



Installation Instructions

Standard Beam Installation

General & Safety Information

- Wear proper personal protective equipment (PPE).
- Operate all tools per manufacturer guidelines.
- Standard woodworking saws and blades can be used for cutting Fypon® polyurethane (PUR) products.
- Fypon PUR parts are NOT load bearing.
- Always follow applicable code requirements and clearances with other equipment or fixtures per manufacturer recommendations.
- For truss applications, refer to Fypon Beam Truss Installation Instructions, which can be found at [fypon.com/install](https://www.fypon.com/install).
- For best results, finish and allow to dry prior to installation. Refer to Fypon General Finishing Instructions, which can be found at [fypon.com/install](https://www.fypon.com/install).
- All Fypon products must be installed per the following instructions and finished within 90 days of installation to maintain warranty coverage.

Tools / Materials

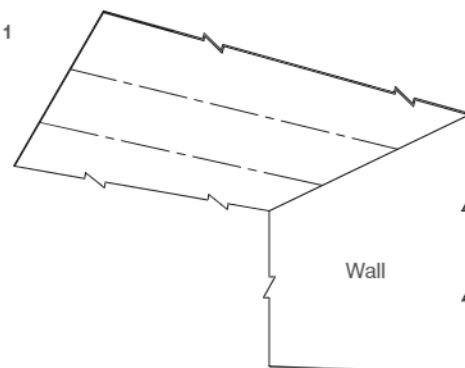
- Pencil
- Tape Measure
- Level
- Square and / or T-bevel
- Stud finder
- Painter's tape
- Hammer or pneumatic nailer
- Nail countersink
- Drill / driver (if using screws)
- Putty knife
- Saw (if trimming)
- 2x lumber (for blocking)
- Sandpaper (220-grit recommended)
- Chalk line
- Caulk gun
- Exterior-grade polyurethane-compatible sealant and /or filler
- Exterior-grade polyurethane-compatible adhesive (Loctite® PL Premium® recommended)
- Exterior-grade fasteners (trim-head screws recommended)

Installation Instructions

1) Mark installation area.

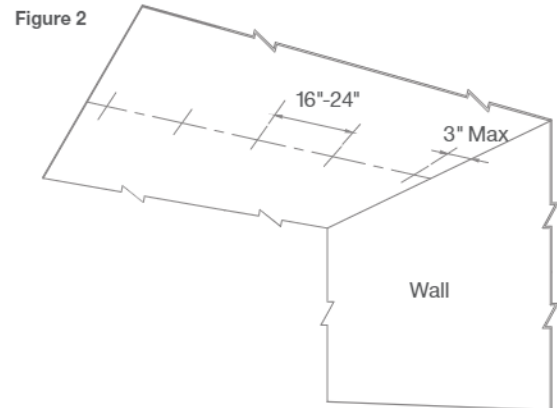
Mark the desired location(s) for the beam (Figure 1). A chalk line works well for this.

Figure 1



2) Mark mounting locations.

If studs / rafters are present, use a stud finder to identify and mark locations for the mounting blocks on studs or rafters. If studs / rafters are not present, toggle bolts should be used. Mounting block locations should be within 3" of the ends of the beam, 16" – 24" apart, and at any joints where beams meet (Figure 2).

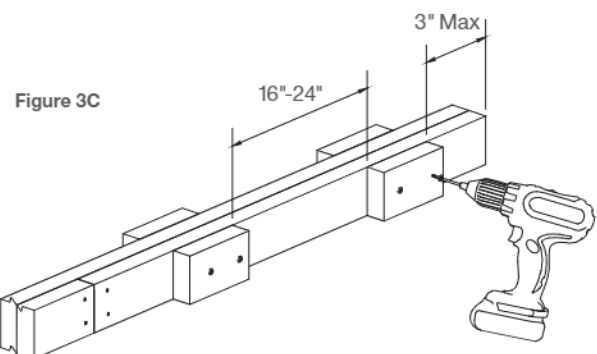
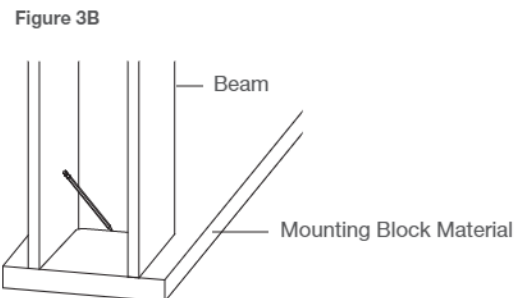
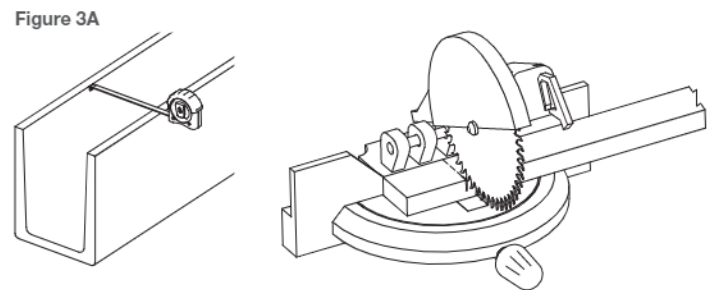


3) Fabricate mounting blocks.

