

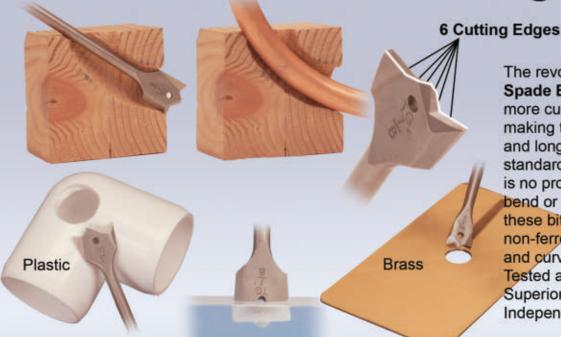


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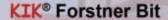
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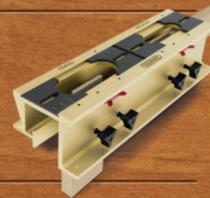




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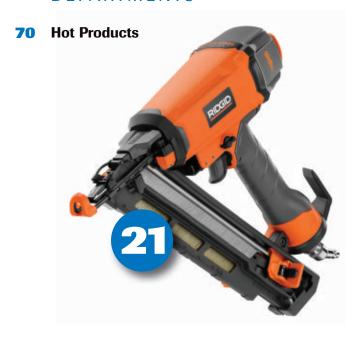
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## From The Editor-In-Chief

mong remodeling contractors you'll find a wide range of skill and experience, but it's important to verify that the people you hire know how to accomplish the specific job you need done.

For example, it's been a big year for patios around our neck of the woods, from pavers to stone to concrete front porches. I've seen patios built by true professionals, I've built some patios myself in the past, and I've written articles on how to build them. I know when I'm seeing a patio built incorrectly.

I was recently at a home in which the owner had been impressed with a certain contractor's work installing hardwoods in their kitchen, and based on his success with the flooring, they hired him to install a patio in the backyard. Hardwood flooring and outdoor patios are two very different projects, however, and there were some problems with the patio construction. The soil wasn't properly compacted after excavating the site. An inadequate amount of gravel bed was used as the foundation, and a drainage problem at one corner of the plot went unaddressed.

To give the contractor the benefit of the doubt, maybe he wasn't intentionally cutting corners—maybe he just didn't know what he was doing. It's hard to say, because the contractor wasn't usually on site during the installation; only his hired help was there to follow the instructions he'd left them. And the workers had never before built a patio.

Contractors are generally hungry for work, and would rather take a job than pass it up. This often means they'll take on an unfamiliar project with the confidence that they'll be able to "learn as they go". The problem with learning on the job is that mistakes are made along

the way, and you don't want those mistakes to come at your expense.

Make sure to vet your contractors carefully and don't assume they know how to do all jobs just because they do some jobs well. Have your contractor provide references proving his experience on your particular project to rest assured your home is in good hands.







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## S. △ Got ∠

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:
The rubber gasket to my refrigerator is leaking. How do I replace it?

• To find the right replacement gasket, check the refrigerator's instruction manual or the manufacturer's • website for the correct part number and supplier locations. Let the new gasket soak in hot water while

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you remove the leaky gasket. The heat will make the rubber more flexible and easier to install. Refrigerator gaskets are often held to the door with a metal retainer flange attached to the door perimeter. Fold back the old gasket to reveal the retainer screws, then loosen the screws and pull off the gasket. Starting at a top corner, wrap the new gasket over the retainer completely around the perimeter. Test the fit of the gasket before fully tightening the retainer screws. Make adjustments as needed until the gasket seals.

ls it better to apply glazing or caulk to seal the panes of wooden windows?

.....

 Many window profes- sionals prefer to use the traditional glazing, whether oil- or latex-based, because it cleans off the glass easily and can be easily reworked to achieve a water-shedding 45-degree bead. Caulk can be more difficult to shape and messier to apply. In the past, caulk has also had problems sticking to porous surfaces such as wood. Caulk formulations have evolved. however, and a number of today's high-quality products have excellent adhesive properties. Another consideration is the color of the product. Glazing can be painted to match the window, but standard silicone caulk can't be painted. If you use caulk and color is an issue, make sure the product you choose is paintable.

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## S. A Got-

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 do I unclog a jammed garbage disposal?

• First and foremost, begin the repair by unplugging the jammed disposer. If there's no outlet, turn off the circuit breaker. Use a flashlight to inspect the inside and pull out any foreign objects you observe.

ntroducing something revolutionary in aminate flooring. AMERICAN CONCEPTS American made Remodeling? Try a laminate floor that's American made American style and made for Americans. and quality With the quality and safety American durability not always found in imports. America's healthier floor And it's a healthier floor for American sustainability your home and the planet. All at a fair and reasonable price. www.americanconceptsflooring.com | 866-334-9923 kronotexUSA Reconnect the power and see if it's still jammed. If it doesn't work, check for a reset button on the bottom of the disposer beneath the sink. Reset the unit and check its operation. If it's still jammed, turn off the power and use a broom handle to try to free the impellers. If this doesn't work, use a 1/4-in. allen wrench in the hex socket at the bottom of the disposer to turn the impellers in both directions to free them. (Some disposers utilize a special wrench, which comes with the unit, in lieu of an allen wrench.)

Is it advisable to wallpaper a ceiling?

.....

