Installation Tips & Techniques

Tools

- **Safety glasses and power miter saw**: carbide saw blade with 80 teeth or more recommended.
- **Miter box and hand saw**: Limited angle adjustment (not recommended for crown).
- **Coping saw**: Only needed if you choose the coping technique to install the moulding.
- **Angle gage**: To create the correct miter, you must determine the wall corner angle.
- **Glue**: To adhere the miter joints, Royal Mouldings strongly recommends gluing all joints with PVC or “Pipe Cement.”
- **Hammer & nails** or a pneumatic nail gun.

Other tools may include a tape measure, pencil, C-clamp, putty and caulk.

Cutting

Use standard woodworking equipment for cutting. If using a power miter saw, a carbide toothed blade is recommended. Use any brand of spray furniture polish on saw blade as a lubricant for easier cutting.

Wall Angles

It will also benefit you to measure the wall angles on each corner. This will help you calculate the correct miter angle. NOTE: It is not uncommon for corner angles in most homes to be off as much as 3°. If you were installing 5” crown moulding the 3° difference would result in a 3/8” gap in the miter joint. To help you calculate the proper angle Royal has an angle calculator listed on their website, www.royalbuildingproducts.com.

- Left and Right hand positioning: the side of the trim you are cutting is as important as its position on the saw table. The positions are illustrated above.

Vertical Miters

Use this technique for cutting baseboard, chair rail, quarter round, and splice miters. Align trim back against fence.

- **Inside corners**: A left hand inside corner is shown in the photo.
- **Step 1**: Place the trim on the saw table in the left hand vertical position and rotate the angle gage “clock wise” to 45°, or the desired angle setting, and make the cut.
- **Step 2**: To cut the mating piece, simply rotate the table angle gage to the opposite 45° or desired angle, and place the next piece of trim on the saw table in the right hand vertical position. Cut the trim.

- **Outside Corners**: A right hand outside corner is shown in the photo.
- **Step 1**: To complete this, place the trim on the saw table in the right hand vertical position and rotate the angle gage “clock wise” to 45°, or preferred angle setting, and make the cut.
- **Step 2**: To cut the mating piece simply rotate the table angle gage to the opposite 45° or desired angle, and place the next piece of trim on the saw table in the left hand vertical position.

Horizontal Miters

Use this technique for cutting window and door casings. Align trim back on saw table.

- **Step 1**: A left hand miter is shown in the photo to the right. To get the setup in the photo, adjust the saw table angle to the “clock wise” 45° or predetermined angle. Then lay the trim on the table in the left hand horizontal position and proceed to cut.
- **Step 2**: To cut the mating piece simply rotate the table angle to the opposite 45° or preferred angle, and place the next piece of trim on the saw table in the right hand horizontal position. After the cut is made the miter joints are ready for assembling.

Compound Position Miters

Use this technique for cutting Crown moulding. This is the most complicated of all the mitering cuts. Note: When cutting Crown Mouldings in the compound position, remember “upside down & backwards”. This term is used because the “TOP” of the trim that is positioned against the ceiling after installation rests on the saw table during the mitering process, and the “BACK” of the trim that is placed against the wall, after installation, is set against the fence during the cutting procedure.

- **Compound Inside Corner Miters**: Left hand inside corner miter shown in photo.
- **Step 1**: Place the top of the profile against the saw table and the back of the profile against the fence in a left hand compound position. Then adjust the table angle gage “clock wise” to 45° or calculated angle, and cut.
- **Step 2**: Place the top of the profile against the saw table and the back of the profile against the fence in a right hand compound position. Then move the table angle gage the opposite calculated angle, and cut.
Compounding Outside Corner Miters  
Left hand outside corner miter shown in photo.  
• **Step 1:** The trim should lie on the saw table in a left hand compound position. The saw is to be adjusted “counter clock-wise” to the calculated angle before cutting.  
• **Step 2:** Put the mating piece of trim on the saw in the right hand compound position. Then move the table angle gage to the opposite calculated angle and cut. The miter joint is ready to be put together.

