Beams
INSTALLATION INSTRUCTIONS

You may wish to paint, stain or faux finish your decorative millwork piece prior to installation. This can speed up installation and reduce errors (spilling onto ceiling or walls).

Materials needed:
- Ladder
- Tape Measure
- Reciprocating Saw
- Caulk Gun
- Painters Caulk
- Pencil
- Safety Glasses
- Polyurethane Compatible Filler
- Sandpaper
- Paint Brush
- Paint
- Circular or Hand Saw
- ¼” Drill Bit
- Power Drill
- Spade Bit
- 1 ½” Trim Screws
- Wood Blocks
- Stud Detector
- Screwdriver
- Polyurethane Compatible Adhesive

1. Measure Ceiling for Placement
   A) Measure the ceiling for placement of the beams and use the markings on the ceiling to draw a guide line for the center line of each beam.

2. Beam Support
   A) Cut wood blocks for beam supports to match inside width of beam and drill a hole into the center portion of each block with a ¼” drill bit.

3. Attach Block to Ceiling
   A) Measure for placement of blocks on the ceiling. Use a stud detector to ensure that there are no joists where the block and toggle bolts are to be mounted.
   B) Hold each block to the ceiling, center it on the guide line and dimple for position of the toggle bolt. Using a phillips head screw driver inserted into the ¼” hole in the block to dimple the ceiling. A ½” hole is needed for the toggle bolt.
   C) Insert toggle bolt into the block and attach block to the ceiling.
   D) Apply adhesive to block where beam will be attached.

4. Attach Beams
   A) Attach beams to blocks with 1 ½” trim screws, screwed into the sides.

General Installation Notes
Any adhesives, sealants, fillers or paint used must be compatible with the material that is being installed (see manufacturer’s recommendations in the Finishing and Adhesives section below). Always use corrosion-resistant mechanical nails or screws along with manufacturer’s recommended adhesive product when installing all Fypon products. This combination provides a secure, long-lasting bond. Countersink all fasteners about 1/8” and fill with product compatible filler. Exterior installations should be finished using a manufacturer’s recommended caulk to prevent water infiltration behind siding, windows and doors. Some exterior installations, in particular new construction before siding is applied, may require a J-channel and/or flashing to prevent water infiltration. Installers must determine which installation technique is best for the specific situation.

Finishing and Adhesives
Polyurethane (PUR) – Fypon polyurethane products are factory primed. Depending on product location, always use interior/exterior-grade, PUR compatible adhesives, sealants, and fillers when installing Fypon products. Consult the manufacturer’s recommendations for your particular climate and the substrate you are installing to.

Cellular PVC – Depending on product location, always use interior/exterior-grade, PVC compatible adhesives, sealants, and fillers when installing Fypon products. Consult the manufacturer’s recommendations for your particular climate and the substrate you are installing to. If painting is desired, a 100% acrylic latex paint with a Light Reflectance Value (LRV) of 55% or higher must be used. Applying paint with an LRV of 54% or lower will void the warranty.

IMPORTANT:
Please read these installation guidelines thoroughly before beginning installation. Please note that these guidelines are provided only to assist with the installation of Fypon moulding and millwork products. Modified procedures may be required in order to meet specific situations, unique applications and local building codes. The manufacturer does not, under any circumstances, warrant the installation of its products. Be sure to wear appropriate protective clothing, gloves and safety glasses when working with any tools. Installer should check for and relocate all electrical wiring within the proposed installation area, as needed (be sure to disconnect all electric power before working with any electrical wiring and follow all applicable local electrical codes and safety procedures).

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Polyurethane Millwork - General Information

INSTALLATION INSTRUCTIONS

Moulded of high-density polyurethane foam, Fypon moulded products have an in-mould barrier coat, which becomes an integral part of the urethane foam as it cures. After each piece is moulded and trimmed, we apply an exterior grade primer. Polyurethane is a closed-cell product, making it resistant to moisture and insects. It resists rotting, warping cracking and peeling, as well as crumbling and deterioration.

Storage & Handling

- Polyurethane millwork should be stored on a flat, level surface in a cool, shaded area, and should not be stored in extreme heat.
- Millwork that has been stored in a hot place should be allowed to acclimate to the installation area. Due to urethane’s high insulating value, this may take up to 10 hours.
- Handle the product with care to avoid damage. If the product does become damaged, it is easy to repair. Use wood filler or automotive filler to quickly fill dents or gashes of any size. Broken moulding can be successfully rejoined with polyurethane compatible adhesive or equivalent product.

