HardiePanel® Vertical Siding Product Description

HardiePanel® vertical siding is factory-primed fiber-cement vertical siding available in a variety of sizes and textures. Examples of these are shown below. Textures include smooth, stucco, Cedarmill® and Sierra 8. HardiePanel vertical siding is 5/16 in. thick and is available in 4x8, 4x9 and 4x10 sizes. Please see your local James Hardie dealer for texture and size availability.

HardiePanel vertical siding is available as a prefinished James Hardie® product with ColorPlus® Technology. The ColorPlus coating is a factory applied, oven baked finish available on a variety of James Hardie siding and trim products. See your local dealer for availability of products, color and accessories.
Note: James Hardie has a capillary break requirement when installing HardiePanel on a Multi-Family/Commercial project. Please visit: www.jameshardiepros.com for further information.

**GETTING STARTED**

First locate the lowest point of the sheathing or sill plate, and begin installation on that wall.

1. Measure up from the sill plate the height of the panels at either end of the wall and snap a straight, level chalk line between the marks as a reference line. That line is for guidance in positioning the top edge of the panels. Check the reference line with a 4 ft. level.

2. Starting on one end and working across the wall, measure and trim the first panel making sure that the edge falls in the middle of a stud.

3. Using the chalk line as a guide along the panel's top edge, carefully position the panel and secure it with suitable fasteners and fastener spacing for the particular application as noted in the ESR-1844.

4. As installation continues, check the vertical edge of each panel with a 4 ft. level.

TIP: It is common practice to mark panels for cutting with a chalk line. Blue chalk is recommended because it washes off. Red chalk is considered permanent and may bleed through lighter colored paints.

TIP: Install flashing over the footing/foundation and extend the panel over the flashing just below the sill plate. Do not extend siding beyond the required grade clearances.

TIP: For Sierra 8 panels, double studs at each panel joint allows fasteners to be placed outside of panel grooves.
VERTICAL JOINT TREATMENT

Treat vertical joints in HardiePanel® vertical siding by using one of the following four methods:

1. Install the panels in moderate contact.

2. Leave an appropriate gap between panels (1/8 in. is the most common), and caulk using a high-quality paintable caulk, that meets ASTM C-834 or C-920 requirements. (Not recommended for ColorPlus)

Panels may be installed first with caulk applied in the joints after installation; or as an option, after the first panel is installed, apply a bead of caulk along the panel edge. When the next panel is installed against the first, the edge embeds in the applied caulk creating a thorough seal between the edges of the panels.

**WARNING**

The caulk joint method is not recommended for the ColorPlus® products

3. Vertical joints may be covered with wood or fiber-cement batten strips. If James Hardie® siding or trim products are ripped and used as batten strips, paint or prime the cut edges. Batten strips should span the vertical joint by at least ¾ in. on each side.

4. Metal or PVC “H” moldings can be used to join two sections of HardiePanel siding.

**TIP:** Stainless steel fasteners are recommended when installing James Hardie products.

HARDEIPANEL SIDING FASTENER SPECIFICATIONS

The Fastener Specifications table shows fastener options for a variety of different nailing substrates. Please refer to the applicable ESR report online (see back page) to determine which fastener meets your wind load requirements.
In some applications such as multi-story structures or at gable ends, it may be necessary to stack HardiePanel® siding. The horizontal joints created between panels must be flashed properly to minimize water penetration. Treat horizontal panel joints by using one of the following methods:

1. After installing the lower course of panel siding, install vinyl or coated aluminum "Z" flashing at the top edge of the panel. Make sure that the flashing is sloped away from the wall and does not rest flat on the top edge of the panel. Install the second level or gable panels leaving a ¼ in. minimum gap between the bottom of the panel and the Z flashing. This gap should never be caulked.

2. As an alternative, if a horizontal band board is used at the horizontal joint, flashing must extend over the panel edge and trim attachment. Flashing for both treatments must slip behind the water-resistive barrier.

**WARNING**

Do not bridge floors with panel siding. A horizontal joint shall always be created between floors.

TIP: For the most symmetrical looking wall, plan the installation so that a full panel is centered on the wall or gable with equal-size panels cut for each end. As an alternative, plan the installation so that a full panel is located on either side of the wall center, again leaving equal-size panels on each end. These strategies might entail a centered framing layout. Choose the strategy that looks the best and uses material most efficiently.
In panel installations, trim is typically overlaid on top of the panel. Special attention needs to be paid to trim flashing at the tops of openings. Below is one method for properly flashing trim in a panel application:

1. After installing the window, cut and install a ¼ in thick shim above the window. The shim should be the same width as the trim, and it should be as long as the width of the window.

