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CEDART

INSTALLATION GUIDE
STAIN AND SEAL CEDAR - EXTERIOR

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CAUTION

Although this installation guide has been designed with great care, CAYAKI INC. is not responsible for any errors or omissions that may result from its use.

You must consider all the documentation and regulations that may apply in your area.

It is strongly recommended that you consult CECOBOIS - Guide to Best Practices for Installing Solid Wood Exterior Cladding (Center of Expertise on Commercial Wood Construction). *Available in French only.*

BE PREPARED

Careful inspection is required upon delivery of the product. This first inspection makes it possible to check:

• The conformity of the product delivered with your order
• The model of the profile
• The model of the moldings
• The color
• The quantity
• The retouching material
• The packaging for any damages that could have affected the product.

> **If the product is damaged, do not install**, take pictures and immediately contact CAYAKI INC. Repack carefully, such as the original, to protect the product from the weather, scratches and twisting that may occur if the boards are exposed to wide variations in ambient temperature.

> For more information, consult CECOBOIS (Center of Expertise on Commercial Wood Construction): **Guide to Best Practices for Installing Solid Wood Exterior Cladding**.
> https://www.cecobois.com/publications/guide-technique/guide-des-meilleurespratiques-dinstallation-du-revetement-exterieur-en-bois-massif (available in French only)

Installation accessories
> • Pneumatic nailer or stapler for coating or molding
> • Recommended staples or nails
> • Compressor
> • Laser and manual level
> • Saw
> • Hammer with plastic tip
> • Brush.

Store in a dry, well-ventilated area, away from the sun and rain, without heating, on a level surface six (6) inches from the floor and at least ten (10) inches from a vertical surface (or wall) to allow air circulation. The upper surface of the packaging must have a slight slope that can promote the evacuation of water carried by the wind. The ambient temperature of the storage should be similar to the installation area.

The storage of the product must respect the original packaging with separators between boards to protect the product against friction.

PRE-CHECK

INSTALLER MUST CHECK PRODUCTS BEFORE INSTALLATION. If **before** or **during** the installation, you notice that products have apparent anomalies or do not meet the specifications of your order and that the quantity of non-compliant boards may exceed the 15% surplus added to the order, call IMMEDIATELY CAYAKI INC. Do not install non-compliant boards otherwise warranty will automatically be invalidated.

ACCLIMATIZATION
Wood is hygroscopic. It reacts to temperature and humidity.

As a result, acclimatization is required (72 hours in the setting environment). Poor acclimatization can cause twisting, narrowing and / or suction effects after installation.

FLASHING AND WEATHER PROTECTION
The installer must ensure that the flashings comply with the codes and standards of the region.

PREPARING THE INSTALLATION SURFACE
Wall surfaces should be smooth, clean, dry and straight.

Laying area exceeding six (6) meters (19.6 feet)
> • Increase the opening of the furs at the top and bottom of the covered areas
> • Or by compartmentalizing at the level of the second floor

FURS
The type, size and spacing of furs depend on their arrangement, the profile and the orientation of the boards. It is recommended to completely replace the furs in case of a renovation.

MAIN METHODS OF FUR INSTALLATION BASED ON THE DIRECTION OF THE BOARDS

Furring Fastening
Furring must penetrate at least 32 mm (1 ¼ in.) deep. If an exterior insulation is present, adjust accordingly.

PROTECTION AGAINST RODENTS
Openings that let in air must be protected with ventilation grills that comply with F42 of the National Building Code.

OPEN PROTECTIVE CONTOUR
Before installing furring and/or finishing moldings, around doors and windows, make sure that the membrane is watertight to block water infiltration. The weather screen shall overlap the two (2) inches flashing. The furs should be slightly set back so as not to be visible when laying the boards.

CLEARANCE AND VENTILATION OPENINGS
Clearance
Planks must leave a minimum distance from the installation surfaces
> • 200 mm (8 in.) above the floor
> • 50 mm (2 in.) above an inclined roof covering
> • 200 mm (8 in.) at above a flat roofing
> • 50 mm (2 in.) above a patio
> • 25 mm (1 in.) above a shelf.

Openings

If the foundation projects beyond the wall, flashing with a 10 mm (3/8 in.) opening must be installed between the siding and the flashing.

ABUTMENT JOINTING ARRANGEMENTS
- Butt joints must be offset by at least 250 mm (10 in.)
- Avoid joints over openings
- Avoid laying very long planks end to end
- It is recommended to install moldings in cases you want to make sections.

Arrangement of non-stamped planks.

It is recommended to align planks with furs.

CUTTING METHODS
Use a finishing blade.

