IMPORTANT: FAILURE TO INSTALL AND FINISH THIS PRODUCT IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND JAMES HARDIE WRITTEN APPLICATION INSTRUCTIONS MAY LEAD TO PERSONAL INJURY, AFFECT SYSTEM PERFORMANCE, VIOLATE LOCAL BUILDING CODES, AND VOID THE PRODUCT ONLY WARRANTY. BEFORE INSTALLATION, CONFIRM THAT YOU ARE USING THE CORRECT HARDIEZONE™ INSTRUCTIONS.

TO DETERMINE WHICH HARDIEZONE™ APPLIES TO YOUR LOCATION, VISIT WWW.HARDIEZONE.COM OR CALL 1-866-942-7343 (866 9HARDIE)

STORAGE & HANDLING:
Store flat and keep dry and covered prior to installation. Installing siding wet or saturated may result in shrinkage at butt joints. Carry planks on edge. Protect edges and corners from breakage. James Hardie is not responsible for damage caused by improper storage and handling of the product.

OUTDOORS
1. Position cutting station so that wind will blow dust away from user and others in working area.
2. Use one of the following methods:
   a. Best: 1. Shears (manual, electric or pneumatic)
   b. Better: 1. Dust reducing circular saw equipped with a HardieBlade® saw blade and HEPA vacuum extraction
   c. Good: 1. Dust reducing circular saw with a HardieBlade saw blade (only use for low to moderate cutting)

INDOORS
1. Cut only using shears (manual, electric or pneumatic).
2. Position cutting station in well-ventilated area

- NEVER use a power saw indoors
- NEVER use a circular saw blade that does not carry the HardieBlade saw blade trademark
- NEVER dry sweep – Use wet suppression or HEPA Vacuum

Important Note: For maximum protection (lowest respirable dust production), James Hardie recommends always using “Best” level cutting methods where feasible.

CUTTING INSTRUCTIONS

GENERAL REQUIREMENTS:
• HardieShingle® panels can be installed over braced wood or steel studs spaced a maximum of 24” o.c. or directly to minimum 7/16” thick sheathing. See general fastening requirements.
• Information on installing James Hardie products over foam can be located in JH Tech Bulletin 19 at www.jamehardie.com
• A water-resistive barrier is required in accordance with local building code requirements. The water-resistive 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.
• When installing James Hardie® products all clearance details in figs. 1,2,3,4,5,6 &7 must be followed.
• Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6” in the first 10’.
• Do not install James Hardie products, such that they may remain in contact with standing water.
• HardieShingle panels may be installed on vertical wall applications only.
• DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.

CLEARANCES
Install siding and trim products in compliance with local building code requirements for clearance between the bottom edge of the siding and the adjacent finished grade.

Maintain a minimum 2” clearance between James Hardie® products and paths, steps and driveways.

Maintain a minimum 2” clearance between James Hardie products and decking material.

At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be installed per the roofing manufacturer’s instructions. Provide a minimum 2” clearance between the roofing and the bottom edge of the siding and trim.

OUTDOORS

STRAIGHT EDGE, STAGGERED EDGE, HALF-ROUND PANELS & INDIVIDUAL SHINGLES

INSTALLATION REQUIREMENTS - PRIMED & COLORPLUS® PRODUCTS

Figure 1

Figure 2

Figure 3

Figure 4

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

WARNING: AVOID BREATHING SILICA DUST

James Hardie® products contain respirable crystalline silica, which is known to the State of California to cause cancer and is considered by IARC and NIOSH to be a cause of cancer from some occupational sources. Breathing excessive amounts of respirable silica dust can also cause a disabling and potentially fatal lung disease called silicosis, and has been linked with other diseases. Some studies suggest smoking may increase these risks. During installation or handling: (1) work in outdoor areas with ample ventilation; (2) use fiber cement shears for cutting or, where not feasible, use a HardieBlade® saw blade and dust-reducing circular saw attached to a HEPA vacuum; (3) warn others in the immediate area; (4) wear a properly-fitted, NIOSH-approved dust mask or respirator (e.g. N-95) in accordance with applicable government regulations and manufacturer instructions to further limit respirable silica exposures. During clean-up, use HEPA vacuums or wet cleanup methods - never dry sweep. For further information, refer to our installation instructions and Material Safety Data Sheet available at www.jameshardie.com or by calling 1-800-9HARDIE (1-800-942-7343). FAILURE TO ADHERE TO OUR WARNINGS, MSDS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.
Maintain a 1/4” clearance between the bottom of James Hardie® products and horizontal flashing. Do not caulk gap.

**TRIM CONSIDERATION:**
Minimum 1” trim thickness is needed as Panels stack at a depth of roughly 15/16” for the 7” reveal. If additional trim depth is desired, you can place a spacer under the trim (Fig. 8C & 8D) DO NOT install trim over HardieShingle.