Measure the inside width of the beam and cut blocks to fit inside the beam (Figure 3A).

For suspended beams 8' long and shorter, the inside of the beam can be used to trace the outline for a mounting block that can be fastened to the wall (Figure 3B).

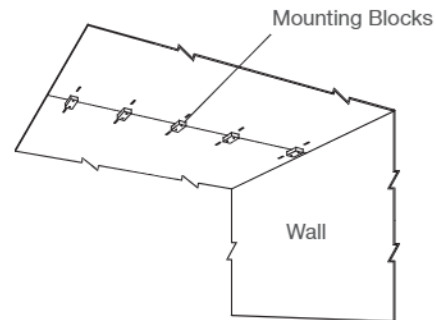
For suspended beams over 8' long, a board or boards should extend the full length of the beam to prevent the beam from sagging over time. Multiple boards may need to be screwed together with mounting blocks attached to both sides to fasten the beam to (Figure 3C). Mounting block locations should be within 3" of the ends of the beam, 16" – 24" apart, and at any joints where beams will meet.



4) Install mounting blocks.

Align and fasten mounting blocks with the marks made in the previous step. Mark the block locations with painter's tape that will be visible and removable after the beam is installed (Figure 4A). If screwing into studs / rafters, make sure the screw will penetrate at least 1" into the stud / rafter (Figure 4B). If not screwing into studs / rafters, use toggle bolts (Figure 4C). Use at least two fasteners per mounting block.

Figure 4A



If installing a ridge beam along the peak of a vaulted ceiling, install additional mounting blocks stacked on the first ones to provide sufficient contact surface for the beam (Figure 4D).

Figure 4B

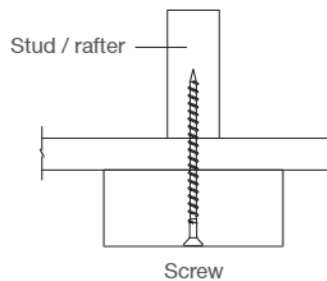
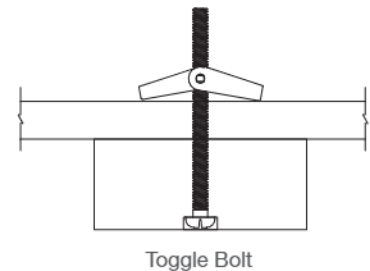


Figure 4C



If installing a suspended beam, install mounting blocks to the walls or joist hangers and full-length board (Figure 4E).

Figure 4D

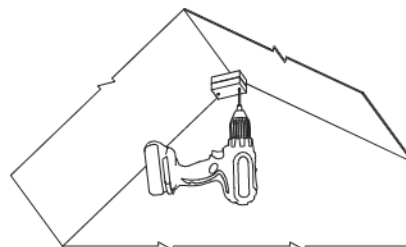
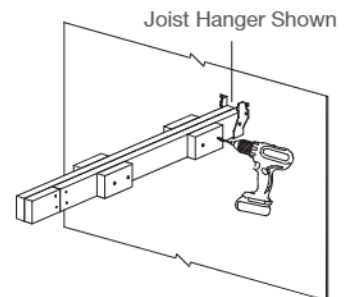


Figure 4E



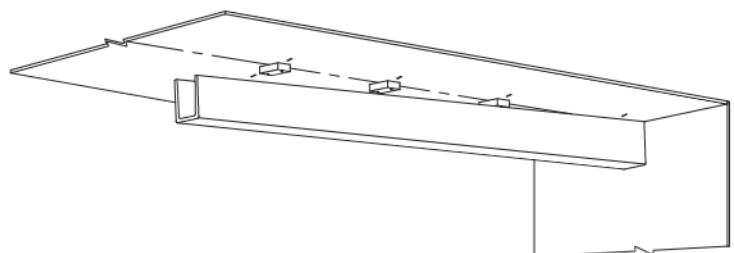
5) Cut beam and machine as needed.

Refer to Fypon® Beam Fabrication Instructions if this was not already done.

6) Dry fit the beam.

Once beam has acclimated to the installation temperature for at least 24 hours, position the beam where it will be installed (Figure 6) and confirm a tight fit. If not, trim as needed.

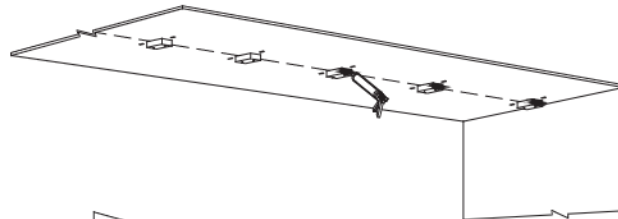
Figure 6



7) Apply adhesive.

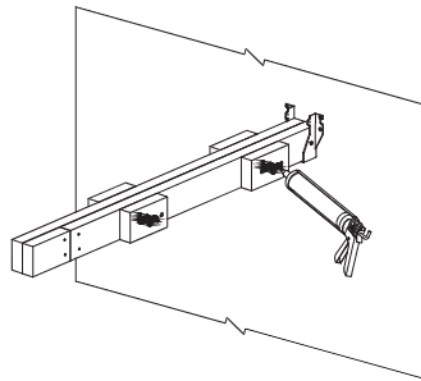
Apply a 1/4" bead of adhesive to the sides of the mounting blocks that will contact the beam (Figure 7).

