

# Work Smart With PVC Trim

For good results with this rotproof material, you have to understand how it moves

BY RICK ARNOLD

**H**ere in New England, it seems like we're installing more and more PVC trim every year. And why not? It doesn't rot or need paint, although paint is not a bad idea (more on that later). I typically recommend PVC trim for two particular applications. First, it's the perfect material for a customer who wants white trim and never wants to paint. Second, it's the best choice when there are unavoidable moisture problems resulting from the location of the house or the weather.

Installing PVC trim close to the ground, a deck, a roof, or a driveway doesn't carry the same risks as doing so with wood or fiber-cement trim. When PVC is painted, the paint will last longer than when it's applied to wood installed in moisture-prone areas.

PVC trim is available in many thicknesses, lengths, and profiles, and for the most part, it cuts and shapes like wood. Like other building materials, PVC expands and contracts with the ambient temperature. It's important to know how to work with that movement. With proper joinery and fastening, PVC trim can be virtually trouble-free. However, I've seen carpenters try to install it like wood and then find themselves revisiting the job for repairs. Here's why: In contrast to wood, PVC moves along its length, not its width.

When I have to install lengths over 12 ft., I pay attention to the temperature and plan for

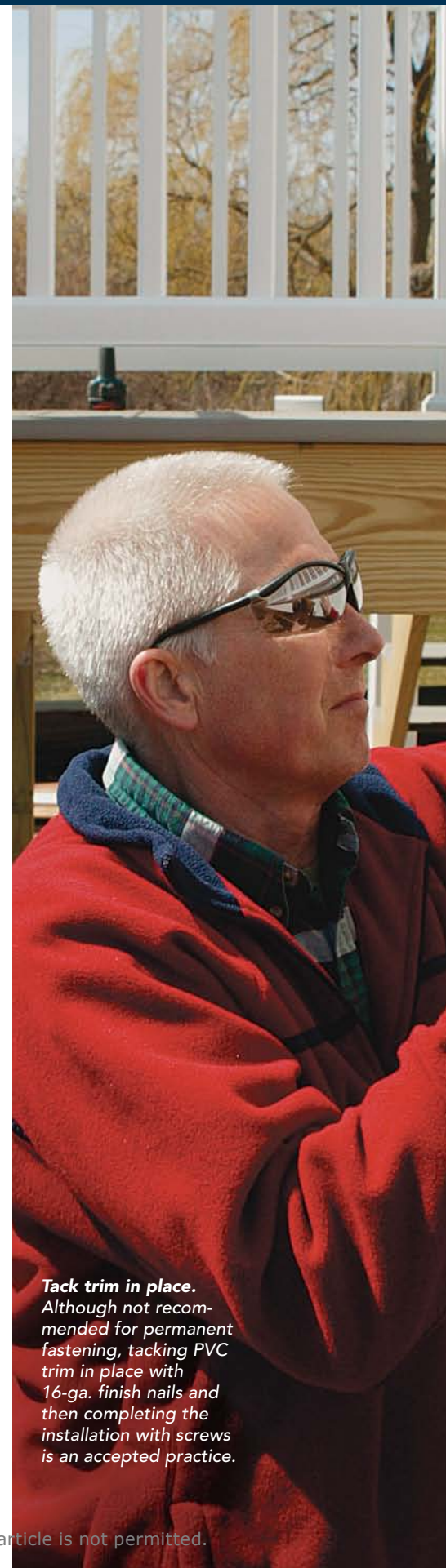
its effect on the material's movement. This is especially important because the standard stock length is 16 ft. to 18 ft., so it's always tempting to use one board instead of two.

The ideal temperature range for installing PVC trim is 60°F to 70°F. That's about midstream for board movement. When the temperature cools, the boards shrink. When it gets warmer, they expand. If I'm installing long PVC boards and it's 90°F in the shade, I make the joints tight because I know there could be a 3/16-in. gap by the time midwinter rolls around. Of course, the reverse is true for winter installations.