**GABLE INSTALLATION:**
Installation over sheathing is recommended (Required for Individuals) for gables.*
1) Find the center stud of your of your Gable and snap a caulk line down
2) Measure out 16” to both the left and the right of the center line and snap a caulk line
3) Measure up 2” if you are off a roof line or 1/4” if you are starting above a band board
4) Set the bottom of your 1 ¼” starter strip at that line
5) Place your 8 ¼” Starter Course - bottom level with the bottom of the starter strip
6) Set your first row of Shingle - starting the first piece at the vertical line left of center
   (If you are using staggered edged shingles Trim down the first row to the shortest shingle length)
7) Drive nails approximately ¼” above Key ways 5 per full panel Center Nail can be either one of the keyways.
   (Stay by keyway to avoid shiners) (EX1) Blue Dots show nail placement
8) Measure up 7” with straight and 6” with Staggered edge and snap a caulk line to get your proper exposure
9) The second row will start at the center line
10) The Third row will start at the line right of center
11) As you work your way up the gable make sure you Keep your Cut Pieces you will use the pieces on the edges of the gable (EX2)
12) Edges Gable butting into trim leave a 1/8” Gap (for house movement and Caulking)
13) Make sure to sure siding nails on the small pieces on the edges (Do not use a trim nail to install!)

**BLOCKED PENETRATIONS**
Penetrations such as hose bibs and holes 1 ½” or larger such as dryer vents shall have a block of trim around point of penetration.

*Panels can also be installed direct to stud up to 24”OC.
Note: Snapped chalk lines help guide installation, when installing straight edge panels or Individual shingles use a straight edge on bottom edges if uniform straight edge is desired.
HARDIESHINGLE® STAGGERED EDGE PANELS INSTALLATION

Fastener Requirements
0.083" x 0.187" HD x 1 1/2" long ring Shank nails are used for fastening HardieShingle® Staggered Edge Panels to both framing and to 7/16" thick APA rated sheathing.

HardieShingle® Staggered Edge Panel Installation
Install HardieShingle® panels with joints butted in moderate contact. Due to overlapping of the joints, caulk is not required except where panels abut trim boards. (fig. 13 & 15). Ensure keyways do not line up on subsequent courses.
1) Install a 1-1/4" starter strip, then install a 8-1/4" wide HardiePlank® lap siding starter course.
2) Place first panel so that panel end centers over stud. Trim panel as needed. Butt the cut end into trim as shown (figs 13 & 15). When installing over a band board or any horizontal surface, leave 1/4" gap between bottom of siding and flashing.
3) Secure panel, leaving 1/8" gap for caulk at trim and continue the course along the wall.
4) Start the second course, by removing the equivalent of one full stud cavity (16" or 24" OC), again abutting the cut end into the trim (figs 13 & 15). This is to prevent pattern repetition. Repeat step 3.
5) Start the third course, by removing the equivalent of two full stud cavities (figs 13 & 15) and repeat step 3.
6) Continue up the wall repeating steps 2 through 6 until desired height is reached.

Note: For aesthetic purposes you may trim the bottom of the panel to create a straight edge. If doing so, ensure all cuts ends are properly sealed and painted (fig 14)

HARDIESHINGLE® STAGGERED EDGE PANEL COVERAGE
Panels for sidewall applications are available in 48” lengths. Pieces needed for one square (100sq.ft.) of product coverage = approximately 50, based on a maximum 6" exposure from the top edge of HardieShingle panels in subsequent courses (refer to Figure 13).

7" EXPOSURE HARDIESHINGLE® STRAIGHT EDGE PANELS INSTALLATION (For 5" exposure product please go to page 6)

Maximum Exposure of 7"
REFFER TO STAGGERED EDGE INSTRUCTIONS ABOVE

HARDIESHINGLE® STRAIGHT EDGE PANEL COVERAGE
Panels for sidewall applications are available in 48” lengths. Pieces needed for one square (100sq.ft.) of product coverage = approximately 43, based on maximum 7" exposure.
HARDIESHINGLE® INDIVIDUAL SHINGLE INSTALLATION

HardieShingle® Individual Shingles must be installed with the widest part of the shingle placed downwards and directly to minimum 7/16" thick sheathing.

Fastener Requirements

0.091" x 0.221" HD x 1 1/2" or 0.121" x 0.371" HD x 1 1/4" long corrosion resistant siding nails are used for fixing HardieShingle siding to 7/16" thick APA rated sheathing.

