

Installation guide for Hurford's Shou Sugi Ban (Sep 24)

Thank you for purchasing Hurford's Shou Sugi Ban. Please read these instructions prior to installation. Other design information is provided in the Shou Sugi Ban brochure.

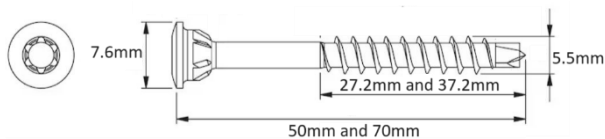
Shou Sugi Ban is a complete cladding system designed to be installed both horizontally and vertically onto cavity battens.

This document is provided for guidance and should be read in conjunction with other building regulations. It is advised that only qualified tradespeople with the relevant skill levels install this product. It is the installer's responsibility to ensure that appropriate waterproofing is provided and that the installation is structurally sound.

WARNING: MUST BE KEPT DRY PRIOR TO INSTALLATION

Hardware required for installation of Hurford's SHOU SUGI BAN:

- SEALANT – SIKAFLEX® 11FC+ Available from Sika stockists
- WURTH SCREW – ASSY®PLUS 4 A2
Black - SCR- TH- TER- DBIT- A2- BLCK- RW20-5,5X50 or 70/23 (Use 50mm long into 35 mm thick battens (Art.- no. 0166235550) and 70mm (Art.- no. 0166235570) long through 20mm thick battens and into the wall framing)
- WURTH DRIVE BIT – WURTH RW® BIT - Bit RW E 6.3 (1/4) BIT- RW20- LUMINOUSORANGE- 1/4ZO- L50MM (Art.- no.061471 20)



Preparation:

NOTE: ENSURE ALL PREPARATION WORK IS CARRIED OUT BEFORE INSTALLATION OF THE CLADDING.

- 1) If the cladding cannot be installed immediately, store in a dry protected area with the packs elevated on bearers.
- 2) Check that the frame is straight, the studs are flush, and have a maximum spacing of 450mm.
- 3) Install vapour permeable sarking as per manufacturer's instructions to the wall frame.

4) Installing battens:

Horizontal cladding to vertical H3 treated battens – With horizontal cladding, cavity battens provide a ventilated space. The 20mm thick battens are to be at least the width of the stud and temporarily fixed directly over the sarking to each stud. Stud spacing to be at 450mm centres.

Vertical cladding to horizontal H3 treated castellated battens – These battens provide a ventilated wall cavity. Temporarily fix the 20mm thick timber castellated battens, horizontally at a maximum spacing of 600mm, over the sarking to each stud, and if the top of the batten is bevelled, the slope is toward the cladding. The fixing of the cladding will be through the batten and into the wall framing.

Vertical cladding to horizontal structural H3 treated timber battens – Install the 70x35mm structural battens horizontally over the sarking at a maximum spacing of 600mm, and structurally fix the battens onto every stud with the 70mm long Wurth screws.

5) Install waterproof corners, window, roof and other flashings as per the manufacturer's instructions.

6) Install Shou Sugi Ban trims to the details in FIGS 1-3 for horizontal cladding and FIGS 4-6 for vertical cladding.

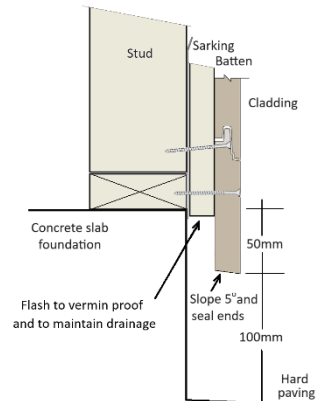
» **Temporary capping for waterproofing around any exposed board ends is necessary. Also, ensure water doesn't enter the cavity behind the cladding as trapped water can cause cupping and movement related problems.**

General Installation:

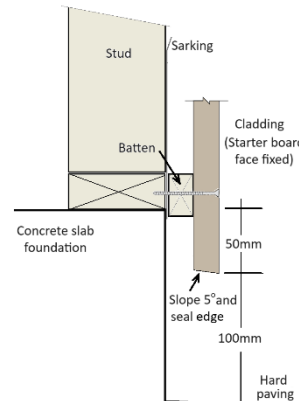
7) Timber expands mainly in the width of the board and not the length, ensure boards butt up tightly at end match joints.

