



INSTALLATION GUIDE

CHARRED WOOD and CEDART CLADDING - EXTERIOR and INTERIOR

This guide covers all ranges of sidings (interior and exterior) of prefinished wood (natural or charred, and treated in the factory, for wall or ceiling use), manufactured by CAYAKI Inc. ("CAYAKI"), and hereinafter collectively called "Product".

Installation instructions. This guide complies with the standards of the National Building Code (NBC) of Canada. The installer must respect the building code of the region where the Product is installed to ensure the conformity of the installation as well as strict follow-up of the installation and maintenance instructions stipulated in this CAYAKI installation guide and with the documentation included when receiving the order. **The installation guide is also available on our website www.cayaki.com.**

Reception and inspection of the Product. Upon receipt of the order, the purchaser and/or installer must thoroughly inspect the Product in order to ensure its quality and appearance before installation.

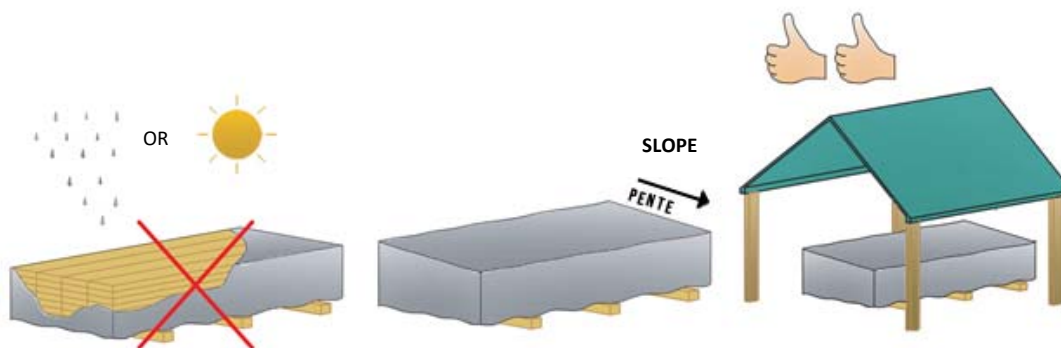
If upon receipt of the Product, defects are noted on more than 15% of the order of the same family of Product, CAYAKI will supply replacement material for the defective Product in accordance with the conditions of execution of the limited 90 days warranty on finish.

It is the responsibility of the purchaser and/or the installer to ensure that the correct Product is selected for the application (indoor, outdoor, etc.), according to the technical sheets for our articles, available on www.cayaki.com.

Storage. Storage of the Product must be done in a dry and well ventilated space, protected from the sun and rain, without heating, on a flat surface at a distance of 152 mm (6 in) from the ground and 254 mm (10 in) at least from a vertical surface that may prevent air from circulating. The Product must be kept in the original packaging with the separators between the planks (if applicable) in order to protect them against friction. Keep the covering clean and dry and check each plank before installation.

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

The acclimatization of the Product is necessary (72 hours in the installation environment). A deficient acclimatization can cause torsion, shrinkage and/or suction cup effects after installation.



On site storage of the Product

CAYAKI Product Installer Instructions

Inspection. A careful inspection of the order will allow the installer to ensure the quality and appearance of the Product before installation. It will also allow a verification of the quantities ordered, the model and the color of the Product, the model of the mouldings (if applicable) and the touch-up material. Do not install a defective Product. For any non-conforming product found on more than 15% of the order, the installer must immediately notify CAYAKI by telephone (1-418-866-1021) or by email at info@cayaki.com. All CAYAKI Products are covered by a 90-day limited warranty on the finish. The terms and conditions of our guarantees are available on our website www.cayaki.com.