HardieShingle® Individual Shingle Installation

Due to overlapping of the joints, caulk is not required except where panels butt trim boards. (fig. 17). Ensure keyways do not line up on subsequent courses. 1) Install 1 1/4" starter strip and a 8 1/4" wide HardiePlank® siding starter course. 2) Install first shingle from the end abutting trim. Install widest part of shingle placed downwards. (fig. 16). 3) Secure shingle, leaving a 1 1/8" gap for caulk at trim and continue the course along the wall. 4) Start the second course, leaving a minimum lap of 1 1/2" between successive courses, again from the end abutting the trim. Repeat step 3. 5) Continue up the wall repeating steps 2 through 5 until desired height is reached.

HARDIESHINGLE® INDIVIDUAL SHINGLE COVERAGE

Individual Shingles for sidewall applications are available in assorted widths as listed below. Bundles needed for one square (100 sq. ft.) of product coverage:

<table>
<thead>
<tr>
<th>Shingle Width</th>
<th>Number of Bundles</th>
<th>Pieces per Bundle</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-3/16&quot;</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>5-1/2&quot;</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>6-3/4&quot;</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>7-1/4&quot;</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>10&quot;</td>
<td>3</td>
<td>15</td>
</tr>
</tbody>
</table>

HARDIESHINGLE® HALF-ROUND PANELS INSTALLATION

Fastener Requirements

0.083" x 0.187" HD x 1 1/2" long ringshank nails are used for fastening HardieShingle® Half-Round Panels to both framing and to 7/16" thick APA rated sheathing.

HardieShingle Half-Round Panel Installation

Install HardieShingle® panels with joints butted in moderate contact. Due to overlapping of the joints, caulk is not required except where panels abutt trim boards. (fig. 18). Ensure keyways do not line up on subsequent courses. 1) Install a 1-1/4" starter strip, then install a 8-1/4" wide HardiePlank® lap siding starter course. 2) Place first panel so that panel end centers over stud. Trim panel as needed. Butt the cut end into trim as shown (figs 18). When installing over a band board or any horizontal surface, leave 1/4" gap between bottom of siding and flashing. 3) Secure panel, leaving 1/8" gap for caulk at trim and continue the course along the wall. 4) Start the second course, by removing the equivalent of one full stud cavity (16" or 24" OC), again abutting the cut end into the trim (fig 18). This is to prevent pattern repetition. Repeat step 3. 5) Start the third course, by removing the equivalent of two full stud cavities (figs 13 & 15) and repeat step 3. 6) Continue up the wall repeating steps 2 through 6 until desired height is reached.

HARDIESHINGLE® HALF-ROUND PANEL COVERAGE

Panels for sidewall applications are available in 48” lengths. Pieces needed for one square (100 sq. ft.) of product coverage=43 pieces with 7" exposure.
CORNER DETAILS
A. Panels butted against corner boards.
B. Panels butted against square wood strip on inside corner, flashing behind.
C. Laced outside corner.
D. Laced inside corner.

WINDOWS AND DOORS
Building wall components such as windows, doors and other exterior wall penetrations shall be installed in accordance with the component manufacturer's written installation instructions and local building codes. Where windows or doors are installed, continue the application of siding as if the wall is complete. Trimming for the opening and using the resulting piece may throw off the spacing above the break.

GENERAL FASTENING REQUIREMENTS
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. Stainless steel fasteners are recommended when installing James Hardie® products near the ocean, large bodies of water, or in very humid climates.

- Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
- Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
- Do not use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.
- Do not use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.

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 CB34. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions. Note: OSI Quad as well as some other caulking manufacturers DO NOT allow tooling.

PRIMING & 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. In addition non ColorPlus® product versions of HardieShingle® Siding require a field applied prime coat. 100% acrylic primers and topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back rolling is recommended when paint is spray applied.

COLORPLUS® 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 new HardieShingle® 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.
- 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.

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
5" EXPOSURE HARDIESHINGLE® STRAIGHT EDGE PANELS INSTALLATION (For 7" exposure product please go to page 3)

Maximum Exposure of 5"

REFER TO STAGGERED EDGE INSTRUCTIONS ON PAGE 3

Steps 1 - 4

Figure 20

Steps 5 & 6

Figure 16

Panels for sidewall applications are available in 48" lengths. Pieces needed for one square (100 sq. ft.) of product coverage = approximately 60, based on maximum 5" exposure.

HARDIESHINGLE® STRAIGHT EDGE PANEL COVERAGE

HARDIESHINGLE® INDIVIDUAL SHINGLE INSTALLATION

Individual Shingles for sidewall applications are available in assorted widths as listed below. Bundles needed for one square (100 sq. ft.) of product coverage:

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<th>Shingle Width</th>
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<td>20</td>
</tr>
<tr>
<td>5-1/2&quot;</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>7&quot;</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>8-3/4&quot;</td>
<td>3</td>
<td>20</td>
</tr>
</tbody>
</table>

Install with the widest part of the shingle placed downwards

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Please visit www.jameshardie.com for Additional Product Information and Availability, Installation Information, Warnings, and Warranties.