Product Applications

- Fypon polyurethane products are to be used for decorative purposes only, not to provide structural support (except structural columns, balustrade systems and porch posts).
- Fypon polyurethane products can withstand temperatures of about 140°F (60°C). However, the millwork should never be installed in an area subject to solar temperature buildup, such as behind a storm door.
- Fypon polyurethane will resist the elements, except for direct sunlight to the yellowish (unpainted) underside of the millwork. It is important to fill damaged or cut surfaces with putty, caulk, and/or paint within a few days.

Machining Guidelines

- Fypon products can be cut, drilled or routed similar to wood products.

Fastening Guidelines

- Proper fastening is important in limiting the effects of expansion and contraction on the product. For best results, always use non-corrosive finish nails or screws in combination with urethane compatible Adhesive or equivalent product. Adhesive should be applied to all contact points, including joint ends.
- Power nailers work well with this product but should be adjusted to prevent over driving the fastener into the material. This will prevent excessive nail pressure which can result in cracking.

Finishing Techniques

- Painting - Fypon products may be painted with any good quality latex paint. Usually one coat is all that is needed. See additional information on finishing and painting below. They are also suitable for many faux finishing techniques, including sponging, feathering and antiquing.
- Staining - Fypon Timber products are noted as Woodgrain/Stainable and may be stained with a good quality, non-penetrating stain. Apply stain with a 2” natural bristle brush. Begin with a circular motion, then feather the stain in the direction of the grain. For a darker finish, apply a heavy coat of stain with light pressure. For a lighter finish, apply a thin coat of stain with more pressure.
- Grout Application - Fypon Stone products do not require grout application, but it may be applied after installation to achieve a desired appearance. A urethane-based grout is recommended and should be applied per the grout manufacturer’s specifications.

Expansion & Contraction

- This product expands and contracts with changes in temperature. To minimize this characteristic the recommendations given in the Fastening section should be followed.
- When installing this product allow $\frac{3}{16}$" per 18” for expansion and contraction. Remember that it is recommended that all joints be glued and where possible, fastened to the substrate to prevent joint separation.
**General Installation Notes**

Any adhesives, sealants, fillers or paint used must be compatible with the material that is being installed (see manufacturer’s recommendations in the Finishing and Adhesives section below). Always use corrosion-resistant mechanical nails or screws along with manufacturer’s recommended adhesive product when installing all Fypon products. This combination provides a secure, long-lasting bond. Countersink all fasteners about 1/8” and fill with product compatible filler. Exterior installations should be finished using a manufacturer’s recommended caulk to prevent water infiltration behind siding, windows and doors. Some exterior installations, in particular new construction before siding is applied, may require a J-channel and/or flashing to prevent water infiltration. Installers must determine which installation technique is best for the specific situation.

**Finishing and Adhesives**

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**READ CAREFULLY BEFORE STAINING**

**Before You Start**

**DO:**
- Apply stain when temperatures are between 50° and 90°F and relative humidity is below 80%. These are optimal conditions for staining.
- Apply stain to all exposed edges and ends of your stainable polyurethane product. All surfaces exposed to weather should be finished within 90 days of exposure.

**DO NOT:**
- Apply stain or topcoat while dew is present.
- Apply stain in direct sunlight.
- Sand stainable polyurethane product.

**STEP 1: SURFACE PREPARATION**

Prior to staining, be sure to clean and prepare surfaces. Use a clean rag dampened with mineral spirits to wipe the entire surface, removing all contaminants.

**Pro Tip:** Compressed air can be used to blow dust off of deeply grooved products.

Refer to troubleshooting on the back of these instructions to repair any scratches, if necessary.

**ITEMS YOU WILL NEED:**
- (1) Pair of Gloves
- (3) 3” Natural Brush for Stain
- (1) 2” Synthetic Brush for Topcoat
- (1) Staining Rag
- (2) Cleaning Rags
- Bottle of Mineral Spirits
- Stain
- Topcoat
- (2) Stir Sticks
- Step-by-Step Instructions

**RECOMMENDATION:**

Fypon recommends General Finishes 450 Exterior stain and top coat or Minwax Gel Stain and Minwax topcoat. If using Minwax Gel stain, it should be cut 2 - 1 with 2 parts stain and 1 part mineral spirits. Follow gel stain drying times found on the container.

