

HARDISHINGLE™ INSTALLATION INSTRUCTIONS FOR INDIVIDUAL SHINGLES



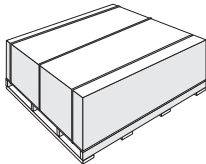
James Hardie®

AUGUST 2002

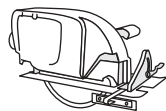
IMPORTANT: FAILURE TO INSTALL AND FINISH HARDISHINGLE™ STRAIGHT EDGE PANELS FOR SIDEWALL APPLICATIONS IN ACCORDANCE APPLICABLE BUILDING CODE COMPLIANCE REPORTS AND JAMES HARDIE'S WRITTEN APPLICATION INSTRUCTIONS, MAY AFFECT SYSTEM PERFORMANCE, VIOLATE LOCAL BUILDING CODES REQUIREMENTS, AND VOID THE PRODUCT ONLY WARRANTY.

HANDLING & STORAGE:

Store panels flat on a smooth level surface, under cover. If panels become saturated, allow to dry prior to installation. Protect edges and corners from breakage.



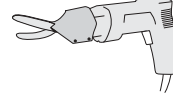
CUTTING OPTIONS:



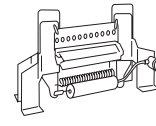
Circular saw with dust collector



Circular saw blade with carbide-tipped teeth



Electric or pneumatic hand shear



Pneumatic shear



Carbide score and snap knife



▲ JH recognizes Makita® #5044KB 4" or #5057KB 7-1/4" saw with dust collection. Call 800-4MAKITA.
▲ Hitachi® HARDIBLADE® w/4 PCD Diamond Teeth. Call Hitachi® at 800-546-1666 for nearest dealer.
▲ SNAPPER SHEAR™ electric, pneumatic, or hand shear. Call 800-297-7487 for tool information.

Always wear safety glasses and dust protection when operating power tools. For more information on avoiding inhalation refer to the MATERIAL SAFETY DATA SHEET available wherever James Hardie fiber-cement products are sold.

FRAMING REQUIREMENTS

Install Hardishingle Individual Shingles on exterior walls braced in accordance with: The BOCA National Building Code/1999, Section 2305.7; 1997 Standard Building Code, Section 2308.2; 1997 Uniform Building Code, Sections 2320.11.3 and 2320.11.4; 2000 International Building Code, Section 2308.9.3; and 2000 International Residential Code for One- and Two-Family Dwellings, Section R602.10.

Use a weather-resistive barrier in accordance with: The BOCA National Building Code/1999, Section 1403.3; SBCCI 1997 Standard Building Code, Section 2303.3; ICBO 1997 Uniform Building Code, Section 1402.1; ICC 2000 International Building Code, Section 1403.2; and ICC 2000 International Residential Code for One- and Two-Family dwellings, Section R703.2.

GRADE CLEARANCE

Install Hardishingle cladding in compliance with local Building Code requirements for clearance between the bottom edge of panel/framing and the adjacent finished grade.