Figure 7



8) Fasten the beam.

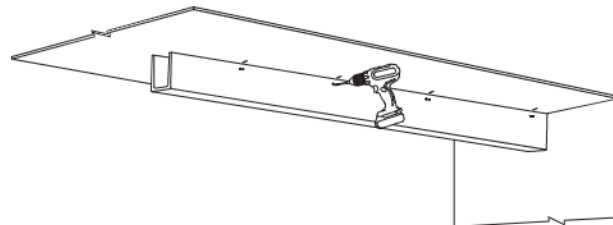
Position the beam in place over the mounting blocks and up against the ceiling (if applicable). Fasten to the mounting blocks from the side of the beam, with at least four fasteners per mounting block (two per side), making sure to countersink them below the surface (Figure 8). Any painter's tape on the ceiling can also be removed after the beam is installed.



9) Fill and sand fastener holes.

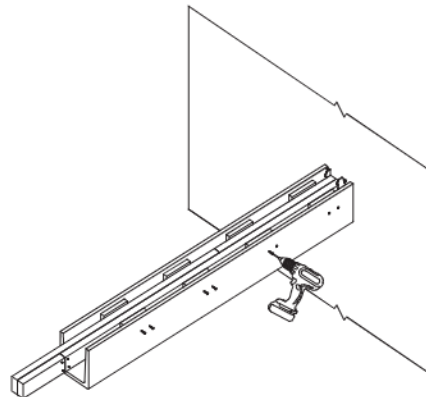
Fill fastener holes with filler and sand to match surrounding area, if needed, but be careful not to remove the primer.

Figure 8



10) Touch up or finish.

Refer to Fypon® General Finishing Instructions. If part was finished prior to installation, touch up filled fastener holes with color-matched finish. Joints and seams can also be caulked if desired.



General & Safety Information

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- Always follow applicable code requirements and clearances with other equipment or fixtures per manufacturer recommendations.
- For best results, finish and allow to dry prior to installation. Refer to Fypon General Finishing Instructions, which can be found at fypon.com/install.
- All Fypon products must be installed per the following instructions and finished within 90 days of installation to maintain warranty coverage.

Tools / Materials

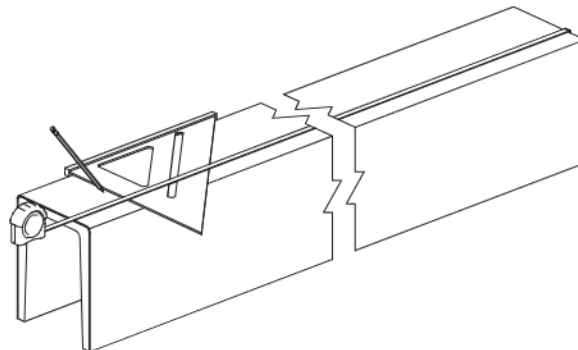
- Pencil
- Tape Measure
- Square and / or T-bevel
- Hammer or pneumatic nailer
- Nail countersink
- Drill / driver (if using screws)
- Putty knife
- Jig saw w/ 45°-angle cut capability and fine-tooth blade
- Rasp or file
- Sandpaper (220-grit recommended)
- Caulk gun
- Exterior-grade polyurethane-compatible sealant and / or filler
- Exterior-grade polyurethane-compatible adhesive (Loctite® PL Premium® recommended)
- Exterior-grade fasteners (trim-head screws recommended)

Installation Instructions

1) Measure and mark beam.

Allow beam to acclimate to installation temperature for at least 24 hours, then measure and mark desired beam length. Use a square to mark straight lines on all sides of the beam that will be cut (Figure 1). If a beam top will be installed, mark it at the same time to the same length as the beam. If fitting against an angled wall or ceiling, a T-bevel may be helpful to identify the proper pitch and cut angle.

Figure 1



2) Cut and machine beam.

Use a jigsaw with a fine-tooth blade to cut the beam. It may be helpful to use the square as a saw guide for a straight cut (Figure 2).

If a beam top or end cap will be installed, proceed to the next step. If not, refer to the Fypon® Standard Beam Installation Instructions.

Figure 2

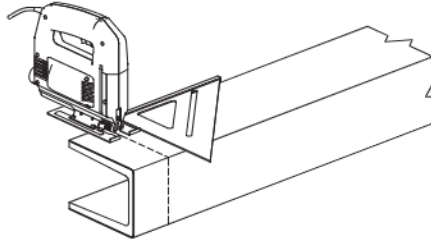
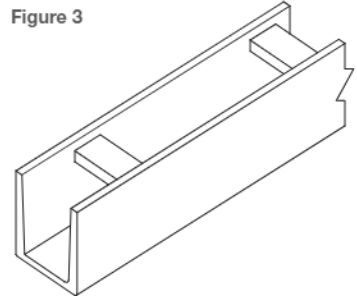


Figure 3



3) Square beam.

Cut and insert blocks of polyurethane or other structural material along the length of the beam on the inside to make it square and a consistent width (Figure 3).

4) Bevel the end(s) of the beam and beam top (if end cap will be installed).