2. Over the shim, install flashing wide enough to cover thickness of the trim and long enough to cover the trim head piece.

3. Install the panel to the window and around the shim taking care not to damage the flashing and leaving a ¼ in gap between the panel and the horizontal part of the flashing.

4. Install the trim around the window, slipping the head piece under the installed flashing.

3 Cut and fit panel around the shim and flashing. Leave ¼ in gap between the flashing and the upper panel.

4 Install window trim under the flashing.
**GENERAL REQUIREMENTS:**

- These instructions to be used for single family installations only. **For Commercial / Multi-Family installation requirements go to www.JamesHardieCommercial.com**

**HardiePanel® vertical siding can be installed over braced wood or steel studs, 20 gauge (33 mils) minimum to 16 gauge (54 mils) maximum, spaced a maximum of 24 in o.c. or directly to minimum 7/16 in thick OSB sheathing. See General Fastening Requirements. Irregularities in framing and sheathing can mirror through the finished application.**

- Information on installing James Hardie products on nailable substrates (ex: gypsum, foam, etc.) can be located in JH Tech Bulletin 19 at www.jameshardie.com

**A water-resistant barrier is required in accordance with local building code requirements. The water-resistant barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. James Hardie will assume no responsibility for water infiltration. James Hardie does manufacture HardieWrap® Weather Barrier, a non-woven non-perforated housewrap¹, which complies with building code requirements.**

- Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6 in. in the first 10 ft.
- Do not use HardiePanel lap siding in Fascia or Trim applications.
- Do not install James Hardie products, such that they may remain in contact with standing water.
- HardiePanel vertical siding may be installed on flat vertical wall applications only.
- For larger projects, including commercial and multi-family projects, where the span of the wall is significant in length, the designer and/or architect should take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin "Expansion Characteristics of James Hardie® Siding Products" at www.jameshardie.com

**INSTALLATION: Fastener**

- Position fasteners 3/8 in from panel edges and no closer than 2 in away from corners. Do not nail into corners.
- HardiePanel vertical siding must be joined on stud.
- Double stud may be required to maintain minimum edge nailing distances.
- When screws are used to attach panels to steel studs/furring, the screws shall have wing tips. If screws do not have wing tips, then pre-drilling is required. (Not applicable when using pins) Follow chart below for pre-drilling:

<table>
<thead>
<tr>
<th>SCREW</th>
<th>PRE-DRILL</th>
<th>HEAD DIAMETER</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 8</td>
<td>7/32 in</td>
<td>Min 0.323 in</td>
</tr>
<tr>
<td>No. 10</td>
<td>1/4 in</td>
<td>Min 0.323 in</td>
</tr>
</tbody>
</table>

**Joint Treatment**

- **Vertical Joints - Install panels in moderate contact (fig. 1), alternatively joints may also be covered with battens, PVC or metal joints or caulked (Not applicable to ColorPlus® Finish) (fig. 2).**
- **Horizontal Joints - Provide Z-flashing at all horizontal joints (fig. 3).**

**Figure 1**

- Batten Joint
- Water-resistant barrier
- Upper panel
- Upper panel
- Cauk Joint
- Lower panel
- Z-flashing
- Decorative band
- Lower panel
- Double stud
- Waterproof barrier
- Upper panel
- Upper panel
- Do not caulk
- Do not caulk

**Figure 2**

- Water-resistant barrier
- Upper panel
- 2 x 4 stud
- 2 x 4 stud
- Leave appropriate gap between panels, then caulk
- Leave appropriate gap between panels, then caulk

**Figure 3**

- Water-resistant barrier
- Upper panel
- Do not caulk
- Do not caulk
- Z-flashing
- Decorative band

**Figure 4**

- Batten Joint
- Water-resistant barrier
- Upper panel
- Upper panel
- Cauk Joint
- Lower panel
- Z-flashing
- Decorative band
- Lower panel
- Double stud
- Waterproof barrier
- Upper panel
- Upper panel
- Do not caulk
- Do not caulk

*Apply caulk in accordance with caulk manufacturer’s written application instructions.