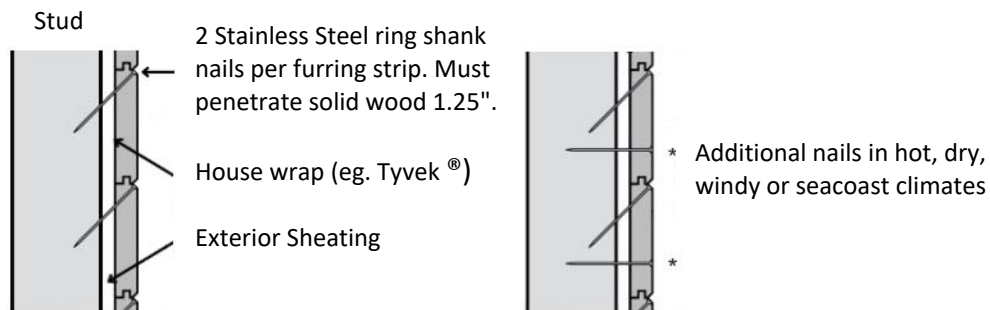
Equipment. The following equipment is required:

- Pneumatic nailer or stapler for covering or mouldings.
- Air compressor.
- Recommended staples or nails.
- Laser and manual level.
- Saw and finishing blade.
- Hammer with plastic tip.
- Sealer and brush applicator.

NOTE. As with all wooden products, avoid installing the CAYAKI Product on a structure containing an excessive level of humidity, such as concrete or plaster during drying. The Product must not be installed on green or bent structural members. A vapor barrier membrane with a permeability rating of less than 1 (e.g., polyethylene or aluminum foil) should be installed on the HOT SIDE (interior) of the wall surface, and extended behind the bulkheads so as to form a continuous protection for exterior walls.

Installation.

- Maintain a minimum penetration of 31.8 mm (1.25 in) in the stud, the slats or a combination of both.
- Also take into account the nailable thickness of the Product in the nail penetration requirements. Increase the penetration value of the nails if required by code.
- Invisible nailing is recommended whenever possible, except around windows and other wall openings. See recommendation below if fastening system is visible.



Example of nailing in the case where the fasteners cannot be hidden in the tongue.

Nails.

- Use stainless steel 6mm (1/4 in) diameter textured flat head corrugated nails.
- Do not use mild steel nails which are not protected against corrosion.



Staples. Use 16 gauge stainless steel staples with a minimum length of 50 mm (2 in), 11 mm (7/16 in) crown, and resin coated for tongue and groove planks.



NOTES:

- In places where the stapler cannot access, such as the starting row at the bottom of the wall, a plank above or below an opening, the last plank at the top of the wall, use the nail described above while carefully applying a finishing stain.
- Depending on the tongue and groove paneling pattern and the finish color of the planks, staples may appear during installation (especially with dark finishes). The use of stainless steel nails is then a good way to overcome this situation.

Safety anchor depth.

Fastening system (nails or staples) must pass furring strip at least 25 mm (1 in) through a solid nailing base. The depth calculation considers the thickness of the plank and the 90° nailing angle or the angle of the concealed staples. For most planks 10 mm (3/4 in) thick, the staple is 50 mm (2 in) long, laid at an angle between 20° and 30°.

a) Installation of planks with visible fastenings:

- For planks 100 to 150 mm (4 to 6 in) these must be nailed about 25 mm (1 in) from the bottom of the planks, one (1) nail per furring strip. The nailing should be far enough from the bottom to prevent the wood from shattering. Space the nails approximately 400 mm (16 in).
- For 50 mm (2 in) mouldings, only one nailing point is recommended. For mouldings 50 mm (2 in) and over, two nails are required; those nails must be 19 mm (3/4 in) apart from the upper and lower edges.
- Space the nails approximately 400 mm (16 in).

b) Installation of planks without visible fastenings:

- In the case of horizontal installation, the planks are attached from the top (tongue); the bottom is fitted onto the plank below. For vertical installation, the tongue must always remain visible in order to attach the staples there before fitting the next plank.
- Install two (2) staples per furring strips with recommended staple spacing of 19 mm (3/4 in).

Optimal installation.

