

Since material handling and installation vary from country to country, the following information may not apply to the US, Canada, Mexico, and China. For these countries, please refer to the information provided by the local subsidiary of Nichiha.

## *Siding standard installation method*

### **What is the standard installation method?**

This method is to secure the minimum quality of the siding and installation. For the reasons below, please observe the method.

- (1) To maintain siding performance for long periods.
- (2) To exert the expected exterior wall function
- (3) Required conditions of quality assurance
- (4) To observe cautions and prohibited matters.

**Caution**



\* The standard installation method is applied when siding is installed to the exterior walls of buildings which conform to the laws and regulations related to the buildings. However, the installation specifications (installation manual, etc.) specified separately with the specific housing companies do not fall under these guidelines.

## *Display classification of harms and damages*

The following classifications show harms and damages which may occur if you disobey the display order. Please be highly cautious when you handle products.

**Warning**



**Warning: shows the possible death or serious injury in case of mishandling.**

**Caution**



**Caution : shows that a user may be damaged and only physical damage may occur in case of mishandling.**



**Prohibited : shows the prohibited matters which shall not be performed.**



## *Siding standard installation method*

### Recommended tools for installation (Makita Corporation)

#### ■ Dust-free circle saw



<Russia>  
<China>  
<Australia>  
<Japan>

Item number: \* For details, contact the following address.  
Item number: \* For details, contact the following address.  
Item number: 4105KB  
Item number: KS4000FX

#### ■ Dust extraction



<Russia>  
<China>  
<Australia>  
<Japan>

Item number: 440, 445X, 448, 449, VC3510  
Item number: \* For details, contact the following address.  
Item number: VC2010L, 446L, 447L  
Item number: 484(P)

#### ■ Impact driver (cordless)



<Russia>  
<China>  
<Australia>  
<Japan>

Item number: BTD134, BTD146  
Item number: BTD136, BTD134  
Item number: BTD145RFE, BTD132RFE  
Item number: TD136DRFX, TD147DRFX

#### ■ Nailer (air type)



<Russia>  
<China>  
<Australia>  
<Japan>

Item number: \* For details, contact the following address.  
Item number: AN560, AN611, AN760, AN902  
Item number: AN611  
Item number: (Normal pressure machine)  
(Normal pressure machine)

### Recommended tools for installation (Makita Corporation)

※For tool details, contact the following address.

#### Russia < Makita LLC >

48-A, Otkrytoe shosse, Moscow 107370  
www.makita.com.ru

Phone: +7-495-380-0151  
Fax: +7-495-380-0152

#### China < Makita (China) Co, Ltd. Head office & plant >

288 Huangpujiang Road, Kunshan Economic & Technical Development Zone, Jiangsu 215335  
www.makita.com.cn Phone: +86-(0)512-57707710 Fax: +86-(0)512-57713623

