Wienerberger
Building Material Solutions

Installation guide for Vauban

Sandtoft installation guide

Technical data

Minimum roof pitch*	22.5^0
Headlap	93 – 108 mm
Batten spacing at maximum gauge	258 - 273mm
Size of tile	366 x 202 mm
Covering capacity at maximum gauge	21.8 tiles per m^2
Cover width	168 mm
Hanging length	326 mm
Weight as laid	47.9 kg per m^2
Battens per m^2	2.7 m
Batten size - up to 450 mm rafter centres	38 x 25mm
Batten size - up to 600 mm rafter centres	50 x 25mm
Nail size/type for tiles	50 x 3.0 mm stainless steel ring shank clout head
Nail size/type for metal tile clips	55 x 3.35mm aluminium ring shank clout head

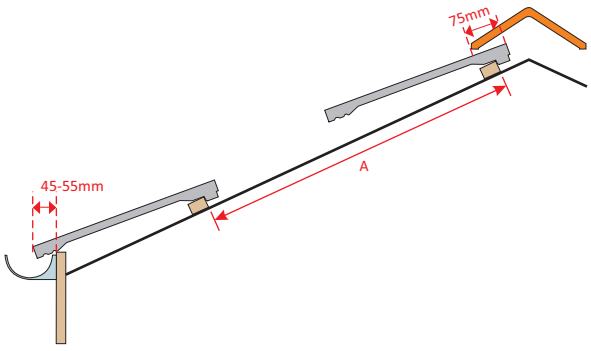
For projects where the rafters are below the minimum recommended roof pitch please contact Sandtoft Technical Department for advice.
Rafter length restrictions apply at minimum roof pitch.

This guide to installing Vauban tiles should be read in conjunction with the specification, CAD details and other, related guides. All these, plus video guides and much more information, are available on our website at www.sandtoft.com

The roof and all Sandtoft products must be installed fully in accordance with this guide and in conformity with the requirements of BS 5534 and BS 5250.
All site work must be carried out adopting normal standards of good workmanship and in conformity with the requirements of BS 8000-6: the British Standard Code of Practice for workmanship on building sites.

Setting out up the roof

Set the first batten so that the tiles overhang half way over the gutter (or 45 to 55mm, whichever is the least). Then set the last batten so that the ridge tiles overlap the top course of tiles by at least 75mm.
Measure the distance from the first to last battens (A) and divide by the maximum gauge (273mm) to give the number of courses required (B) - see diagram below. On the average roof, the 15mm headlap adjustment is sufficient to allow setting out to full courses. Where it is not possible to set out to full courses (eg on a very short extension roof) cut the tops off the tiles in the top course and re-drill for the nail holes.



To determine actual tile gauge:

number of courses = A ÷ max tile gauge

round up to nearest whole number (B),

then, actual tile gauge = A ÷ B

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Setting out across the roof

Set out using standard tiles, not eaves tiles. Lay several tiles fully 'open' and then again fully 'closed' and take the average width of three tiles. Then mark out along the eaves and top battens for every third tile, allowing for overhangs at verges. Strike a chalk line from eaves to ridge at each mark. Lay tiles to these marks to ensure perpendicular lines remain straight.

Tile Fixing

Load out all sides of the roof uniformly, randomly mixing tiles from different pallets. Start tiling at the right hand side of the roof plane and work towards the left, making sure that every third tile is positioned to a chalk line. Use tile-and-half tiles at verges and side abutments in alternate courses so that each course of tiles is cross-bonded. Ensure tile tails are aligned. Set out as far as possible to avoid cut tiles. Where cuts are unavoidable, ensure cut tiles are large enough to nail and/or clip. Where small cuts are too small to nail or clip, use Sandtoft MultiFix adhesive to secure cut tile. Nail each tile using a 50mm x 3.0mm stainless steel ring shank nail (supplied). Tile clips are also available where required.

Ventilated eaves

Set the fascia height, including over fascia ventilator, so that the eaves course tiles lay at the same angle as the tiles above *(refer to Sandtoft's table of fascia heights).*

Fix spacer trays continuously to ensure free passage of air between underlay and insulation from the over fascia ventilator into the roof space. If necessary, depending upon depth of insulation, fix addition spacer trays.

Lay underlay support trays over the fascia ventilator. Make sure there is adequate fall for the underlay towards the gutter. Lap the underlay over the underlay support trays by at least 150mm.

Lay Vauban eaves tiles in the first course; these are slightly narrower than the standard tiles so it is important to position them to the vertical setting out chalk lines. Nail each tile and clip where specified using Sandtoft Vauban eaves clips.

Multiversal continuous dry verge

Finish the underlay and tile battens flush with the outer edge of the wall or bargeboard. Position the lower flange of the Sandtoft Multiversal continuous dry verge under the tile battens then secure the ends of the battens directly through the flange. Use dry verge connectors where necessary and mitre cut the verge to meet neatly at the apex. Position each verge tile, making sure they are fully inserted into the verge unit. At the apex fit a block end ridge or ridge end cap.

Cloaked verge

Carry the underlay 40mm over the edge and turn down the gable wall or bargeboard. Finish the tile battens flush with the outer edge of gable wall or bargeboard. Where the cloaked verge tiles cannot be fitted close to the gable wall, close the under verge gap with an undercloak of 6 mm fibre cement sheet fixed under tiling batten ends. Commence at eaves and fix cloaked verge tiles to every tiling batten using 50 mm stainless steel screws, using cloaked verge tiles and cloaked verge tile-and-half tiles in alternate courses.