Splice Miters  
This technique is used to join mouldings together in a linear run or when a wall is longer than the trim you are installing. Most splice cuts are made in the vertical position. In the photo below of a splice miter, note the only change made in producing the joint is the right hand & left hand positions. The saw angle should remain at the same 45° setting.

Return Miters  
This technique is utilized when moulding ends with an exposed, unfinished end that would require finishing “paint, stain, etc.” This miter joint will create a finished edge.  
• **Step 1:** To produce this miter, cut the trim as though you were turning an outside corner (45° saw setting).  
• **Step 2:** Rotate the saw to the opposite 45° and cut a short piece to mate to the first cut. Glue miter joint together before attaching trim to wall. See photo below.

Coping Joints  
Coping is simply transferring the contour “profile” of one piece of trim to the end of another piece of trim, then cutting the profile line so that, when finished, the second piece of trim will mate with the first with a nice joint.  
• **Step 1:** Cut the first piece of trim to length and position it on the wall. Use straight cuts, no angles.  
• **Step 2:** To create the profile line, cut the second piece of moulding at a 45° as though you were cutting an inside corner.  
• **Step 3:** Following the profile line as a guide cut the trim with a coping saw.  
• **Step 4:** The moulding should be ready for installation.

Nailing  
Install Never Rot® mouldings and trim using 6d and 8d galvanized nails and/or recommended adhesives (see chart on this page). Place nails 12” on center. Nails should be approximately 3/4” from each edge. If nailing product at 40°F or below, pre-drilling is required. Pneumatic nailing is also recommended.

**Fastening Royal Trim Board® and Royal S4S Trimboard™**  
Use fasteners designed for wood trim and wood siding (thinner shank, blunt head, full round head) with trim board. Use only fasteners intended for exterior use such as stainless steel or hot-dipped galvanized.

DO NOT USE staples, small brads and wire nails. The fasteners should be long enough to penetrate the solid wood substrate a minimum of 1-1/2”.

Use two fasteners per every framing member for trim board applications. Trim boards 12” or wider as well as sheets will require additional fasteners. Fasteners must be installed no more than 2” from the end of each board.

Trim boards should be fastened into a flat, solid substrate. Fastening trim boards into hollow or uneven areas must be avoided. Unless product is installed in lower temperatures (< 40°F) pre-drilling is typically not required. Thinner trim products (3/8” and 1/2”) are not intended to be ripped into trim pieces. They are to be glued to a substrate and mechanically fastened.

**Gluing**

**Gluing Miter Joints**  
Royal Mouldings strongly recommend gluing all miter joints on PVC mouldings using a quality instant glue and/or PVC cement. It may seem unconventional, but the benefits outweigh the inconvenience. When assembling splice and return miters try gluing the mouldings together before installation. This will allow you to fit the joints uninhibited, and fasten the trim to the wall as one unit. Fitting these joints on the wall can be difficult and possibly jeopardize the integrity of the miter joint.

**Fastening Royal Never Rot® Moulding and Trim to the Wall**  
PVC trim can be nailed with finishing nails and/or glued. Our recommendations for the nails are paneling, finishing, or pneumatic finish nails. For the glue, recommended products are PL Glues/PC —200, 300, 400/LIQUID NAILS applied according to manufacturer’s directions. Glue alone is not advised for crown mouldings.

**Adhesive Selection for Cellular Vinyl**  
The following brands have been laboratory tested and approved for use with Royal Cellular Vinyl; however, individual conditions may vary and these adhesives may not perform under every circumstance. Other brands may also be suitable, but always test before using.

<table>
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<th>Int/Ext Adhesive</th>
<th>Wood</th>
<th>Steel</th>
<th>Sheetrock</th>
<th>Masonry</th>
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<tr>
<td>Dow 100% Silicone®</td>
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<td>Dap 230 Latex®</td>
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<td>Contech PL-400®</td>
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<td>Better Than Nails®</td>
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<td>Liquid Nails LN-901</td>
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<td>Heavy Duty®</td>
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**For Interior Use Only**  
G.E. Silicone® | F | G | G | –  
USG Cove Base Adh.® | G | G | G | –  
OSI Quick Bond® | G | P | G | G  