#### Australia < Makita (Australia) Pty, Ltd. Head office >

4 Alspec Place, Eastern Creek, NSW 2766  
www.makita.com.au

Phone: +61-(0)2-9839-1200  
Fax: +61-(0)2-9839-1201

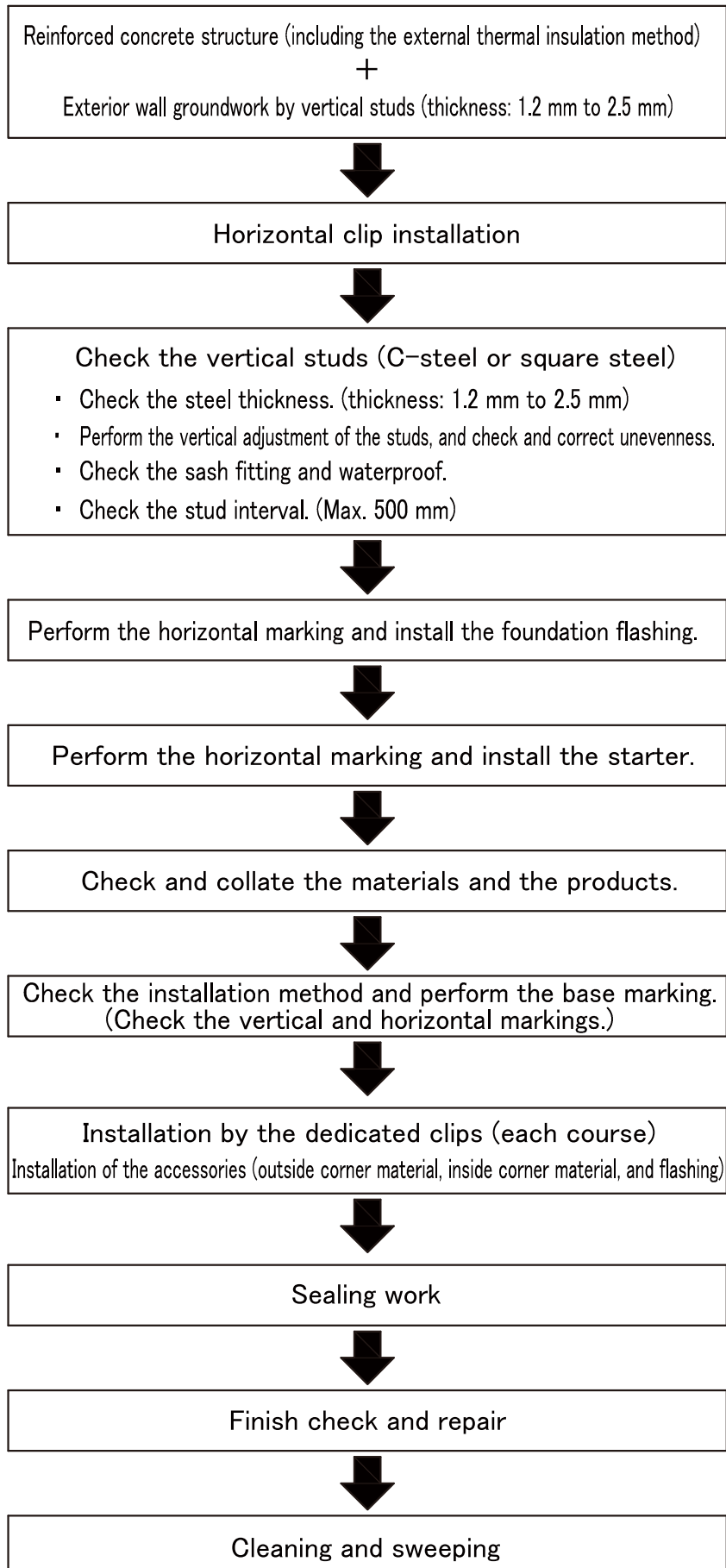
#### Japan < Makita Corporation >

3-11-8, Sumiyoshi-cho, Anjo, Aichi 446-8502  
www.makita.co.jp

Phone: +81-(0)566-98-1711  
Fax: +81-(0)566-98-6021

## *Siding standard installation method*

### Standard installation method



# Siding standard installation method

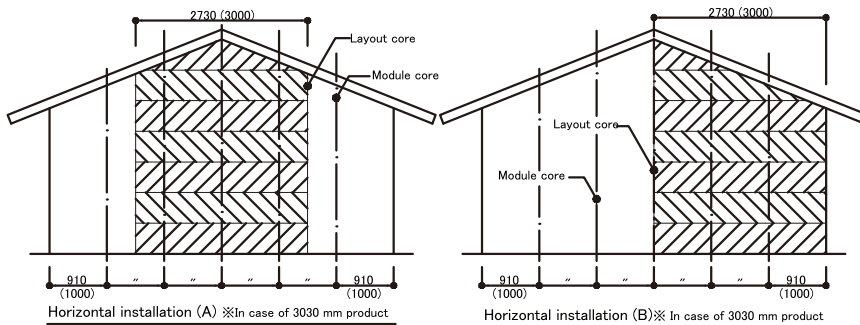
## Siding layout method

### Layout work point

- For layout work, it's important to reduce the cut loss of the siding and keep a balance, as well.
- In principal, perform the layout work so that the positions of the right/left joints should be symmetrical with respect to the basic line of the target wall center.
- If the position of the right/left joints cannot be set to the column and stud position because of the owner's request and aesthetic view, consideration shall be taken so that the installation trouble should not occur by adding studs in advance or other measures.