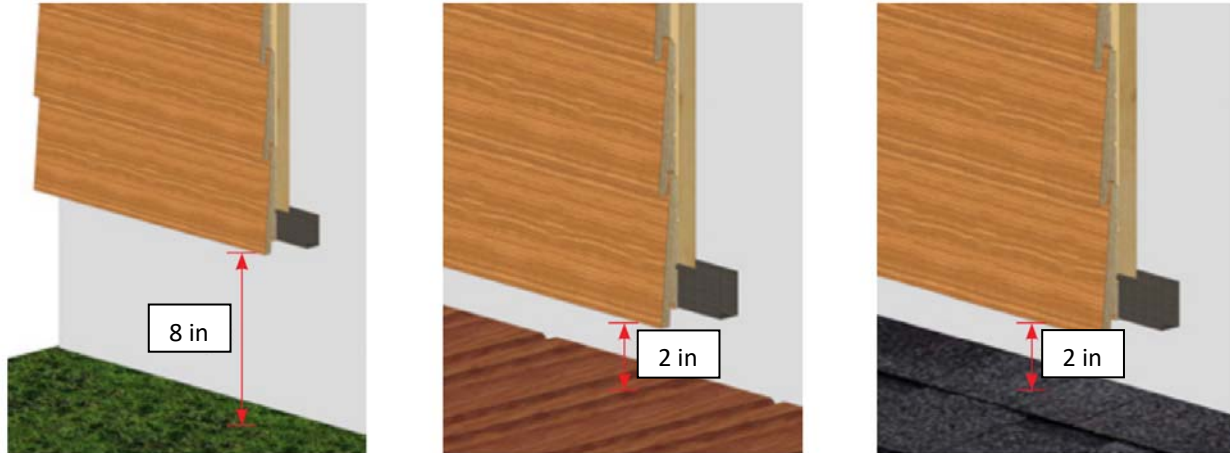
- The head of the nail or staple must rest on the wood and must not penetrate the wood. Before attaching it, you must press the plank firmly against the wall.
- Avoid nailing or stapling near the edges. If necessary, pre-drill the wood near the edges or the ends before nailing or stapling.

Protective contour of the openings.

- Before installing the furring strips and/or the finishing mouldings, around the doors and windows, it is necessary to make sure of the waterproofness of the membrane in order to block water infiltration.
- The weather barrier must overlap the flashing by 50 mm (2 in).
- The furring strips must be slightly set back so as not to be visible when laying the planks.

Clearance and ventilation openings.

- The planks must leave a minimum distance from the laying surfaces:
- 200 mm (8 in) above the ground.
- 50 mm (2 in) above an inclined roof covering.
- 200 mm (8 in) above a flat roof covering.
- 50 mm (2 in) above a patio.
- 25 mm (1 in) above a shelf.



Clearance of the cladding with regard to water and humid environments.

Furring strips.

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

For the replacement of the siding of existing buildings, the new siding must be installed on furring strips (slats) after the replacement of the weather-resistant barrier (construction paper or building envelope). The fixing of the furring strips must penetrate at least 32 mm (1-¼ in) deep. If an exterior insulation is present, you will need to adjust accordingly.

Flashings.

- Install the bypass flashing so as to direct the water towards the gutter.
- Install step flashing with a minimum of 100 mm (4 in) for the top.
- Integrate the flashing well with the secondary waterproofing barrier.
- Do not protrude the covering or trim over the bypass flashing or gutter.
- Leave a space between the end of the gutter and the adjacent wall to allow maintenance of the siding.
- If the foundation extends beyond the wall, a flashing with a 10 mm (3/8 in) opening should be installed between the siding and the flashing.
- Reseal all cut edges which are in the open air with the finishing product supplied with the order.
- If the flashings are already in place, the installer must ensure that they comply with the building codes of his region.

**Horizontal or vertical installation.**

The Product can be installed horizontally or vertically, the installation of the planks can be done with visible fastenings or without visible fastenings (see above). The Product is not designed for floors. Properly performing each type of installation requires slightly different techniques. Be sure to use the proper technique for each type of installation.

a) Installation of horizontal planks:

- 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 on which the Product is installed. A regular check of the leveling of each row of planks can be repeated if necessary.
- At the start, put the temporary reference piece for the mouldings by aligning them on the reference line at the bottom.
- Install door, window and other framing mouldings.
- Install a ventilation moulding at the top of the wall, fire stop, ventilated and anti-rodent at 50% in order to fill the void.
- Install the flashings (as described above)
- Plan the lay-out of the planks to minimize the losses.