 Applying wallpaper to a • ceiling is definitely an option, but it's a two-person job. If you're wallpapering the entire room, do the ceiling first and conceal the edges later. The ceiling surface should be smooth and coated in primer. Lay out the strips so they overlap the wall by 1/2 inch on the sides and 2 inches at the end walls. Snap chalk lines to guide the layout (use blue chalk; red will bleed through). Working with an assistant, apply the strips to the ceiling using heavyduty adhesive, smoothing the strips with a wallpaper brush as you progress. At the corners, cut a wedge in the overlaps so the paper will lay flat on the wall. When you wallpaper the rest of the room, cover the flaps with the wall strips. **EHT** 



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### Air Tool Advantage

Power, Versatility and Low Maintenance



By Matt Weber

Ithough they require connection to a hose and air compressor, pneumatic tools offer some significant advantages over electric tools. One of the biggest benefits is that air tools don't have their own motor. This makes the tools lighter, more compact and easier to handle—with less moving parts to malfunction. For this reason, air tools are known for their long-lasting value. With electric tools, you have lots of small motors that can wear out. With air tools, you have a single powerful motor to run them all, so

air tools can perform for years without failure.

Versatility is another advantage. Whether you're building a shed, applying knockdown texture to a wall or fixing your car, you can easily interchange a variety tools with a single compressor, including a ratchet wrench, paint sprayer, finish nailer, impact wrench and many more. The right air compressor can run tools that tackle everything from woodworking and metalworking to painting and mechanical work, whether you need to power a framing nailer or a sand blaster.

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motors that are engineered for
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delivers 40 PSI (4.8 CFM) and
90 PSI (4.2 CFM), enough for
two nailers.

#### ASSESSING COMPRESSOR POWER

The most popular air compressors among DIY'ers and pros on the move are portable units that can run a wide range of tools. These mid-size units can be toted to the jobsite while still providing ample power. A portable air compressor is a great homeowner tool that can inflate tires, operate an airbrush kit and power short-burst tools like nailers and staplers.

Inflation of tires and other objects is the most basic task of an air compressor, and even the smallest units will accomplish the job (eventually). The real question becomes: What else will it do?

When choosing an air compressor, many people assume the higher the horsepower rating, the more powerful the compressor. Horsepower, however, can be misleading. Like two race cars with the same horsepower rating, one of the cars can still go faster.

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Photo courtesy of Beth and Rod of See Dirt Run!

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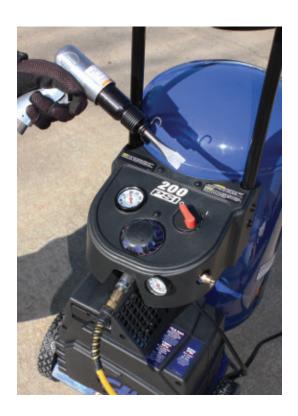
#### TOOL SCHOOL

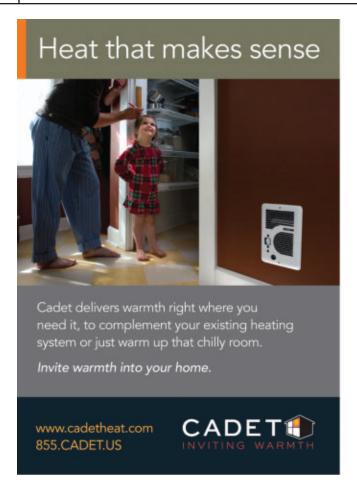
There are many other factors influencing how well the machine will perform other than horsepower.

Furthermore, manufacturers provide different variations of horsepower. Some compressor manufacturers rate their products by peak horsepower. Peak horsepower is the maximum output a motor can produce while the motor has the start windings engaged, which can be as much as 7 times the running horsepower. Under normal operating conditions, the start windings are only engaged for a fraction of a second, so using peak horsepower as a comparison rating can be misleading since the motor only achieves this horsepower during startup.

Another misleading rating is a compressor's air pressure or PSI (pounds per square inch) rating. Most air tools require 90 PSI to operate, and most air compressors produce at least 90 PSI, meaning that virtually any compressor intended for pneumatic tools will achieve the necessary air-pressure output. Although higher PSI can impact run time, it doesn't improve tool performance.

When selecting an air compressor, check the SCFM rating of the most powerful air tool you plan to operate. Then choose an air compressor with a CFM output rating that exceeds that of the tool.









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#### **TOOL SCHOOL**

The most important rating for an air compressor is the SCFM (Standard cubic feet per minute) output. This input rating also indicates the air flow that the tool requires to operate properly. To determine the size of compressor you need, first consider the tools you will use. The tool with the highest SCFM rating will be your guideline for choosing a compressor. For best results, purchase a compressor with an output of 1.5 times that rating. For example, if you want to use an impact wrench that requires 5.0 SCFM, you would want to purchase a compressor that puts out 7.5 SCFM. If you anticipate using multiple tools simultaneously, add the SCFM requirements for all tools that will be used at one time, and multiply the sum by 1.5 when choosing a compressor.

#### **TANK SIZE**

The next factor to consider when selecting a compressor is tank size. Sizes are usually listed in gallons. The size of a tank is important because it determines how long tools can run before the compressor pump cycles back on. If you will be using air tools that require a high volume of air for continuous use, such as operating a pneumatic sander, then you need a larger tank. If you only intend to use the tool for intermittent use, your compressor can have a smaller tank size. For intermittent use, you can save money by choosing a unit with a smaller pump/motor (the most expensive part of the unit) and a larger tank. A large enough tank with a pump that exceeds the SCFM requirement of your tools will allow the compressor

time to cool between cycles.

Keep in mind that tools requiring only quick bursts of air, like brad and finish nailers, deplete the tank much more slowly. For these tasks, tank sizes between 2-6 gallons are sufficient.

Tank design is also something to consider, because what you own, you must store. Some units feature twin tanks, giving the compressor a box-like shape. Some tanks are round and flat, called a "pancake" design. Some tanks are designed horizontally, while others stand vertically to occupy less floor space.