8) When installing, ensure that the cladding is a minimum of 50mm below the internal subfloor height and that there is a minimum ground clearance to hard surface paving of 100mm or if above natural ground this should be a minimum of 175mm (refer to Diagram 1).

DIAGRAM 1
HORIZONTAL CLADDING



VERTICAL CLADDING



9) Horizontal Cladding Installation –

- Starting at the bottom left, ensure the applicable subfloor and ground clearances are present, and note that boards are installed with the main tongue edge facing up. Prepare the first board by first cutting off the board's end-matched tongue with a straight or mitred cut to suit the end trim (see details FIG 1-3). Then also cut along the bottom of the board to create a 5° slope (see Diagram 1). Check that the starter board is level (use a spirit level) before face fixing in place with a 70mm long Wurth screws through each of the vertical cavity battens and into the bottom plate (see Diagram 1). Then, also use a 70mm long Wurth screw to secret fix this board through the cavity batten and into the studs.

- Continue with the bottom boards and when connecting horizontally, end on end, apply a bead of sealant to the end-match groove of the fixed board and insert the next board's end-match tongue into the groove (refer to diagram 2 – showing for vertical installation) before securing with 70mm long Wurth screws through the face of the board at each batten crossing. Then utilising the screw line, secret fix with the 70mm long Wurth screw through the batten and into the stud. Take care in removing any excess sealant at the end-match joint so as not to mark the board surface. The micro bevel at the end-match aids in directing water away from this joint.

- Continue installing the rows of boards above by secret fixing each board at each batten crossing. To allow the correct expansion between boards, use the locating shoulder engineered into the profile (see Diagram 3) and check by tape measure that expansion allowance is maintained (multiples of the cover width + 2mm. E.g. If the cover width is 70mm, then multiples of 72mm). Also, ensure that end-matched joints are at least 400mm apart.

- Refer to Figures 1-3 and 7 for more details.

10) Vertical Cladding Installation –

» **Sealing along the bottom of vertically installed cladding is essential.**

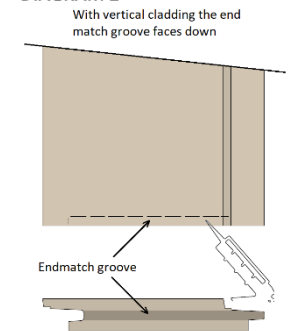
- To ensure you start and finish with a board of the same width across a section of wall, measure the width of the wall and calculate how much needs to be cut off (ripped) the first and last boards, and also cut these boards to suit the trim (see details FIG 4-6).

- The first board to be installed requires an exposed tongue and the last board at the far end of the wall will require an exposed groove.

- As the boards are end-matched, it permits board ends to be joined between the horizontal battens. End-match tongues are to face vertically and on installation, Sika sealant is applied to the end-match groove of the board being fixed (refer to Diagram 2).

- Start installation from the left, ensuring the applicable ground clearance is present. The bottom boards are also to be cut with a slope toward the exposed face of the cladding (refer to Diagram 1) and with the cut ends sealed with Feast Watson Timber and Deck Stain, Black Japan.

DIAGRAM 2



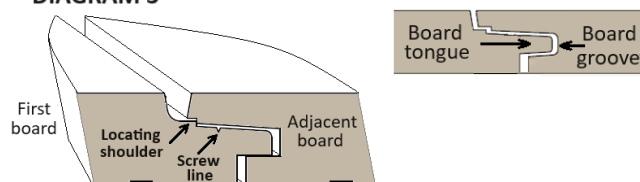
- With the first board positioned into the trim (see details FIG 4-6), it is then fixed near centrally across its face at each batten crossing using the Wurth screws (70mm long for 20mm thick battens with fixing into the wall frame and 50mm long for 35mm thick structural battens). If this board is not full height, the prepared board above will be fixed in place utilising the end-match with sealant first applied to the groove (refer to Diagram 2). Take care in removing any excess sealant so as not to mark the board surface.