For the starting row at the bottom of the wall.**Ventilated metallic starting grid:**

- Install the metal grid on the walls following the reference line while ensuring that it overlaps by 25 mm (1 in.) the concrete floor, the tongue facing upwards.
- Openings that allow ventilation must be covered by ventilated wire meshes which protect against rodents and which comply with statement F42 of the National Building Code.

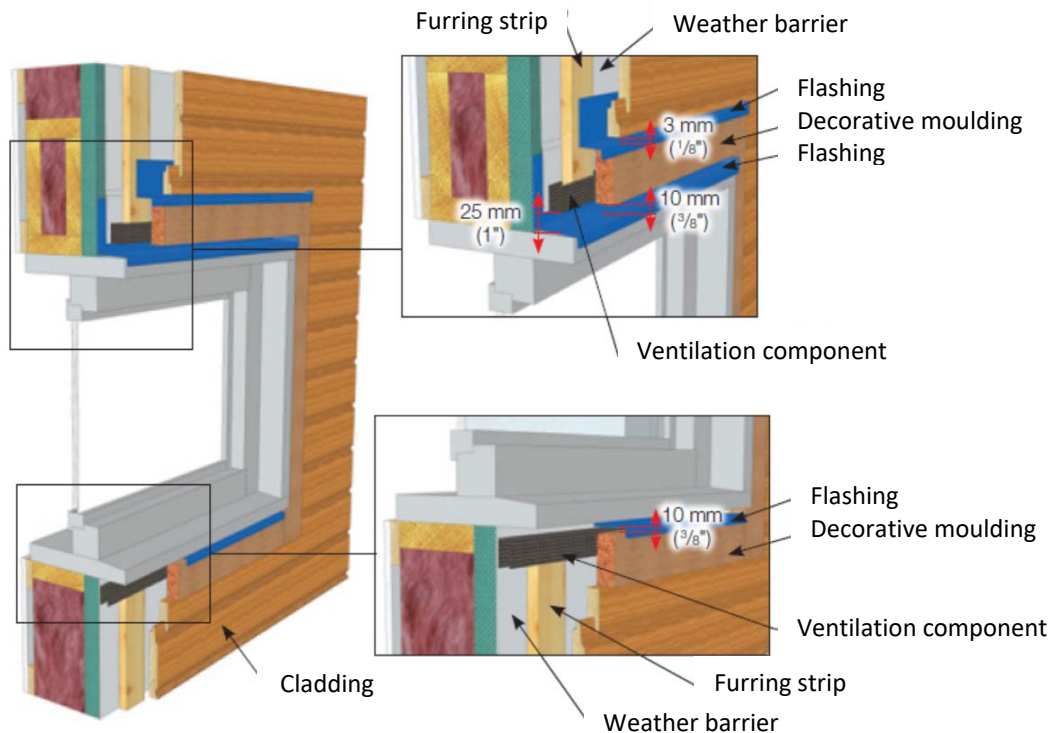
Without metal ventilated starting grid:

- Install the screen using the stapler, inserting it under the furring strips and folding it over.

With horizontal wooden moulding:

- Install the ventilated wire mesh by inserting it under the furring strip and by folding over it.
- Install the horizontal wooden moulding following the reference line. The moulding should overlap by 25 mm (1 in) the concrete floor.
- Install a protective flashing to protect the moulding while leaving a clear space of 10 mm (3/8 in) between the horizontal surface of the flashing and the ends of the vertical planks. This space must be free of any obstruction.
- Identify the corners of the walls adjacent to the four (4) rows of planks and proceed wall by wall before starting the next 4 rows.
- Install the next three (3) rows.

Regularly check the reference level and the perfect junction at the wall corners. If you have to make adjustments, never make them in one (1) row, but distribute them over the following rows. Repeat checks constantly.