Adjust the jigsaw to a 45-degree angle and bevel the inside end(s) of the beam that will receive an end cap (Figure 4A). Also bevel the end(s) of the beam top, but round the corners to follow the shape of the beam (Figure 4B).

Figure 4A

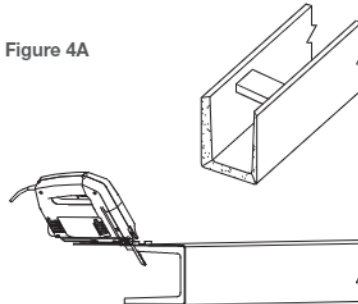
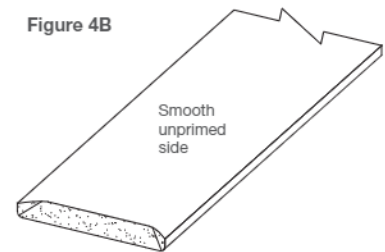


Figure 4B



5) Trace the beam end cap (if applicable).

Temporarily assemble the beam top and tape it in place. Place the smooth side of the end cap against the end of the beam, with the desired area of grain showing. Hold the end cap in place and trace the outline of the beam on the back side of the end cap (Figure 5). Mark the top or bottom of the end cap, if desired.

Figure 5

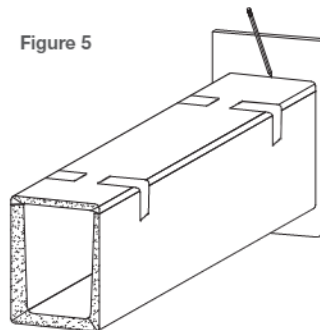
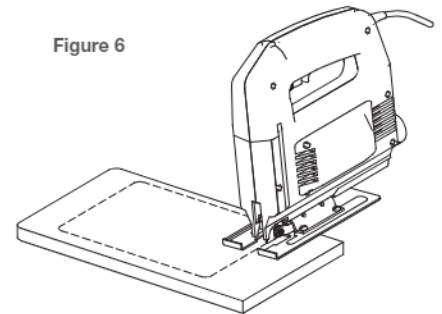


Figure 6



6) Cut end cap.

Use the jigsaw to cut the beam end cap along the lines marked in the prior step. Round the corners to match the beam (Figure 6).

7) Bevel the end cap.

Adjust the jigsaw to a 45-degree angle and cut around the end cap with the wood-grained side up, so all of the edges are beveled (Figure 7).

Figure 7

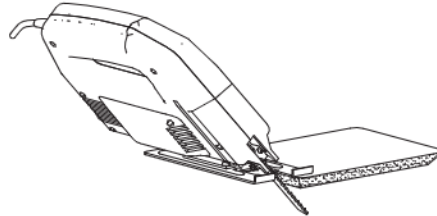
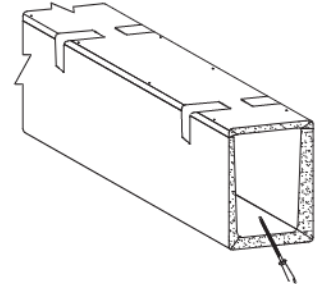


Figure 8



8) Dry fit and clean up the cut edges.

Dry fit the beam, beam top and / or end cap to confirm they fit tightly together. If they do not, use a rasp, file or sandpaper to modify the beveled edges where necessary, until they fit together as desired (Figure 8).

9) Assemble beam top (if applicable).

Apply a 1/4" bead of adhesive along the long edge of the beam (Figure 9A), press the beam top into place, and fasten (Figure 9B). Remove any excess adhesive.

Figure 9A

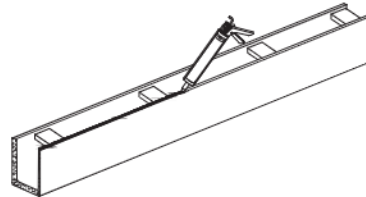
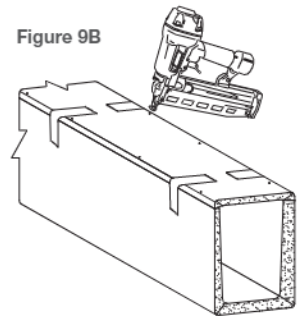


Figure 9B



In some cases, it may be necessary to perform this step after the beam is installed.

10) Assemble beam end cap (if applicable).

Apply a 1/4" bead of adhesive along the beveled edges of the end cap (Figure 10A) and press it in place. Tape or fasteners should be used to hold the end cap in place while the adhesive cures (Figure 10B), but remove any excess adhesive while it is still wet. Tape can be removed after the adhesive has cured (Figure 10C).

Figure 10A

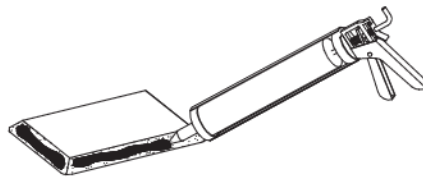
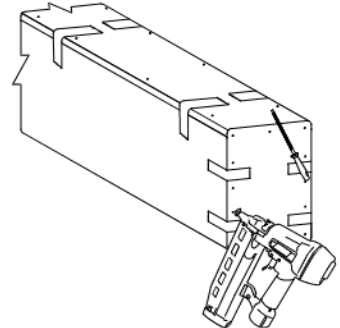


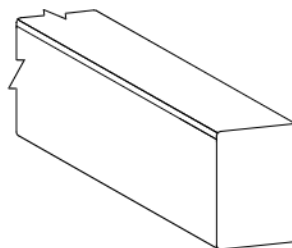
Figure 10B



11) Fill and sand fastener holes.

