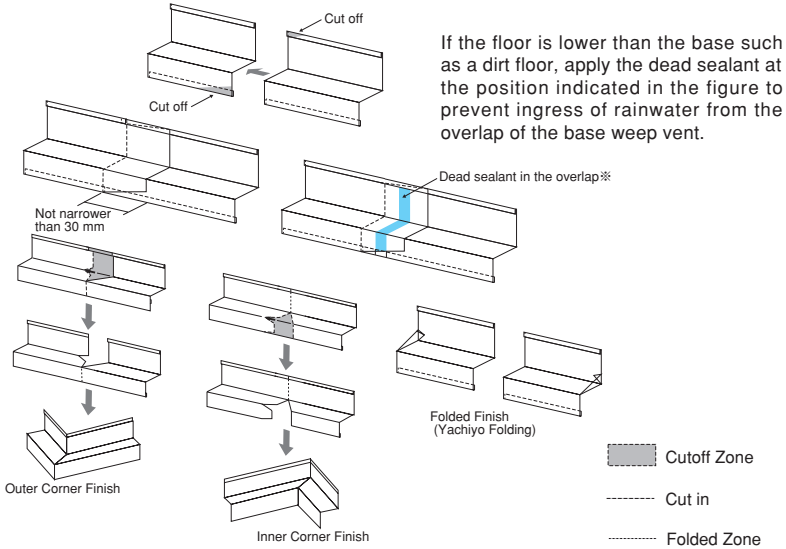
◆Common Construction Manual

Attaching Weep Vent on the Base

①Horizontally attach the weep vent for the base.
②For a general steel sheet weep vent, give an overlap margin more than 30 mm.



If the floor is lower than the base such as a dirt floor, apply the dead sealant at the position indicated in the figure to prevent ingress of rainwater from the overlap of the base weep vent.

Example of Base Weep Vent Work

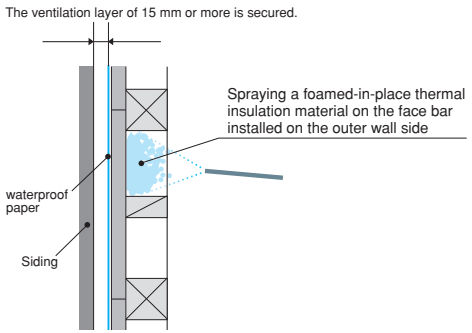
※In addition, be sure to apply the dead sealant at the joint with the metal accessories.

Direct spraying process of foamed-in-place thermal insulation materials, such as urethane, from the back side of waterproof sheets

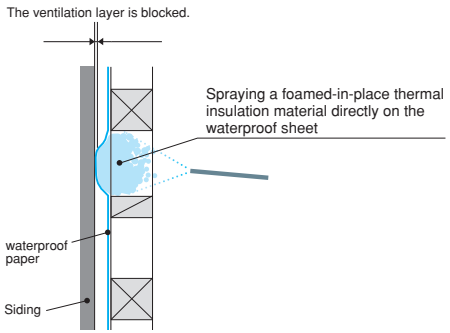
In some cases where a foamed-in-place thermal insulation material, such as urethane, is sprayed directly on a waterproof sheet, the ventilation path between the back of the outer wall material and the waterproof sheet is blocked.

- Directly spraying a foamed-in-place thermal insulation material on the back of a moisture-permeable waterproof sheet may affect the performance and quality of the waterproof sheet and hinder ventilation secured by the outer wall ventilation construction method. Therefore, use a face bar so as not to directly spray the material.

- If you consider employing the direct spraying method for a foamed-in-place thermal insulation material, please fully check with the manufacturer of the thermal insulation material and the construction shop as to the availability of the direct spraying method and the validity of the process method.



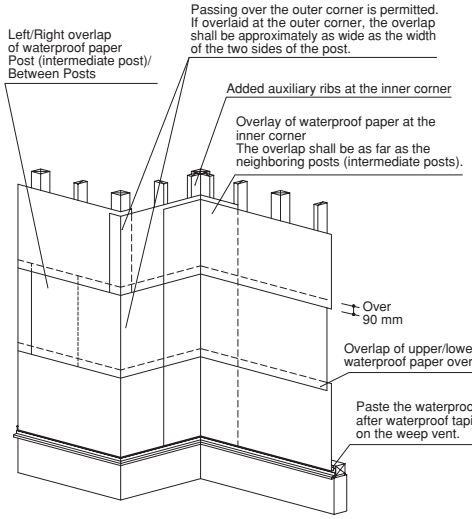
Desirable process example



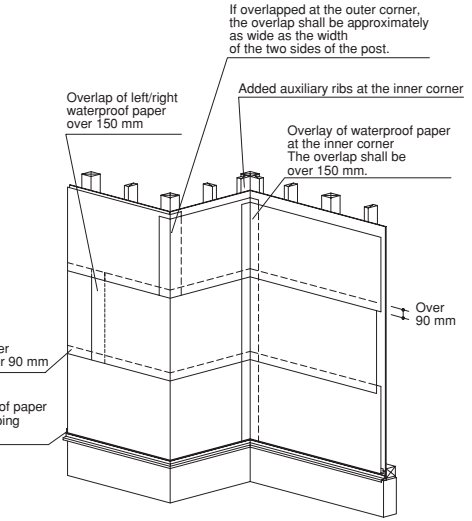
Undesirable process example

Pasting the Waterproof Paper

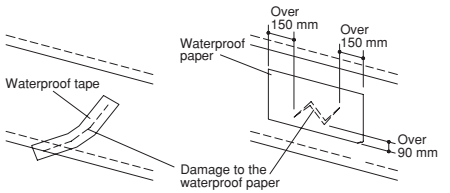
Without Durable Surface Material



With Durable Surface Material



- The side joint/nailed portion of the siding does not have perfect waterproof performance. Accordingly, be sure to use waterproof paper to prevent moisture even if leakage or condensation occurred on the backside of the siding with sufficient consideration.
- Use the Konoshima moisture permeable waterproof paper. (Do not use the plastic type film with less moisture permeability that tends to cause internal condensation.)
- In principle, it is horizontally pasted from lower to upper. The printed mark of Konoshima shall be on the outside when pasted. The overlap of upper/lower shall be over 90 mm; left/right overlap shall be the spacing of the post (intermediate post) and post (intermediate post) (overlap shall be on the position of the post/intermediate post) if there is no durable surface material, and 150 mm shall be taken if there is a durable surface material. (However, avoid overlapping the vertical joint of the durable surface material.) If waterproof paper is not used, or used in the wrong way, it will cause leakage of rain. Be very careful when working on the peripheral of the opening.
- Paste waterproof paper on the surface of the backing wood so that the backside of the siding and the waterproof paper will not make contact. (If they make contact, the ventilating layer will not be secured and will cause condensation.) The outer corner can be passed over, but overlapping shall be as wide as the two surfaces of the post.
- Be sure to paste on the inner corner with overlap from left/right with overlapping width over 150 mm on the durable surface material; if there is no durable surface material, the overlap shall be as far as the neighboring post (intermediate post).
- On the weep vent of the flashing for the base weep vent or the roof, use waterproof paper to cover the weep vent. (About 15 mm from the bottom of the rise of the weep vent.) If the bottom edge of the waterproof paper is supported only by the vertical furring strip, to prevent fluttering of waterproof paper by the wind, use double-sided waterproof tape on the weep vent and overlap it with the waterproof paper. (If the long starter or horizontal furring strip is used for holding the waterproof paper, the waterproof tape is not required.)
- Use the double-sided waterproof tape of Konoshima.
- Paste the waterproof paper securely on the double-sided waterproof tape.
- If the waterproof paper is broken by chance, to prevent rainwater from coming in from that portion, repair to stop the broken portion by pasting the waterproof tape, by overlapping the waterproof paper, or by reworking.

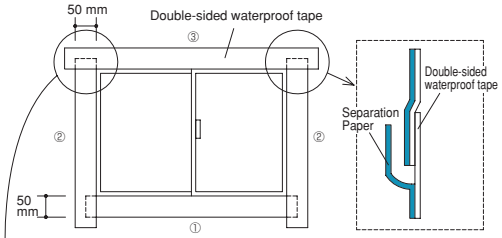


- The waterproof paper at the eave connection shall be pasted upward as far as the ventilation is not interrupted (the bottom end of rafter, etc.).
- Clasp the upper end of waterproof paper to the plate to prevent fluttering.

How to Paste Waterproof Paper/Waterproof Tape at Openings/Ventilation Ports

- In principle the waterproof paper over the openings shall be through pasting so please avoid overlaps.
- Tape the double-sided waterproof tape on the periphery of the opening or ventilation port, and press the edge of the waterproof paper using double-sided waterproof tape to the periphery of the sash and ventilation port. Pay special attention to the periphery of the opening.
- The method and procedure for pasting double-sided tape around the sash

1. In principle, paste from lower to upper.
2. Please tape the upper end of double-sided waterproof tape at left/right side within the width of the double-sided waterproof tape on the upper frame.
3. Especially for the double-sided waterproof tape used on the upper frame, paste it extremely close to the frame, not allowing a residual view of the fin. (Ensure to press around the edge of the fins, corner with asperities, and where the tapes are overlapping.)
4. Remove the release paper for the double-sided waterproof paper when the waterproof paper is pasted, and press it to the waterproof paper.
5. For pressing to the waterproof paper, a hand roller will ensure the pressing.



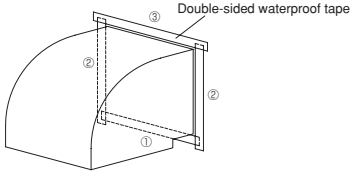
※When pasting the upper double-sided waterproof tape, remove the end of separation paper of the lower double-sided waterproof tape, and paste the adhesive faces to each other.

Be careful to follow the above order and overlap length for pasting the waterproof tape, otherwise, water leakage will be caused.

Paste the waterproof tape for the side of the window not to run off the waterproof tape on the upper frame of the window.

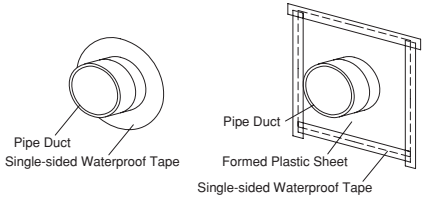
Square Type Ventilation Ports

- Similarly as the opening, paste the double-sided waterproof tape on the periphery of the square type ventilation port in the order below.



Round type Ventilation Ports

- Similarly as the opening, paste the stretchable single-sided waterproof tape, or use a formed plastic sheet and paste the single-sided waterproof tape, for the periphery of round type ventilation port.

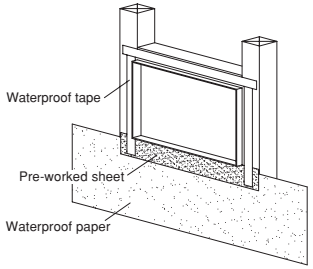


For details please refer to "Waterproofing Construction Manual for Ventilation Port Periphery" issued by NPO Japan Exterior Furnishing Technical Center.

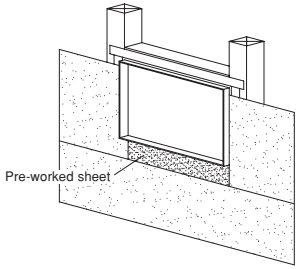
Openings

- If there is a pre-worked sheet under the sash, paste the waterproof paper inserting under the preworked sheet. In addition, do not paste the waterproof tape on the pre-worked shed and the fin (fringe) on the lower frame of the sash.

How to paste the waterproof tape where a sheet is pre-worked

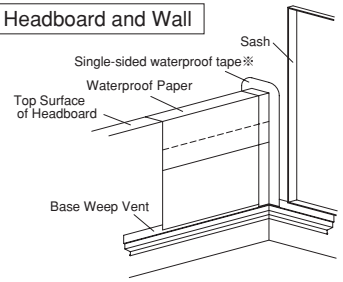


How to paste the waterproof paper where a sheet is pre-worked

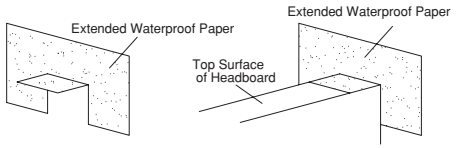


How to Paste the Waterproof Paper on Balcony

Joint of Headboard and Wall

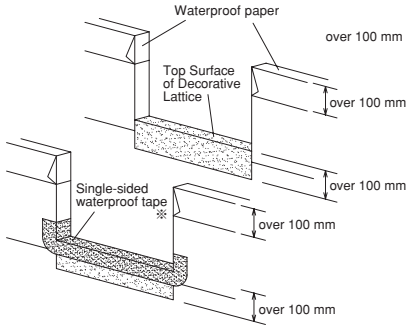


- Paste the waterproof paper twice on the top surface of headboard. The overlap shall be over 100 mm for both outside and inside of the balcony.
- Please paste the extended waterproof paper at the joint of headboard and wall before pasting up from the lower part as indicated in the figures below:



- On the joint of headboard and wall, either paste the highly stretchable single-sided waterproof tape over the waterproof paper or paste the single-sided waterproof tape after attaching a standard corner accessory, such as permanent water drip for increasing the waterproof performance.

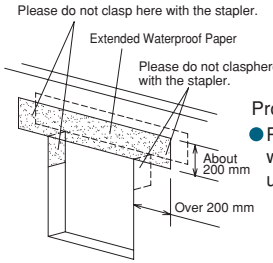
Decorative Lattices



- Paste the waterproof paper twice on the top surface of decorative lattice. The overlap shall be over 100 mm for both outside and inside of the balcony.
- On the top surface of decorative lattice, either paste the highly stretchable single-sided waterproof tape over the waterproof paper, or paste the single-sided waterproof tape after attaching a standard corner accessory such as permanent water drip for increasing the waterproof performance.

Balcony Opening

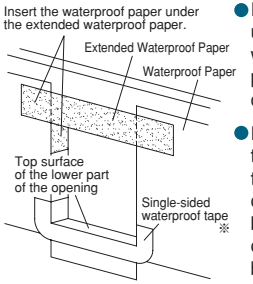
Procedure ①



Procedure ①

- Please paste the extended waterproof paper at the upper part of the opening.

Procedure ②

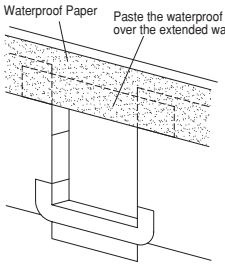


Procedure ②

- Insert the waterproof paper under the extended waterproof paper and paste for the side of the opening.
- Paste the waterproof paper twice on the top surface of the lower part of the opening. The overlap shall be over 100 mm for both outside and inside of the balcony.
- On the top surface of the lower part of the opening, either paste the highly stretchable single-sided waterproof paper, or paste the single-sided waterproof tape after attaching a standard corner accessory for increasing the waterproof performance.

※Recommended Product:
Nitto Denko Corp. Hyper Flash No. 695

Procedure ③



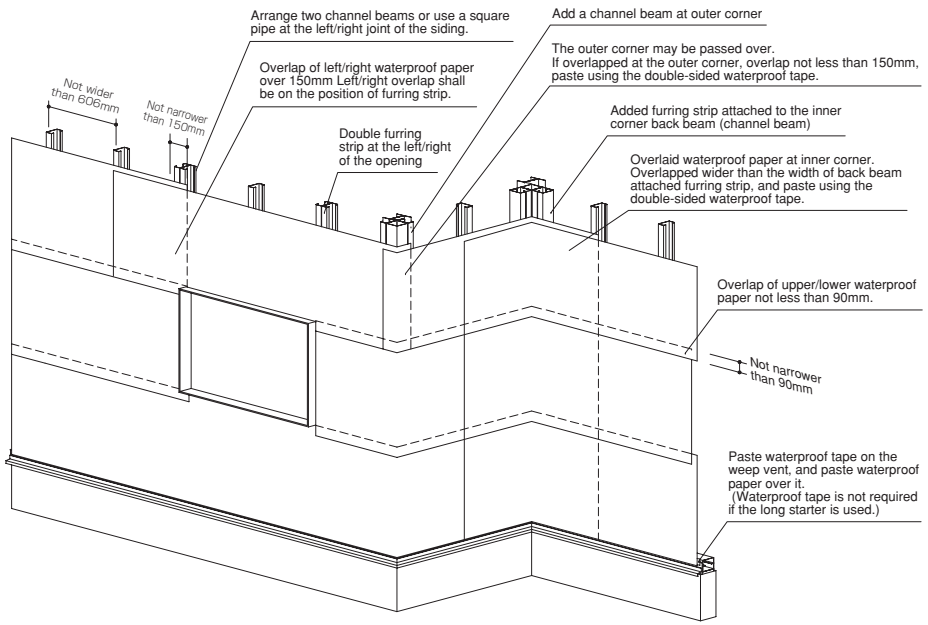
Procedure ③

- On the upper part of the opening, paste the waterproof paper over the extended waterproof paper.