**James Hardie recommends installing a rainscreen (an air gap) between the HardiePanel siding and the water-resistant barrier as a best practice.**

**For additional information on HardieWrap®, Weather Barrier, contact James Hardie at 1-866-4-Hardie or www.hardiepanel.com**

**SMOOTH | CEDARMILL® | STUCCO | SIERRA 8**

Visit jameshardiepros.com for the most recent version.
CLEARANCE AND FLASHING REQUIREMENTS

**Figure 3** Roof to Wall

**Figure 4** Horizontal Flashing

**Figure 5** Kickout Flashing

**Figure 6** Slabs, Path, Steps to Siding

**Figure 7** Deck to Wall

**Figure 8** Ground to Siding

**Figure 9** Gutter to Siding

**Figure 10** Sheltered Areas

**Figure 11** Mortar/Masonry

**Figure 12** Drip Edge

**Figure 13** Block Penetration

**Figure 14** Valley/Shingle Extension

GENERAL FASTENING REQUIREMENTS

Refer to the applicable ESR report online to determine which fastener meets your wind load design criteria.

Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion. James Hardie recommends the use of quality, hot-dipped galvanized nails. James Hardie is not responsible for the corrosion resistance of fasteners. Stainless steel fasteners are recommended when installing James Hardie® products near the ocean, large bodies of water, or in very humid climates.

Manufacturers of ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products. Fasteners used to attach HardieTrim Tabs to preservative-treated wood shall be of hot dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3 or 2009 IBC 2304.9.5

- Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
- NOTE: Published wind loads may not be applicable to all areas where Local Building Codes have specific jurisdiction. Consult James Hardie Technical Services if you are unsure of applicable compliance documentation.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space).
- NOTE: Whenever a structural member is present, HardiePanel® should be fastened with even spacing to the structural member. The tables allowing direct to OSB or plywood should only be used when traditional framing is not available.

\[
\begin{array}{ccc}
\text{SNUG} & \text{DO NOT} & \text{DO NOT} \\
\text{FLUSH} & \text{UNDER DRIVE} & \text{OVER DRIVE} \\
\text{DO NOT USE} & \text{STEEL FRAME} & \text{FACE NAIL} \\
\text{DO NOT} & \text{HAMMER} & \text{COUNTERSINK} \\
\text{IF, THEN} & \text{WOOD FRAME} & \text{& FILL} \\
\text{REMOVE & REPLACE} & \text{IF, THEN ADDITIONAL NAIL} & \\
\end{array}
\]
**PNEUMATIC FASTENING**
James Hardie products can be hand nailed or fastened with a pneumatic tool. Pneumatic fastening is highly recommended. Set air pressure so that the fastener is driven snug with the surface of the siding. A flush mount attachment on the pneumatic tool is recommended. This will help control the depth the nail is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. (Drive under driven nails snug with a smooth faced hammer - Does not apply for installation to steel framing).

**CUT EDGE TREATMENT**
Caulk, paint or prime all field cut edges. James Hardie touch-up kits are required to touch-up ColorPlus products.

**CAULKING**
For best results use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer’s written instructions. Note: some caulking manufacturers do not allow “tooling”.

**PAINTING**
DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® products. James Hardie products must be painted within 180 days for primed product and 90 days for unprimed. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

**COLOURPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE**
- Care should be taken when handling and cutting James Hardie ColorPlus® products. During installation use a wet soft cloth or soft brush to gently wipe off any residue or construction dust left on the product, then rinse with a garden hose.
- Touch up nicks, scrapes and nail heads using the ColorPlus® Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with a new piece of siding with ColorPlus® Technology.
- Laminate sheet must be removed immediately after installation of each course.
- Terminate non-factory cut edges into trim where possible, and caulk. Color matched caulks are available from your ColorPlus® product dealer.
- Treat all other non-factory cut edges using the ColorPlus® Technology edge coaters, available from your ColorPlus® product dealer.

Note: James Hardie does not warrant the usage of third party touch-up or paints used as touch-up on James Hardie ColorPlus products.

**PAINTING JAMES HARDIE® SIDING AND TRIM PRODUCTS WITH COLORPLUS® TECHNOLOGY**
When repainting ColorPlus products, James Hardie recommends the following regarding surface preparation and topcoat application:
- Ensure the surface is clean, dry, and free of any dust, dirt, or mildew
- Repriming is normally not necessary
- 100% acrylic topcoats are recommended
- DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.
- Apply finish coat in accordance with paint manufacturers written instructions regarding coverage, application methods, and application temperature
- DO NOT caulk nail heads when using ColorPlus products, refer to the ColorPlus touch-up section

Problems with appearance or performance arising from use of third party touch-up paints or paints used as touch-up that are not James Hardie touch-up will not be covered under the James Hardie ColorPlus Limited Finish Warranty.

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**DANGER:** May cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product. Refer to the current product Safety Data Sheet before use.

**WARNING:** This product can expose you to chemicals including respirable crystalline silica, which is known to the State of California to cause cancer. For more information go to P65Warnings.ca.gov.