Fill fastener holes with filler and sand to match surrounding area, if needed, but be careful not to remove the primer.

Figure 10C



12) Touch up or finish.

Refer to *Fypon® General Finishing Instructions*. If part was finished prior to fabrication, touch up filled fastener holes with color-matched finish.

General & Safety Information

- Wear proper personal protective equipment (PPE).
- Operate all tools per manufacturer guidelines.
- Standard woodworking saws and blades can be used for cutting Fypon® polyurethane (PUR) products.
- Fypon PUR parts are NOT load bearing. However, Fypon PUR beam mantels have been tested to support a weight load capacity of up to 200 lbs. if properly mounted.
- Always follow applicable code requirements and clearances with fireplaces or other heat sources per manufacturer recommendations. Fypon PUR beam mantels have been tested to ASTM D1929 and shown to be safe from ignition to 300°C (572°F). For comparison, soft woods can ignite at temperatures as low as 180°C (356°F).
- For best results, finish and allow to dry prior to installation. Refer to Fypon General Finishing Instructions, which can be found at fypon.com/install.
- All Fypon products must be installed per the following instructions and finished within 90 days of installation to maintain warranty coverage.

Tools / Materials

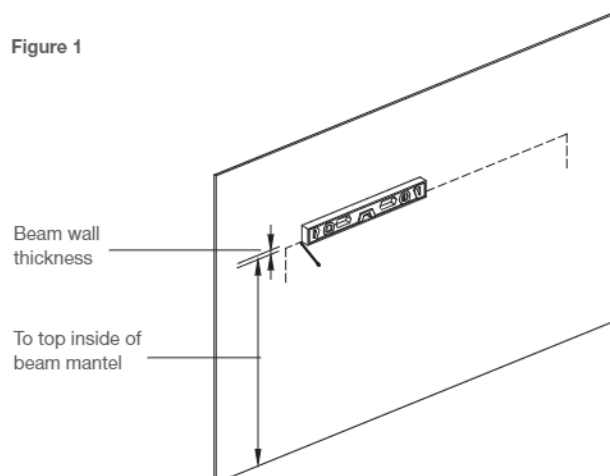
- Pencil
- Tape Measure
- Level
- Square and / or T-bevel
- Stud finder
- Hammer or pneumatic nailer
- Nail countersink
- Drill / driver and appropriate bits
- 2x4 or 2x6 lumber
- Saw (to cut blocking)
- Putty knife
- Sandpaper (220-grit recommended)
- Caulk gun
- Exterior-grade polyurethane-compatible sealant and / or filler
- Exterior-grade polyurethane-compatible adhesive (Loctite® PL Premium® recommended)
- Exterior-grade fasteners (1-½" trim-head screws recommended)
- 3/16" x 4" toggle bolts
- 3" flat-head fasteners (for drywall or wood)
- 1/4" x 2-¾" flat-head concrete anchors (for masonry)

Installation Instructions

1) Mark guideline.

Refer to Figure 1. If installing the beam mantel over a heat source, ensure that the location meets applicable code requirements. Typically, the bottom of the beam mantel must be at least 12" above the heat source, plus 1" for every 1" that the mantel protrudes from the wall. Mark a straight and level guideline to denote the inside top and ends of the beam mantel. The top edge of the beam mantel will sit above this line, by its wall thickness.

Figure 1



2) Fabricate mounting blocks.

From 2x4 or 2x6 lumber, cut mounting blocks that match the inside height of the beam mantel, or cut a single board that is slightly less than the inside length of the beam mantel. Refer to the table on the right for the number of mounting blocks to cut, based on the length of the beam mantel (Figure 2A). Drill three 1/8" holes in each mounting block as shown (Figure 2B), with one in the center of the block and two more that are spaced 3/4" in from the top corners. If using a single board, wait to drill holes until the next step.

Figure 2A

Beam Length	Wood Mounting Block (Qty)
Up to 60"	3
60" to 78"	4
78" to 90"	5

3) Mark mounting block locations and prepare mounting blocks for installation.

Refer to Figure 3. Use a stud finder and mark any stud locations on the guideline. If the stud locations are more than 16" apart or not within 6" of the beam mantel ends, additional mounting locations will be needed, with toggle bolts at the non-stud locations.

For any of the center mounting block holes that will receive toggle bolts, enlarge the 1/8" hole in the block to 1/4" to allow the toggle bolt to pass through. Mark the toggle bolt hole location on the wall and drill a 5/8" hole for the expanding part of the toggle bolt to pass through.

Similarly, if installing on masonry, pre-drill holes as needed for any masonry fasteners.

If using a single board, drill holes in the same pattern as the mounting blocks, to align with the identified mounting locations, and similarly prep any holes for toggle bolts or masonry fasteners.