Steel Back Beam Work Specification (Horizontal Sticking Ventilation Fixture Method)

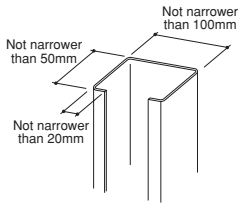
Steel Beam/
Horizontal Sticking/
Ventilation Fixture

Waterproof paper layout drawing



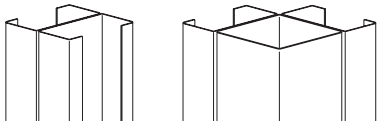
Furring Strip Size

- Use the thickness of channel beam in the range of 1.6 -2.3mm. (Those with 3.2mm or over will require more working time for attaching the screws, and influence the precision of work.)
- Use the channel beam of sectional dimension 100 x 50 x 20mm or over.
- Use the channel beam of 2.3mm thick for a structural member supporting the vertical load.

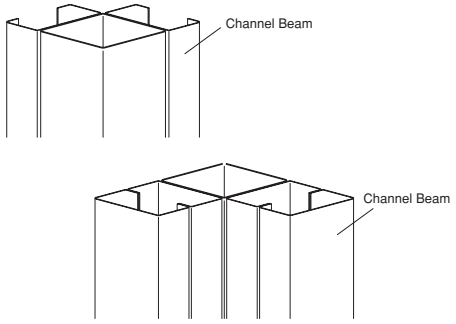


How to Configure Furring Strips

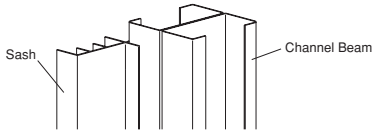
- The pitch of channel beams shall not be more than 606mm.
- Arrange two channel beams or use a square pipe for providing secure fixing of the clasping fixture for the furring strips at the left/right joint of the siding.



- Add the channel beams at the outer/inner corner for providing secure fixing of clasping fixtures.

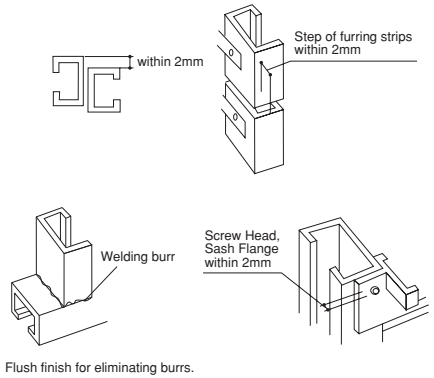


- Arrange two channel beams for providing secure fixing of clasping fixtures for the furring strips at the left/right of the opening.



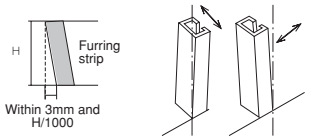
Precision of Back Beam Furring Strip

- The flush limit of joint, welding burr, and screw head, etc. shall be 2mm for the back beam furring strips.

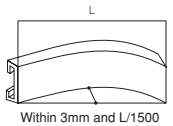


- Verticality within 3mm and H/1000, Straightness within 3mm and L/1500, Torsion within 1mm, Alignment within 3mm

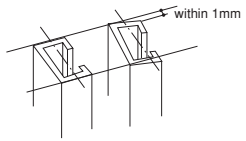
〈Verticality〉



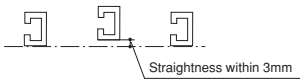
〈Straightness〉



〈Torsion〉



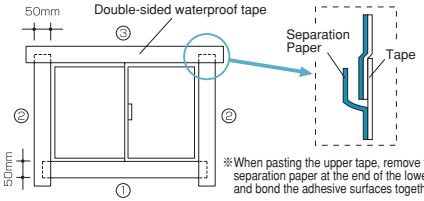
〈Alignment〉



Waterproof Paper

- Horizontal Joint/Screw Clasping of the siding are not perfect for waterproofing. Be sure to use the waterproof paper and pay due consideration to prevent the entrance of water to the indoor side even if leakage or condensation in the back surface of the siding occurs.
- Please use the Konoshima waterproof sheet HV for waterproof paper. (Do not use the plastic type waterproof paper, curing sheet, or windbreak sheet because they will cause internal condensation or leakage.)
- In principle the horizontally pasted from lower to upper. The printed mark of Konoshima shall be the outside when pasted. The overlap of vertical direction shall be over 90 mm, horizontal over 150mm. If the waterproof paper is not used, or used in a wrong way, it will cause the leakage. Please carefully work especially around the openings etc.
- If the waterproof paper is not allowed for use because of interior restrictions, apply sufficient sealant to the portion of concern regarding waterproofing (weep vent etc.) and use the putty to cover the screw heads.
- Paste the waterproof paper passing over the outer corner, or if overlaid, overlap both left/right about as wide as the width of furring strip (channel beam) and paste with the double-sided waterproof tape.
- Be sure to paste the waterproof paper from left/right at the inner corner. Overlap the left/right as far as the neighboring furring strip (channel beam) and paste with the double-sided waterproof tape.
- At the weep vents for the base or roof flashes, paste the waterproof tape on the weep vent and overlay the waterproof paper. (Half as high as the rise of the weep vent)
- Please use the Konoshima HV waterproof tape.
- Securely press the waterproof paper to the waterproof tape.
- Use the double-sided waterproof tape around the openings and ventilation port. Ensure the adhesion of the waterproof paper edge around the sashes and ventilation ports using the waterproof tape. Pay a special attention around the openings.
- How to and Procedure of pasting waterproof tape around the sashes

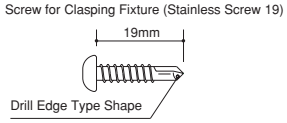
1. In principle, paste from lower to upper.
2. Paste the tape of vertical frame side not to exceed the upper tape and securely press. If exceeds, the difference of thickness at the overlay will form a water path.
3. Especially the waterproof tape on the upper frame shall be pasted as tight as possible, not to leave any visible fin.
4. When pasting the waterproof paper, remove the separation paper and press to the waterproof paper.
5. Paste the waterproof paper while removing the separation paper and press using a handy roller, etc. Use a spatula to press the overlapped area of four corners. Press the stepped areas with special care.



Clasping with Fixtures

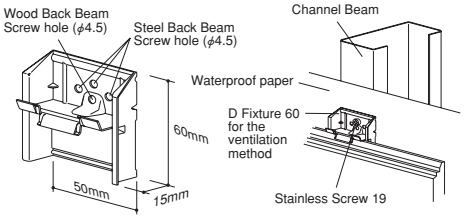
- Fasten the clasping fixture with a screw after securely fitting to a shiplap of the siding.
- Use the center hole for screw fitting to the steel back beam (refer to the clasping fixture shape figure below) at the center of clasping fixture. If the center hole cannot be used, please use either one of the side screw holes.
- Use the separately supplied stainless screw 19 (for steel back beam) BSBJ001 for fixing the clasping fixture.

The chips and metal powder generated by screwing will cause the rust if adhered on a metal component. Immediately wipe off.



- Clasp on every back beam (with spacing 606mm), try to avoid interference with other components.

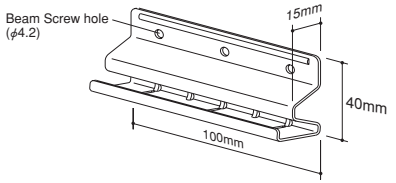
〈 Product Drawing of D Fixture 60 for the ventilation method (BTK-D02) and How to Clasp 〉



※Screws are not packed with the Starter for D Fixture 60 for the ventilation method. Please separately purchase the stainless screw (for steel back beam) BSBJ001.
※Use a stainless screw 19 (for the steel back beam) in either one of three screw holes for steel back beam to fix the clasping fixture.

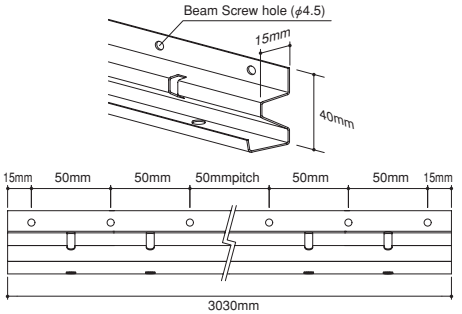
- Use a Starter D Fixture 100 for the ventilation method (BTK-D04). (D Fixture 60 for the ventilation method cannot be used for starter portion.)

〈 Product Drawing of the starter for D Fixture 100 for the ventilation method (BTK-D04) 〉



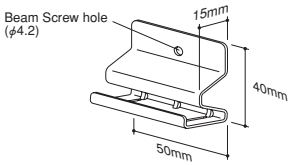
※Screws are not packed with the Starter for D Fixture 100 for the ventilation method. Please separately purchase the stainless screw (for the steel back beam) BSBJ001.
※Use one screw in the center screw hole, or two screws for side screw holes.

〈 Product Drawing of Long Starter for the ventilation method (BTK-G17) 〉



- Fix the long starter using screws in 500mm pitch.
- Use the Starter for D Fixture 50 Ventilation Method (BTK-D05) at the position of the starter for working a short outer corner or where there is no space for mounting a starter for D Fixture 100 for the ventilation method (BTK-D04).

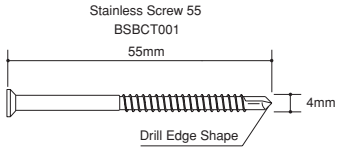
〈 Product Drawing of the starter for D Fixture 50 Ventilation Method (BTK-D05) 〉



※Screws are not packed with the Starter for D Fixture 50 for the ventilation method. Please separately purchase the stainless screw (for the steel back beam) BSBJ001.
※Use a screw in the center screw hole.

Screwing

- For the peripheral area of the window or eave soffit connection area where a clasping fixture cannot be used, use a screw after attaching a spacer. Drill a pilot hole of ϕ4.0mm at more than 30mm from the end, spot face, and screw. Use the separately supplied stainless screw 55.

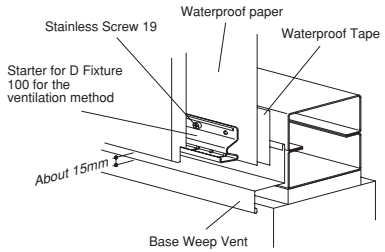


- Sink the screw head from the surface of the siding about 1mm, and use putty for finish. Please do not use the sealant.

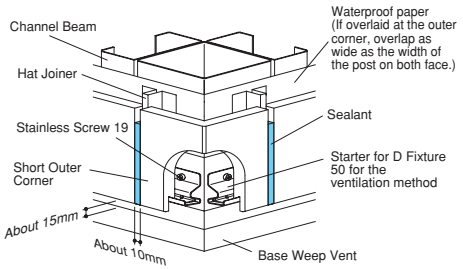
Base

- Work with a gap of about 15mm between the base weep vent and the bottom edge of the siding to prevent capillarity and absorption of displacement due to drainage of condensation or loading.
- If the long starter is not used, paste the waterproof paper on the base weep vent using waterproof tape to prevent fluttering.

〈 Clasping Using Starter for D Fixture 100 for the ventilation method (BTK-D04) 〉



〈 Clasping of the starter for D Fixture 50 for the ventilation method (BTK-D05) 〉



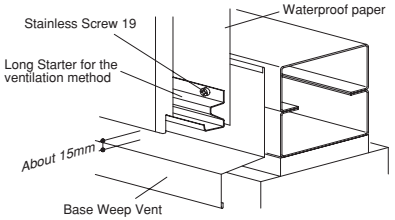
- If the bottom end of the siding is cut for use, coat the butt end sealer twice to prevent absorption of water from the cut end. Please coat the second layer after the first coat has dried. For a visible cut end, apply the touch-up paint after the coated sealer has dried. (Refer to page 53 for details)
- Do not seal the gap between the base weep vent and siding. Ventilation or Drain of Condensation will be blocked.
- Please carefully work the weep vent not to make a bruise or scratch.

The chips and metal powder generated by screwing will cause the rust if adhered on a metal component. Immediately wipe off. Please remove the chips or metal powder after cutting with scissors as well. This is similar for other metal accessories.

【Using a Long Starter for the ventilation method】

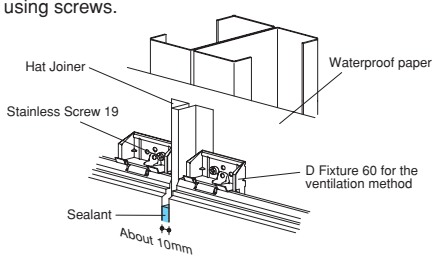
- Fix the Long Starter for the ventilation method using a screw in the screw holes with spacing under 500 mm pitch.
- If a screw is used in a position other than the screw hole, please drill a pilot hole of ϕ4.5mm to match the height of other screw holes and screw it.
- After marking a horizontal line, screw the long starter for the ventilation method with its upper end matched to the marked line. (Cut end may show burrs or deformation. Use about 50 mm inside from the cut edge for matching with the marked line.)

〈 Clasping of Long Starter for the ventilation method (BTK-G17) 〉

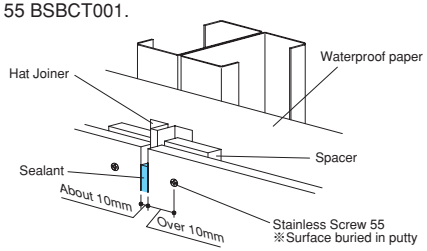


Connections

- Work the joint width of about 10mm, depth 5 -10mm and work the sealing.
- Use a hat joiner or a backup material for avoiding three face bonding.
- Be sure to use a hat joiner to prevent the side shifting of the siding.
- Clasp the hat joiners with the spacing of 1m pitch using screws.

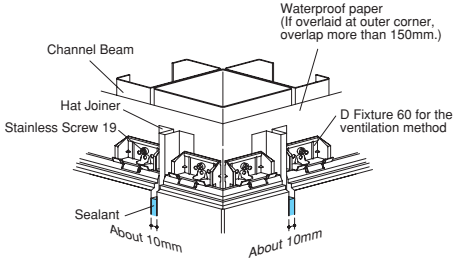


- For screwing, be sure to drill a pilot hole of ϕ4.0mm at more than 30mm from the end, spot face, and screw. Use the separately supplied stainless screw 55 BSBCT001.



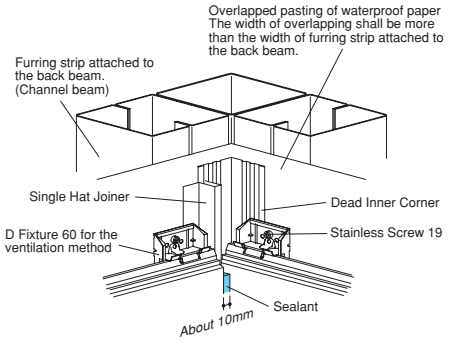
Outer Corners

- Paste the waterproof paper passing over the outer corner, or if overlaid, overlap both left/right about as wide as the width of furring strip (channel beam) and paste using the double-sided waterproof tape.
- Add a channel beam to secure the back beam for fixing the clasping fixture.
- Do not work using only sealant.
- For the screwing position of homogeneous short outer corner or long outer corner, please drill a pilot hole of ϕ4.0mm and use a screw after spot facing.
- Be sure to use a hat joiner to prevent side shifting of the siding.
- Clasp the hat joiners with the spacing of 1m pitch using a screw.