The key to minimizing seasonal movement is to employ a strategy involving the right joints, fasteners, and adhesives. I can arrange and install a sequence of joints and choose which end of the board will remain stable. The other aspect of this strategy is a recognition that the material has to move, and that the installer's job is to pick the best place for the movement, then compensate for it with a combination of joinery and flexible gap fillers that will look good while protecting the underlying structure for many years to come.

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Rick Arnold is a builder and a contributing editor to *Fine Homebuilding*. He lives in North Kingstown, R.I. Photos by Charles Bickford, except where noted.



**Tack trim in place.** Although not recommended for permanent fastening, tacking PVC trim in place with 16-ga. finish nails and then completing the installation with screws is an accepted practice.



## STORAGE

Because the material can be warped by heat, it should be stored out of the sun, off the ground, and fully supported on a flat surface.



## HANDLING

Long lengths of PVC can be difficult to carry, even for two people. On hot days, prevent warping by supporting the trim with a 2x as you carry it. Roller stands or outfeed tables help to support the stock while it's being worked.



## CUTTING

Carbide-edged tools give the best results when cutting or profiling PVC trim. Cut edges can be smoothed with 220-grit or finer sandpaper. Sanding essentially melts the newly exposed material and makes it more resistant to dirt.

## CONTROL MOVEMENT IN RUNNING TRIM

The key to success with PVC trim is to plan for lengthwise movement in boards longer than 12 ft. If not properly detailed, the plastic trim can buckle or develop unsightly gaps. The author's strategy is to choose appropriate joints to fix in place while allowing other joints to move. The movement can be concealed with a shiplap joint or by leaving room for the board to expand behind a butt joint.