Figure 2B

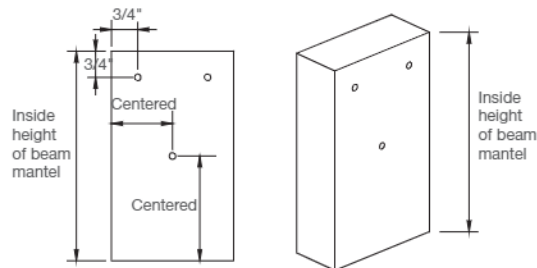
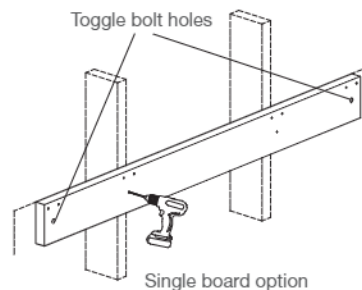
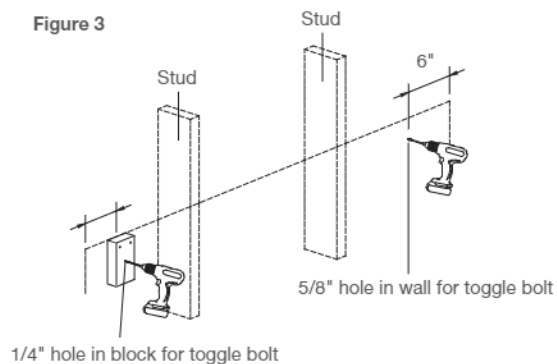


Figure 3

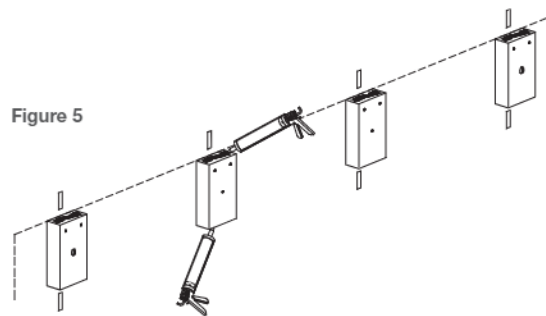
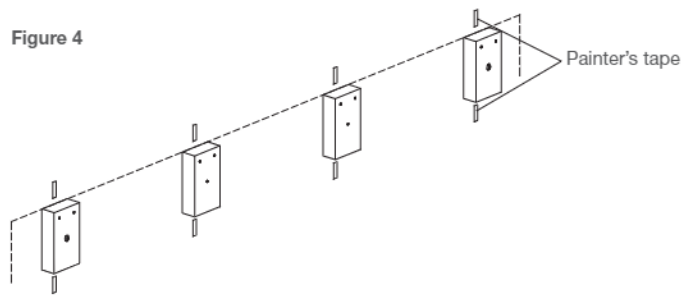


4) Attach mounting block(s).

Refer to Figure 4. Align the tops of the mounting blocks with the guideline at the desired locations and fasten to the wall using the appropriate fasteners. Secure to studs using 3" screws, masonry using masonry fasteners, or non-stud drywall locations using toggle bolts.

If using a single board, fasten in the same manner, using appropriate fasteners.

Use painter's tape to mark the location of each mounting block about 2" above and below the block, to mark where the beam will be fastened.

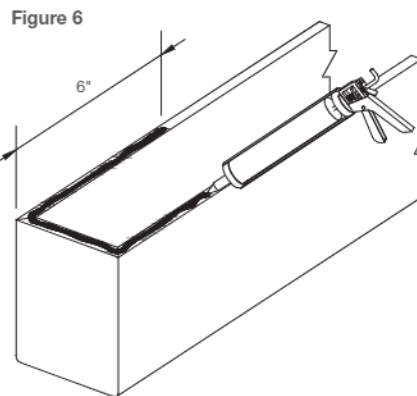


5) Apply adhesive to mounting blocks.

Apply a 1/4" bead of adhesive to the top and bottom of each mounting block (Figure 5).

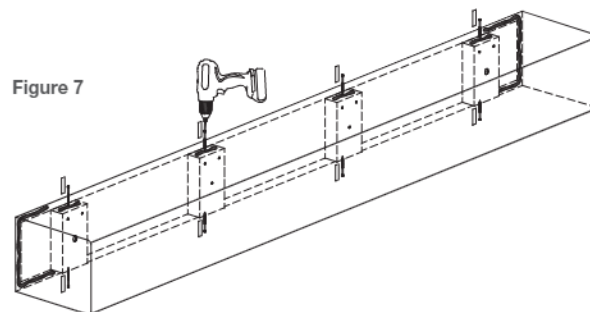
6) Apply adhesive to the beam mantel.

Apply a 1/4" bead of adhesive to the back side of the beam mantel at the ends and about 6" in from the ends (Figure 6).



7) Install beam mantel.

Press the beam mantel over the mounting blocks and against the wall. Fasten at the mounting locations with 1-1/2" trim head screws, about 1" away from the wall, making sure to install them vertically and countersink them below the surface (Figure 7). Remove any excess adhesive and painter's tape.



8) Fill fastener holes.

Fill fastener holes with filler and sand to match surrounding area, if needed, but be careful not to remove the primer.

9) Touch up or finish.

Refer to Fypon® General Finishing Instructions. If part was finished prior to installation, touch up filled fastener holes with color-matched finish.