### Layout method in horizontal installation

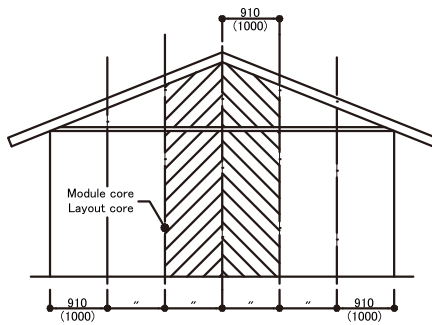
- There are two method in the horizontal installation layout; (A) the method which aligns the siding center to the center of the building, and (B) the method which aligns the vertical joints. Selecting either the method (A) or (B) depends on the aesthetic view of building, paying attention to the opening position.
- If the layout work is performed based on the following calculation, the vertical joint will be reduced.



"X" = Total level core length of the siding installation surfaces (from outside corner to outside corner, from inside corner to inside corner),  
 "Y" = Siding length (1800 mm product: 1820 mm, 3030 mm product: 2730 mm or 3000 mm)  
 Substitute the numeric value into the following formula and answer N.  
 $X/Y = N$  (Round up a decimal point.)  
 ※ If N is an odd number, adopt (A).  
 If N is an even number, adopt (B).

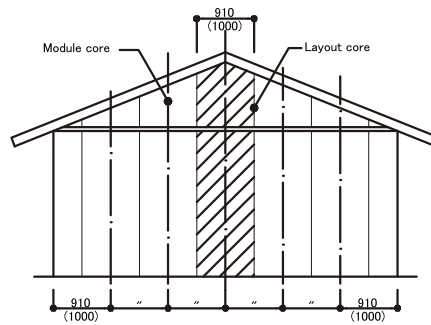
### Layout method in vertical installation

- For the vertical installation, set the plates which are in the same size to the right and left of the building. Caution shall be taken so that the plate next to the outside corners is not the narrow one.
- To prevent the narrow plates, select the layout from either "core joint divide" or "core sorting" with respect to the core line of the building.



<When the ship-lapped joint section is at the center of the exterior wall>  
 Divide the exterior wall outer dimension by 2 and the decimal place is 0.5 or more.

Vertical installation: core joint divide



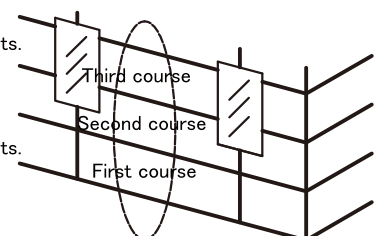
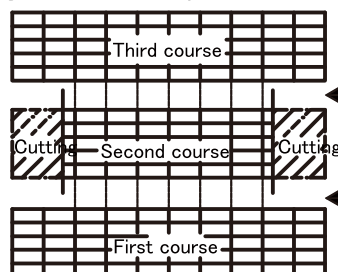
<When the siding center is at the center of the exterior wall>  
 Divide the exterior wall outer dimension by 2 and the decimal place is 0.5 or less.

Vertical installation: core sorting

### Pattern match (ditch and joint)

- For patterns which have straight groove and joint, caution shall be taken for cutting work so that the center groove and the pattern on the top/bottom sidings are aligned.

(Caution)  
 There are some designs which require the pattern match. Check the status by a catalog or a sample in advance.