Butt cuts
- It is recommended to make abutment cuts of 22,5°
- In cases of laying vertical planks, it is necessary to make a cut allow water draining
- In cases of horizontal laying, a cut should favor the angle directed towards the least apparent side
- Apply a coat of finish stain at the ends of the planks.

Ties
- It is recommended to make 90° cuts and leave 3 mm (1/8 in.) space for expansion.
- Cover the space with a sealer the same color as the boards.

RETOUCHING

All surfaces exposed to water ingress must be protected with two (2) dye passes. It is very IMPORTANT not to apply stain on boards that have been finished in the factory. As an example, if the planks have been fastened with exposed nails, the bald nail heads must be retouched with the tip of a brush. The temperature must be higher than 10^0 C.

FASTENING
Nails
- Do not use mild steel nails that are not protected against corrosion
- Use only 304 stainless steel nails
- Use ¼ in. diameter textured flat nails
- Ringed body.

Staples
Use staples for tongue and groove boards
- 304 stainless steel staples
- 16 gauge
- 11 mm (7/16 in.) crown
- 50 mm (2 in.) minimum length
- Resin coated plaster.

In places where stapler cannot access, like the starting row at the bottom of the wall, a board above or below an opening, the last board at the top of the wall; use the nail described above while applying carefully a finishing dye.

SAFETY ANCHOR DEPTH
Laying Boards with Exposed Fasteners
The National Building Code (article 9.27.5.7.2) states that fasteners must pass through furs at least 25 mm (1 in.) in a solid nailing base. The depth calculation considers the thickness of the plank and the nailing angle of 90º or the angle of the hidden staples. For most planks 10 mm (3/4 in.) thick, the staple is 50 mm (2 in.) long at an angle between 20^0 and 30º

- For boards 100 to 150 mm (4 to 6 in.) must be nailed about 25 mm (1 in.) from the bottom of the planks, one (1) nail per fur. Nailing must be sufficiently far from the bottom to prevent wood splitting
- For 50 mm (2 in.) moldings, only one nailing point is recommended. For 2 in. (50 mm) and larger moldings, two nails are required, which must be 19 mm (3/4 in.) from the top and bottom edges
- Space nails approximately 400 mm (16 in.).

Laying planks without exposed fasteners
- Planks are secured from top, bottom is snapped onto the bottom plank.
- Two (2) staples per fur with a recommended spacing of 19 mm (3/4 in.).

OPTIMUM FASTENING
- The head of the nail or staple must rest on the wood and not penetrate the wood
- Before fixing, it is necessary to press the board on the wall
- It is necessary to avoid nailing or stapling near the edges
- If necessary, pre-drill wood near the edges or ends before nailing or stapling.

INSTALLING HORIZONTAL BOARDS
1. With a laser level, establish the horizontal reference line at the bottom of the wall. This reference line must cover the entire perimeter of the building if applicable. Reproduce for each floor if necessary
2. Put temporary reference pieces for the moldings by aligning them with the reference line at the bottom
3. Install the door, window or other frame moldings
4. Install top ventilation moldings, fire resistant, ventilation and mosquito net at 50 % to fill the gap
5. Install the flashings
6. Plan the layout of the boards to minimize the losses
7. For the starting row at the bottom of the wall:
   a. **Ventilated metal start grid**
      i. Install the metal grid on the walls following the reference line while ensuring that it overlaps the concrete foundation by 25 mm (1 in.), male upward.
   b. **Without ventilated metal mesh of departure**
      i. Install the mosquito net using the stapler by inserting it under the furs and folding it over
      ii. Install the first bottom board along the reference line
      iii. The board must overlap the concrete foundation by 25 mm (1 in.).
   c. **With horizontal wood molding**
      i. Install the mosquito net or ventilated wire mesh by inserting it under the fur by folding it over
      ii. Install the horizontal wood molding following the reference line. The molding should overlap the concrete foundation by 25 mm (1 in.).
8. Install a protective flashing to protect the molding while leaving a 10 mm (3/8 in.) clearance between the horizontal surface of the flashing and the ends of vertical planks. This space must be clear of all obstructions
9. Identify wall corners adjacent to the four (4) rows of planks and proceed wall-to-wall before proceeding to the next 4 rows

10. Install the following three (3) rows
    Always verify the reference level and the perfect junction at the corners of walls at all steps. If you need to make adjustments, never do them on one (1) row, but divide them on the next few rows. <u>Repeat and check constantly.</u>

Top of wall
11. Break off continuity between air gap and roof void
12. Install steel wire mesh or mosquito's screen
13. Cut top last plank over width to maintain 10 mm free opening 3/4 in.). Use nails to fix the last board. You may choose to install a molding to hide this opening
14. Install a flashing to cut water infiltration if the overhang is less than four (4) times the opening space
15. After completing all walls, make the necessary edits.

