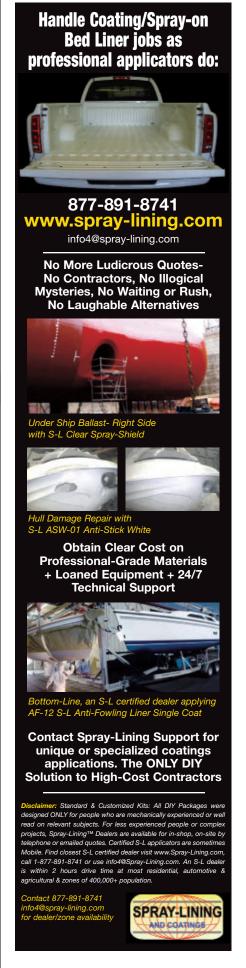
Mosquito Dunks, which look like small beige donuts, float on standing water and naturally kill mosquito larvae before they become adults. Each Mosquito Dunk will treat up to 100 square feet of surface water for about 30 days. Learn more at www.summitresponsiblesolutions.com.





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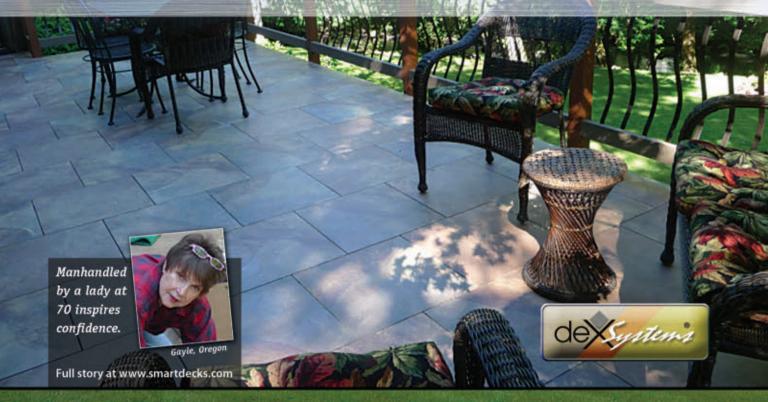


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