Inner Corners

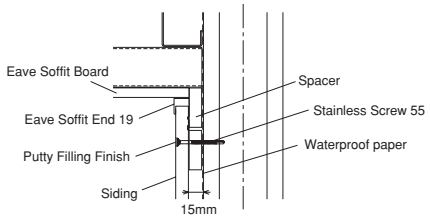
- Paste the waterproof paper twice at an inner corner, overlap both left/right as far as the neighboring furring strip (channel beam), and adhere using the double-sided waterproof tape.
- Add a channel beam to secure the back beam for fixing a clasping fixture.
- Be sure to use a hat joiner to prevent the side shifting of the siding.
- Please clasp the single hat joiner with the space of 1m.



Eave Soffits

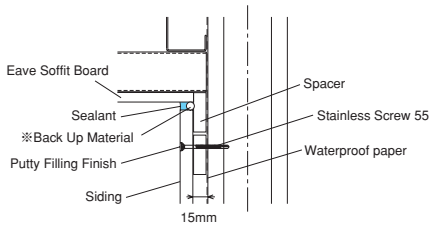
- Be sure to raise the waterproof paper over the end beam portion as high as the horizontal beam.
- Work the siding inserting into the eave soffit, or seal the connection with the eave soffit.
- Ventilation shall be connected to behind the eave or ceiling back, or use the ventilated eave soffit end.

Example of use of Eave Soffit End



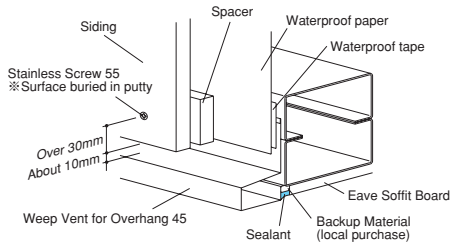
※Some municipality grants the penetration of fire from the ventilated eave soffit end as problematic. Please contact a manager of architecture department of municipality.

Example of Sealing Finish

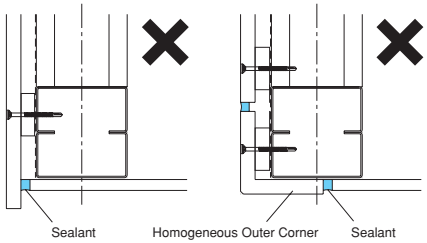


Parapet Overhangs

- Use the weep vent for overhang (inner corner, outer corner, end components are supplied), and set clearance of about 10mm.
- Apply the butt end sealer twice on the cut end to prevent the absorption of water from the cut end if the bottom end of the siding is cut for use. Apply the second coating after the first coating has dried. If the cut end is visible, coat the butt end sealer, and apply the touch-up paint after drying.

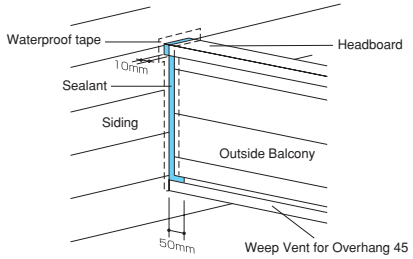


Example of Problematic Works for Overhangs



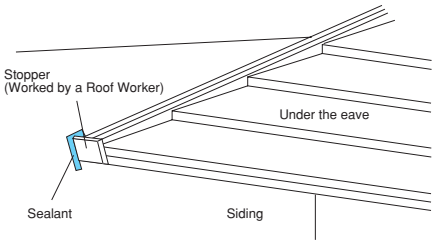
Do not stop the ventilation layer by the work as shown above. The rainwater or condensation in the wall inside flowed behind the siding cannot be drained. As a result, the siding and eave ceiling board base material may be deteriorated.

- Seal the joint (connection with siding) of headboard for balcony to the wall. Please carefully work the flashing using the dead inner corner or waterproof tape etc., on the connecting portion of the siding and balcony.
- Between the siding outside the balcony and weep vent for overhang 45, work the sealing of 50mm long from the end of inner corner zone.



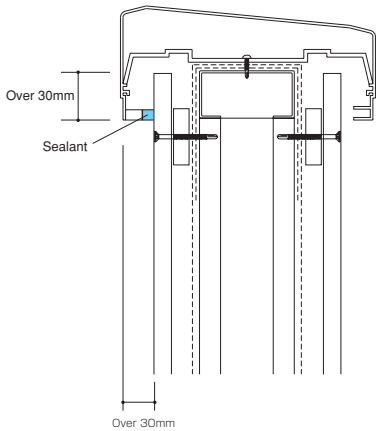
Eave Soffits Contacting the Wall

- At the edge of under the eave, raise the sloped flashing plate or add a stopper at the edge to prevent rainwater to creep along the wall.
- Be sure to work the sealing to prevent leakage because the eave edge tends to leak.



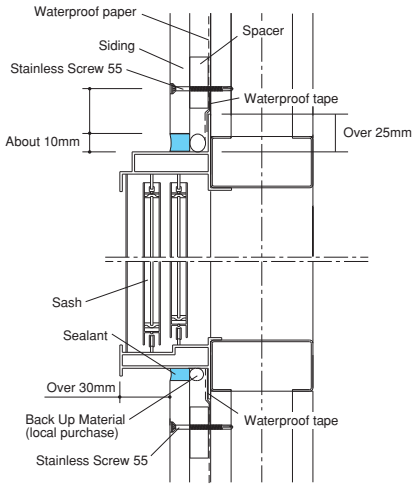
Attach Headboards

- If the headboard for parapet/balcony/fence etc. is horizontally set or sloped toward the outside, a quantity of rainwater will flow over the surface of the siding and result in the stain/leakage if a headboard is attached. Please slope toward the opposite side of the siding surface or work the headboard with large overhang to prevent the flow on the siding surface.
- Overhang and the overlap of headboard to the siding shall be more than 30mm.
- The rainwater may blow in through the joint of headboard and siding to cause the leakage in the regions of strong rains and winds. Securely work the sealing. (Carefully work not to stop the ventilation.)

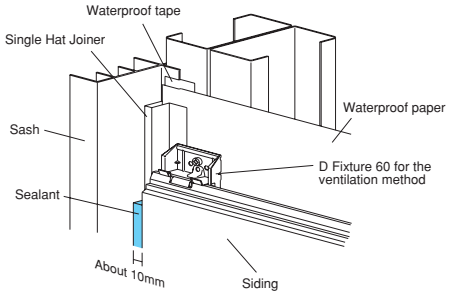


Openings

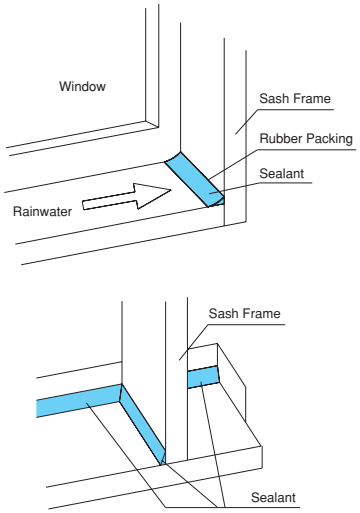
- In principle, adopt the sash of an external mount type or semi-external mount type. (Use those types whose frame extrudes from the surface of the siding in consideration of the thickness of the siding and furring strip.)
- The semi-external mount types whose dimension of extrusion of the lower side frame of the sash is not very large, attach a spacer before mounting the sash, and secure the extrusion of frame by pulling out the sash.
- Work the weep vent at the bottom frame of the sash about 30mm apart from the surface of the siding.
- If the distance of 30mm cannot be secured for the weep vent, apply a template. Set a template in the distance more than 30mm and attach a stopper at the ends. If a drain port is not equipped for a stopper or a template, the siding surface will be stained due to the leakage and water drips from the sash, and peeling of the coating film or frost damage may occur due to the icicle from the condensation etc.
- Adopt the sashes with its weep vent fringe rise higher than 25mm.



- The sealing work at vertical frame and upper frame shall not be the triangle sealing. Please secure about 10mm of joint width.

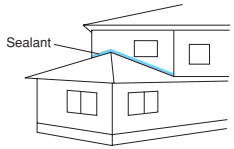


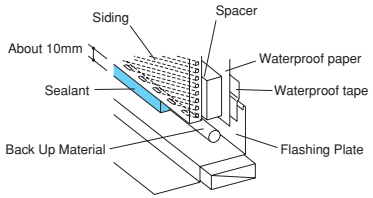
- A rubber packing is inserted in the joint portion of a sash. It may be broken during the installation or by aging to cause the leakage from the joint. Provide a perfect waterproof by the sealing work.



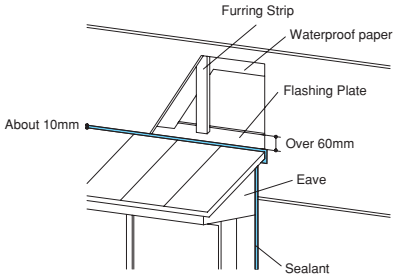
Connection of Eaves/Under the eaves

- Set clearance of about 10mm at the connection with the eave/under the eave. Coat the butt end sealer twice on the cut end of the siding. Apply the second coating after the first coating has dried. If the cut end is visible, coat the butt end sealer, and apply the touch-up paint after drying. If the rain or snow may come in through the gap of the horizontal sticking of DRESSE, insert the backup material (small round bar) in the cut end of DRESSE contacting the connecting portion of gable end eave/under the eave, and fill with the sealant. Because of the hollow structure of DRESSE, the rainwater may run through the hollow center hole. Please carefully work the flashing.





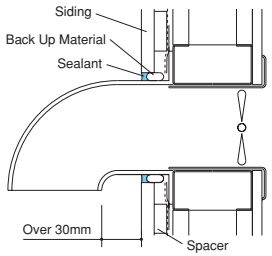
- The rising from the flash plate at the connecting portion of eave and under the eave shall be over 60mm. (Please note; for the specifications of the Japan Housing Finance Agency, some roof materials require over 120mm.)



- Work the lower end of the siding of the connecting portion with the eave/under the eave straight.
- For the eave with a slope, add the backboard at the end of the slope and work the sealing to prevent leakage.

Mounting the Ventilation Port (Pre-Mount Type)

- Mount the ventilation Port before siding work.
  Attach the ventilation port before the siding work. If attached after working on the siding, it tends to form a configuration that allows the moisture to go into the wall structure, to cause condensation, etc.

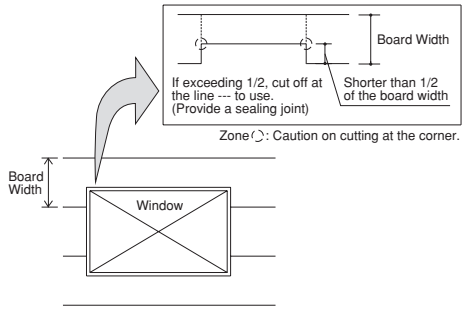


- If there is any concern on non-flush around the ventilation port, be careful to work the siding.
- Please securely work the sealing for the sleeve joint for not leaking the condensation inside the wall body because condensation will easily occur in the ventilation hood.
- If the normal ventilation food with insect net for the forced ventilation fan is used, it may be clogged and cause the condensation.
- Set clearance of about 10mm between the ventilation hood and siding and work the sealing.
- For a ventilation port used for a room with high humidity, select the one with good drainage.

Notches/Narrow Components

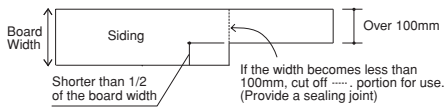
- Work of a Notch

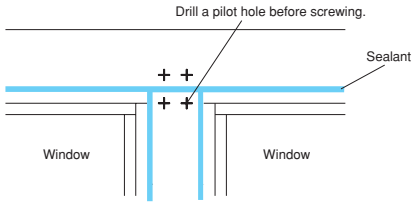
1. The length of the notch around the opening shall be shorter than 1/2 of the board width. If the notch length exceeds 1/2 of the board width, cut off and provide the sealing joint.
2. Carefully work the cutting at the corner because too deep cutting will cause cracks.
3. Before working the one shorter than 1/2 of the board width, please drill a pilot hole of ϕ4.0mm and spot face before working. (Please confirm for sure, the presence of a spacer and back beam under the position of screwing position.)



●Work of a Narrow Component

1. Narrow siding will easily break. Please avoid the allocation to make-up narrower than 100mm.
2. If the narrower than 100mm make-up is unavoidable, please be careful when handling to avoid breakage and provide a sealing joint as well. Especially at the lower part of the opening where make-up will be thinner than 100mm, make two or three sealing joints for the length of 1,820mm for example.
3. Before screwing, be sure to drill a pilot hole of ϕ 4.0mm for screwing. Confirm the presence of a spacer and back beam under the position of clasping with a screw.
4. Too sophisticated narrow make-up will result in inefficient work and incomplete weatherproof. (Avoid such a make-up.)





Cuts/Butt Ends

●Be sure to coat the sealer for butt end twice on the exposed cut ends without sealing such as cut ends or the bottom cut ends of vertically pasted product. Apply the second coating after the first coating has dried. If the cut end is visible, coat the butt end sealer, and apply the touch-up paint after drying.

●Please coat the exclusively prepared primer for sealant for the cut ends that require the sealing work such as openings/peripheral of ventilation ports, etc.

◆Wooden Base Work Specifications (Horizontal Sticking Ventilation Fixture Method)

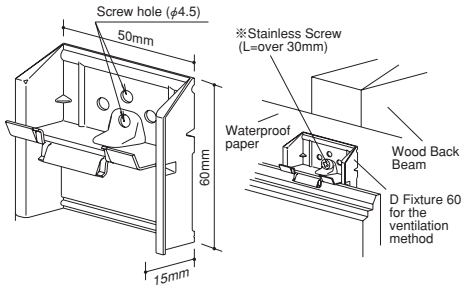
Clasping with a Fixture

●Fasten the clasping fixture with a screw after securely fitting to a shiplap of the siding.

●Use the center hole for screw fitting (refer to the figure of clasping fixture below) at the center of clasping fixture. If the center hole cannot be used, use either one of the side holes.

●Fix a clasping fixture on every back beam (spacing under 500mm), try to avoid interference with other components.

〈 Product Drawing of D Fixture 60 (BTK-D02) for the ventilation method and How to Clasp 〉

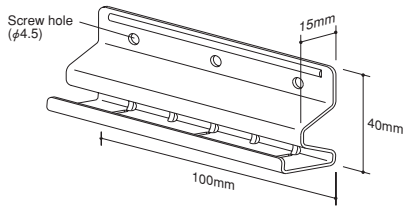


※Screws are not packed with D Fixture 60 for the ventilation method. Please separately purchase the stainless screw (for wood back beam) BSBD001.

※Use a screw in the center screw hole or a screw in either one of the side screw holes.

●Use a D Fixture 100 for the ventilation method (BTK-D04) or a Long Starter (BTK-G17) for the ventilation method. (D Fixture 60 for the ventilation method cannot be used at the starters.)

〈 Product Drawing of the starter for D Fixture 100 for the ventilation method (BTK-D04) 〉

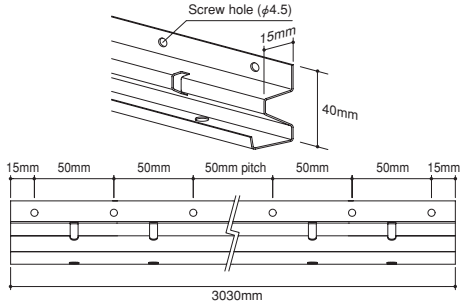


●Do not bridge the starter for D Fixture 100 for the ventilation method at the left/right joint on two sidings.

※Screws are not packed with the Starter for D Fixture 100 for the ventilation method. Please separately purchase the stainless screw (for wood back beam) BSBD001.

※Use a screw in the center screw hole or two screws in the side screw holes.