- Once the first board or boards are fixed, the adjacent boards can be installed. The correct expansion allowance is achieved by positioning the board up to the locating shoulder on the starter board before secret fixing this board through the screw line at a slight angle (see Diagrams 1 and 3. *Diagram 1 shows the angle when secret fixing boards horizontally*).

» **Note that maintaining the expansion gap is essential.**

- Continue with the installation ensuring subsequent boards remain plumb by checking with a spirit level and also check by tape measure that expansion allowance is maintained (multiples of the cover width + 2mm. *E.g. If the cover width is 70mm, then multiples of 72mm*). Also, ensure that end-matched joints are at least 400mm apart.

DIAGRAM 3



» **Note that maintaining the expansion gap is essential.**

10) It is a requirement to coat any sawn cut edges or ends during installation with Feast Watson Timber and Deck Stain, Black Japan.

» **Sealing cut ends is essential.**

Completion:

» If permanent capping is needed, install immediately on completion of cladding installation.

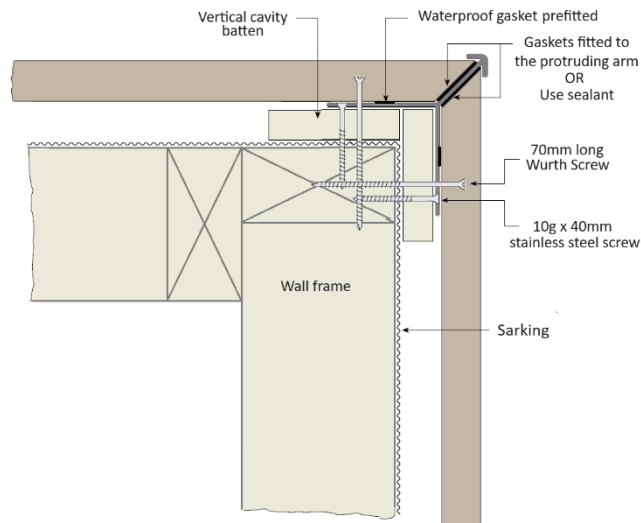
» Ensure any gaps are sealed using the Sika sealant.

» You MUST apply an additional coat of finish to the facade after installation.

» Periodic maintenance will be necessary with reapplication of the finish coat to a clean facade. The time interval will be dependent on the location, aspect, and coating product used.

Again, thank you for purchasing Hurford's SHOU SUGI BAN.
www.hurfords.com.au

**FIG 1 - Aluminium external angle corner detail
Horizontal cladding – 20mm cavity batten**

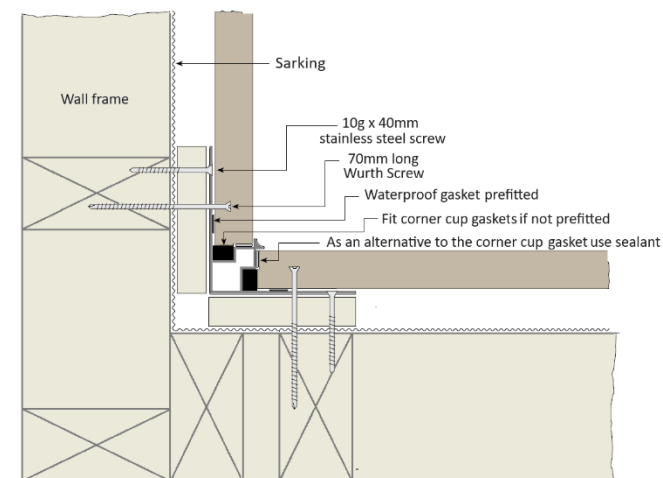


- Cladding boards will need to be mitered and ensure the cut end is sealed.
- If not pre-fitted, peel the backing off the supplied gaskets (23mm x 3mm) and fit to each side of the protruding arm. Sealant as indicated is an alternative.
- Screw fix the trim through the cavity batten and into the studs with 10g x 40mm stainless steel screws.
- Fix cladding through the cavity battens enabling gaskets to compress. Note that the trim can flex slightly to allow the board to fit firmly against the protruding arm gasket.