#### **MORE TO CONSIDER**

Another consideration when choosing a compressor: Maintenance. Oil-free compressors have sealed bearings and







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#### **TOOL SCHOOL**

require less maintenance than oillubricated compressors. Oil-free compressors usually have enough power for homeowner applications. Most heavy-duty, professionalgrade compressors are oil-lubricated, but these compressors require regular oil changes.

When selecting a portable compressor, consider factors such as the unit's weight and whether or not it has wheels and an ergonomic handle. When it comes to the compressor's weight, material matters. For example, some portable compressors feature an aluminum tank that makes the machine lighter and easier to move around than with a steel tank.

And don't forget to look for easy-to-read gauges and easy-access controls. The number of hose outlets is important if you want simultaneous tool usage. Additional features include air-cooling systems, thermal overload switches that automatically shut off the motor if it overheats, and roll cages, which protect the compressor from being battered on the job site.



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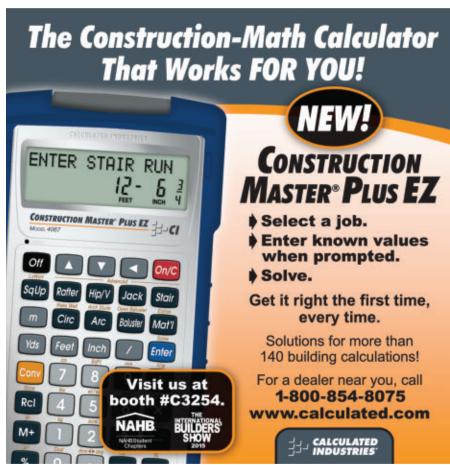


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#### **TOOL SCHOOL**

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#### **Get in the Zone**

Zone Heating for the Home



**By Matt Weber** 

one heating is an efficient method for optimizing the way you warm your home. The goal is to save money that's otherwise wasted by heating unoccupied areas that don't need conditioning.

Studies have shown that typical occupants spend 80 percent of the time in 20 percent of the house, so it makes sense to only heat or cool the areas being used. Zoning targets the specific temperature and airflow requirements of one area, without affecting other areas. Zone heating can potentially save you hundreds of dollars in energy costs each year.

A basic zoning technique for an existing forced-air heating system is to adjust the vents in the unoccupied rooms. Don't close the vents completely, however. Sealing the vents closed could reduce airflow through the air handler, causing pressure imbalances, putting stress on the duct connections, and affecting air quality if you're using your air handler for ventilation. Closing the vents by 75 percent can be effective.

Bear in mind that the vent nearest to the thermostat should remain open, or the thermostat will register a cold temperature, and the furnace will run more than necessary.

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Space heaters are a costeffective way to supplement your central heating system. In fact, you can entirely shut off your primary system and simply warm one room or "zone" at a time. Or, if your primary heater isn't adequate, a space heater can pick up the slack.

The most common are ceramic space heaters with fan-forced air. Available in a wide range of designs, they're safe, compact and ideal for heating spaces up to 150 square feet.

Oil-filled space heaters are ideal for warming a personal space or small room, and they're easy to maintain because the oil inside the unit never needs to be replaced. Most models feature handles and wheels for easy portability. Oil-filled heaters are also silent because they don't use a fan to distribute the heat.

Infrared heaters are probably the most energy efficient. These units are great for warming personal spaces, because the heat produced is similar to solar heat, so you feel the warmth immediately. With no need for a fan, an infrared heater operates very quietly and presents a great choice for smaller personal spaces.

The size of the space heater should depend on the coverage desired, and many units come with built-in thermostats and remote controls.

Other forms of room heating that might be considered for supplemental heating (or for additions) include electric radiant systems, ductless heat pumps, active solar space heating, sealed-combustion gas room heaters, and high-efficiency wood or pellet stoves.

#### **SYSTEM ZONING**

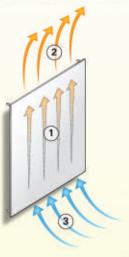
System zoning involves multiple thermostats connected to a control panel that operates different dampers within the ductwork





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#### **SKILL SAVVY**

of your heating system. The thermostat sensors monitor the temperature of their specific zone, then open or close the dampers according to the thermostat's settings. Does your family battle over the thermostat? System zoning is ideal for heating or cooling indi-vidual bedrooms based on the desired temperature setting.

According to the U.S. Department of Energy, system zoning can save homeowners up to 30 percent on a typical heating and cooling bill.

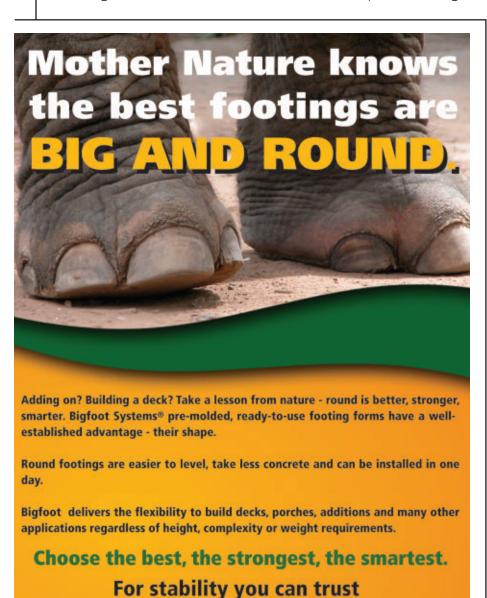
An integrated zone heating system is ideally installed when building a new house, but it is possible to professionally retrofit a system for an existing home. Zoning can be accomplished with central forced-air systems, using damper controls installed in the



Wall-mounted ECO-heaters provide convenient zone heating without raising the temperature on your thermostat. But unlike traditional space heaters, they use only 400 watts of electricity—not 1,500. Plus, Silent Flow convection heating technology provides quiet and efficient operation. The unit's heat reflector prevents heat from being absorbed into the wall, making the heater more effective. And the T-Series ECO-heaters have a built-in thermostat for a consistent temperature throughout the room.