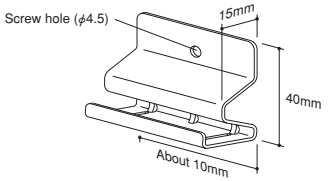
〈 Product Drawing of Long Starter for the ventilation method (BTK-G17) 〉



●Screw the long starter with 500mm pitch.

●Use the Starter for D Fixture 50 for the ventilation method (BTK-D05) at the position of the starter for working a short outer corner or where there is no space for mounting a starter for D Fixture 100 for the ventilation method (BTK-D04).

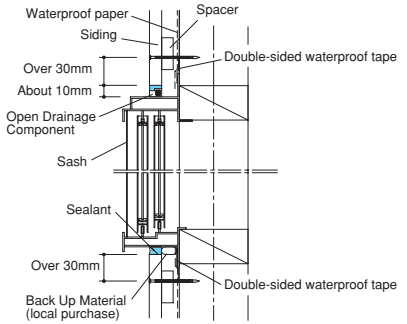
〈 Product Drawing of the starter for D Fixture 50 for the ventilation method (BTK-D05) 〉



※Screws are not packed with the Starter for D Fixture 50 for the ventilation method. Please separately purchase the stainless screw (for wood back beam) BSBD001.

※Use a screw in the center screw hole.

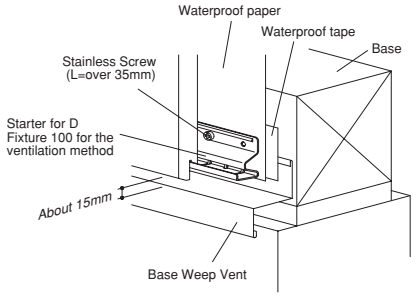
●For around the window or connection of eaves where clasping fixture cannot be used, please set a spacer and drive a nail. Please nail after drilling a ϕ3.5mm pilot hole spaced more than 30mm from the end. Use a nail of L = 65mm.



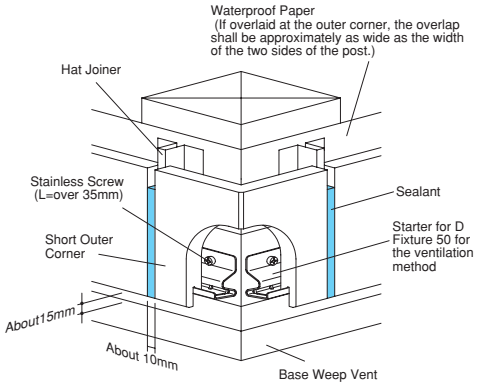
Base

- Work with a gap of about 15mm between the base weep vent and the bottom edge of the siding to prevent capillarity and absorption of displacement due to the drainage of condensation or loading.
- If the long starter is not used, paste the waterproof paper on the base weep vent using waterproof tape to prevent fluttering.

〈 Clasping Using Starter for D Fixture 100 for the ventilation method (BTK-D04) 〉



〈 Clasping Using Starter for D Fixture 50 for the ventilation method (BTK-D05) 〉

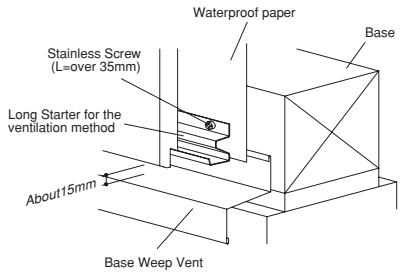


- Please do not seal the gap between the base weep vent and siding using the sealant, etc. Ventilation or drain of condensation will be blocked.
- Use the dry wood especially those for the base and post/intermediate post contacting the base. The siding may be broken if the siding shifted down due to the shrinkage of the post after the work of the siding.
- If the bottom end of the siding is cut for use, coat the butt end sealer twice to prevent absorption of water from the butt end. Coat the second layer after the first coat has dried. For a visible cut end, apply the touch-up paint after the coated but end sealer has dried.
- Carefully work the weep vent not to make a bruise or scratch.
- The chips and metal powder generated by screwing will cause the rust if adhered on a metal component. Please immediately wipe off. Remove the chips or metal powder after cutting with scissors as well. This is similar for other metal accessories.
- For 2 x 4 method, use the nail or screw on the siding for reinforcement because the back beam may go down. Three-point clasping with nail/screw is a rough standard for the length 2,730mm. For a conventional construction method, clasp in a similar way if the back beam may move.

【Using a Long Starter for the ventilation method】

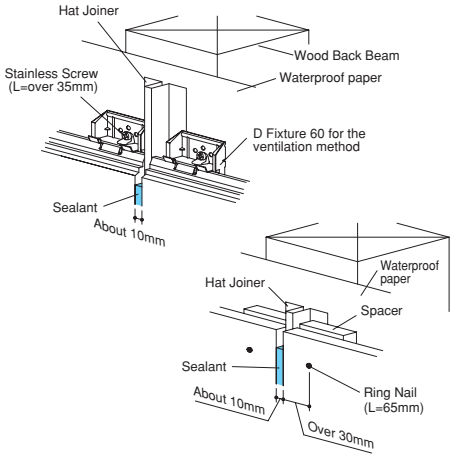
- Screw in the holes on the long starter for the ventilation method to fix with the spacing not more than 500mm.
- If screwing is necessary at a position other than the screw hole, please drill a pilot hole of ϕ4.5mm to match the height of other screw holes and screw.
- After marking a horizontal line, screw the long starter for the ventilation method with its upper end matched to the marked line. (Cut end may show burrs or deformation. Use about 50mm inside from the cut edge for matching to the marked line.)

〈 Clasping of Long Starter for the ventilation method (BTK-G17) 〉



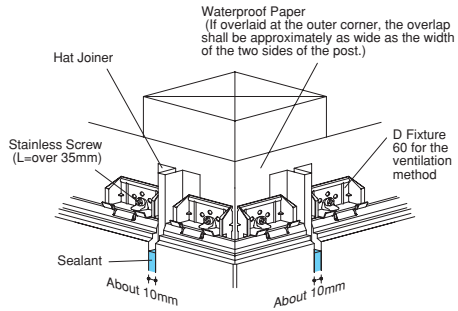
Connections

- Work the sealing with the joint width of about 10mm and a depth not less than 5mm.
- Use a hat joiner or a backup material for avoiding three face bonding.
- Be sure to use a hat joiner to prevent the side shifting of the siding.
- Clasp the hat joiners with the spacing of 1m pitch using nails or a screw.



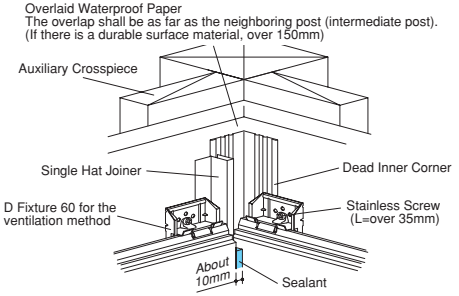
Outer Corners

- Paste the waterproof paper to pass over, or if overlaid, the overlap shall be as wide as the two surfaces of the post.
- Do not work only with sealant.
- For the nailing position of homogeneous shot outer corner or long outer corner, please drill a pilot hole of ϕ3.5mm and use a nail of L = 65mm for nailing.
- Be sure to use a hat joiner to prevent side shifting of the siding.
- Clasp the hat joiners with the spacing of 1m pitch using a nail or screw.



Inner Corner

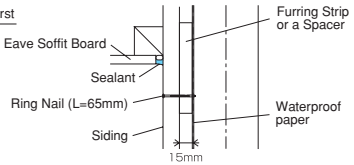
- Please paste the waterproof paper overlaid with its overlap as far as the neighboring post (intermediate post). (If there is a durable surface material, over 150mm)
- Attach an auxiliary crosspiece to secure the back beam for fixing the clasping fixture.
- Be sure to use a single hat joiner to prevent side shifting of the siding.
- Clasp the single hat joiners with the spacing of 1m using nails or screws.



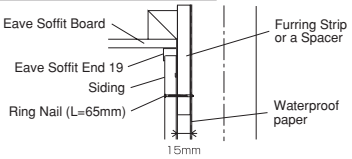
Eave Soffits

- Be sure to raise the waterproof paper over the end beam portion as high as the horizontal beam.
- For the purpose of waterproofing, work the siding first in principle. If the eave soffit board is to be worked first, work the siding inserting into the eave soffit or work the sealing of the connection with the eave soffit.
- Ventilation shall be connected to behind the eave or ceiling back, or use the ventilated eave soffit end.

Siding Work First

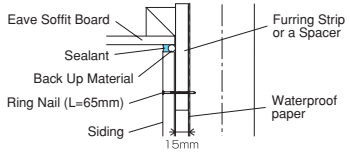


Eave Soffit Board Work First (use of eave soffit end)

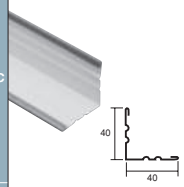
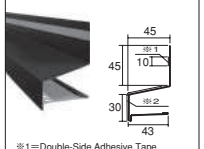
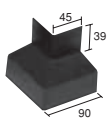
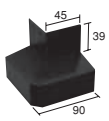
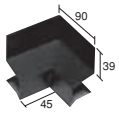


※Some municipality grants the penetration of fire from the ventilated eave soffit end as problematic. Please contact a manager of architecture department of municipality.

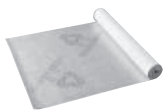
Eave Soffit Board Work First (example of sealing work)

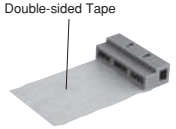


Common Components for All the Construction Methods

Used for	Inner Corners		Bases							
			Weep Vent WMF—N45							
Name, Type , Specification	Dead Inner Corner BGK-S15001	5 pcs /case	Main Unit WMF—N45—□□	10 pcs /case	Outer Corner WMF—N45SD—□□	5 pcs /case	Chamfering Outer Corner WMF—N45MSD—□□	5 pcs /case	Inner Corner WMF—N45SI—□□	5 pcs /case
	Galvalume Steel Plate		Galvalume Steel Plate		Galvalume Steel Plate		Galvalume Steel Plate		Galvalume Steel Plate	
Schematic Drawing	 L=3050mm		 ※1=Double-Side Adhesive Tape ※2=Protective Sheet L=3030mm							
Color Number	WT: Wite SV: Silver AG: Amber Gray CB: Chic Brown BK: Black									

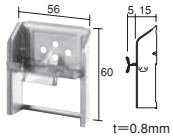
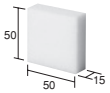
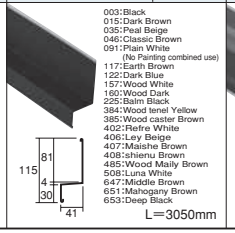
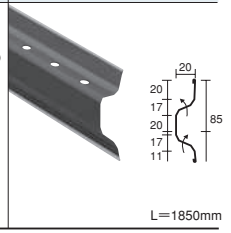
Used for	Bases			
	Weep Vent WMF—N45			
Name, Type , Specification	Intermediate Joiner WMF—N45JC—□□	20 pcs /case	End Cap WMF—N45EC—□□	5 pcs for right & left each/case
	Galvalume Steel Plate		Galvalume Steel Plate	
Schematic Drawing				
Color Number	WT: Wite SV: Silver AG: Amber Gray CB: Chic Brown BK: Black			

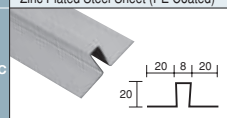
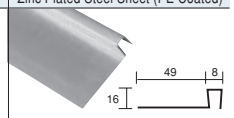
Used for	Waterproofs							
Name, Type , Specification	Waterproof sheet BST-002	1 Roll	Heat Shielding Waterproof Sheet BST-003	1 Roll	Waterproof Tape BRT-003	5 rolls/case	Sealer for Cut End BKS-001	1 can/case
	PE Porous Film & PET non-woven cloth composite		Laminate Product		Double-sided Adhesive Tape		Solvents	
Schematic Drawing	 W1m×L50m		 W1m×L50m		 t0.5mm×W50mm×L20m		 Sealer for Cut End Brush 200 cc Can 1 pc Brush 1 pc	

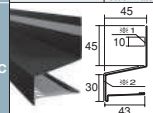
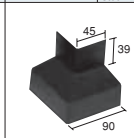
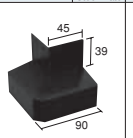
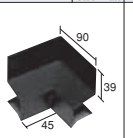
Used for	Openings		Repairing Materials			
Name, Type , Specification	Opening Water Drain BWD-001	30 pcs/case	Repairing Putty BHP-007	1 pc/case	Touch-up paint BHY□□□□	1 set/case
	Polyethylene		Styrene Type Acrylic Emulsion		Solvent (two-pack)	
Schematic Drawing	 Double-sided Tape		 Spatula Tube Type 350g/pc Spatula 1pc		 Base Compound Hardener Stirring Stick Fine Brush Base Compound (70 g) 1 can, Hardener (7 g) 1 can Fine Brush 1 pc, Stirring Stick 1 pc	

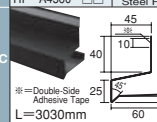
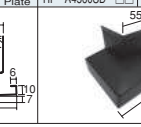
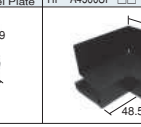
Ventilation Fixture Method Common Components

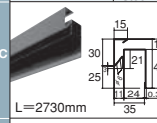
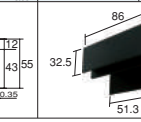
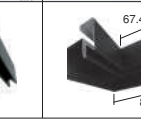
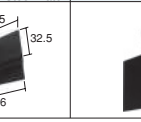
Wooden Construction
Horizontal Sticking
Ventilation Fixture 15 mm

Used for	Fixture Components (15mm)				Base Areas, Upper/Lower Joining Areas		Semi-Fireproof (1 h Specification) The standards in Japan	
Name, Type , Specification	D Fixture 60 for the ventilation method BTK-D02	70 pcs/bag	Spacer BSP-002	100 pcs/bag	Base Weep Vent For Vertical/Horizontal Sticking Ventilation Method 41 BGK-F55□□□	5 pcs/case	Ventilation Accessory Fire Stop BFS-001	10 pcs/case
	Alloy Plated Steel Plate		Acrylic Foam		Galvalume Steel Plate		Color Steel Sheet	
Schematic Drawing	 t=0.8mm For the wooden base application, be sure to use the separately sold screw (BSBD001) to fit. For the steel beam application, be sure to use the separately sold screw (BSBJ001) to fit.		 With double-sided adhesive sheet		 003:Black 015:Dark Brown 035:Peal Beige 046:Classic Brown 091:Plain White (No Painting combined use) 117:Earth Brown 122:Dark Blue 157:Wood White 160:Wood Dark 225:Balm Black 384:Wood tenel Yellow 385:Wood caster Brown 402:Refre White 406:Ley Beige 407:Maishe Brown 408:shienu Brown 485:Wood Maily Brown 508:Luna White 647:Middle Brown 651:Mahogany Brown 653:Deep Black L=3050mm		 L=1850mm	

Used for	Left / Right Joining Area			
	Hat Joiner		Single Hat Joiner	
Name, Type , Specification	Hat Joiner J820 BGK-HJ0820	10 pcs/case	Single Hat Joiner J816 BGK-KJ0816	10 pcs/case
	Zinc Plated Steel Sheet (PE Coated)		Zinc Plated Steel Sheet (PE Coated)	
Schematic Drawing	 Double-sided PE resin coating L=3030mm		 Double-sided PE resin coating L=3030mm	