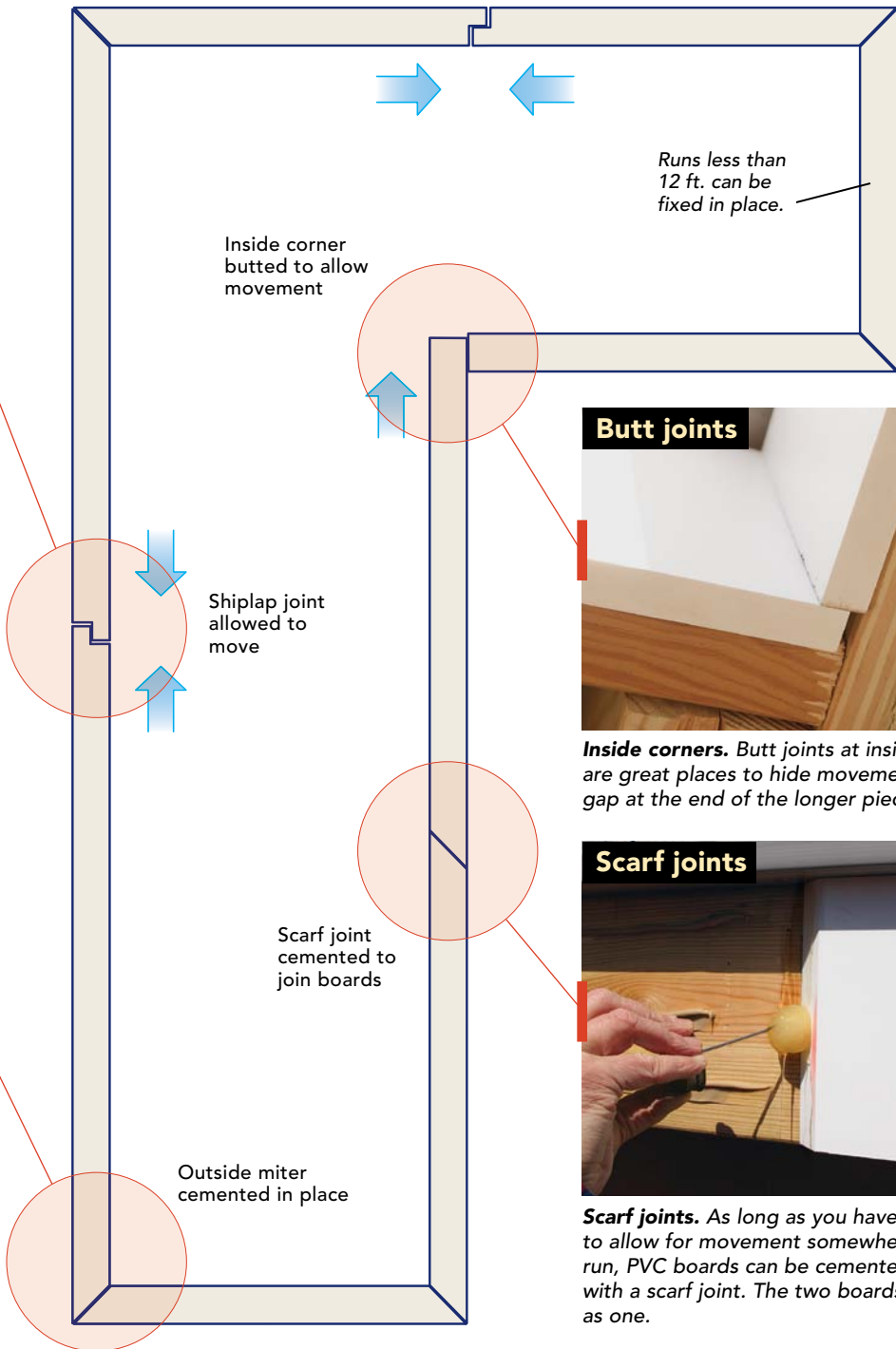
**Shiplap joints**

**Shiplap joints.** When there's an outside miter at both ends of a trim run that's 12 ft. or longer, use two boards connected with a shiplap joint to allow the boards to move without exposing the material underneath the joint.



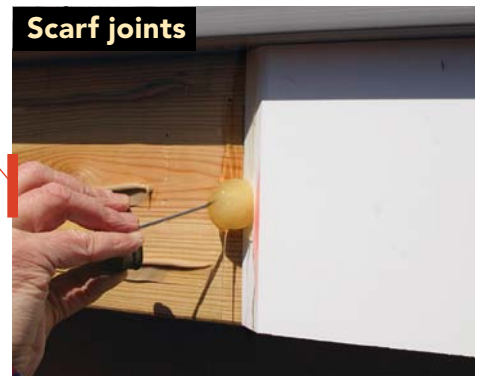
**Mitered corners**

**Outside corners.** Cement any mitered outside corners together to keep them from opening as the boards move.



**Butt joints**

**Inside corners.** Butt joints at inside corners are great places to hide movement. Leave a gap at the end of the longer piece.



**Scarf joints.** As long as you have a strategy to allow for movement somewhere along the run, PVC boards can be cemented together with a scarf joint. The two boards will move as one.

### Tips for running trim

Install a piece of aluminum or vinyl flashing behind all joints where water needs to be kept out.



Gaps can hide behind decoration. Here, the intersection of two rake boards is hidden behind a chevron of PVC that's fastened only on one side to allow the material beneath to move.



## DON'T SKIMP ON FASTENERS

Nails or screws are the only recommended fasteners that provide the required holding power. When installing  $\frac{3}{4}$ -in. stock, fasteners should penetrate  $1\frac{1}{2}$  in. into framing. As shown below, manufacturers specify the number of fasteners to be used, but when fastening on a sunny southern exposure or when the trim is to be painted a dark color, the author suggests an extra fastener per interval to reduce the likelihood that the boards will heat up and warp. Fasteners should be positioned no less than  $\frac{1}{2}$  in. and no more than 2 in. from any edge.