Securely mounted to the wall, ECO-heaters are inconspicuous, and they aren't a tripping hazard. You can even paint the ceramic ECO-heater to blend it into your décor with common Latex paint. Installation is easy with common household tools, so even a novice can follow the simple instructions included in the package and install an ECO-heater on the wall in about 15 minutes. Have a basement that needs extra warmth? Install a few ECOheaters for larger spaces. Learn more at www.ecoheat.com.





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#### **SKILL SAVVY**

ducts by an HVAC technician, but the dampers may affect the system's efficiency and balance. In large homes, zoning of central heating and forced-air systems is usually accomplished by installing multiple systems, with one unit per floor. Hydronic heating systems can also be configured to provide zone heating, with valves and piping connected to a boiler.

Zone control works best in homes where the different zones can be isolated from each other with closable doors. Never shut off the heat

entirely in an unused part of your home because condensation could form on cold inside wall surfaces leading to mold. And remember to keep all rooms at a minimum of 50°F in the winter to prevent water pipes from freezing.

(Source: U.S. Department of Energy)

#### HOT PRODUCTS FOR A WARMER HOME

#### STEP WARMFLOOR

The STEP Warmfloor radiant heating solution is designed to be the ultimate in comfort and versatility for warming your cold floors or heating your entire house. Safe and efficient, STEP Warmfloor is an extremely durable and thin (only 3/64-in.) heating element designed to operate on 24 volts AC or DC, and can be connected to alternative energy sources, such as wind or solar power. The heating elements are self-regulating, allowing them to heat with maximum power in cold environments, and use less and less electricity as they warm up. It is because of this self-regulating technology that the heating elements cannot overheat, and are one of the most efficient radiant heating elements available.



STEP Warmfloor is approved for use with almost any floor covering including natural stone, ceramic and porcelain tiles, hardwood and laminates, resilient and carpet. And, because the heating element can be placed directly below most floor covering, installation is a breeze.

The system is suited for remodeling, room additions, new construction projects, and retrofit applications if access to the subfloor is available. STEP Warmfloor is also available for snow melting and roof deicing applications. Learn more at www.warmfloor.com



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Overboards are made from 100-percent aluminum, which is a non-corrosive material. The main panel is extruded aluminum and the end caps are cast aluminum. They're a wonderful conductor of heat and will hold and radiate the heat long after steel covers have cooled and are calling for more heat, making Overboards much more energy efficient. These heavy-duty aluminum covers will not rust and become unsightly due to humidity and moisture. They will not dent in heavy traffic areas. OverBoards have a white powder-coat finish but can be painted to match any décor. OverBoards provide a high-end look and lasting value to your home, and they're custom-cut to your exact specifications. Learn more at www.go-overboard.com.

#### MITSUBISHI DUCTLESS ZONING TECHNOLOGY

Ductless heating and cooling systems are among the most energy-efficient options available to homeowners. Because no ductwork is required, a major benefit of ductless systems is that they can be installed in less than one day, in addition to their smaller size, flexibility and ability to provide individualized comfort.

Mitsubishi Electric has now introduced the Hyper-Heating INVERTER (H2i) MSZ-FH ductless system available. At 30.5 SEER (Seasonal Energy Efficiency Ratio), the highest efficiency rating for heating and airconditioning systems, the H2i MSZ-FH models can use up to 40 percent less energy per room than a conventional system. The patented technology allows them to operate at 100 percent heating capacity even when the outdoor temperature is as low as +5 degrees Fahrenheit, meaning the new models have the highest performance capabilities in cold climates on the market. The ductless technology also means homeowners have complete, personalized control over each zone (or room) in their home. Zones can be cooled or heated to a specific temperature request and turned off when unoccupied. Learn more at www.mehvac.com.



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# CLEAR PATH By Rob Robillard

n the Northeast, winter means shoveling and salting your walkway and stairs to keep your home accessible. The common theme amongst many a Northerner is that shoveling stinks!

I recently discovered one solution is to install a snow melting system. A heated walkway or driveway is a great way to dispense with snow melt chemicals and ensure that your driveway or walkway is always clear.

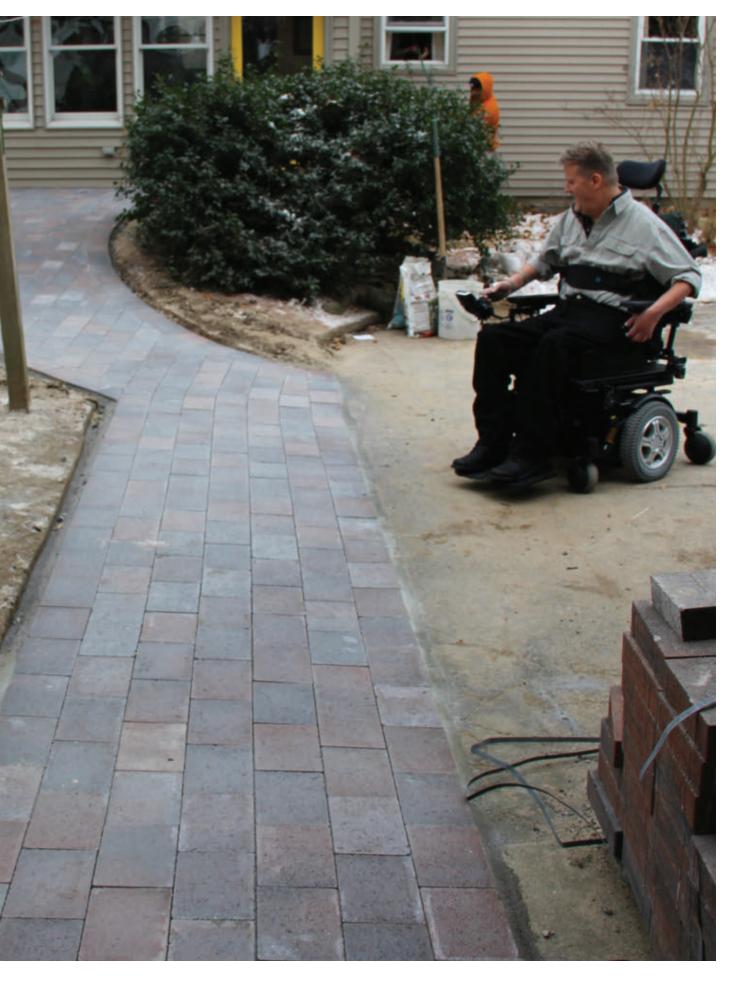
The benefits of having a heated walkway are many. Probably the greatest is the safety of family and visitors in your home. If your walkways and driveways are heated, then ice and snow will melt, reducing the danger of slips and falls. And no more shoveling!