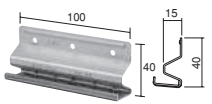
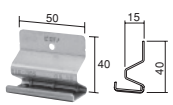
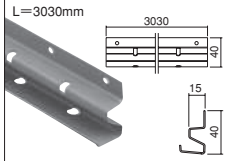
Used for	Base Areas													
	Weep Vent WMF—N45													
Name, Type , Specification	Main Unit WMF—N45—□□	10 pcs/case Galvalume Steel Plate	Outer Corner WMF—N45SD—□□	5 pcs/case Galvalume Steel Plate	Chamfering Outer Corner WMF—N45MSD—□□	5 pcs/case Galvalume Steel Plate	Inner Corner WMF—N45SI—□□	5 pcs/case Galvalume Steel Plate	Intermediate Joiner WMF—N45JC—□□	20 pcs/case Galvalume Steel Plate	End Cap WMF—N45EC—□□	5 pcs for right & left each/case Galvalume Steel Plate		
Schematic Drawing	 ※1=Double-Side Adhesive Tape ※2=Protective Sheet L=3030mm													
Color Number	WT: Wite SV: Silver AG: Amber Gray CB: Chic Brown BK: Black													

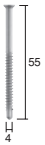
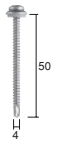
Used for	Overhang Area													
	Overhang Weep Vent													
Name, Type , Specification	Main Unit HF—A4560—□□	4 pcs/case Galvalume Steel Plate	Outer Corner HF—A4560SD—□□	2 pcs/case Galvalume Steel Plate	Inner Corner HF—A4560SI—□□	2 pcs/case Galvalume Steel Plate	Joint Cover HF—A4560JC—□□	6 pcs/case Galvalume Steel Plate	End Cap HF—A4560EC—□□	2 pcs for right & left each/case Galvalume Steel Plate				
Schematic Drawing	 ※=Double-Side Adhesive Tape L=3030mm													
Color Number	WT: Wite SV: Silver AG: Amber Gray CB: Chic Brown BK: Black													

Used for	Eave Soffit Area													
	Venting Edge													
Name, Type , Specification	Main Unit FVK—N24F—L27—□□	12 pcs/case Galvalume Steel Plate	Outer Corner FVK—N24FSD—□□	2 pcs/case Galvalume Steel Plate	Inner Corner FVK—N24FSI—□□	2 pcs/case Galvalume Steel Plate	Joint Cover FVK—N24FJC—□□	6 pcs/case Galvalume Steel Plate	End Cap FVK—N24FEC—□□	2 pcs for right & left each/case Galvalume Steel Plate				
Schematic Drawing	 L=2730mm													
Color Number	WT: Wite SV: Silver AG: Amber Gray CB: Chic Brown BK: Black													

Components of Exclusive Use for Steel Beam Base Horizontal Sticking Ventilation Fixture Method

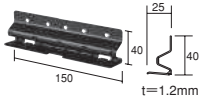
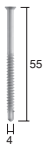
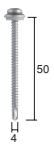
Steel Beam Structure | Horizontal Sticking | Ventilation Fixture 15 mm

Used for	Clasping Parts (15mm)					
Name, Type , Specification	Starter for D fixture 100 Ventilation Method BTK-D04	30 pcs/bag	Starter for D fixture 50 Ventilation Method BTK-D05	10 pcs/bag	Long Starter for the ventilation method BTK-G17	10 pcs/case
	Alloy Plated Steel Plate		Alloy Plated Steel Plate		Galvalume Steel Plate	
Schematic Drawing	For Main Body 		For Outer Corners 		L=3030mm 	
	Be sure to use the separately sold screw (BSBJ001) to fit		Be sure to use the separately sold screw (BSBJ001) to fit		Be sure to use the separately sold screw (BSBJ001) to fit	

Used for	Clasping Parts (15 mm)					
Name, Type , Specification	Stainless Screw (for steel beam base) BSBJ001	1000 pcs/case	Stainless Screw 55 BSBCT001	200 pcs/case	Stainless Ceiling Screw 50 BSBCU001	200 pcs/case
	Stainless SUS410		Stainless SUS410		Stainless SUS410	
Schematic Drawing						
	Head Type: Pan Head Size: ϕ4.0 X 19 mm For Sticking the Fixture		Head Type: Flexible Head Size: ϕ4.0 X 55 mm		Head Type: Pan Head Size: ϕ4.0 X 50 mm	

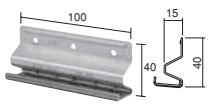
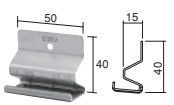
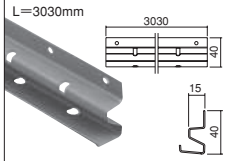
Components of Exclusive Use for Steel Beam Base Vertical Sticking Ventilation Fixture Method

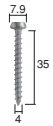
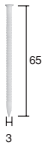
Steel Beam Structure | Vertical Sticking | Ventilation Fixture 15 mm

Used for	Clasping Parts (15mm)							
Name, Type , Specification	Supporting Fixture for Vertical Ventilation Method BTK-D12	20 pcs/bag	Stainless Screw (for steel beam base) BSBJ001	1000 pcs/case	Stainless Screw 55 BSBCT001	200 pcs/case	Stainless Ceiling Screw 50 BSBCU001	200 pcs/case
	Alloy Plated Steel Plate		Stainless SUS410		Stainless SUS410		Stainless SUS410	
Schematic Drawing								
	Be sure to use the separately sold screw (BSBJ001) to fit		Head Type: Pan Head Size: ϕ4.0 X 19 mm For Sticking the Fixture		Head Type: Flexible Head Size: ϕ4.0 X 55 mm		Head Type: Pan Head Size: ϕ4.0 X 50 mm	

Components of Exclusive Use for Wooden Base Horizontal Sticking Ventilation Fixture Method

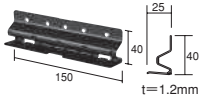
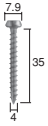
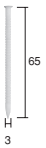
Wooden Construction | Horizontal Sticking | Ventilation Fixture 15 mm

Used for	Clasping Parts (15mm)					
Name, Type , Specification	Starter for D fixture 100 Ventilation Method BTK-D04	30 pcs/bag	Starter for D fixture 50 Ventilation Method BTK-D05	10 pcs/bag	Long Starter for the ventilation method BTK-G17	10 pcs/case
	Alloy Plated Steel Plate		Alloy Plated Steel Plate		Galvalume Steel Plate	
Schematic Drawing	For Main Body 		For Outer Corners 		L=3030mm 	
	Be sure to use the separately sold screw (BSBD001) to fit		Be sure to use the separately sold screw (BSBD001) to fit		Be sure to use the separately sold screw (BSBD001) to fit	

Used for	Clasping Parts (15 mm)			
Name, Type , Specification	Stainless Screw (for wooden base) BSBD001	200 pcs/case	Ring Nail （L=65mm） BRNKH001	1 kg/box (about 260 pcs/box)
	Stainless SUS410		Stainless SUS304	
Schematic Drawing				
	Head Type: Pan Head Size: ϕ4.0 X 35 mm		For Clasping the Siding for Openings（18mm）	ϕ3×65mm White

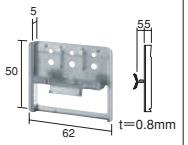
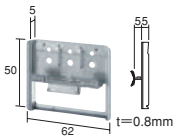
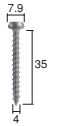
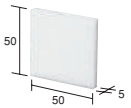
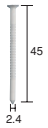
Components of Exclusive Use for Wooden Base Vertical Sticking Ventilation Fixture Method

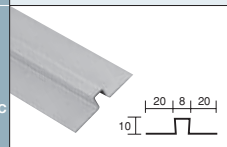
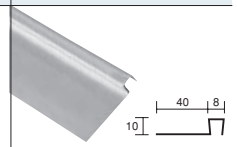
Wooden Construction | Vertical Sticking | Ventilation Fixture 15 mm

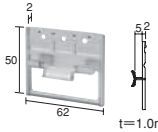
Used for	Clasping Parts (15mm)					
Name, Type , Specification	Supporting Fixture for Vertical Ventilation Method BTK-D12	20 pcs/bag	Stainless Screw (for wooden base) BSBD001	200 pcs/case	Ring Nail （L=65mm） BRNKH001	1 kg/box (about 260 pcs/box)
	Alloy Plated Steel Plate		Stainless SUS410		Stainless SUS304	
Schematic Drawing						
	Be sure to use the separately sold screw (BSBD001) to fit		Head Type: Pan Head Size: ϕ4.0 X 35 mm For Sticking the Starter Fixture		For Clasping the Siding(18mm) for Openings	ϕ3×65mm White

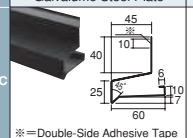
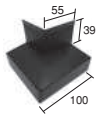
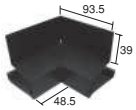
Fixture Method Common Components

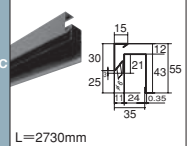
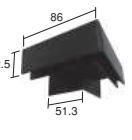
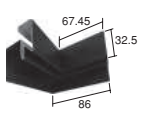
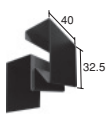
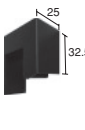
Wooden Construction
Ventilation Fixture 5 mm

Used for	Clasping Parts (5 mm)									
Name, Type , Specification	D Fixture 60 BTK-D01	70 pcs /bag	D Fixture 60 BTKD01-N	70 pcs /bag	Stainless Screw (for steel beam base) BSBD001	200 pcs /case	Spacer BSP-001	100 pcs/bag	Ring Nail (L=45mm) BRNN□□□	45 psc/bag (20 bag/case)
	Alloy Plated Steel Plate		Alloy Plated Steel Plate		Stainless SUS410		Acrylic Foam		Stainless SUS304	
Schematic Drawing										
	Exclusive ring nail 72 pcs included		Without an exclusive ring nail		Head Type: Pan Head Size: ϕ4.0 X 35 mm For Sticking the Starter Fixture		With double-sided adhesive sheet		For Clasping the Siding (18mm)	

Used for	Left / Right Joining Area			
	Hat Joiner		Single Hat Joiner	
Name, Type , Specification	Hat Joiner J810 BGK-HJ0810	10 pcs/case	Single Hat Joiner J810 BGK-KJ0810	10 pcs/case
	Zinc Plated Steel Sheet (PE Coated)		Zinc Plated Steel Sheet (PE Coated)	
Schematic Drawing				
	Double-sided PE resin coating L=3030mm		Double-sided PE resin coating L=3030mm	

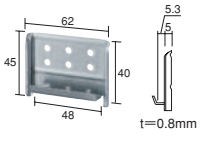
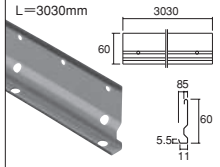
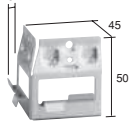
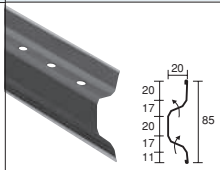
Clasping Parts (2 mm)	
D Fixture 60 for Two millimeter BTK-D20	70 pcs/bag
Alloy Plated Steel Plate	
	
Exclusive ring nail 72 pcs included Do not use the separately sold screw (BSBD001). There is no 2 mm high starter fitting. Do not use for general purposes.	

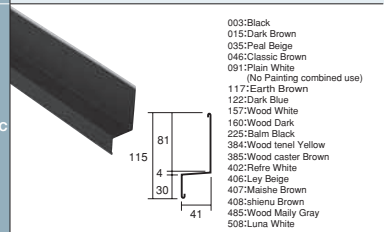
Used for	Overhang Area									
	Overhang Weep Vent									
Name, Type , Specification	Main Unit HF−A4560−□□	4 pcs /case	Outer Corner HF−A4560SD−□□	2 pcs /case	Inner Corner HF−A4560SI−□□	2 pcs /case	Joint Cover HF−A4560JC−□□	6 pcs /case	End Cap HF−A4560EC−□□	2 pcs for right & left each/case
	Galvalume Steel Plate		Galvalume Steel Plate		Galvalume Steel Plate		Galvalume Steel Plate		Galvalume Steel Plate	
Schematic Drawing										
	※=Double-Side Adhesive Tape L=3030mm									
Color Number	WT: Wite SV: Silver AG: Amber Gray CB: Chic Brown BK: Black									

Used for	Eave Soffit Area									
	Venting Edge									
Name, Type , Specification	Main Unit FVK−N24F−L27−□□	12 pcs /case	Outer Corner FVK−N24FSD−□□	2 pcs /case	Inner Corner FVK−N24FSI−□□	2 pcs /case	Joint Cover FVK−N24FJC−□□	6 pcs /case	End Cap FVK−N24FEC−□□	2 pcs for right & left each/case
	Galvalume Steel Plate		Galvalume Steel Plate		Galvalume Steel Plate		Galvalume Steel Plate		Galvalume Steel Plate	
Schematic Drawing										
	L=2730mm									
Color Number	WT: Wite SV: Silver AG: Amber Gray CB: Chic Brown BK: Black									

Components of Exclusive Use for Wooden Base Horizontal Sticking Fixture Method

Wooden Construction
Horizontal Sticking
Ventilation Fixture 5 mm

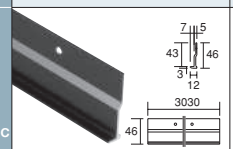
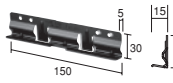
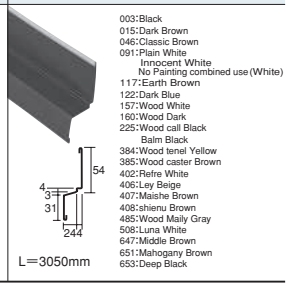
Used for	Clasping Parts (5 mm)						Semi-Fireproof (1 h Specification) The standards in Japan	
Name, Type , Specification	Starter for the Horizontal Sticking method BTK-D11	50 pcs /bag	Long Starter for the Horizontal Sticking method (for wooden base) BTK-G16	10 pcs /case	S Fixture 60 for the Outer Corner BTK-S05	12 pcs /case (30 exclusive nails included)	Ventilation Accessory Fire Stop BFS-001	10 pcs/case
	Alloy Plated Steel Plate		Alloy Plated Steel Plate		Alloy Plated Steel Plate		Color Steel Sheet	
Schematic Drawing								
	Be sure to use the separately sold screw (BSBD001) to fit		Be sure to use the separately sold screw (BSBD001) to fit		Do not use for the starter		L=1850mm	

Used for	Base Areas	
Name, Type , Specification	Base Weep Vent ForVertical/Horizontal Sticking Ventilation Method 41 BGK-F55□□□	5 pcs/case
	Galvalume Steel Plate	
Schematic Drawing		
	L=3050mm	

003:Black
015:Dark Brown
035:Peal Beige
046:Classic Brown
091:Plain White (No Painting combined use)
117:Earth Brown
122:Dark Blue
157:Wood White
160:Wood Dark
225:Balm Black
384:Wood tenel Yellow
385:Wood caster Brown
402:Refre White
406:Ley Beige
407:Maishe Brown
408:shienu Brown
485:Wood Maily Gray
508:Luna White
647:Middle Brown
651:Mahogany Brown
653:Deep Black

Components of Exclusive Use for Wooden Base Vertical Sticking Fixture Method

Wooden Construction
Vertical Sticking
Ventilation Fixture 5 mm

Used for	Clasping Parts (5 mm)				Up/Down Joining Area	
Name, Type , Specification	Supporting Fixture for Vertical Sticking Method BTK-A06	5 pcs /case	Supporting Fixture for Vertical Sticking Method BTK-D10	20 pcs /bag	Intermediate weep vent 28 BGK-F25□□□	5 pcs /case
	Aluminum		Alloy Plated Steel Plate		Galvalume Steel Plate	
Schematic Drawing						
	L=3030mm Black		t=1.2mm Black		L=3050mm	
	Please use the included designated screws (L 40 mm, 60 pcs) to fit		Be sure to use the separately sold screw (BSBD001) to fit			

003:Black
015:Dark Brown
046:Classic Brown
091:Plain White Innocent White No Painting combined use (White)
117:Earth Brown
122:Dark Blue
157:Wood White
160:Wood Dark
225:Wood call Black Balm Black
384:Wood tenel Yellow
385:Wood caster Brown
402:Refre White
406:Ley Beige
407:Maishe Brown
408:shienu Brown
485:Wood Maily Gray
508:Luna White
647:Middle Brown
651:Mahogany Brown
653:Deep Black

◆Physical Property Data

Test Item	Testing Standard	Test Result	Unit
Specific Weight	JIS A 5430	1.05	
Moisture Content	JIS A 5422	15.5	%
Bending Fracture Load (Strength) ∥	JIS A 1408	1748(10.2)	N (N/mm²)
Bending Fracture Load (Strength) ⊥		1045(6.1)	
Young's Modulus ∥	JIS A 1408	6082	N/mm²
Young's Modulus ⊥		5003	
Water Absorption Rate	JIS A 5430	43.0	%
Dimensional Change Rate at Water Absorption ∥	JIS A 5430	0.12	%
Dimensional Change Rate at Water Absorption ⊥		0.12	
Charpy Impact Strength ∥	JIS K 7111-1	0.124	J/cm²
Shock Resistance	JIS A 5422	No penetrating crack	
Brinell Hardness	JIS Z 2243	5.3	
Water Penetration Front	JIS A 5422	0	ml
Water Penetration Back		1.5	
Warpage by Water Absorption	JIS A 5422	1以下	mm
Resistance to Freezing and Thawing	20℃ 1h and −20℃ 2 h per cycle, Without Butt End Seal (※different from JIS A 5422)	No abnormality (300 cycles)	

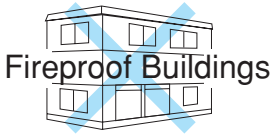
※The above are the measurements. Not a guaranteed performance.