SEALANT OPTION

- Apply a full bead of sealant in place of the foam gaskets where illustrated. Ensure enough sealant is used to create a moisture barrier. On installation, the boards should compress the sealant to about 3mm. Take care in removing any excess sealant so as not to mark the board surface.

**FIG 2 - Aluminium internal angle corner detail
Horizontal cladding – 20mm cavity batten**



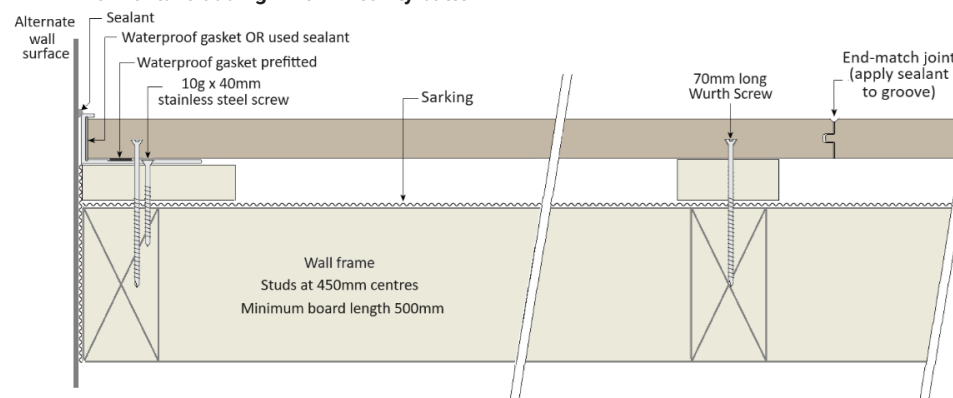
- If not pre-fitted, peel the backing off the supplied corner cup gasket (12mm x 10mm) and fit to each inside corner cup, as illustrated. Sealant is an alternative.
- Screw fix the trim through the cavity battens and into the studs with 10g x 40mm stainless steel screws.
- Ensure that all cut ends are sealed.

- Fix cladding through the cavity battens to the stud allowing gaskets to compress.

SEALANT OPTION

- Apply a full bead of sealant in place of the foam gaskets where illustrated. Ensure enough sealant is used to create a moisture barrier. On installation, the boards should compress the sealant to about 3mm. Take care in removing any excess sealant so as not to mark the board surface.

**FIG 3 - Aluminium end-stop detail
Horizontal cladding – 20mm cavity batten #**



#Note: The end-stop trim is not to be used as an exterior horizontal wall flashing.

- If not pre-fitted, peel the backing off the supplied gasket (23mm x 3mm) and fit inside the trim recess.

- Screw the trim through the cavity batten and into the stud with 10g x 40mm stainless steel screws.

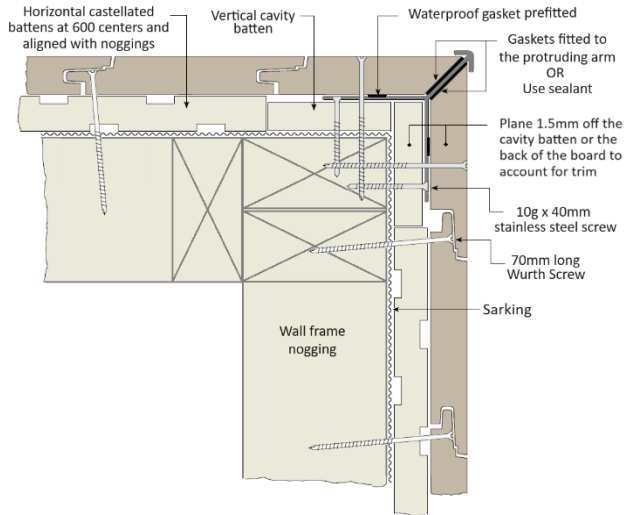
- Ensure that all end grain is sealed.

- Fix end boards through the cavity batten to the stud allowing gaskets to compress.