If you are considering installing a snow melting system, the best time for installation would be during a new home project or major landscaping changes to the property. If old, cracked walkways need replacing, that would also be an excellent time for this type of installation.

#### **SNOW MELTING—IS IT WORTH IT?**

An electric snow melting system like the one featured in these photos is top-of-the-line and designed to be energy efficient. It acts fast to melt away the snow and prevent ice from forming. This system can be installed under concrete, bluestone, bricks, asphalt and in mortar underneath brick pavers.







Save time and effort. By installing heated driveways and snow melting systems in your sidewalks, walkways and driveways, you can save the time and effort of having to get up early on a cold winter morning or going out late at night in the frigid temperatures to shovel snow. With snow melting products and deicing solutions, you can stay comfortable inside and let the radiant heat do the work for you.

**Environmentally friendly.** Snow melting and deicing systems can be environmentally friendly, protecting your lawn and landscaping from damage caused by chemicals or snowplows.

Protect your investment.

Replacing or installing a new concrete, decorative concrete, asphalt, paver or stone driveway or walkway is a substantial investment in your home. Unlike harsh snow melting chemicals or sharp plow blades, the gentle radiant heat produced by the system melts snow and ice without damaging the surface to

help keep your driveway and walkways looking good for years to come.

Cost Comparison. Another thing to consider is the cost comparison of how much you pay for snow removal services and chemicals versus the operational costs of a snow melting system. After the initial investment, costs of operating the system are minimal. On the

average, the operating cost per snowfall event is about the same as paying someone to remove the snow. However, with a snow melting system, the pavement is left clear and dry. Removing snow with a shovel or machine can leave behind a thin layer of snow that could refreeze, resulting in hazardous conditions and the need for the additional



Wire mesh is used to anchor the heating cable.

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## **CLEAR**THE PATH

application of salt or other snow melting chemicals.

**Safety.** With a snow-melting system, not only can you reduce the risk of slips and falls, you can also reduce the risk of bodily injury or

strain from shoveling heavy snow. A snow melting system also gives you peace of mind, knowing that your family, friends and visitors—everyone from the mail carrier to loved ones who use wheelchairs—

can safely move to and from your home.

Steep driveways can also be made safe to traverse in snow and ice conditions. These systems also help protect your pets too, by safely clearing the snow and ice without harmful chemicals that can hurt their paws.

## TYPES OF RADIANT SNOW MELT SYSTEMS

There are two systems typically used outdoors when heating walkways and driveways: electrical heating cable; and hydronic heating piping.

A hydronic heating system uses copper tubing or cross-linked polyethylene (PEX) with a liquid treated



The mesh is placed over the compacted sub-base, and sand will cover both the mesh and heating cable.



The mesh is cut to fit the curve of the walkway.





The green heating cable is routed along the wire mesh.



The heating cable loops back and forth in the walkway.



The cable is secured to the mesh with tie-wraps. I drilled through the brick wall in the photo for the electrical supply line.

with antifreeze to warm the driveway or walkway. This glycol-based solution is heated with a boiler, operated with either manual or automatic controls.

On this walkway project, electric heating was the only option and also the most cost effective to install. We chose the WarmlyYours Premium Snow Melting System. This system was custom-designed for my project and came complete with all the cable, controllers and snow sensors needed for a quality snow melting system.

## INSTALLATION UNDER BLUESTONE PAVERS

On this project, the homeowner had a wood stoop porch and a cobblestone front walkway, which must have been a complete

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## CLEAR THE PATH



A rotary hammer bores through the brick to route the electrical supply.

The supply line is protected with electrical conduit.

nightmare to shovel. They decided to tear out the wood stoop and cobbles to replace them with a fieldstone stoop with a bluestone top and bluestone walkway—all heated.

WarmlyYours designs durable, high quality indoor heating and outdoor snow melt products. The company's heating cables are designed for concrete slab floors of new homes, outdoor driveways, walkways, stairs and patios. The product is well suited for large areas like base-

ments, garages, additions and driveways.

Before starting my project I gave my customer service representative the exact project dimensions, and they provided me with a custom detailed installation drawing.

The snow melt system I chose for this project comes in mats or loose cable in



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## CLEAR THE PATH

specific lengths tailored to an individual project.

For my project I used 251 ft. of loose cable, which I looped and spaced approximately 3 inches apart. The system is CSA-Certified for outdoor use in Canada and U.S. and is offered in 120V or 240V configurations. It is rated for 3000 watts, 240 volt and 12.5 amps.

Warmly Yours sent the following as part of the premium system:

- 251' of snow melt heat cable
- Relay panel
- Premium snow melt control panel
- · Snow sensor
- Temperature sensor

The heating cable is installed and ready for the sand bed.