**STEP 2: APPLY STAIN**

Stir the stain well with a stir stick. Improperly mixed stain will not dry correctly.

**APPLY THE STAIN**

Using your 3” natural brush apply the stain directly on the surface of the polyurethane product. Ensure that you work the stain into the grain.

Use the natural brush to even out the color, wiping the stain in the direction of the grain.

Use a brush to achieve the desired shade, wiping in the direction of the grain. For lighter shades, wait a few minutes, then rub off the excess stain. For darker applications allow stain to dry and then re-apply a second coat.

**Shutter Tip:** For best results, apply the stain to one section at a time as indicated:

Beams
A. Start with one side
B. Then top
C. Then the other side

Shutters
A. Stain main panels first
B. Then battens
C. Then edges

**STEP 3: BLEND**

After product has been fully stained, then take a clean, dry short bristle brush and begin dry brushing and blending the stain in the direction of the grain. Every few strokes, remove the excess stain onto a clean rag. Continue this process until you have completed the entire product and it appears as any stained wood product. Pay special attention to any deep grooves and corners. Do Not let stain collect or pool in these areas. For lighter shades wait a few minutes, then rub off the excess stain. For darker applications, repeat steps 2 and 3. Make sure first application is dry before applying second coat of stain.

**Tip:** To reduce bristle loss during the blending process, periodically tug on the bristles with a rag. This will help remove loose bristles so the strands do not fall off and stick to the product.
STEP 4: TEST FOR DRYNESS

To determine if the stain is dry enough for applying topcoat, allow to dry for at least 2 - 3 hours (water-based stain) or 6-8 hours for gel stain before testing for dryness and applying topcoat.

Tip: To test for dryness, follow the instructions below:

Using a gloved hand touch an area of the piece that is hidden or near an edge. The stain is completely dry when nothing comes off on the glove. If it is not dry, test again every hour until dry.

STEP 5: APPLY THE PROTECTIVE TOPCOAT

Stir the topcoat well with a stir stick.

To apply the topcoat, wet the tips of the 2” synthetic brush to apply a single, very thin first layer of topcoat.

Apply topcoat in a smooth and even motion. Do not use excessive brush strokes, as this may cause the topcoat to bubble or loosen the stain. If you find an area that is too light or dark with stain, apply a small amount of mineral spirits and wipe. Then reapply the stain and dry brush and blend area. After it is dry, top coat.

Tip: To reduce bristle loss during the topcoat process, periodically tug on the bristles with a rag. This will help remove loose bristles so the strands do not fall off and stick to the product.

Tip: Apply the topcoat in the same order in which you applied the stain in Step 2.

LONG-TERM MAINTENANCE

• All exterior finishes are affected by exposure to sun, weathering, moisture and air pollutants. Typical durability of the topcoat is 3–5 years, but may be less, depending upon site-specific conditions. When the topcoat feels rough, it’s time to reapply a new layer of topcoat.

DO NOT:
• Reuse topcoat more than 3 years old.
• Use topcoat that has been frozen.

TROUBLESHOOTING BEFORE STAINING

Light scratches or scuffs:
1. Prior to applying stain, lightly spray scratched area with a matching primer or smooth the area by buffing in the direction of the grain. A 3M™ Scotch-Brite™ pad is recommended for buffing.
2. Clean the repaired area and allow to dry before finishing.

Deep scratches:
1. Fill the scratch with a wood crayon or scratch pencil. Body filler may also be used. Lightly sand. Grain detail may have to be manually etched into these fillers.
2. Wipe off any excess filler with a cleaning rag dampened with mineral spirits.

TROUBLESHOOTING AFTER STAINING

Fine scratches:
1. Wipe the surface with mineral spirits.
2. Apply the stain to the scratched area with a cotton swab or an artist brush.
3. Blend the stain until color match is achieved.
4. Wait until the stain is dry before applying topcoat.
5. Apply a fine layer of topcoat over the repaired area with a clean cotton swab or small brush (approximately 1/2” width or less).

Tip: Fine scratches can be touched up by daubing stain onto the area even if topcoat has already been applied.

CAUTION – PLEASE READ!

To avoid inhaling any fumes when using stains, paints or topcoats, it is extremely important to use adequate ventilation. Keep all materials out of the reach of children. Close all containers after use.

Please be sure to follow the stain manufacturers safety procedures.