Prohibitions for Construction

If DRESSE is used for the buildings and purposes below, special consideration is required.
Please do not use with a general construction method.

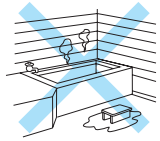
Application to Fireproof Buildings

Cannot be applied to a place (buildings) where fireproof construction is required
(Can be applied to the semi-fireproof buildings)



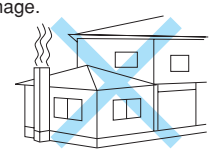
Application to places exposed to water all the time or where steam is generated.

The severe conditions, such as absorption of water and drying, are requested due to the influence of abnormal moisture or heat. Warpage, frost damage, deteriorated strength, or cracking will be caused.



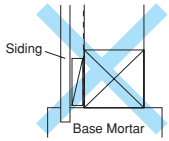
Application to the Collected Stacks

The moisture generated inside the collected stack will seep out through the mortar and will provide the potential of absorption by the backside of the siding to cause warpage, discoloration, and frost damage.



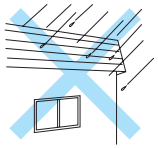
Application to the buried use in the base mortar

The siding will absorb the moisture by capillary action and cause frost damage, peeled coating film, and mold. Please never apply for this purpose.



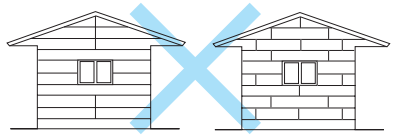
Application to the sloped parapet

Durability under more severe conditions than the vertical wall surface similar to the roof is requested. The deterioration of coating film, frost damage, and leakage will be caused.



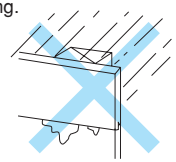
Irregular Arrangement of Siding

Please do not paste the siding in an irregular arrangement; it will cause improper sealing work at the connecting portion of joiner for joints, weep vents, and siding to become a cause of leakage. Please align the joint when working.



Application to places exposed to rain from the backside or the fence, etc.

The backside of the siding is processed only with the sealer. The repeated absorption of water from the backside and drying will be the cause of warpage/cracking.

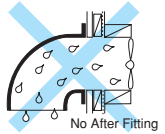


Attaching the Ventilation Port After Working the Ceramic Type Siding

If attached after siding work, it tends to form a configuration that allows the moisture to go into the wall structure, to cause condensation, leakage, frost damage, etc. Please attach the ventilation port before the siding work.

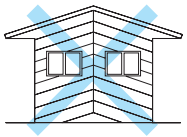
Attaching the Ventilation Port After Working the Ceramic Type Siding

If attached after siding work, it tends to form a configuration that allows the moisture to go into the wall structure, to cause condensation, leakage, frost damage, etc. Please attach the ventilation port before the siding work.



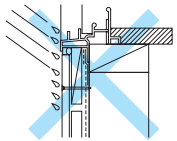
Inclined Arrangement of Siding

Please do not paste in an inclined arrangement; it will cause leakage due to the bad work of sealing and flashing treatment.



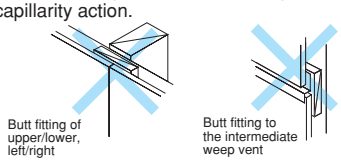
Working without Weep Vent under Sash

Creeping water on the external surface of the sash may spoil the ceramic type siding at both ends of the sash or cause freezing damage on the siding surface in snowy regions. Please use a weep vent extending more than 30 mm from the siding surface at the bottom end of the sash.
In addition, add a backboard at each end of the weep vent.



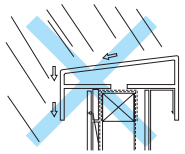
Butt fitting at the Joint

Butt fitting of siding will cause leakage or frost damage. In addition, butt fitting of the siding to the intermediate weep vent will cause problems, such as frost damage, due to the absorption of water by capillarity action.



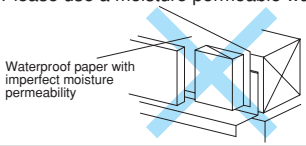
Use of Headboard Sloped Toward Outside

The horizontal headboard or sloped wall for the parapet, balcony, or fence will let the quantity of rainwater flow on the siding surface to cause stains or leakage.



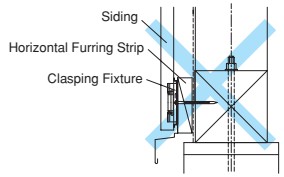
Use of Waterproof Paper with Imperfect Moisture Permeability

Please avoid using the vinyl chloride film with imperfect moisture permeability that will cause condensation, frost damage, or mold.
Please use a moisture permeable waterproof sheet.



Omission of Supporting Fixture for Vertical Plating

The vertical paneling work without supporting fixtures will cause dropping of the siding.

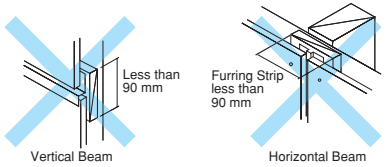


◆Prohibitions for Construction

If DRESSE is used for the buildings and purposes below, special consideration is required.
Please do not use with a general construction method.

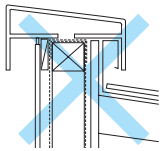
Jointing with Narrower Base Width than 90 mm

If the width of base material is less than 90 mm, the shortage in the distance from the end of the wood plate may cause cracking by fastening with a nail or a screw.



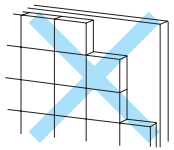
Parapet for Snow Catch Roof without a Ventilation Port

Please do not use because it will cause condensation on the backside or inside of the siding.



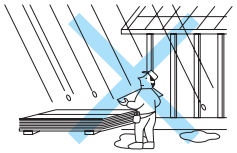
Direct pasting of tiles on the siding

The tiles may break or fall off.
(If tiles are pasted as a special specification, please contact our service office.)



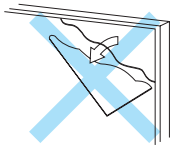
Work of Wet Plates / Work on a Wet Base

Wet plates that absorbed rainwater will shrink after construction due to drying to cause gaps, cracking, warpage or deformation, peeling or whitening of the coating, and breakage of sealed portion. In addition, please do not work on a wet base.



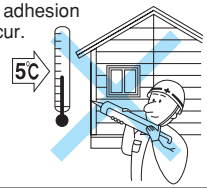
Covering with a Thick Coating such as Cement Stucco

Please do not apply a thick coating; it will cause peeling due to insufficient adhesion strength.
(If a thick coating will be applied as a special specification, please contact our service office.)



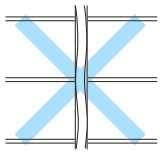
Sealing/Painting in the Rain or at less than 5˚C

Please do not work at higher humidity than 80% in the rain, less than 5˚C outdoors, or when the base surface for the work is over 50˚C because defects, such as insufficient adhesion or bubbling, will occur.



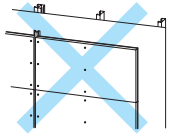
Sealing Work without Primer

Please be sure to coat the primer before sealing work because the lack of a primer coating before sealing work will cause defective sealing.



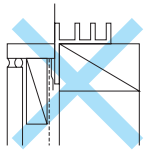
Direct Clasping to the Steel Beam

The direct clasping is usually not regarded as a ventilation method. The direct clasping will give no play in the clasped portion with no capability of absorbing the behavior of steel beams, and the siding may break at the clasped portion.



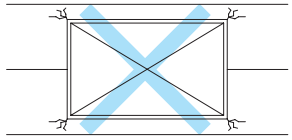
Use of Internally Attached Sash

Please do not use the internally attached sashes because it will cause leakage or frost damage.



Working Notch/Narrow Components

If the depth of the notch is over 1/2 of the width of a board, please do not work with a notch.
It will cause cracks. Please be sure to cut off and provide a sealing joint.

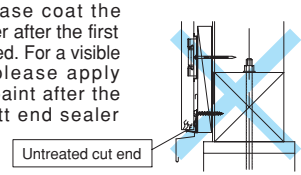


Working on the Directly Loaded Location

Please do not use for the balcony floor where directly loaded.

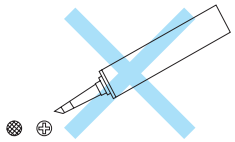
Non-Treatment of Cut End or Bottom Butt End of Vertical Sticking

If the exposed cut end or the bottom butt end of vertical sticking is left uncovered, they will cause cracks. Be sure to coat the butt end with sealer twice. Please coat the second layer after the first coat has dried. For a visible cut end, please apply touch-up paint after the coated butt end sealer has dried.



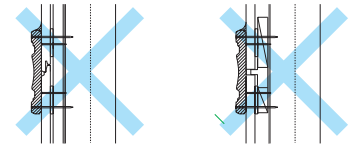
Repair of Nail/Screw Heads Using the Sealant

Please do not repair the nail/screw heads using the sealant because the sealant film may whiten due to aging deterioration.



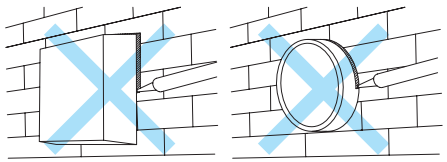
Working the Sideboard across the Joint of Upper/Lower Sidings

Please do not work a sideboard over the joint of upper/lower sidings.



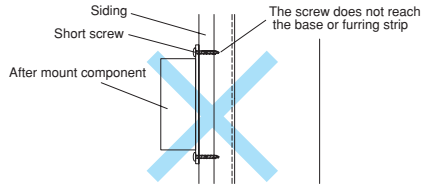
Use of Silicon Type Sealant

Please do not use a silicon sealant on the connection of after fitting equipment instrument and the siding and where it appears on the surface of the siding because it will cause stains.
Please use Konoshima genuine or recommended sealants.



Holding an After Mount Component on the Siding

If an after mount component is supported only by the siding, it will cause cracking of the siding or falling off of the mounted component.



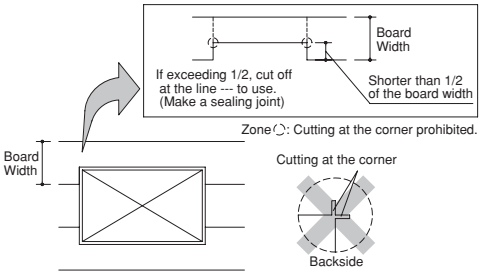
◆Working of the siding

Notches/Narrow Components

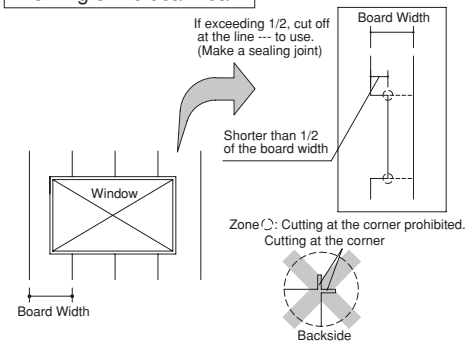
●Working of a Notch

1. The length of the notch around the opening shall be shorter than 1/2 of the board width. If the notch length exceeds 1/2 of the plate width, cut off and provide a sealing joint.
2. Carefully work the cutting at the corner because too deep cutting will cause cracks.
3. Before working the one shorter than 1/2 of the board width, please drill a pilot hole of ϕ3.5 mm before working. (Please confirm the presence of a spacer and furring strip under the position of clasping using nails/screws.)

Working of Horizontal Beam

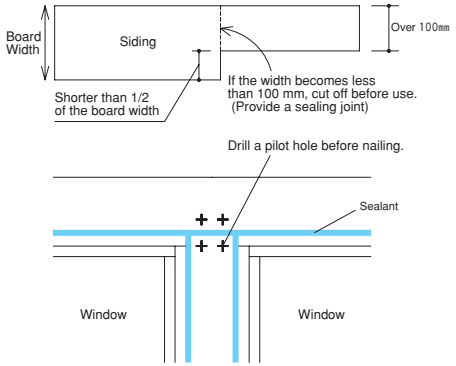


Working of Vertical Beam



●Working the Narrow Components

1. Narrow siding will easily break. Avoid the allocation to make-up narrower than 100 mm.
2. If the narrower than 100 mm make-up is unavoidable, be careful when handling to prevent breaking and provide a sealing joint as well. Especially at the lower part of the opening where make-up will be thinner than 100mm, make two or three sealing joints for the length of 1,820 mm for example.
3. Before nailing, be sure to drill a pilot hole of ϕ3.5mm for nailing. Confirm the presence of a spacer and furring strip under the position of clasping with nails.
4. Too sophisticated narrow make-up will result in inefficient work and incomplete weatherproofing. (Please avoid such a make-up.)

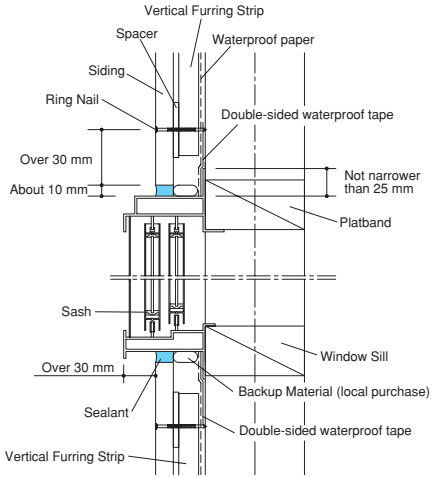


◆Working of the openings

Openings

●In principle, adopt the sash of external mount type or semi-external mount type. (Use those types whose frame extrudes from the surface of the siding in consideration of thickness of the siding and furring strip.)

●The semi-external mount types whose dimension for the extrusion of the lower side frame of the sash is not very large, attach the furring strip before mounting the sash, and secure the extrusion of the frame by pulling out the sash.



●Set the weep vent under the sash 30 mm apart from the surface of the siding.

●If the extrusion of about 30 mm cannot be secured for the weep vent, please apply a template. Set a template in the distance of about 30 mm and attach a stopper at the ends. If the extrusion is not enough for a stopper or a template, the siding surface will be stained due to leakage and water drips from the sash, and peeling of the coating film or frost damage may occur due to the icicle from condensation etc.

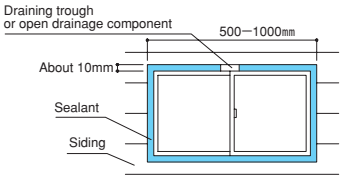
●Adopt sashes with its weep vent fringe rise higher than 25 mm.

●The sashes designed for the mortar external wall may have an asperity at the connection with siding which is not very good for a perfect sealing work.