SEALANT OPTION

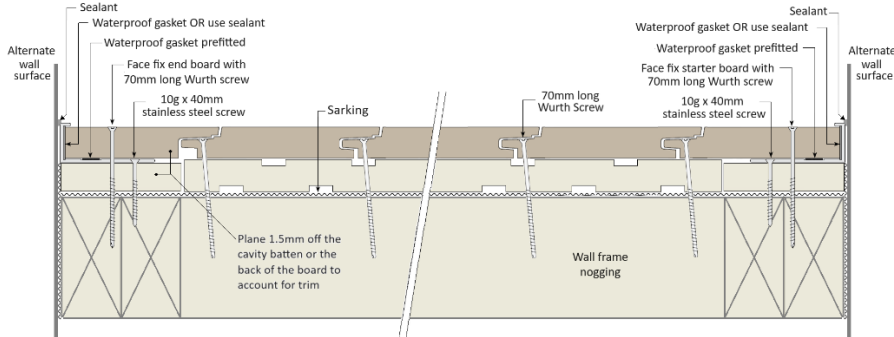
- Apply a 6mm bead of adhesive into the recess at the time of board installation and with the bead being compressed to about 3mm to create a moisture barrier. Take care in removing any excess sealant so as not to mark the board surface.

FIG 4 - Aluminium external angle corner detail
Vertical cladding – 20mm castellated batten



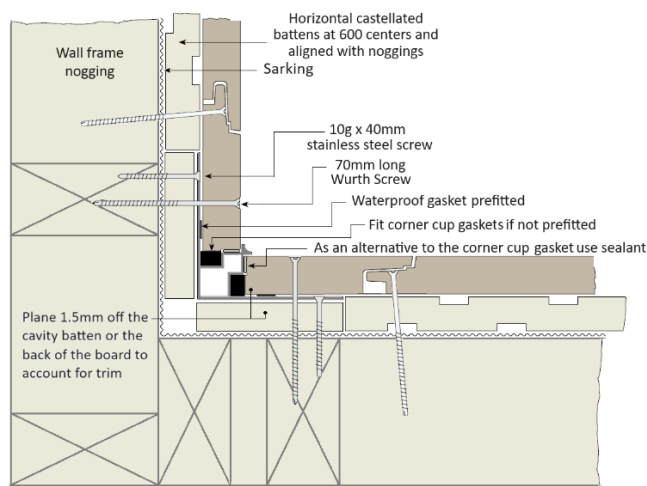
- Cladding boards will need to be mitered and ensure the cut edge is sealed. All ends also need to be sealed.
 - If not pre-fitted, peel the backing off the supplied gaskets (23mm x 3mm) and fit to each side of the protruding arm. Sealant as indicated is an alternative.
 - Reduce the thickness of the cavity battens or backs of the boards over the trim by planing off 1.5mm, to account for the thickness of the trim.
 - Screw fix the trim through the cavity batten and into the studs with 10g x 40mm stainless steel screws.
 - Fixing of the boards over the trims is centrally through the face of the boards with 70mm long Wurth screws, and enabling gaskets to compress.
 - Continue to fix the boards through the castellated battens and into the noggings. Maximum nogging spacing is 600mm. Note that the trim can flex slightly to allow the boards to fit firmly against the protruding arm gasket.
- SEALANT OPTION**
- Apply a full bead of sealant in place of the foam gaskets where illustrated. Ensure enough sealant is used to create a moisture barrier. On installation, the boards should compress the sealant to about 3mm. Take care in removing any excess sealant so as not to mark the board surface.

FIG 6 - Aluminium end-stop detail
Vertical cladding – 20mm cavity batten #



*Note: The end-stop trim is not to be used as an exterior horizontal wall flashing.

FIG 5 - Aluminium internal angle corner detail
Vertical cladding – 20mm castellated batten



- If not pre-fitted, peel the backing off the supplied corner cup gasket (12mm x 10mm) and fit to each inside corner cup, as illustrated. Sealant as indicated is an alternative.
 - Screw fix the trim through the cavity battens and into the studs with 10g x 40mm stainless steel screws.
 - Ensure that all cut edges and end grain is sealed.
 - Fixing of the boards over the trims is centrally through the face of the boards with 70mm long Wurth screws, and enabling gaskets to compress.
 - Continue to fix the boards through the castellated battens and into the noggings. Maximum nogging spacing is 600mm.
- SEALANT OPTION**
- Apply a full bead of sealant in place of the foam gaskets where illustrated. Ensure enough sealant is used to create a moisture barrier. On installation, the boards should compress the sealant to about 3mm. Take care in removing any excess sealant so as not to mark the board surface.