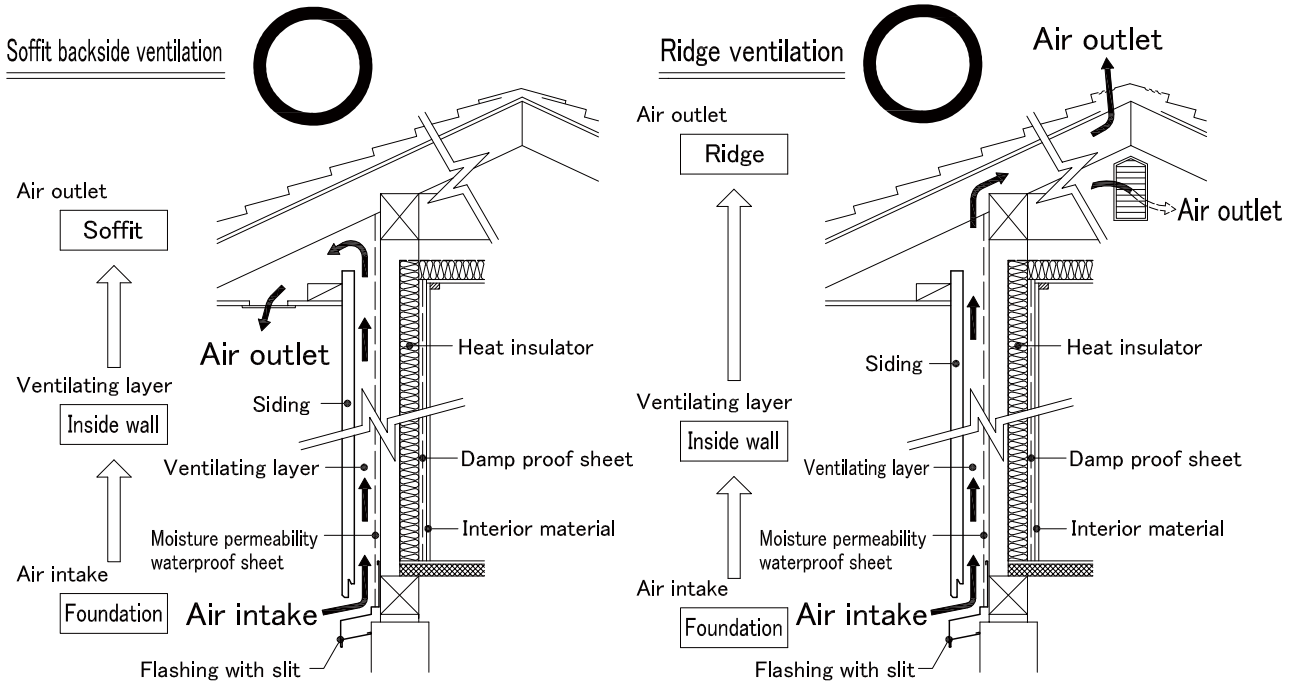


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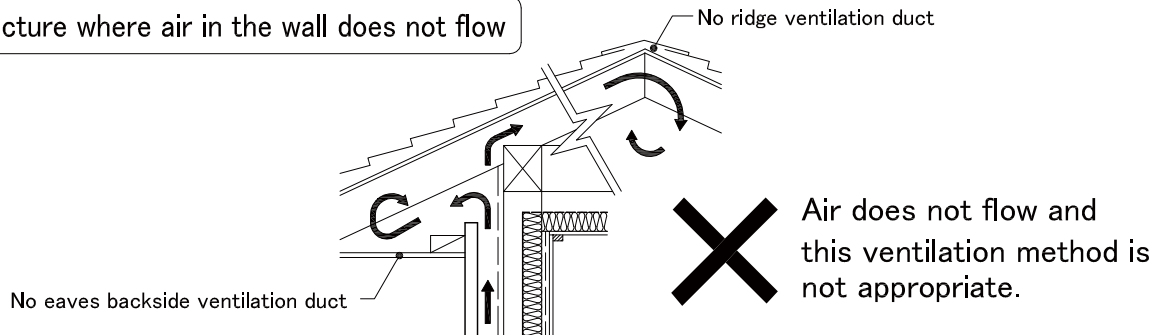
# Siding standard installation method

## Precautions for ventilating construction method

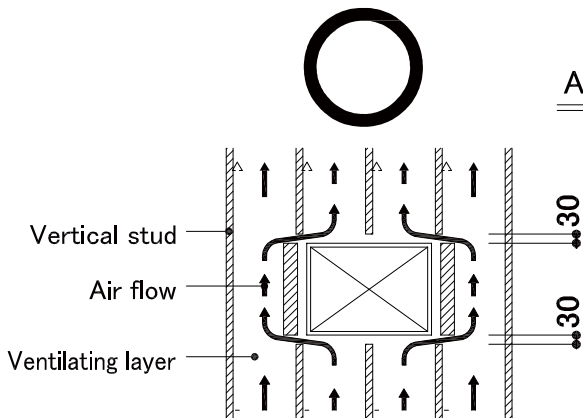
### Structure where air in the wall flows effectively