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- Tape Measure
- Level
- Square and / or T-bevel
- Stud finder
- Hammer or pneumatic nailer
- Nail countersink
- Drill / driver (if using screws)
- Putty knife
- Saw (if trimming)
- Plumb line (if using cable)
- Sandpaper (220-grit recommended)
- Chalk line
- Caulk gun
- Exterior-grade polyurethane-compatible sealant and / or filler
- Exterior-grade polyurethane-compatible adhesive (Loctite® PL Premium® recommended)
- Exterior-grade fasteners (trim head screws recommended)
- Cable, cable clamps and eye screws or threaded rod and threaded rod mounts / nuts

Installation Instructions

1) Install top vertical support mounts (if applicable).

Refer to Fypon Standard Beam Installation Instructions to mark and install mounting blocks, including any locations that will have a vertical support or king post. If using cable, fasten an eye screw to the mounting block at the truss location (Figure 1A). If using a threaded rod, secure a threaded rod mount to the mounting block (Figure 1B).

Figure 1A

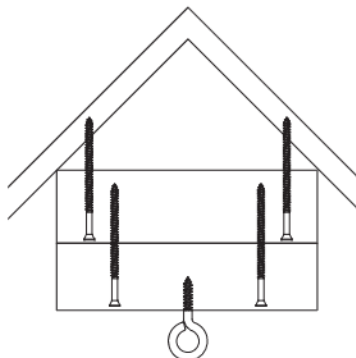
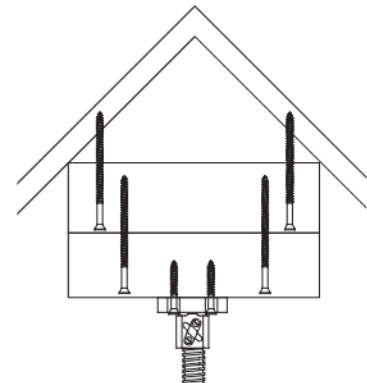
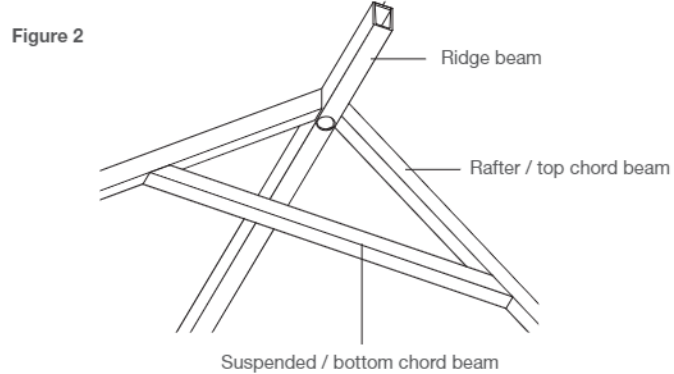


Figure 1B



2) Install ridge beams, rafter (top chord) beams, or suspended (bottom chord) beams.

Refer to the Fypon® Beam Fabrication and Standard Beam Installation Instructions. Install the ridge beam, with holes in all locations where vertical supports like cables or threaded rods will pass through the beam. Next, install any other rafter (top chord) beams. If the bottom chord of the truss will be a suspended beam, install it next (Figure 2).



3) Install bottom vertical support mounts (if applicable).

If using cable, suspend a plumb line from the eye screw to determine the mounting block location (Figure 3A). If using a threaded rod, install it into the threaded rod mount to determine the location of the mounting block at the bottom (Figure 3B). If there is not a full-length support in the suspended beam, cut and install a mounting block to attach the cable or threaded rod to. Apply a 1/4" bead of adhesive to the edges of the mounting block and secure it to the suspended (bottom chord) beam using trim screws (Figure 3C), with the heads countersunk. Drill a hole in the mounting block for the threaded rod (Figure 3D) or install an eye screw if using cable (Figure 3E).

Figure 3A

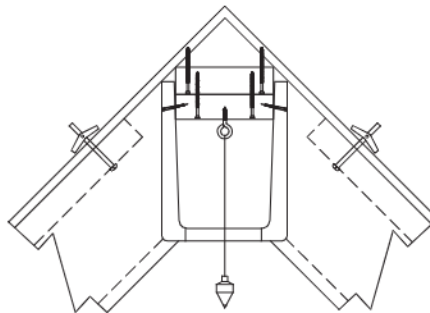


Figure 3B

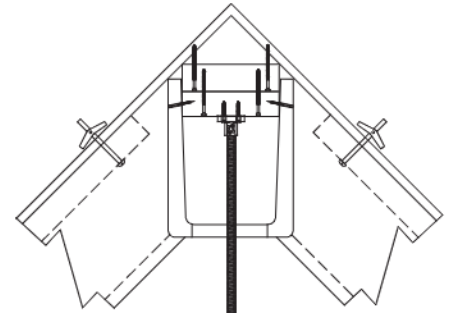


Figure 3C

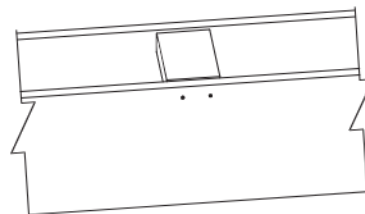


Figure 3D

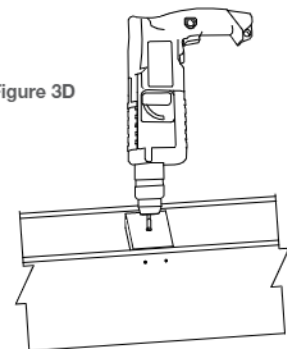
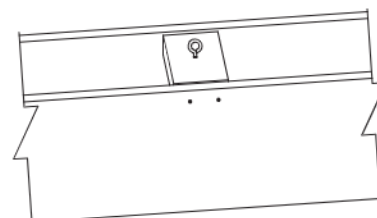