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This frost blanket prevents the sand from freezing overnight.

A sand bed is leveled over the mesh and heating cable, much like a flexiblebase patio.



The Heating Cable is comprised of a dual multi-strand heating element with a primary insulation of Fluoropolymer. The insulated core is protected with a woven metal braid and an outer jacket of PVC, EPR or a Zero Halogen Polyolefin-based compound to make it sturdier and to provide corrosion protection.

These cables are terminated with 20-ft. (6.1m) long standard cold leads. The cold lead is obviously not heated and is used to enter into the building and attach to the control panel. The hot and cold junction is uniquely designed to make it 100 percent foolproof.

The accompanying project photos show the basics of installing the systems.

Whatever your reason, a snow melting system for your walkways or driveway can make any snowfall



## CLEAR THE PATH



The paver stones are carefully laid onto the sand bed.



Border pavers help to give the walkway a finished look.



Here's is the completed new landing, after polymeric sand has been swept into the paver joints and the surface has been rinsed.

event, big or small, hassle-free. You can spend less time worrying about digging out and more time with friends and family doing things you enjoy. **EHT** 

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



The occupant test-drives the new walkway in his wheelchair. The pavers for this project are called "Patriot Place" because they were leftover from the New England Patriots' stadium.

#### HEATIZON SNOW MELTING SYSTEMS

Heated driveways are a great addition to increase the functionality of a home in the winter, but they aren't the only surfaces that can be heated. For example, an elevated paver walkway around a condo complex in Lake Tahoe, California, was heated with a Heatizon Tuff Cable low-voltage snow melting system.

Tuff Cable was chosen because of its 25-year warranty, product longevity and design flexibility. Along with heated driveways and walkways, Tuff Cable can also be used in retrofit applications for existing concrete or asphalt. Heatizon retrofit systems are installed by saw-cutting grooves in existing asphalt or concrete, placing the heating element—whether low-voltage Tuff Cable or line-voltage Hott-Wire—in the grooves and sealing them off with highway-grade sealants. Heatizon snow melting systems are designed to ASHRAE Standards (American Society of Heating, Refrigeration, & Air Conditioning Engineers), providing the right amount of heat for each project based on its regional weather patterns and by application, making them cost-effective and energy conscious. Another feature that sets electric systems apart from other snow melting technologies is they are solid state and have no moving parts, making them virtually maintenance-free. Learn more at www.heatizon.com.



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Professional spreaders. The Flex-Select models feature easily inter-

changeable shut-off trays (the complete bottom of the hopper including the shut-off) that can easily convert the spreader from the EarthWay EV-N-SPRED capable of spreading all fertilizers and free-flowing granular products, to the EarthWay High-Output rock salt/pelletized high SGN material spreader, or to a new Low-Output low application rate fine chemical/fine grass seed spreader. Each application will spread evenly, accurately, and up to a 50% wider spread width than other push spreaders.

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





# Customized single-piece wainscoting makes installation easy. By Matt Weber DO-ITBy Matt Weber DO-ITWAAINSCOTING

ecorative raised-panel wainscoting gives a room an elegant, more formal appearance that is popular in dining rooms, foyers and hallways. Assembling the panels from scratch, however, requires careful measurement, shrewd carpentry skills, plus a lot of time and labor.

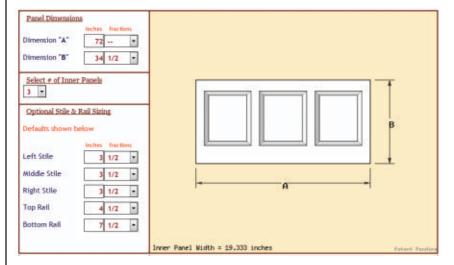
A great way for a DIY'er to cut the labor in half is to order customized wainscoting that is shipped to your home as large, single sections with the decorative pattern routed into the MDF panels. Rather than piecing together every rail and stile, the large panels can be installed directly to the wall so the job progresses as much as 8 linear feet at a time. The single panels are also less prone to paint cracking, because there are no rail or stile joints, which are prone to expansion and contraction.

For this project the EHT staff ordered customized panels from Wainscoting America. The company streamlines the selection process with an online tool at Wainscotingamerica.com. First step is to



select your style, including raised, shaker, recessed or V-groove panel. Next, determine the height of your panels. (The rule of thumb is that the wainscoting panels are usually 1/3 the height of the wall.) Determine your Top Rail

Wainscoting Height, and then determine your Bottom Rail Wainscoting Height. These measurements are ultimately your decision, but the company offers some standard default measurements if you don't want to get creative.



Installing preassembled wainscoting panels saves time and labor for a DIY-friendly home improvement project.

Next, determine your Left, Middle and Right Stile Widths.

You'll need to take careful measurements of each wall, and enter all this information into the fill-in-the-blank interface on the website. The instructions will guide you through every step of the process, accounting for overlapping panels at the corners and offering a selection of cap rails and base molding. Once you punch in the coordinates, the website will produce a visual representation of your panel design. Make adjustments until you're happy with the look. It's a very user-friendly method for designing your wainscoting.

The panels ship in five business days, and they arrived on our site in flat cardboard boxes. Two of the walls in our project were longer than 10 feet, so the wainscoting for those runs came as two separate pieces that join with an overlapping rabbet joint. The shorter runs required only one panel each.

Here's how we completed the installation.

#### STEP-BY-STEP

Our project house had existing base and shoe molding that had to be removed. I scored the top caulk line with a utility knife and used a paint scraper to open a gap at the top of the base just wide enough to slip in a flat bar. When prying with the flat bar, push the tip down far enough to pry against the floor plate (not against hollow drywall, or you may punch a hole through it).