FIG 7 – Vertical cladding to horizontal structural 35mm battens

Generally, the details will be very similar to Figures 4 to 6 although as the batten is structural, it needs to be structurally fixed into the wall framing as outlined in clause 4 above, and the boards only need to be fixed into the batten. Figure 7 provides a detail for an external corner to illustrate the differences due to the thicker structural batten.

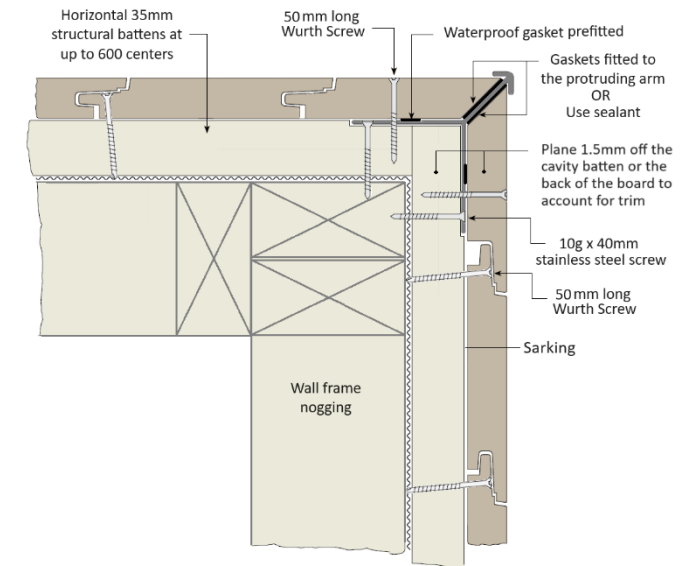
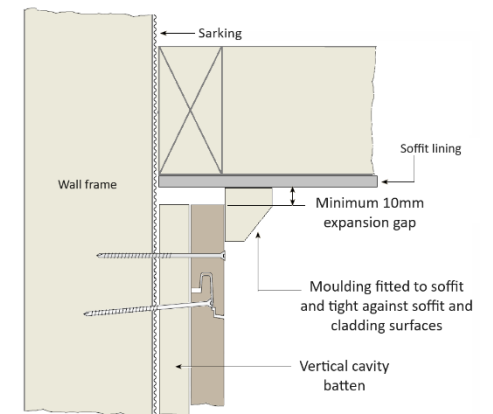


Fig 8 Flashings around openings and details at soffits

- With windows and doorways, there are requirements to be met regarding construction and installation and as windows and doors are generally a proprietary product, manufacturer instructions need to be followed. Generic guidelines relating to aspects of installation and flashing are available from the Australian Glass and Window Association in their publication - A Guide to Residential Installation.
- Flashings are used to prevent water entry from around openings and to guide water to the outside of the cladding. Around openings, head, jamb, and sill flashings are needed and the location of the sarking to the flashing is important.
- Particularly with vertical cladding it is important that the flashing does not allow water to track back into the end grain of the boards and as indicated, all cuts (end and edge) need to be sealed with Feast Watson Timber and Deck, Black Japan.
- Details at soffits with vertical cladding and 20mm thick battens is shown in Figure 8.



- If not pre-fitted, peel the backing off the supplied gasket (23mm x 3mm) and fit inside the trim recess.
 - Screw fix the trim through the cavity batten and into the stud with 10g x 40mm stainless steel screws.
 - Ensure that all cut ends and end grain is sealed.
 - Fixing of the boards over the trims is centrally through the face of the boards with 70mm long Wurth screws, and enabling gaskets to compress.
 - Continue to fix the boards through the castellated battens and into the noggings. Maximum nogging spacing is 600mm.
- SEALANT OPTION**
- Apply a 6mm bead of adhesive into the recess at the time of board installation and with the bead being compressed to about 3mm to create a moisture barrier. Take care in removing any excess sealant so as not to mark the board surface.