Preparation of the walls around openings (with finishing mouldings)

Top of the wall.

- Break the contiguity between the air space and the roof void by installing a firestop and anti-rodent top ventilation moulding to fill the void (see previous illustration).
- Install the wire mesh or mosquito net / screen.
- Cut the last plank from the top across the width to keep a free opening of 10 mm (3/4 in). Use nails to secure the last plank. You can choose to install a moulding to hide this opening.
- Install a flashing to cut water infiltration if the overflow is less than four (4) times the opening space.
- After finishing all the walls, carry out the necessary alterations.

b) Installation of vertical planks:

- Create a space of 37.5 mm (1.50 in) to ensure optimal air circulation behind the exterior siding. For vertical installation, we recommend double horizontal and vertical battening to ensure good ventilation of the Product.
- For any air space more than 25mm (1 in) under the siding, articles 3.1.11.2.1 c and 9.10.16.2.1 c of the 2010 Quebec Construction Code require to proceed as follows:
A fire barrier element, made of sheet steel flashing 37.5 mm (1.50 in) thick, must be installed at each level horizontally so that there is at most 20.42 meters (65 feet and 7.50 in) of horizontal distance and 2.74 meters (9 feet 11 in) in vertical distance between firewalls (section 3.1.11.2.1 c).
- 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 on which the Product is installed. A regular check of the leveling of each row of planks can be repeated if required.
- If necessary, reproduce for each stage the horizontal reference line with a laser level.
- Initially, put the temporary reference pieces for the mouldings by aligning them on the reference line at the bottom.



- Install door, window and other framing mouldings.
- Install a ventilation moulding at the top of the wall, firestop, ventilated and anti-rodent at 50% in order to fill the void.
- Install the flashings. (As described above)
- Plan the lay-out of the planks to minimize the losses.
- Make an alignment mark on the horizontal furring strips at 2/3 the height of the section of wall to be coated to check the alignment.

Bottom of the wall.

- With the ventilated metal starting grid: Install following the reference line while overlapping the concrete floor.
- Without ventilated metal starting grid: Install the mosquito net; fix it with the stapler by inserting it under the furring strip and folding it over.

With finishing moulding in horizontal planks.

- Install the mosquito net or the metal ventilation grille as indicated above by inserting it under the furring strips and folding it over.
- Install the finishing moulding following the reference line.
- Overlap the moulding by 25 mm (1 in) on the concrete floor.
- Install a flashing to protect the horizontal mouldings. 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 thus created is free of all materials that may prevent water from escaping.

Top of the wall.

- Break the contiguity between the air space and the roof void by installing a firestop and anti-rodent top ventilation mouldings to fill the void (see previous illustration).
- The end of the planks must be cut to leave a space of 10 mm (3/8 in) at the top of the wall.
- Install a finishing flashing to prevent water infiltration if the roof overhang is less than four (4) times the opening space.

First row to install.

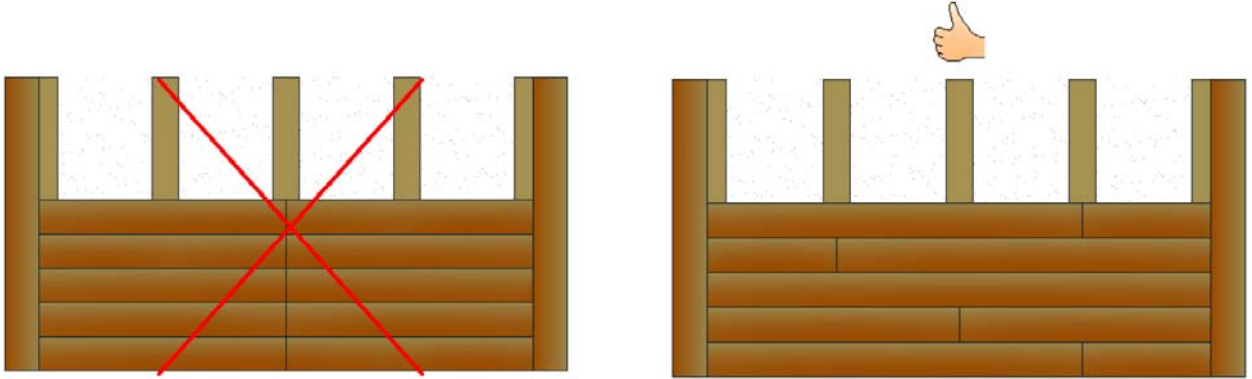
- Determine the source of the winds so that the tongues are facing the wind to minimize the supply of water in the grooves.
- Leave a 10 mm (3/8 in) opening at the top of the wall.
- The bottom of the planks must be cut at a maximum angle of 15° to allow water to drip outwards.
- Use the level to vertically install the starting plank and secure with nails.
- Touch up any cuts that expose the wood.
- Install the following three (3) rows.
- If a verticality adjustment is necessary after three (3) rows, distribute the adjustment over several rows.
- Proceed in four (4) rows.