I used a laser level to lay out the wainscoting. Snapping a chalk







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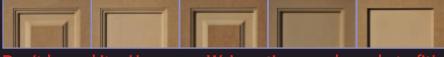
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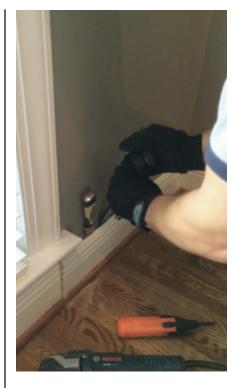


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www.WainscotingAmerica.com

### DO-T-YOURSELF WAINSCOTING





line as a guide will also work. This line represents the top of your wainscoting panels. Take several measurements in different places between the layout line and the floor. Floors are not always level, and these measurements will determine if you need to shim beneath the panels to keep them supported while you fasten them to the wall.

When I dry-fitted the panels I discovered that an out-of-plumb wall in one corner was slightly too tight for the panel. This was not an error by the panel's manufacturer, but a problem with the wall framing. To solve this issue, I used a rip gauge and circ saw to trim the panel.

Take careful measurements when mapping out outlet box locations on the rear of the panels. If you cut the box in the wrong spot, it will be very difficult to disguise.



#### Howard Restor-A-Finish

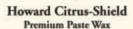
- · Eliminates white heat rings and water marks
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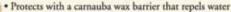
#### Howard Feed-N-Wax Wood Polish & Conditioner

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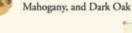








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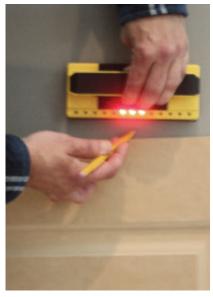
I suggest starting your cut-outs by drilling a hole at each corner, using a bit slightly larger than the width of your jigsaw blade.



### DO-IT-YOURSELF WAINSCOTING



Use the jigsaw to connect the corners. The holes provide the clearance for the blade to make tight 90-deg. turns.



Prior to gluing the panels, mark the wall studs so you'll know where to drive the brad nails through the panels.



We used heavy-duty Liquid Nails to install the panels, combined with sparing use of brad nails. We drove a few nails into the studs to hang the panels while the construction adhesive set. Use as few nails as possible to reduce the need to spackle the nail holes.





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## YOURSELF WAINSCOTING

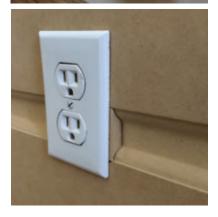
If the floor is out of level, shims can be placed beneath the panels to level them for installation.

Electrical box extenders are necessary to install the outlets flush with the face of the panels.

If an outlet box falls along the groove of a raised panel, you have two options. One solution is to cut a new hole in the wall and relocate the box. The second option is to keep it in place and fill the







voids in the groove with special filler blocks included in the Wainscoting America kit.

On this project, a window sill interfered with the installation of a panel. Rather than notch the panel to fit over the sill, I notched the back of the sill.

Next to the window I applied glue to the wall rather than to the panel.

In this case I had to press the panel high on the wall and slide it down behind the notched sill.



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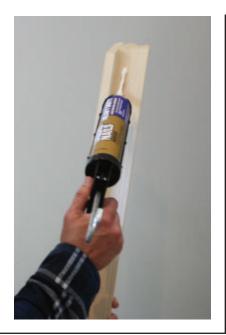








The kit included a decorative cap rail. Just like joining two runs of crown molding, I recommend cutting a scarf joint when joining two lengths of cap rail. A scarf joint consists of two 45-degree







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from the most common view of the room.

The wainscoting kit included mitered returns to provide a finished look to the ends of the cap rail.

Set the nail heads beneath the surface to be filled with spackle or wood putty. Caulk all the seams, apply primer and your final topcoat of paint. **EHT** 







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nytime you introduce arches, home improvement projects become much more interesting. An arched design often produces problems you can't anticipate, so you can expect it to take additional time and cost more in materials. The same can be said of one-off, handmade custom components. Put the two together—curved and custom—and you have the potential for some serious challenges.

My brother the pessimist knows this, and his bids for these jobs often shock the homeowners. His everything-will-be-slow assessment is usually accurate, though, so we come out about right on estimated man-hours. For the project in this article, the materials were all supplied by the homeowner who was quite happy with the results.

#### THE PROJECT

This job entailed installing a pair of custom, wrought iron, arched entry doors that the homeowner bought at a home show for his new house, which was under construction.

Even if you never install a set of doors like this, you can learn some techniques that will apply to framing a passage arch or trimming a curved transom window.

We teamed up with the framers to get the opening within tolerances for the installation.

The job required an arch to be framed over the door itself, which the framers did quite efficiently by first tracing the door jamb on their sheeting boards, cutting it out and arranging short blocks to fill the gap between the interior and exterior sheeting.

Because the door builder was more artist than contractor, the jamb width didn't match conventional wall construction. Typical jamb widths are 4-9/16 inches for 2x4 interior walls and 6-9/16 for today's exterior walls. However, door shops often have to make custom jamb widths for entry doors because of the finish on the front of the house, and because these walls often have extra layers of sheer sheeting to meet engineering requirements. In this case, because of hinge design and the nature of curved casing, we decided to align the jamb so it would be flush with the drywall on the interior, knowing that we would have to figure out how to trim the exterior later.

Another factor on this job was the weight of the doors. They weren't particularly big, but they were made of heavy metal and had active, swinging glass windows, which added considerable weight. Heavy doors require solid support under the jamb, minimal gap to the framing, careful shimming and



fasteners that are both long and strong.