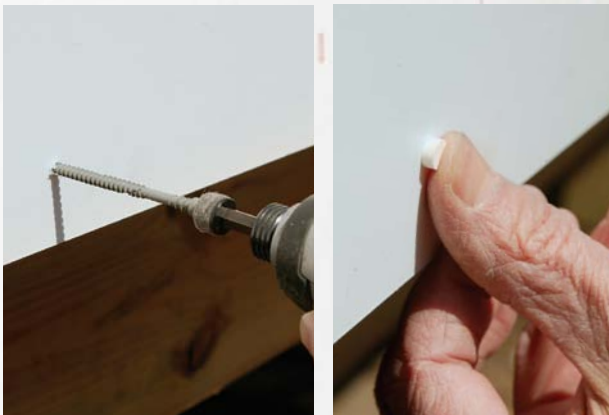
**Take your pick.** Manufacturers recommend using stainless-steel or hot-dipped galvanized siding nails. Spiral-shank or annular-threaded (ring-shank) are best. Painted stainless-steel nails can be less noticeable on the finished installation. Trim-head screws must be corrosion-resistant and have a #7 or larger shank. In terms of performance, nails are faster to install, but harder to conceal. Screws have more holding power.



### Fastening schedule

Boards 6 in. wide or less	2 fasteners, 16 in. on center
Boards 8 in. to 10 in. wide	3 fasteners, 16 in. on center
Boards 12 in. wide or more	4 to 5 fasteners, 16 in. on center

**A favorite system.** The author prefers a FastenMaster product that includes a bit that drills both a pilot hole for the screw and a larger hole for a proprietary plug. Made of PVC, the plugs are available in different colors and are simply pressed into place.



**Putty works.** Countersunk trim-head screws also can be concealed with a two-part epoxy putty. This works best when the trim is to be painted.



## TWO WAYS TO ASSEMBLE CASINGS

For joints that will never open, PVC door and window casings can be assembled like common wood casings. The only difference is the adhesive.

### Pocket screws



When assembling casings with butt joints, the author prefers to apply PVC cement to each joint and then to draw the joint together with pocket screws.

### Biscuits

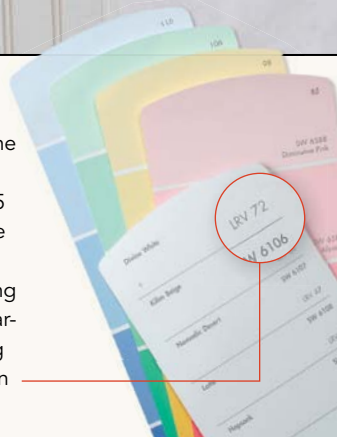


Miter joints can be joined with plastic biscuits. The author coats the biscuit and both sides of the miter with PVC cement, then assembles the joint. The corners can be tacked with a finish nail to hold the joint tight until the cement sets up.

## If you're going to paint, choose color carefully

Many people use PVC trim because it will never need to be painted. It turns out, though, that PVC provides an excellent substrate for 100% acrylic latex paint, and paint is even recommended by some trim manufacturers to seal exposed edges that otherwise might attract dirt. However, it is important to choose color carefully. Acrylic paint colors are given a light-reflectance

value (LRV) on a scale of 0 to 100: The lower the LRV, the darker the color. Any paint with an LRV of less than 55 should not be used on PVC trim. The dark color can transfer enough solar heat to the trim to cause failure. Using the wrong paint also can void the warranty. Some manufacturers, including Sherwin-Williams, provide the LRV on their paint-color cards.





## Gear for the PVC tool kit

**Flexible sealant.** To hide and keep water out of joints that are expected to move, use a flexible caulk or sealant made for PVC. Shown here: Flex from Bond & Fill.



**Two-part filler.** These PVC adhesives bond the material and are thick enough to fill gaps or nail holes, which makes them great for repairs. Shown here: PVC Trim Welder from Extreme Adhesives.

**PVC cement.** Cellular PVC trim cement is used to fuse boards together at joints. Unlike other PVC cements, it does not need primer. Working time may be short. Make sure your measurements are correct, and be ready to go before you apply the cement. Shown here: Azek Adhesive Cellular PVC Cement.



**PVC sawdust sticks to everything.** To make your workday more pleasant, spritz your tools and your clothing with antistatic spray before you start work. The spray is made by several manufacturers and is available at grocery stores.

**Don't sand—wash.** PVC trim can become grubby from handprints, pencil marks, and dirt. Sanding can produce dull spots on the material. Several manufacturers offer proprietary cleaners, but common household granulated bleach cleanser works just as well.