### Structure where air in the wall does not flow

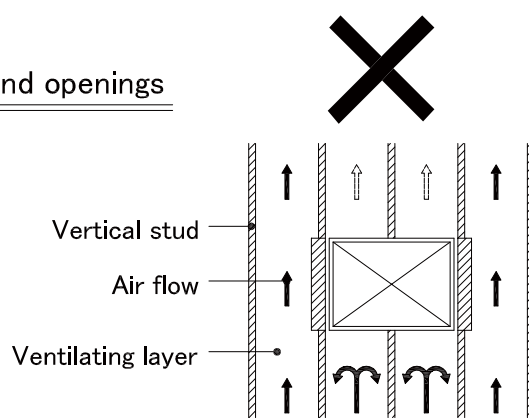


### Structure where air in the wall flows effectively



There is a space around openings for ventilation.

### Structure where air in the wall does not flow

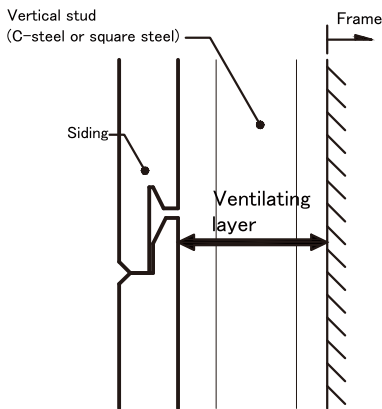


Areas around opening are blocked and there is no space for ventilation.

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# Siding standard installation method

## Securing the ventilating layer



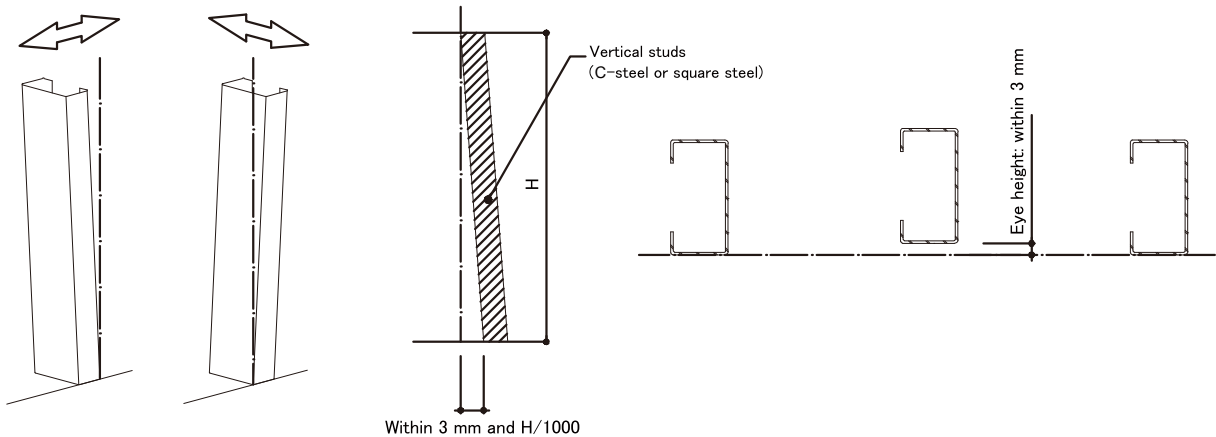
The required ventilating layer on the exterior wall ventilation method is at least 15 mm.

※The ventilating layer to be secured is at least 15 mm so that it can discharge rain water and condensation water in the wall as well as air.