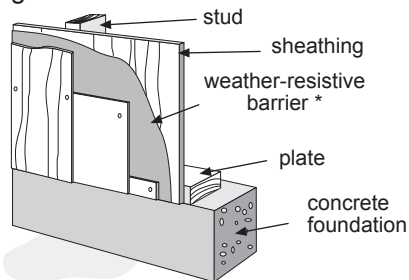
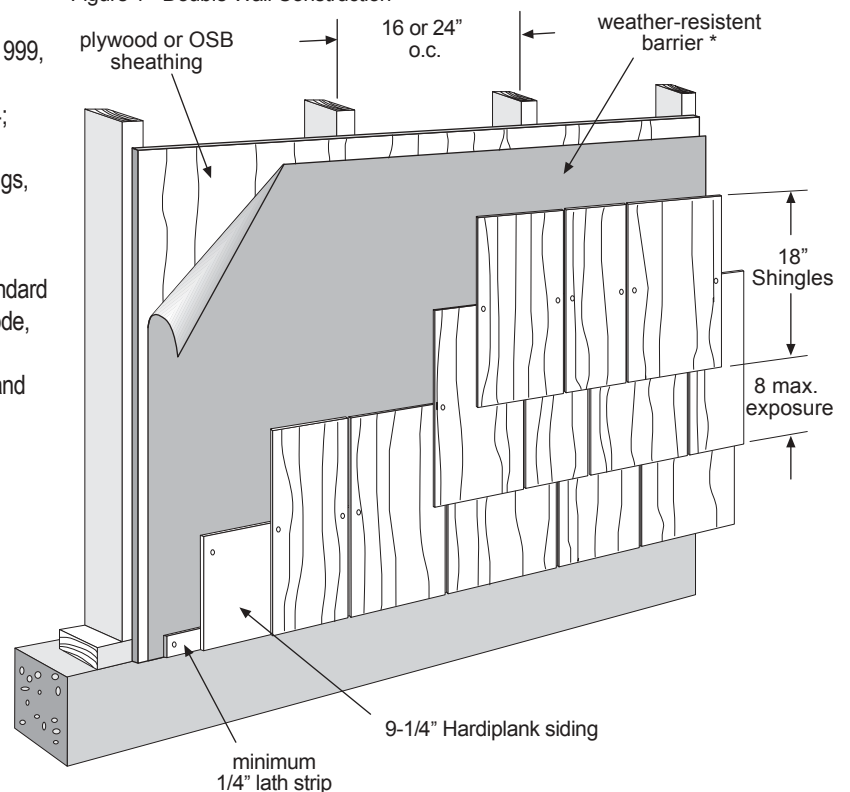


Figure 1 - Double Wall Construction



James Hardie's seal indicates products recognized for use by James Hardie Building Products

APPROVALS: HARDISHINGLE™ individual shingles are recognized as an exterior wall cladding in National Evaluation Report No. NER-405 (BOCA, ICBO, ICC, SBCCI); City of Los Angeles, Research Report No. 24862; US Dept. of HUD Materials Release 1263b; California DSA PA-019; Texas Department of Insurance Evaluation Report EC-23; and City of New York MEA 223-93M. These documents should also be consulted for additional information concerning the suitability of this product for specific applications.

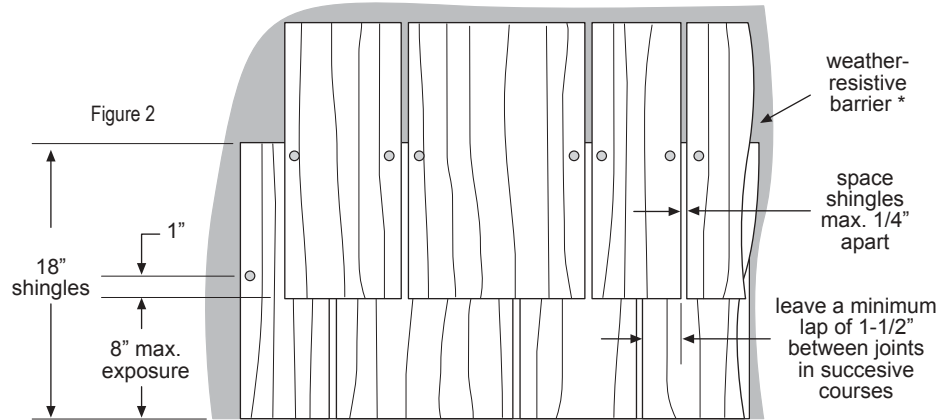
WARNING: AVOID BREATHING SILICA DUST

Product contains Silica. Inhalation of respirable silica dust can cause silicosis a potentially disabling lung disease, and is known to the State of California to cause lung cancer. When drilling, cutting, or abrading product during installation or handling, (1) Work outdoors where feasible, otherwise use mechanical ventilation, (2) Wear a dust mask or, if dust may exceed PEL, use NIOSH/MSHA approved respirator, (3) Warn others in area. For further information, refer to material safety data sheet or consult employer.

FAILURE TO ADHERE TO WARNINGS, MSDS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY.