Installation of the last row.

- Cut the edges of the planks that arrive on the corner. Cut on the male side; touch up the exposed wood with two (2) topcoats.
- Apply the sealer at the appropriate places, along the vertical joints, to meet the mouldings. If the horizontal flashing overlap does not overflow, apply sealant.

Joint treatment:

- The joints of the adjacent siding planks must be located above the center of a stud or a furring strip installed on a stud.
- It is recommended to make 90° cuts and leave a space of 3 mm (1/8 in) for expansion.
- Leave a gap at the 3 mm (1/8 in) butt joints between the covering pieces, and nail them into the stud or the furring strip. Nail on each side of the top nailing line.



Arrangement of lengths and joints

Cutting process for effective abutment.

- It is recommended to make abutment cuts of 22.5°.
- In the case of horizontal installation, it is necessary to do a cut which angle is directed towards the less visible side.
- When installing vertical planks, a cut must be made to allow water to drip.
- Cover the space with a sealer the same color as the planks.
- Apply a coat of finishing stain to the ends of the planks before installing them.



Arrangement of butt joints.

- The butt joints must be offset by 250 mm (10 in) minimum.
- Avoid seals over openings.
- Avoid laying very long planks end to end.
- It is recommended to install mouldings in cases where you want to make sections.

Layout of non-pressed planks.

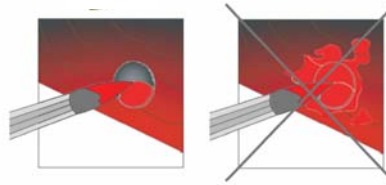
- It is recommended to align the planks on the furring strips.

Choice of sealer.

- See section 9.27.4.2 of the NBC for specifications (NRC 2015).
- For exterior application, the sealer must be flexible (non-hardening), water resistant, adherent to wood and siding surfaces, and free of volatile organic compounds (VOCs).

Touching-up.

- All surfaces exposed to water infiltration must be protected with two (2) coats of dye. It is very important not to apply dye to planks that have undergone a factory finish treatment. As an example, if the planks have been secured with exposed nails, the head of the stripped nails must be touched up with the tip of a brush. The temperature must be above 10° C when applying the touch-ups.



Maintenance.

- Carry out an annual inspection to prevent any deterioration, in particular inspecting the seal joints.
- A visual inspection makes it possible to identify scratched surfaces or splinters resulting from an impact and to carefully apply touch-ups with the tip of a brush.
- The instructions regarding the temperature and drying time before a second coat must be observed.

Note that after several years, certain colors could have been affected differently by UV rays; this discoloration is completely natural and does not constitute a defect. Consequently, it is recommended to carry out tests before touching up the Product in order to check the difference between the applied stain and the dried one and how to adjust the stain with aged wood.

Cleaning.

- Clean with a low flow garden hose and a soft bristle brush if necessary.
- Do not pressure clean.

N.B. This guide is provided as a basic reference and does not bind CAYAKI. The user is responsible for the meticulous installation in accordance with the highest standards of the Building Code.