Figure 3E

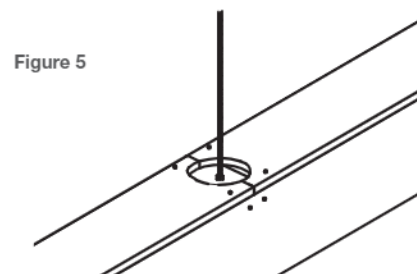
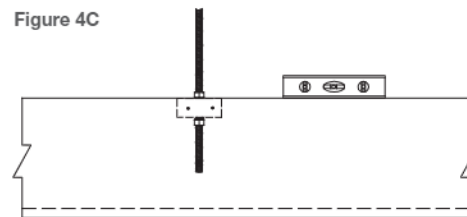
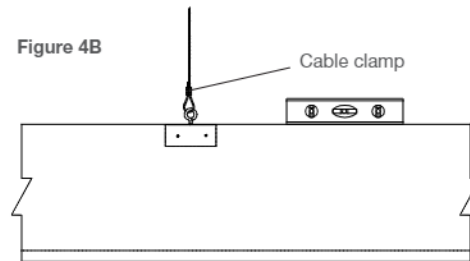
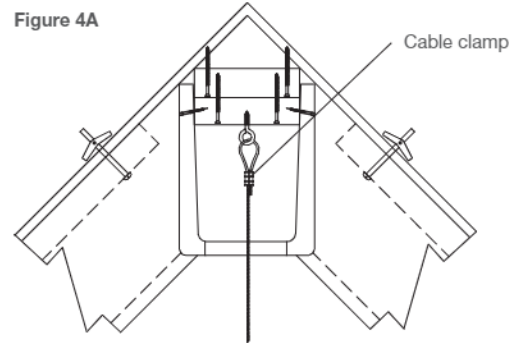


4) Attach vertical support to suspended beam.

If using cable, attach one end to the eye screw at the peak, using a cable clamp (Figure 4A). Attach the other end to the eye screw on the suspended beam, take out the slack in the cable and make sure the beam is level, then secure with a cable clamp (Figure 4B). A turnbuckle can also be used for fine tuning of the cable length. If using a threaded rod, make sure the suspended beam is level and secure the bottom of the threaded rod to the mounting block in the suspended beam (Figure 4C). The threaded rod may have to be cut before this step, leaving room for some adjustment.

5) Install beam tops (if desired).

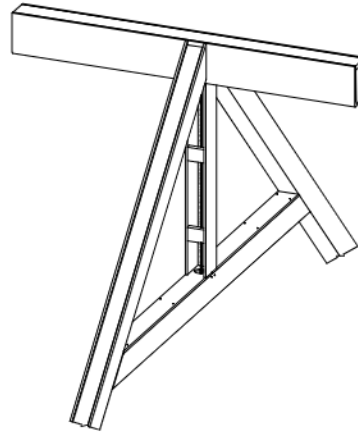
If a beam top will be installed on the suspended beam, do so now. Refer to the Fypon® Beam Fabrication Instructions to fabricate and assemble the beam top. It may be necessary to fabricate the beam top in multiple pieces with notches in the ends to fit around the vertical support mount (Figure 5).



6) Install king post beam around vertical support.

Refer to Fypon® Beam Fabrication Instructions if king post beam was not already cut. Install king post beam to hide the vertical support (Figure 6A) and install a beam top on the open side (Figure 6B). Fasten the king post beam at the top and bottom with trim screws and countersink the heads.

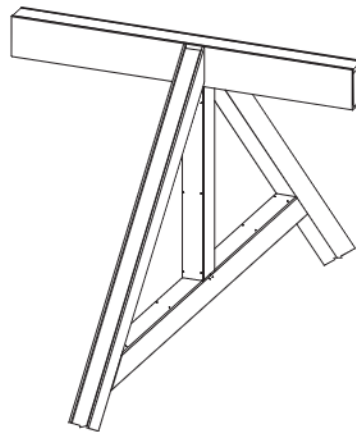
Figure 6A



7) Install additional beams.

Install any additional webbing (strut) beams (Figure 7). If additional mounting blocks are needed, follow the same process as before, and as shown in the Standard Beam Installation Instructions.

Figure 6B



8) Attach any accessories.

Attach any beam straps, beam plates, etc. with adhesive and fasteners in the desired locations (Figure 7).

9) Fill and sand fastener holes.

Fill fastener holes with filler and sand to match surrounding area, if needed, but be careful not to remove the primer.

10) Touch up or finish.

Refer to Fypon General Finishing Instructions. If part was finished prior to installation, touch up filled fastener holes with color-matched finish. Joints and seams can also be caulked if desired.

Figure 7