INSTALLING VERTICAL BOARDS
1. Create a 1 ½ in. space for optimal airflow (recommended by APCHQ). For a vertical installation, we recommend doubling the thickness of the slats with vertical and horizontal planks to ensure optimal air circulation
2. This detail creates an air space of 1 ½ inch behind the exterior siding
3. However, for any air space more than 1 inch below the cladding, the requirements of the 2010 Quebec Construction Code (articles 3.1.11.2.2.1 c) and (9.10.16.2.1 c) require that you proceed as follows:
    A fire barrier element, consisting of a 1 ½ inch thick sheet steel flashing (section 9.10.16.16.3.2 a) must be installed on each floor (section 3.1.11.2.1 a) horizontally, with a maximum of 65 feet 7 ½ inches horizontally and a distance of 9 feet 11 inches vertical between the fire barriers (section 3.1.11.2.1 c)
4. With a laser level, establish the horizontal reference line at the bottom of the wall. This reference line must cover the entire perimeter of the building if applicable. Reproduce for each floor if necessary
5. Put temporary reference pieces for the moldings by aligning them with the reference line at the bottom
6. Install the moldings
7. Install the flashings
8. Plan the layout of the boards emboss to minimize losses
9. Make an alignment mark on the horizontal fur at 2/3 of the height of the wall section to be coated to check the alignment.

Bottom of the wall
10. <u>With the ventilated metal start grid</u>
    a. Install following the reference line while straddling the concrete foundation
    <u>Without ventilated metal outlet grill</u>
    b. Install the mosquito net; secure it with the stapler by inserting it under the fur and folding over it.
    <u>With horizontal plank trim</u>
    c. Install the mosquito net or wire mesh by inserting it under the fur by folding over it.
    d. Install the trim along the reference line.
    e. Overlap 1 in. (25mm) molding on concrete foundation
    f. Install a flashing to protect the horizontal molding. Leave a clearance of 10 mm (3/8 in.) between the horizontal surface of the flashing and the ends of the vertical planks. Ensure that the space created is free of any material that may prevent water from escaping.

Top of the wall
11. Install a device to break the continuity between the air gap and the vacuum under the roof
12. Install the wire mesh or the screen
13. The ends of the boards must be cut to leave a space of 10 mm (3/8 in.) at the top of the wall
14. Install a finishing flashing to cut off water infiltration if the roof overhang is less than four (4) times the opening space.

First row to install

15 Determine where the winds are coming from so that the male knuckles face the wind to minimize the water intake in the female knuckles

16. Leave a 10 mm (3/8 in.) opening at the top of the wall.

17. Planks should be cut to a maximum angle of 15º to encourage drainage of the water to the outside

18. Use the level to vertically install the starting board and fasten with nails

19. Retouch all the cuts that put the wood naked

20. Install the three (3) following rows.

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21. If a vertical adjustment is required after three (3) ranks, spread the adjustment over several ranks.

22. Proceed: four (4) ranks by four (4) ranks.

Installation of the last row

23. Cut the banks of the boards at the corner. Cut the male side; retouch the exposed wood with two (2) topcoats

24. Apply the sealant without thermoplastic in the appropriate places along the vertical joints to meet with moldings. If horizontal flashing does not overflow, apply sealant without thermoplastic.

SEALER CHOICE

See NBC 9.27.4.2 for Specifications (NRC 2015). In summary, the sealant should be:

• Flexible (non-hardening) for exterior

• Water resistant

• Adherent to wood and cladding surfaces

• No volatile organic compounds (VOCs).

• Sealant without thermoplastic.

MAINTENANCE

Perform an annual inspection to prevent damage, especially inspecting the sealant joints. A visual inspection can identify scratched surfaces or splinters resulting from an impact. Carefully apply retouch with a sharp brush only on the area concerned. The instructions for temperature and drying time must be followed before a second coat.

Despite the burn cedar being treated against UV rays, it should be remembered that after several years, some shades may have been affected differently by UV rays, this discoloration is quite natural and does not constitute a defect. Therefore, it is recommended to do some tests before touching up to check the difference between the applied and dried oil and how to adjust the oil with the aged wood?

CLEANING

You can clean with a very soft spray hose as needed. Pressure cleaning is to be avoided.

N.B. This guide is provided as a basic reference and is not binding on CAYAKI INC. The user is responsible for making the installation in a careful manner in accordance with the highest standards of the Building Code and our Warranty.