Mortarless bonding gutter with firebreak

Cut the tile battens to finish fully supported on the rafter and/or party wall. Finish the underlay to turn up over the ends of the battens. Lay a mortar bed over party wall to finish flush with tops of the tile battens. Install the bonding gutter centrally over the mortar bed and secure to battens using nails or screws. Lay tiles to finish close to the bonding gutter upstand, using tiles and tile-and-half tiles in alternate courses. Nail each tile and clip where specified using Sandtoft Vauban verge clips.

Roll hip

Lap the underlay on one side of the hip over the underlay on the other side by at least 150mm. Cut the tile battens to the hip, making sure the ends of the battens are fully supported, either on bearers or onto the hip batten. If necessary use tile battens to make up to the appropriate height of the hip batten so that the dry hip fixing screws penetrate by at least 25mm. Finish the tiling by cutting close to the hip batten. Use tile-and-half tiles where necessary to avoid small cut pieces.

Roll hip...continued

Nail each tile and clip where specified using Sandtoft Vauban tile clips. Position the hip roll and tray centrally over the hip and tack to the hip batten. Remove the paper backing and press onto the tiles. Position the hip tiles centrally over the hip and unions and secure using the screws and plates provided.

Mortarless valley trough

Fix 19mm valley boards, supported on bearers and flush with the tops of the rafters. Lay a continuous strip of underlay centred on the valley and lap the general underlay over this by at least 300mm. Cut the tile battens to the valley, making sure the ends of the battens are fully supported over the valley boards. Install the Mortarless valley trough centrally in the valley and secure to the valley board at its edges using nails or screws. Lay tiles to finish close to the valley upstand, using tiles and tile-and-half tiles in alternate courses. Nail each tile and clip where specified using Sandtoft Vauban tile clips.

Side abutment with continuous secret gutter

Fix timber bearers, flush with the tops of the rafters, to support the secret gutter and battens ends. Finish the underlay to turn up against the wall by at least 75mm. Cut the tile battens, making sure they are fully supported on the rafter or bearer. Fix a counterbatten over the bearer or rafter, allowing sufficient space to the wall for the secret gutter. Install the secret gutter with its upstand against the wall and secure to the counterbatten using nails or screws.

Finish tiling within 15mm of the wall, maintaining broken bond using tiles and tile-and-half tiles in alternate courses. Install a KoraFlex step and cover flashing overlapping the secret gutter upstand by not less than 65mm and dressed over the tiling by not less than 150mm.

Top edge ventilated abutment

Lay the underlay to finish 5 to 10mm from the wall. Set the tile battens so that the tiles fit 5 to 10mm from the wall. Cut the abutment ventilator to width if necessary and install over top course tiles. Secure using the clips provided. Install a KoraFlex cover flashing, dressed over the ventilator and tiling by not less than 150mm.

Profile dry ridge

Lay the underlay to finish 5 to 10mm from the ridge apex. Fix ridge batten straps to the rafters at maximum 600mm centres. Use tile battens to make up to the appropriate height of the ridge batten so that the dry ridge fixing screws penetrate by at least 25mm. Set the position of the top course tile battens to allow the ridges to overlap the tiles by at least 75mm. Lay the top courses of tiles, then click together the dry ridge ventilation units and position at each side of the ridge. Position the ridge tiles centrally over the ridge batten onto the ventilation units and ridge unions then secure using the screws and plates provided.

RollRidge

Lay the underlay to finish 5 to 10mm from the ridge apex. Fix ridge batten straps to the rafters at maximum 600mm centres. Use tile battens to make up to the appropriate height of the ridge batten so that the dry ridge fixing screws penetrate by at least 25mm. Set the position of the top course tile battens to allow the ridges to overlap the tiles by at least 75mm. Lay the top courses of tiles, then lay the roll centrally along the apex and tack to the ridge batten. Remove the paper backing and press onto the tile surface. Take care not to flatten the corrugations in the ridge roll to preserve an air path. Position the ridge tiles centrally over the ridge batten and ridge unions then secure using the screws and plates provided.

Profile dry mono ridge

Lay the underlay to finish 5 to 10mm from the ridge apex. Set the position of the top course battens to allow the mono ridges to overlap the tiles by at least 75mm. Lay the top course of tiles, then click together the dry ridge ventilation units and position on the top tile course. Position the mono ridge tiles onto the ventilation units and ridge unions. Fit the spacers provided and secure the mono ridge tiles to the wall or fascia with stainless steel screws and sealing washers.

Roof window

Install the roof window surround in accordance with the manufacturer's instructions. Turn the underlay up against and tape to window surround using Sandtoft Multi-tape. Seal the underlay at each window corner using Sandtoft Multi-tape.

Where available install a window secondary underlay skirt. Alternatively, form a skirt from Sandtoft Koramic VPM Super underlay. Make a cut in the general underlay above the window to create a lap over the window skirt and seal with Sandtoft Multi-tape. Seal the skirt over the tiling battens and general underlay using Sandtoft multi-tape.

Install the roof window flashings in accordance with the roof window manufacturer's recommendations. Lay the tiling over the flashings. Use tiles and tile-and-half tiles in alternate courses to maintain broken bond. Where necessary, carefully remove tile nibs to reduce 'kicking' over flashings. Use 50mm stainless steel screws, instead of nails, to secure tiles over the window flashings.