**Expansion and Contraction:** Royal Mouldings exterior PVC products, as manufactured, may expand and contract due to temperature variations. To reduce or eliminate open joints, the preferred method is the use of adhesive commonly called pipe glue or PVC pipe cement. When bonded correctly with this adhesive, the joint becomes an integral part of the system to which it is being applied.

www.royalbuildingproducts.com
Installation

Never Rot® Brick Mould & Jamb
1. Remove old jamb, brick mould and garage door stop with a pry bar or hammer.
2. Measure the top opening from side to side and cut jamb to fit with a fine tooth power- or hand saw.
3. Install top jamb piece using 8d galvanized finishing nails to 2x4 or 2x6 structural frame members. Alternate nailing from side to side, nailing every 12” and approximately 3/4” from each edge. Note: If nailing product at 40°F or below, pre-drilling is required.
4. Measure and cut jamb side pieces to fit from top jamb to floor. Nail as directed.
5. Measure top brick mould to overlap the jamb material by 1/2”. This will allow for a 1/8”–1/4” reveal around the jamb. Reveal should be both on top and sides. Cut 45° angle on ends, butt or angle joint middle seam if needed. *Note: nails should penetrate structural frame at least one inch.
6. Measure and cut side brick mould trim to fit. Install as directed.

Never Rot® Garage Door Thermo*Stop® II
1. When installing Garage Door Thermo*Stop® II alone, open the garage door and remove old door stop with standard claw hammer.
2. Close garage door. Begin Garage Door Thermo*Stop® installation by measuring and marking 1/2” from outside of garage door several places around the jamb. Connect the marks with a straight edge, then open door again.
3. Measure top opening from side to side and cut Garage Door Thermo*Stop® ends square with fine tooth power- or hand saw.
4. Place grooved side against jamb and inner edge, (where hard vinyl joins weatherstrip) along marked lines. Nail in place with 6d galvanized finishing nails in the pre-punched nail guides or 8” on center.
5. Measure and cut each piece to fit, from top piece to floor. With grooved side against jamb, position nail as directed.
6. For a good drainage and overlap, trim side stop pieces at a 45° angle with scissors where the soft vinyl weather stripping meets the top.
7. Cover edges with crown or trim moulding. 

CAUTION: Ceiling planking should never be used for load-bearing application. Attic space above porch should be vented.

Never Rot® Siding Corners
1. Insert nailing fins into corner trim as shown.
2. Cut the trim pieces so that they touch the soffit on top and extend 1/8” below the sheathing on bottom.
3. Measure from the corner: 4” for 3-1/2” trim and 6” for 5-1/2” trim and make several V-marks from top to bottom. Use these marks to line up the edge of the nailing fin or to strike a chalk line for alignment.
4. While lining up the edge of the nailing fin with the V-marks (or chalk line), apply nails through the pre-punched holes, 18” (MAX) apart.
5. Apply 4” window and door sealing tape so that it fully covers both nailing fins, from the soffit to the bottom of the sheathing.

Royal Smart Space System Organizer
Mount the system by screwing directly into the studs. Screws should be #8, minimum, in size and long enough to penetrate studs by 1/2 their length. Length may vary depending on wall construction. Join panel ends over studs to maximize load capacity.
Painting Royal Cellular Vinyl PVC

Royal’s factory applied Readi-Finish® requires no painting for protection. Desired custom finishes can be achieved using oil based or latex paints. To maintain warranty for custom colors in darker shades, use of paints with VinylSafe™ Technology from Sherwin Williams is recommended. (Dark colors are considered any color that falls within the lightness (L) value of 56 to 0 noting that 100 is white and 0 is black.)

Royal Trim Board® and Royal S4S Trimboard™ may be painted to achieve a color other than that supplied.

1. Scuff Sand using 220 grit sandpaper to remove any foreign matter and to promote adhesion. Clean sanding residue and paint with a latex acrylic paint. For darker colors refer to Sherwin Williams VinylSafe™ Color Technology. Allow to dry per manufacturer’s directions.
2. Apply a second coat (if required to achieve desired color).