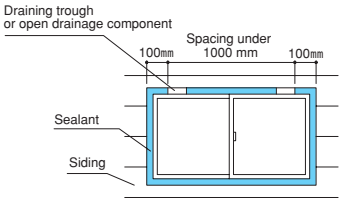
●Sealing Work Around the Sash Work with the clearance of about 10 mm secured around the sash for sealing work. Provide a trough to drain the rainwater or set an open drainage component at the upper part of the sash. But the drain trough or open drainage component is not required for the cases below:

- An eave or a porch is arranged over the sash
- A sash mounded in the built-in bay window
- A sash whose upper frame is narrower than 500 mm
- The rain or snow may come in through the drain trough in the region of strong winds or snow.

Sashes of 500 —1000mm wide upper frame

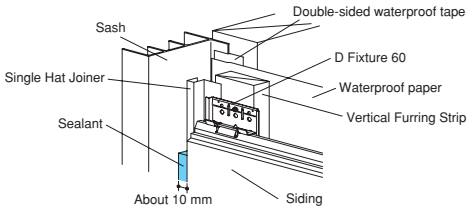


Sashes over 1000 mm wide upper frame

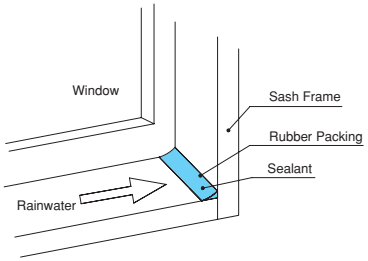


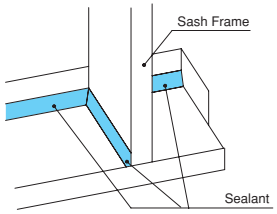
●The sealing work around the sash shall not be triangle sealing. Please secure about 10 mm of joint width.

●Use a single hat joiner to the side of a sash and clasp the fringe of single hat joiner using a nail or screw. Please clasp with a space of about 1 m.

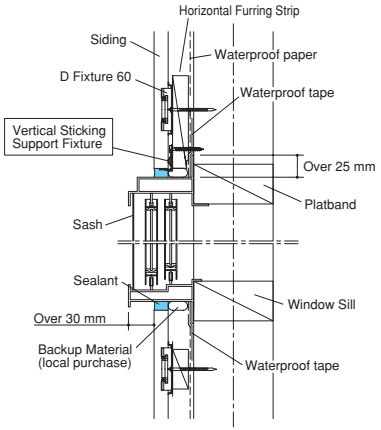


●A rubber packing is inserted in the joint portion of a sash for waterproof purpose. It may be broken during the installation or by aging to cause the leakage from the joint. Provide a perfect waterproof by the sealing work.





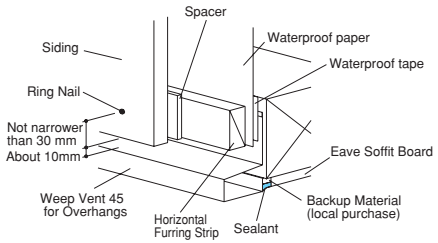
●For the vertical sticking fixture method, be sure to attach a vertical sticking supporting fixture at the bottom of the siding for the upper side of an opening. If the siding is fixed using only ring nails or screws, the siding may creep down or fall down due to the vibration of building etc.



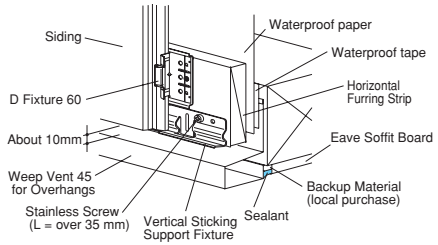
Parapets / Overhangs

- Use the weep vent for overhang (for outer corner/inner corner available as well) for the overhang, and set with a clearance of about 10 mm.
- Be sure to apply the butt end sealer twice on the bottom end of the siding to prevent the absorbing of water from the butt end. Apply the second coating after the first coating has dried. If the cut end is visible, coat the butt end sealer, and apply the touch-up paint after drying.

Horizontal Sticking

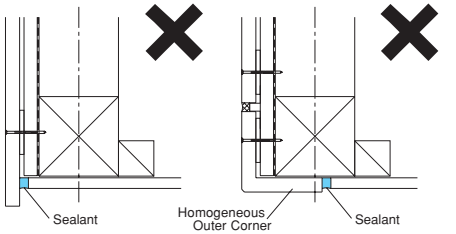


Vertical Sticking



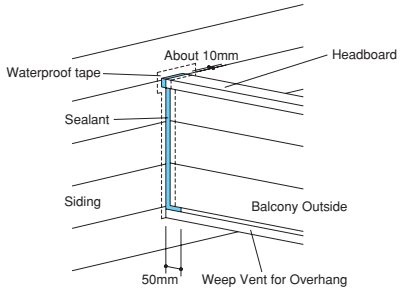
- For vertical sticking method, be sure to attach a vertical sticking support fixture at the bottom end of the siding for the overhang. If the siding is fixed using only ring nails or screws, the siding may creep down or fall down due to the vibration of building etc.

Example of Work for Overhangs with Possible Problems



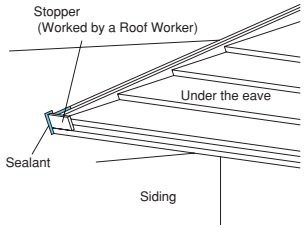
Please do not stop the ventilation layer by the work as shown above. The rainwater or condensation in the wall inside that flowed behind the siding cannot be drained. As a result, the siding and eave ceiling board base material may be deteriorated.

- Please seal the joint (connection with siding) of the headboard for the balcony to the wall. Please carefully work the flashing using the dead inner corner and waterproof tape on the connecting portion of the siding and balcony.
- Between the siding outside the balcony and weep vent for the overhang, work the sealing of 50 mm long from the end of inner corner zone.



Eave Edge Contacting the Wall

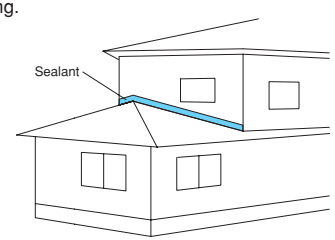
- At the edge of under the eave, raise the inclined flashing plate or add a stopper at the edge to prevent rainwater from creeping along the wall.

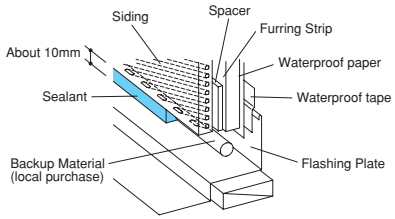


- Be sure to work the sealant for waterproofing because the eave edge tends to cause leakage.

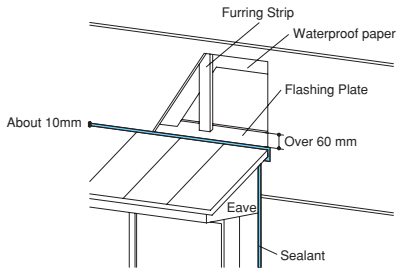
Connection with Eave/Under the eave

- Set clearance of about 10 mm at the connection with the eave/under the eave. Be sure to coat the sealer twice on the cut end of the siding. Apply the second coating after the first coating has dried. If the cut end is visible, coat the butt end sealer, and apply the touch-up paint after drying. If rain or snow may come in through the gap of the horizontal sticking of DRESSE, insert the backup material (small round bar) in the cut end of DRESSE contacting the connecting portion of gable end eave/under the eave, and fill with sealant. Because of the hollow structure of DRESSE, the rainwater may run through the hollow center hole. Please carefully work the flashing.





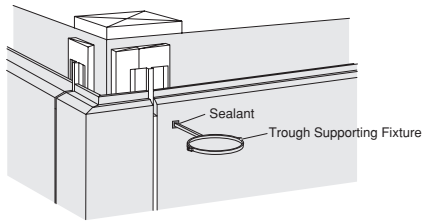
- The rising from the flash plate at the connecting portion of eave and under the eave shall be over 60 mm. (Please note; for the specifications of the Japan Housing Finance Agency, some roof materials require over 120 mm.)

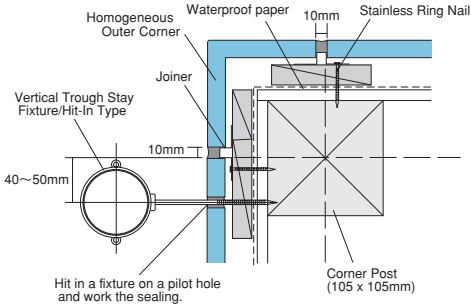


- Work the lower end of the siding of the connecting portion with the eave/under the eave straight.
- For the eave with a slope, add the back board at the end of the slope and work the sealing to prevent leakage.

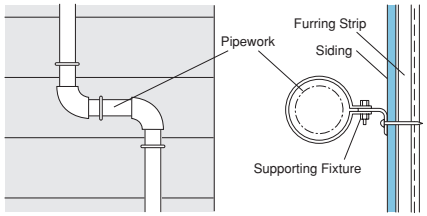
Mounting the Accessories such as Trough Supporting Fixtures

- For mounting the supports for trough, drill a pilot hole at the position of the back beam such as furring strip on a post/intermediate post and the joint and sealing joint of the siding, avoiding the joint of the siding, and hit the metal parts. Please fill with the sealant for the flashing around the siding on which the trough support fixture is hit.
  Use the support components for pipework and avoid direct contact with the siding.Please mount the support components to a position avoiding the joint of the siding with a pilot hole, and fill in the sealant around it.Please fill the sealant to the wire holes for electric power or telephone running through the siding.





- For mounting an equipment instrument, please work a reinforce component and mount on it.



◆Caution for Handling/Transportation

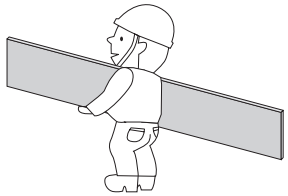
- The products are the heavy goods.
  When using a Unic vehicle or a forklift for transport, please seek the safety of work, avoiding over loading to the lifting weight limit.

- Please secure the load using a rope to prevent cargo shifting.
  If the rope is too tight, cracks or damage to important sections of the product may occur.
  Ropes shall be tight enough only to prevent cargo shifting but not too tight.
  For securing a rope, be sure to use the protection board etc.

- Please take special care at transportation and loading/unloading.
  Do not hit the product with an object, or drop and damage the corner, etc.
  Please be sure to use the protection board etc. for lifting to prevent damage by roping.

- When transporting, carry by one person as show in the right, or by two persons holding at the ends.

- Please be careful not to touch with the wet or stained hands.



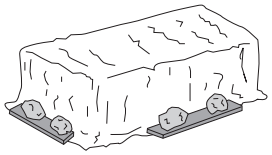
◆Caution for Storage

- Horizontally place on an indoor hard flat place.
- Do not place directly on the ground. Use a bar (square wood) or a board (panel) and pile up without unevenness.

Required number of pillows to prevent unevenness

Length of the siding	1.8m	Not less than 4pcs
	3m	Not less than 5pcs

- For prevention of the siding/accessories/wood from getting wet while storage, be sure to cover with a waterproof sheet to prevent being blown away.
  Do not use siding that absorbed water of rain/snow etc. because they may shrink, warp, or crack at the edge when dried after construction.



- The piled up height shall be not higher than 1m in the packed state.
  When piling the color product after unpacking, be sure to use an inserting paper.

◆Caution for Touch Up Work

The touch up is worked when particularly looks dirty and required as a last resort.
The touch-up paint is not perfectly the same color as the painted product.
The touch-up paints in approximate colors are provided. Please limit the area for applying to a requisite minimum.

● Caution for Storage

- Store in a cold and dark place

● Check the Weather

- Do not paint if it is raining/snowing on the repair day. Avoid the surface of base materials when wet due to the rain/snow of the day before as well.
- Paint when the outdoor temperature is not lower than 5℃. The performance of coated film may not be achieved if painted at lower than 5℃.

● Cautions

- Never touch up using the sealant.
  (The sealant may whiten from thin film deterioration due to aging.)
- Store in a cold and dark place. Do not use the touch-up paint after one year from the manufactured date. Do not re-use the touch-up paint used one time.
- Handle with special care; the solvent type touch-up paint is flammable.
- Carefully read the caution notes on safety and hygiene indicated on the paint can before use.

● Check the Area for Touch Up

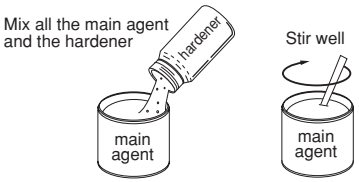
- Thoroughly wipe off dirt, dust, and moisture.
  The dirt on the painting surface will mix in the touch-up paint while painting and cause the wrong color or peeling of coated film, etc.

● Check the Touch-up paint

- The limit of use for touch-up paint is one year from manufactured date.
  (Date of Manufacture: Indicated on the Package)
  Do not use after the limit date.

● Stirring the Touch-up paint

- Stir the touch-up paint using an attached stirrer until the sedimentation disappears and shows uniformity in color. Only shaking the can is not enough for stirring. If the stirring is not sufficient, the color may be different. About 2minutes of stirring is required.
- For a two-pack type touch paint, a hardener is packed together. Be sure to mix all the quantity of main agent and hardener and stir.
  The performance of paint film will not be achieved without the hardener.
- Can be used only on the day the hardener is mixed. Never use the touch-up paint on the next day even if not hardened yet.

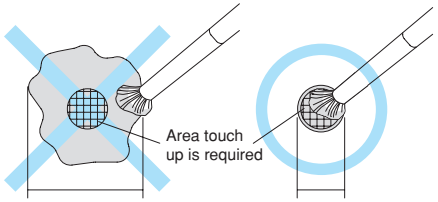


● Touch up the Screw Head

- Fill the screw head using the putty for exclusive use. Do not use the sealant because it will cause the stain.
- After the putty has dried, apply the touch-up paint on the putty.
- Carefully work not to make the area of putty/touch-up painting very large. (Minimize the work to the necessary area.)

● Painting on Repaired Area

- Use the brush packed together.
  If a brush in the market is used, use a fine brush (about 5mm).
  (Use of a thick brush will result in a large and conspicuous touch up.)
- Use a remaining material for checking the color by test painting.
- Touch up the minimum required area.
- Paint to match the finished area of surface, not to drip.



Large touch up will be conspicuous.

● Touch up Butt Ends

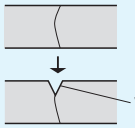
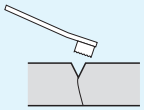
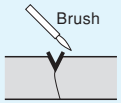
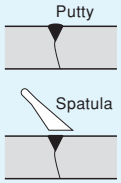
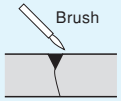
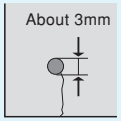
- Be sure to coat the sealer for cut ends twice on the exposed butt ends without sealing such as cut ends or the bottom cut ends of vertically pasted products. Apply the second coating after the first coating has dried. If the cut end is visible, coat the butt end sealer, and apply the touch-up paint after drying.

A user's manual is attached to each touch-up paint. Please check the details and use the product.

◆How to Repair General Cracks

Procedure of Repair

●If a crack is found on a siding, please follow the repairing procedure below to repair.

Steps	Repairing Procedure	Schematic Explanation
1 V groove work	Obliquely cut into a V groove using a cutter knife, etc. Width of V groove : 3 - 7mm Depth of V groove : 3 - 7mm ※Note : Drill a through hole at the crack tip as necessity. (▼See the figure below.)	Schematic Section 
2 Clean up V groove	Clean up the cut surface of V groove using a nylon brush, etc. ※Note : Use the masking tape to mask as necessity.	
3 Coat the exclusive primer	Coat a sufficient quantity of exclusive primer on the cut surface of V groove using a brush.	
4 Fill with the putty and surface finish	Fill the putty in the V groove (including the hole at the tip), and form and repair along the surface pattern using a spatula, etc. ※Clean up the excessive putty. ※Remove the masking tape if used.	
5 Touch up with touch-up paint	After making sure the putty is dry by feeling with a finger (about 40minutes at 20℃), make the repair using touch-up paint on the surface of putty with a brush, etc. ※Some touch-up paints may require primer treatment.	
※Note: Drilling a hole at the crack tip (to stop extension)	①Find the crack tip. ▼ ②Drill a through hole of about ϕ3mm at the crack tip. ▼ ③Repair the crack in accordance with the repair procedure above.	Crack Tip Seen from Top 

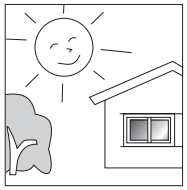
※The above shows a general method. Actual repair work may be adjusted for each situation.