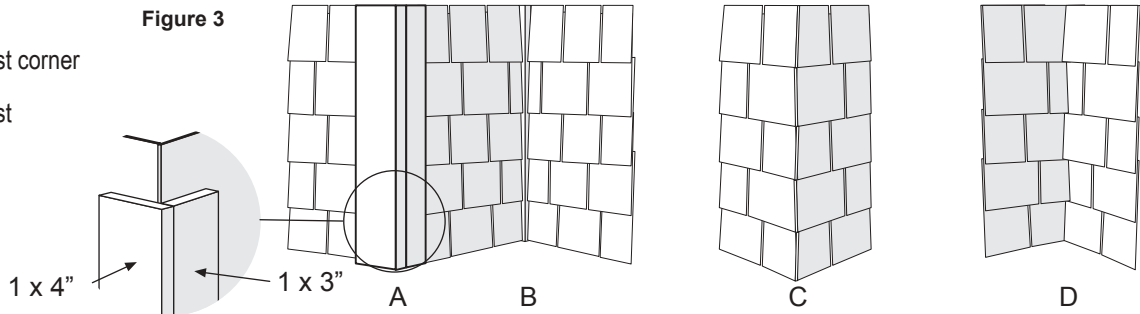
SHINGLE SPACING

Fasteners are a minimum 0.091" shank x 0.221 HD x 1 1/2" long corrosion-resistant siding nail.



CORNER DETAILS

- Shingles butted against corner boards.
- Shingles butted against square wood strip on inside corner, flashing behind.
- Laced outside corner.
- Laced inside corner.



ROOF CLEARANCE

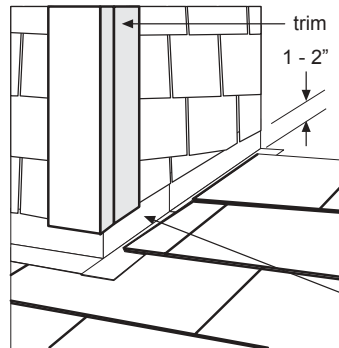


Figure 4

At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be provided per the roofing manufacturer's instructions. Provide a 1"-2" clearance between the roofing and bottom edge of siding or as recommended by the roofing manufacturer.

WINDOWS, DOORS, AND VENTS

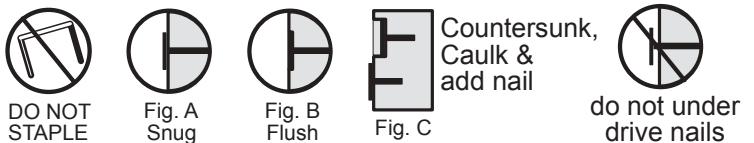
Installation of building wall components such as windows, doors, vents, water pipes and other exterior wall penetrations shall be in accordance with the component manufacturer's written installation instructions and the Code. It is the responsibility of the component installer to insure that penetration areas are properly prepared and that all required sheathing membranes, flashing, caulking, and sealants are installed in accordance with the Code and the published installation details provided by the component manufacturer.

PNEUMATIC FASTENING:

Shingles can be hand nailed or fastened with the use of a pneumatic tool. Set your air pressure so that the fastener is driven snug with the shingle surface.

RECOMMENDED:

Use a flush mount attachment on pneumatic tool. This will help control the depth that the nail is driven. This will be especially helpful when more than one pneumatic tool is driven off the same compressor.



FASTENING REQUIREMENTS:

- Consult Tables 6, 7 and 8 of James Hardie's National Evaluation Service report NER-405 for correct fastener type and placement to achieve specified design wind loads and shear values.
- NOTE: Published shear values and 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 Building Code jurisdiction.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space). (Fig. A & B)
- Do not over-drive nail heads or drive nails at an angle.
- If nail is countersunk, caulk nail hole and add a nail. (Fig. C)

FINISHING SHINGLES:

Patching:
Dents, chips and cracks can be filled with a cementitious patching compound.



Painting:
James Hardie products must be painted. Hardie recommends the application of an alkali-resistant primer along with a minimum one topcoat of 100% acrylic paint. *



* NOTE: Please refer to paint manufacturers' specifications (JH Technical Bulletin No. S-100) for application rates and the number of required topcoats.

BUNDLING & COVERAGE

Shingles for sidewall applications are available in 6", 8", and 12" widths.

Bundles needed for one square (100 sq. ft.) of product coverage:

| Shingle Width | Number of Bundles | Pieces per Bundle |
|---------------|-------------------|-------------------|
| 6" | 6 | 11 |
| 8" | 6 | 11 |
| 12" | 6 | 11 |

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