Finishing Clearwood®

Prepare
1. DO NOT SAND.
2. If cleaning is necessary, wipe with mineral spirits, naphtha or ammonia.
3. For best results use a water based putty or filler after staining to fill nail holes, seams and miters.
4. For best results, test your stain before starting your project. Always use new or reasonably new finishing materials that have not been stored outside in extreme cold or heat. Follow instructions on can.

Paint
Clearwood® PS paints easily, usually with one coat. Apply any oil or latex paint with a brush, roller or sprayer.

Stain
1. Use a penetrating oil base stain. Shake well. Stir often.
2. Apply stain with lint-free cloth or brush. When using a brush, remove the excess liquid from the bristles before applying stain.
3. Allow stain to dry, usually 5-15 minutes. (Follow stain can instructions.)
4. Buff w/ lint-free rag to bring out the grain.
5. If darker color is desired, apply a second coat after 4-6 hours. The stain will continue to be absorbed after Clearwood PS appears to be dry.
6. When the second coat looks dry, buff to bring out the grain.

Topcoat
After stain has dried thoroughly, apply a clear polyurethane topcoat with a brush or spray. Apply any oil or latex paint with a brush, roller or sprayer.

Staining

Instructions are intended to give general overview of various methods & techniques for STAIN-ABLE™ products. Work with sample profile to test stain and develop proper color before starting project.

Tools for STAIN-ABLE™:
- Stain or glaze – Heavy body or high pigment EXTERIOR gel stains perform best.
- Top coat – Select topcoat that corresponds with application as well as stain type (oil, water base, etc.)
- Foam Brush – to apply initial coat of stain or glaze
- Soft Badger Hair Brush – used to blend or soften a finish.
- Rags – Soft cotton is recommended
- Safety products – safety glasses, gloves, and garment protection.

Step 1: Follow manufacturer’s recommendations for Stain or glaze. Using foam brush, saturate product surface with stain or glaze and allow coating to “rest or soak” for five minutes.

Step 2: Start wiping stain or glaze with cloth. The amount wiped will determine end color. Start with light touch in one direction only. Vary amount wiped to create natural color variation found in real wood. Allow some coating to remain in embossed areas to achieve graining effect.

Step 3: Use Soft Badger Hair brush to blend and soften the coating. Additional coats may be added to darken an area, but use small amounts and dry brush periodically.

A few points to remember:
- Use soft brush and long strokes. Soft badger bristles and light pressure will achieve the desired coating.
- A cross-hatching motion will blend color and soften appearance.
- Stippling “Pouncing action” will add color back to the product.
- Intentionally leave dark and light areas to achieve more natural wood effect.

Step 4: Always apply topcoat for protection. Type of topcoat must be compatible with exterior gel stain used.

Cleaning

Exterior Never Rot® Mouldings and Trim
Cleaning Royal Mouldings is easy and fast with most major household cleaners. There are many cleaners on the market and the glass cleaners seem to be the best candidate for keeping the finish intact. The cleaning solution should be applied and immediately wiped dry. With any cleaning material, the cleaning solution should not be left to stand on the components for an extended period of time. Royal Mouldings recommends the following cleaners:

- Windex®
- Spic & Span Cinch®
- Fantastik Orange Action®
- Clorox Clean-Up®
- Fantastik Oxy Power Multi-Purpose Cleaner®

What to Avoid
Harsh cleaners with glycol ethers or ethanol type solvents and/or isopropyl alcohol soften the coating if left on for several minutes and are not recommended. Examples of these harmful cleaners are Goof Off®, Wal-Mart “Great Value All Purpose Cleaner®” (glycol ether), 409 General Purpose® (2-Butoxyethanol) and Greased Lightning® (glycol ether), citrus cleaners, abrasive cleaners, and solvents such as acetone, paint remover and lacquer.

Cleaning Clearwood® Interior Mouldings
To clean finished Clearwood® PS gently wipe with damp rag.

Storage & Handling
Royal trim materials should be stored on a flat and level surface on a full shipping pallet. Handle materials to prevent damage to product edges and corners. Store trim under protective covering to prevent jobsite dirt and residue from collecting on trim.

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