## Accuracy of vertical stud (C-steel or square steel)

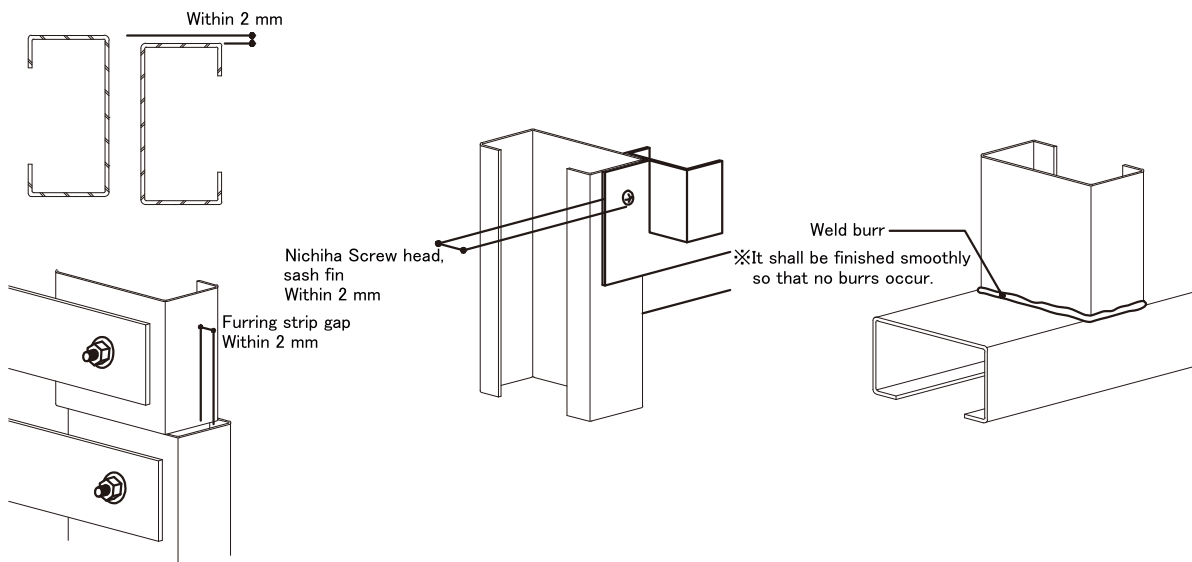
### ■ Vertical tolerance and eye height of vertical stud

- The vertical tolerance of vertical studs shall be within 3 mm and  $H/1000$ .
- The eye height gap of vertical studs shall be within 3 mm.



### ■ Unevenness limit

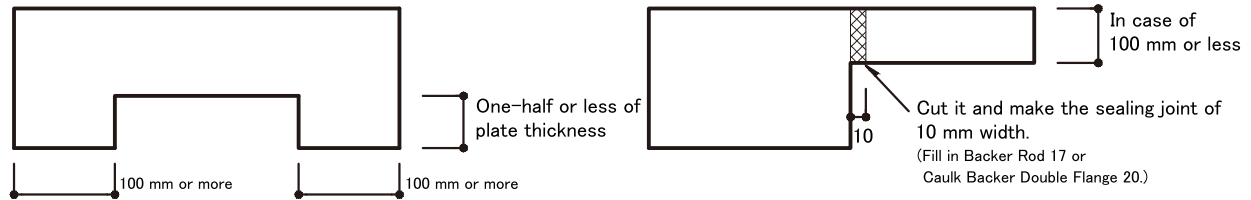
- Unevenness by the gap of vertical stud joint part, weld part burr, and screw head shall be within 2 mm.



# Siding standard installation method

## Siding notching

In principal, the notching dimension of siding shall be one-half or less of plate thickness (455 mm). If the dimension becomes one-half or more inevitably due to layout, be sure to cut the narrow plate whose width is 100 mm or less and place the sealing joint.