◆Cautions on Sealing Work

The length of repair available with a 333ml cartridge is about 2.7m for the sealing work of 10 X 10mm size joint.

● Storage of Sealants

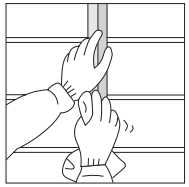
- The sealant will react with the moisture in the air to harden. Avoid direct sunlight, and store in a dry and cool place. The cartridge shall never be wet with water.



● Check the Weather

- Do not work when the temperature is not higher than 5℃ or not lower than 50℃ at the sealing portion because imperfect bonding or foaming problems will occur.

● Check the Sealing Location

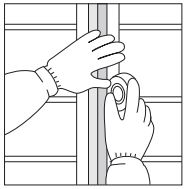


- Do not work the sealing if the surface for coating the sealant is wet because it will cause bad adhesion. (How to check: Place masking tape on the surface for coating the sealant. Easy peeling off indicates that the surface is wet.)
- Before filling with the sealant, remove the dirt, oil and water on the sealing surface using a brush or a cloth.

● Check the Sealant/Primer

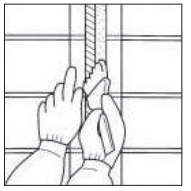
- Use the primer delivered together with the sealant.
- Check the expiry date of sealant and primer before use.
- Do not use the opened primer on later days.

● Curing of Sealing Area



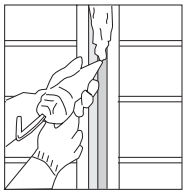
- Use a curing tape for curing the sealing joint.
- Remove the sealing tape within 1～ 2days and before hardening of the sealant.
  Do not use the strong adhesion type tapes such as packing tape.
- Carefully paste the curing tape to the end of the board.
  Paste not to leave any gap on the roughness of the pattern of the siding board etc.
  If a thin layer of sealant remains, it will cause whitening.

● Coat the Primer



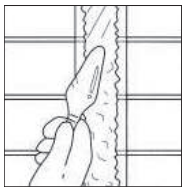
- Coat the primer uniformly on the butt end of the siding and dry it well.
  (More than 20minutes in summer, 60minutes in winter)

● Filling the Sealant



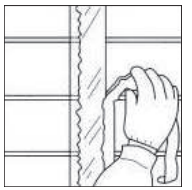
- After coating the primer, fill with the sealant within 6hours.
- Fill with the sealant thoroughly to the bottom. Remove any mixed bubble or liquid.
- After filling the sealant, take care to prevent dust, dirt, or rainwater from contacting the surface. Take a special care for strong wind.

● Pressing and finishing with a spatula



- Using a spatula or a knife, press well to completely fill the joint.
- For a hollow product, press well to fill with the sealant into the hollow hole.
- After pressing well, finish the surface smooth. Work carefully to avoid making a dent.

● Remove Masking Tape



- Before hardening of the sealant, remove the curing tape winding to a bar, etc.

● Cleaning and Checking the Finish

- Wipe off the paste of the curing tape, sealant and primer adhering to other place than the filling area, etc. using a cloth.
- After completion of the filling work, visually check the finish for the unsealed portion, roughness of surface, and bubbles.

◆Cautions on Sealing Work

The length of repair available with a 333ml cartridge is about 2.7m for the sealing work of 10 X 10mm size joint.

● Cautions

- Do not use the silicon type sealant for the connection of the post-fitting equipment instrument, siding, and the area connected with the surface of the siding because it will cause the stain.
  Please use the Konoshima genuine or recommended sealant.
- Secure the width of about 10mm and depth 5～10mm for perfect filling of sealant.
- To avoid three face adhesion of sealant, be sure to use the exclusive joiner with bond breaker or a single hat joiner.
  If the joint is deep, secure the proper joint size using the joint depth adjuster (local purchase).
- If the fire protection construction is required, work the sealing after using the exclusive metal joiner.
- Securely press using the spatula. Insufficient pressing may cause swamping of sealant due to the bubble remained at the bottom of joint.
  Especially for the hollow products, press well to feed the sealant into the hollow hole.
- Check the drying of the area coated with sealant.
  If the sealant is filled with the area for sealing wet with rain, morning fog or frost, etc., the swamping may occur.
- If the neo-urethane sealing and modified silicon sealing unavoidably contact, work the neo-urethane sealing first, and work the modified silicon sealing after curing. Be careful if the modified silicon sealing is worked first, the curing of neo-urethane sealing will be impeded.
- Do not use the sealant for repair of nail heads. It will cause whitening.

● Caution for using a 6L Pail Can

- Avoid mixing of air when absorbing the sealant using an absorbing gun.
- If some air is mixed while filling the joint, remove this portion and fill again.

◆Site Painting

● Painting Works

The conditions for painting vary with the status of primer coating/paint types/regions. Please consult with the paint suppliers/painters for details.

● Prohibitions

Do not use the following paints for DRESSE
- Paints with strong solvent type
- Spraying paints for cement
- Oil paints
- Phthalic resin paints
- Vinyl chloride paints

● Cautions

① Paints
- Consult with a paint supplier for a paint to use, and paint in accordance with its painting specifications. The coated film performances differ by paint to paint used.

② Preparation for Painting
- Remove the stains or adhesions on the base material surface. If partially missing, repair using the exclusive repairing putty.
- Cover or primer coat the coating surface as necessity.
- Check that the paint is according to the designation, and get an approval of a work administrator.
- Designate a safe storage place in a shade regarding inflammables/smells, and acquire the approval of a manager.
- Cover with a sheet until the day of work for protection of the surface of base materials from getting wet with rainwater or stain.

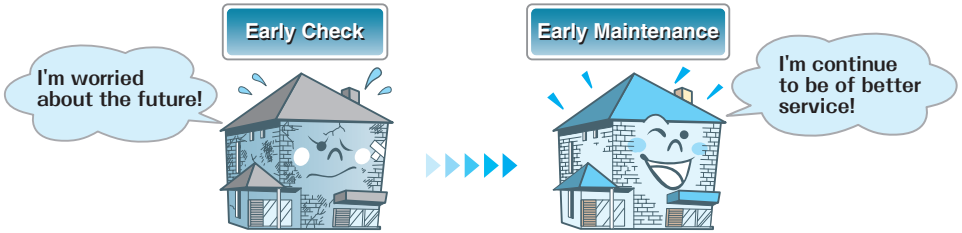
③ Painting Work
- Work the painting at an earliest possible timing within 2 months after construction.
  If exceeding two months, work the painting in accordance with the specifications provided by the paint supplier.
- To prevent stain on the roof or surrounding area, use a sheet or plastic film to cover.
  Do not use the strong adhesion type tapes such as packing tape.
- Avoid the painting work at low temperature (outdoor not higher than 5℃)
- Do not paint on a rainy/snowy day.
- Carefully confirm that the surface of base material is sufficiently dry before painting.
- Stop painting in a strong wind (not under 10m/sec)

④ Inspection
- Check the building with scaffolds are still present, and repaint on the uneven/not painted areas.
- Acquire an approval of a work administrator on the finish.
- Immediately repair the damage of painted film. If the damage is left unrepaired it may cause the degrading of waterproof performance, frost damage, material deformation or molding, etc.

⑤ Exemptions
- Our company will not bare any responsibility on the paint film quality worked at site.

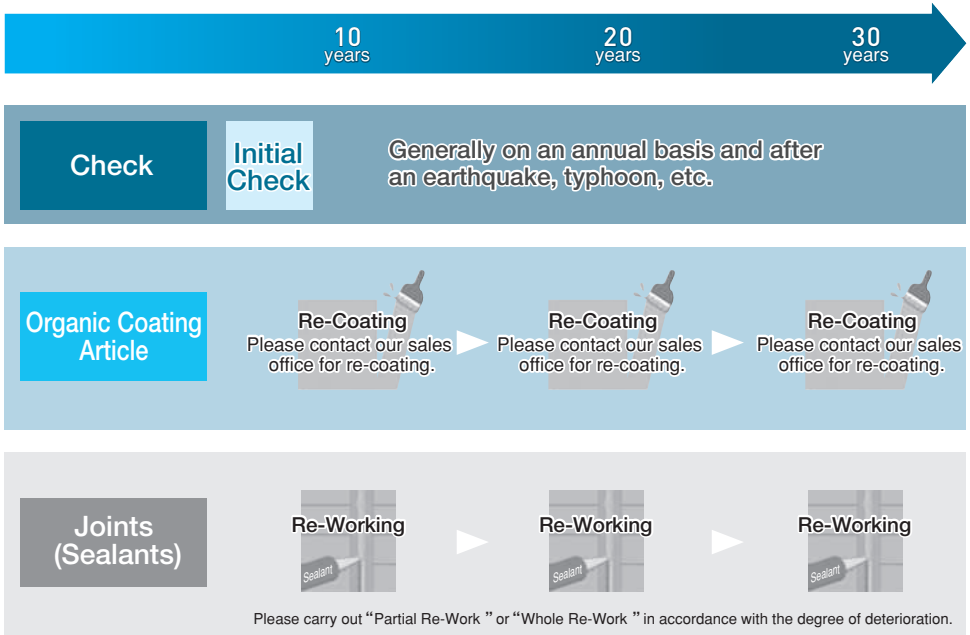
Maintenance and Management of Incombustible Exterior Wall Siding

From immediately after the completion of construction, exterior materials are continuously exposed to severe conditions such as sunlight (ultraviolet rays), wind, rain, snow and changes in temperature, etc. The siding, with a highly weatherproof coating on its surface and waterproof seals between pieces, protects the building from the external environment, but the coated film and sealants do not last forever. Timely checking and maintenance (re-painting or replacement of seals, etc.) as early as possible are recommended.



Enhanced Durability

The speed of deterioration will depend on the conditions of the location (region, environment) or the conditions of the use of the building. Please refer to this schedule for maintenance planning.
Please check by the owner yourself and be careful enough on safety when checking or carrying out maintenance.

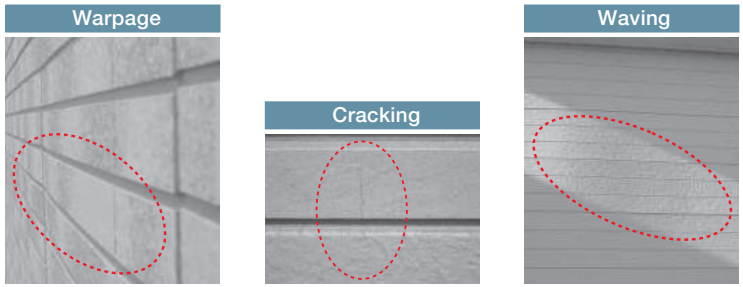


Aging

Ceramic type siding will protect the residence as an exterior material, being exposed to severe conditions such as sunlight (ultraviolet rays), wind, rain, snow or changes in temperature, etc.
The surface is coated with durable paint; the joints are filled with sealing material to protect the building. However, the base materials, coated films and sealing materials will not last forever.
The cracking of base materials or deterioration of the coated film and sealants may appear after several years.

① Base Materials

- After construction, some warping, cracking (hair cracks), waving or swelling may occur on the ceramic type siding by aging. Please check after an earthquake or a typhoon, etc., when cracking may occur.
  These issues will not significantly affect the performance of the siding as an exterior material.



② Surface Coating Film

- The deterioration of the coated film (cracking of the coated film, degraded gloss or color fading, etc.) will progress along with the lapse of time due to rain water or ultraviolet rays.
  As a rough standard, checking once a year is recommended.
  ※The timing may depend on the regional conditions; please contact your building supplier for required maintenance.

③ Sealing Joints

- Maintenance is required because oscillations, such as earthquakes, may cause "breakage" or "peeling" while deteriorating along with the lapse of time.

Information Supplied by: Japan Fiber Reinforced Cement Sidings Manufacturers Association.

Maintenance and Management of Incombustible Exterior Wall Siding

Daily Checking

Please check by the owner yourself.
The check will be in the visually recognizable range.
(Work at a high place is strictly prohibited.)
If any problematic portion is found, maintenance is recommended after contacting your original supplier .
(The cost of maintenance work will be basically on the paid basis.)

① Checking the Sidings

- Visually check for any cracking or breakage such as chipping, any cracking around a nail, screw or other locations.
- After an earthquake etc. please check for any cracking especially at a nail/screw or moving of sidings.

② Checking the Coated Surface of Siding

- Visually check for any whitening, color fading or peeling on the coated film, or stain, mold, moss or algae, etc.
- If the whitening, color fading, or peeling becomes conspicuous, it is the rough timing for re-painting.
- Stain, mold, moss or algae are the natural phenomena. The progress status will depend on the surrounding environments and the shapes of the house. Please handle them by daily maintenance at an early timing.
  (Stain, mold, moss or algae are the items for exemption regardless the degree.)

③ Checking the Seals

- Check for the breakage, peeling and cracking of seals.

④ Checking Other Portions

- Visually check for the rust or peeling of coated film on the metal parts.

Daily Maintenance

Work at high place is strictly prohibited. If a problematic portion is found, please contact your original supplier for maintenance at an early timing.
(The cost for maintenance is basically on the paid basis.)

- For removing stain, mold, moss or algae, use a cloth, a soft brush or sponge etc. and wash with water.
- If water washing is not enough, apply thinned neutral detergent on a cloth, soft brush or sponge, etc. and lightly wipe off.
- If it occurs again, please handle with the same procedure.
  (They may appear again soon depending on the environment.)

Cautions
- Do not use the solvent such as thinner, etc. and steam washing. Do not intensely rub using a steel scrubbing brush etc. to scratch.
- When water washing, spray the water from upper to lower.
- Do not use high pressure water cleaning. It may damage the coated film.

Maintenance of Exterior Wall

Please check by the owner yourself.
For re-painting or maintenance work, contact basically to your original supplier and ask a professional to conduct. (Basically on the paid basis)
Never work the re-painting or repair by t the owner yourself.

① Maintenance of Siding Main Body

- When a crack is found at a nail/screw or other portions, work the crack in a V groove (Width of V: 3—7 mm, Depth of V: 3 —7 mm), coat the primer, fill the putty, and repair with touch up. (Recommended putty: Auton Adhar 3500, Auton Flat Putty (with primer) <Auto Chemical Industry Co., Ltd.>

② Re-Painting of Sidings

- The timing for re-painting is recommended based on the maintenance schedule.
  Please refer to P47 for site painting.
  Please note that depending on the deterioration status of coated surface of multi-color coat products, the original appearance may not be reproduced.

③ Re-working of Seals

- For partial reworking of seals, remove the existing sealant at the defective portion, and be sure to coat the exclusive primer and use a homogeneous quality sealant.

④ Maintenance of Other Portions

- If any of the metal parts such as weep vent, etc. is corrupted or the coating film is peeled, rework the painting.
  If the loosening of nails/screws for clasping the siding is observed, increase the number of them.
  Further add the clasping fixtures to the positions of back beam near those portions.

Cautions for Added Construction Work or Extension/Alteration

Cautions for Added Construction Work
- At attaching the fixtures such as vertical trough, etc. drill a pilot hole of the size
- larger than the fixture (nails), and fix on the back beam.
  Direct hitting may break the siding.
- When drilling a hole for pipework after construction of siding, carefully work the sealing around the pipe.
  When installing a sign or external equipment, do not fix directly on the siding.
  Be sure to fix on the back beam (reinforced if necessary).

Cautions for Extension/Alteration Work
- When connecting a new building to an existing building by an extension/alteration work, be sure to separate the construction.
  Be sure to separate because a problem may occur due to the difference of behavior of the building of existing portion and the new construction.