We noticed that the threshold for this door unit was pretty thin, so we planned ahead to build up the subfloor under the threshold to allow more room in the entry for tile and an entry rug.

Here's how our team of framers and finish carpenters installed a set of custom entry doors that provide a distinct look and the added function of active windows for ventilation.

#### STEP BY STEP

After removing the heavy doors from the hinges, we laid the jamb, along with its built-in transom, on a sheet of oriented strand board and traced the shape.

After cutting the arch-shaped sheets, the guys matched 2x6 blocks for both ends and nailed them to one of the sheets.

They positioned the sheet with the end blocks attached underneath the header in the door opening





The framers nailed through the end blocks into the trimmers on each side of the door opening.



They nailed the second archshaped sheet into place.

They cut a series of blocks to fit between the sheets and nailed









## OVERARCHING DOOR DESIGN



them into place by nailing through the sheets into the blocks.

We factored in furring up the threshold before setting the height of the framed arch. Before setting the door jamb we installed a plywood furring strip that we cut to the length and width of the threshold.

Even with the doors and windows off the hinges, this door jamb with its transom window was quite heavy, requiring two people to install.







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## OVERARCHING DOOR DESIGN

We planned to set the door with the jamb flush to the interior wall surface. To simulate the thickness of the drywall, which was not yet installed, we tacked some plywood blocks that were the same thickness as the drywall to the inside of the framing.

Shimming the door jamb to keep it plumb is essential to proper door operation. Because this jamb is wrought iron and braced with the built-in transom window, there wasn't any adjustment available for squaring it like a standard iamb.

We used an impact driver and lag bolts to attach the jamb to the framing. The void between jamb and framing should be filled with shims at each screw location to prevent movement in any direction.

Even with the jamb set level and plumb, it was tricky to fine-tune







the door reveals, which are the clearance gaps between door and jamb and between door and door. You can experiment with the shims and lag bolts to slightly shift the doors at the hinge locations to get the desired results, but success





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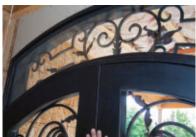
will largely depend on how the door assembly was made at the shop.

Checking the door operation from the outside helps determine if the two doors match plane

enough for the weather-strip on the astragal to seal. A slight inward or outward adjustment at the bottom of each side may help.

After anchoring the jamb near the top and bottom hinges, we





filled the gaps near the middle hinges and installed lag bolts at each of the provided fastener locations.

We often cut off shims with a double-edge pull saw, but here we



needed to be very careful not to scratch the finish on the door jamb.

We thought we would face a challenge trimming the exterior because the jamb was not wide enough for the wall construction.



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## OVERARCHING DOOR DESIGN





This is a situation that occurs pretty regularly on remodeling projects because so many things can affect the thickness of a wall.

As it turned out, the solution was fairly easy. We found this very flexible, paintable poly trim, which we oriented like a jamb extension rather than as a casing.

Because the siding material surrounding the entry door was quite thick, we were able to nail into the siding to secure the trim, which acted as a transition between the siding and the door jamb.





Because the alcove in the front porch that houses the entry door is cozy in size, minimal trim around the door works well.



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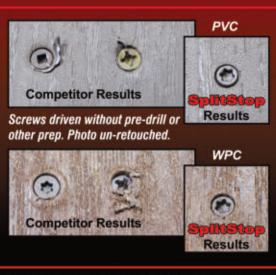
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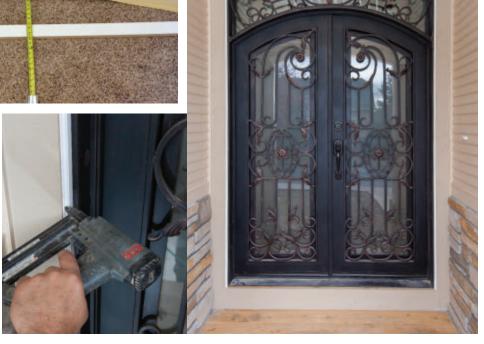






You can order flexible casing and base molding in a variety of profiles, which is just what we did for the interior trim over the arch. We pre-shaped the casing in an arc on the floor to make sure it would hold its shape.

We cut the flexible casing oversize and nailed it into place following an arc that allowed the casing to overlap onto the jamb above the transom window.









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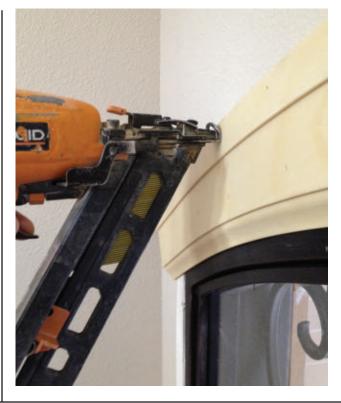


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## OVERARCHING DOOR DESIGN



We used a piece of straight wood casing in the same profile as the arched casing to mark where the outside and inside edges intersected. We then used a straight edge to mark between these points on the inside and outside edge.

The miter cuts on the flexible casing were made with a multi-tool.

To finish the casing, we cut the straight leg pieces by matching the inside and outside marks on the trim boards with the kerf cut on the miter saw. **EHT** 











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Erin Canosa, global director of marketing for Arch, explains the rationale behind the educational series: "Since 2003, when our industry voluntarily withdrew marketing and distribution of chromated copper arsenate, known as CCA, from the consumer marketalace, a host of new preservatives have entered the market all with



consumer marketplace, a host of new preservatives have entered the market, all with varying retentions, fastener requirements and other characteristics. Unfortunately, this influx of new products and different chemistries has added confusion to the marketplace. Now more than ever before, it's critical that preserved wood is treated and used properly." Visit Wolmanized Wood University online at www.wolmanizedwoodu.com.

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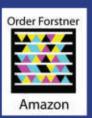














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