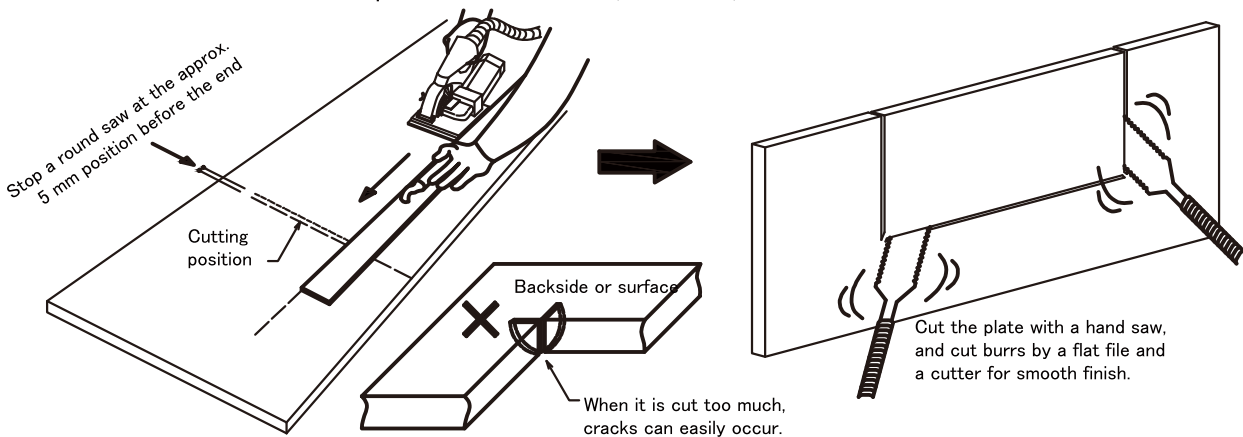
**Prohibited**

For the siding notching around openings, even if the 100 mm or more of the narrow plate thickness is secured, caution shall be taken when carrying it or performing the installation on the scaffold. The photo on the left shows an example where a crack occurred because the sealing joint was not secured when the narrow plate width is 100 mm or less. Because a crack tends to occur at the parts around openings by the shake and vibration of the building, The sealing joint is important to ensure quality.

## ■Precautions for installation

### 1. Cutting

Do not cut to the end at one stroke. Be sure to stop the cutting at the approx. 5 mm position before the end. Finish the remained part with a hand saw, a flat file, and a cutter.



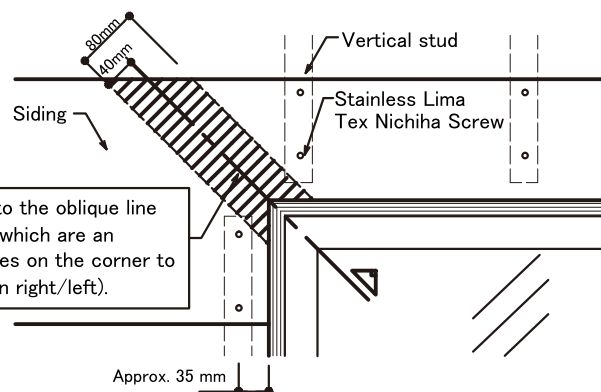
### 2. Handling

Because the siding after notching can be easily cracked, be careful for transportation and installation.

### 3. Fixing

- Use a stainless lima tex Nichiha screw and refer to the figure on the right for fastening.
- Set the screw position from the plate end to 30 mm to 40 mm.

Do not fix the screw to the oblique line parts (from the parts which are an extension of 45 degrees on the corner to the range of 40 mm on right/left).



# Siding standard installation method

## Repair coating

The special repair coating is used for the siding coatings. However, if proper repair is not performed, color difference may occur. In case of using, be careful for the followings.

### ① Weather check

- When it rains or snows on the repairing day or the previous day, do not repair the coating.
- Perform the repair coating at the temperature of 5°C or higher.

### ② Color tone

- After stirring the coating until the color becomes even, apply a trial coating using a remained material and check the color tone.

※ There is a repair liquid where a hardener is to be mixed. So, check the manual supplied and be sure to pour the hardener and stir it up fully for coating operation.



Stir up the coating fully until it becomes the same color with the color sample on the center of lid of the repair coating. Be sure to perform the trial application to leftovers.

### ③ Treatment of repaired surface

- Remove dirt, dust, and moisture content.

### ④ Repair coating

- Stir up the coating fully until the color becomes even.
- When the viscosity of the repair coating is increased, dilute the coating with a small amount of urethane thinner. (Do not use a reducer for coating.)
- Apply the coating only to the relevant repair parts with the supplied felt rod and brush. Do not apply the coating more than necessary. Do not apply a thick coat.
- After application, close the lid tightly and keep it in a cool and dark place.

※ The repair coating color tone matches with the siding. However, depending on the application amount, method, and luster, the repaired part may be noticeable. So, perform the application to the minimal areas.

When the applied area becomes large, it may be unnatural.

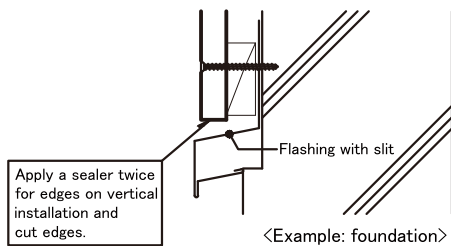
The coating with a hardener cannot be reused. Dispose that coating on the specified place.

## ■ Siding edge repair (cut edge, lower end edge of the vertical installation product)

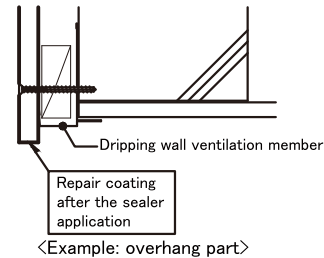
Do not perform the sealing or others to the edges of cut siding and the lower end edge of the vertical installation product. Apply a sealer twice.

In that case, after the first application is dried, perform the second application.

For the parts where the cut edge is seen in case of using a dripping wall ventilation member, apply a sealer and perform the repair coating after drying.



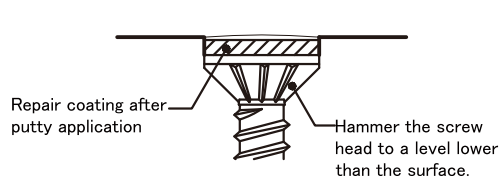
※ Likewise, the roof-wall juncture, top/bottom joint, and inside corner



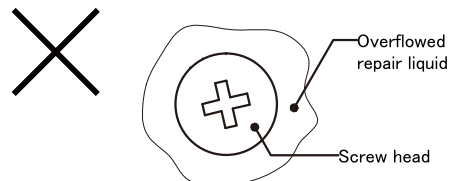
※ Outside balcony installation beginning

## ■ Repair coating of Nichiha Screw head

When fixing the siding with the Nichiha Screw, hammer the screw head to a level lower than the siding surface, and apply putty for repair to the screw head. After the putty is dried, apply the repair coating only to the screw head.



After the repair putty is hardened, perform the repair coating. Do not apply a broader coat than the screw head area. Do not apply a thick coat.



Do not apply a broader coat than the nail head area. Do not apply a thick coat.

## ※ Do not perform the sealing repair treatment to the screw head.

The sealing deterioration may cause bleached phenomenon or dirt adhered may be noticeable.

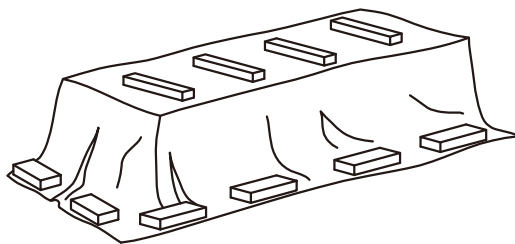


# *Siding standard installation method*

## Storage/handling/transportation

### ■ Storage

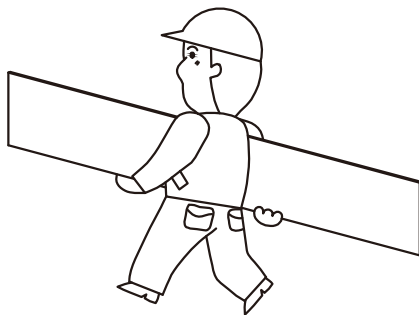
- Store the siding to the horizontal place indoors in principle. Be sure to put it on the pallet and do not put it directly on the ground.
- When storing outdoors, in addition to the above precautions, put the sheet on the siding to prevent the siding from being wet.
- When storing the siding as a loaded pallet, the number of loaded pallets shall be up to 2. The loading height shall be 1 m or lower.
- ※ If the wet siding is installed, shrinkage, warping, and cracks may occur.  
If the coating and sealing are performed to the wet siding, coating abrasion and sealing breakage may occur.



Do not put the siding directly on the ground.  
Store the siding away from moisture content.

### ■ Handling

- Carry the siding quietly with the smaller end set up in order to prevent cracks.
- Do not damage corners and surfaces of the siding by hitting to substances or falling.
- Do not touch the siding with dirty hands.
- Be careful of the environment and watch your step—in carrying around.



If the smaller end is not set up in case of carrying, flaw and crack of siding may occur.

### ■ Transportation

- Do not damage corners and surfaces of the siding in case of carrying down the siding.
- The loading shall be flat and be careful for dirt.
- In order to prevent damage by a harsh breaking, set the patches to the siding corners and secure the siding with ropes and wires firmly.
- When hanging the siding, perform the curing by the pat board in order to prevent the damage to siding by affixing wires.

### Caution



Improper storage and handling may cause failures by the aging degradation.