SUMMIT

ABOVE EXPECTATIONS

XPS INSULATION BOARD, CORNICES AND ACCESS CONTROL PANELS

A PROUD MEMBER OF THE SWARTLAND FAMILY

Est. 1951

SWARTLAND

INSULATION

ABOUT SUMMIT XPS BOARD

ABOUT SUMMIT

Summit offers insulation and decorative ceiling products of the highest quality. We're excited to introduce a new XPS insulation board to the market. Summit XPS board is manufactured in our factory with zero ozone depletion potential (ODP).
We follow strict global warming potential protocol.

WHAT IS SUMMIT XPS?

XPS, or extruded polystyrene foam board, is a rigid polystyrene with high compressive strength. Its closed-cell structure provides excellent long-term thermal insulation performance because of its inherent resistance to moisture transfer.

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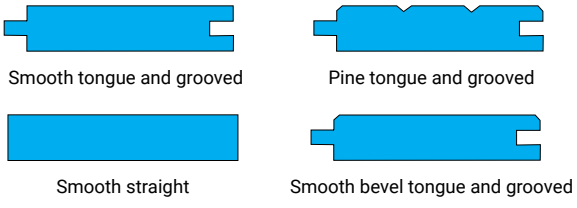
HOW IS XPS MADE?

XPS board is produced during a continuous, fully automated extrusion process. Solid granules of polystyrene resin are fed into an extruder, where they are melted and mixed with various additives, including flame retardent and nucleating agents to form a thick, viscous fluid.

Gas blowing agents are injected into the liquid to enable its expansion. Under carefully controlled heat and pressure conditions, the plastic mixture is forced through a die to create the boards.

The boards are trimmed to various lengths and thicknesses and profiled with tongue and groove.

SUMMIT XPS BOARD PROFILES:



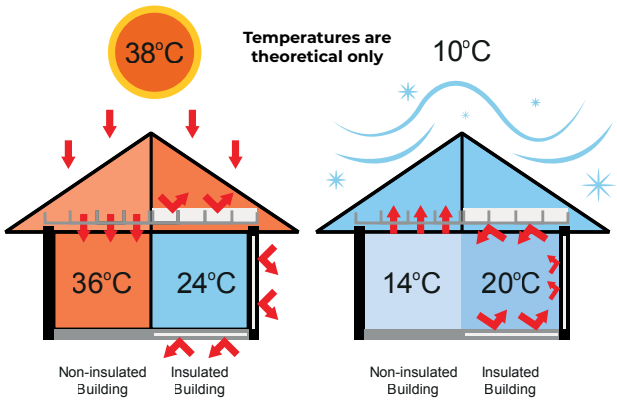
SUMMIT XPS BOARD APPLICATIONS

1. Nail-up ceiling and between trusses insulation
2. Over-truss/over-rafter insulation
3. Over-purlin insulation
4. Cavity/perimeter wall insulation
5. Underfloor (surface bed) insulation

THERMAL INSULATION

WHAT IS THERMAL INSULATION?

Thermal insulation is the process of reducing the transfer of heat between objects that are in thermal contact. The insulating capability of a material is measured as the inverse of thermal conductivity (k) – so low thermal conductivity is equivalent to high insulating capability.



WHY IS INSULATION IMPORTANT?

Maintaining a comfortable interior temperature by heating and or cooling the interior constantly, makes up a big part of the world's energy consumption.

Well-insulated buildings will:

A) Be more energy-efficient
Summit XPS insulation board will reduce the amount of energy used for heating and cooling the home or working environment, and will help to maintain the specific temperature required in commercial and agricultural buildings.

B) Increase comfort levels
Insulation helps to maintain a uniform temperature (typically between 21°C and 28°C) in a home or office, producing a more comfortable environment for the occupants.

C) Be more eco-friendly
In this way, Summit XPS insulation board helps to reduce greenhouse-gas emissions, lowers the carbon footprint of a building and helps to achieve compliance with National Building Regulations SANS 10400-XA.
The gasses used in the manufacturing have zero ozone depletion potential, with no significant contribution to increasing the greenhouse effect. The product has an almost indefinite lifespan if installed correctly and will contribute to significant energy savings.

D) Save money
In addition to reducing the cost of maintaining a comfortable temperature, Summit XPS insulation board has minimal recurring expenses. Unlike heating and cooling equipment, insulation is permanent and does not require maintenance, upkeep or adjustment.

E) Improve health and productivity of workers
Better thermal insulation reduces the build-up of condensation, resulting in a healthier environment. In most commercial and agricultural applications, effective temperature control has an impact on production outputs and input costs.

WHAT IS THE R-VALUE?

The R-value is a measure of how well a two-dimensional barrier, such as a layer of insulation, a window or a complete wall or ceiling, resists the conductive flow of heat. The higher the R-value, the more resistant a product is to heat flow.

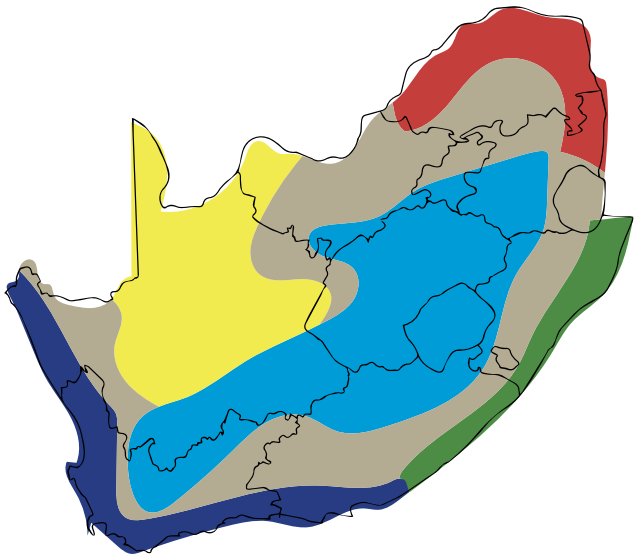
The R-value applies only to specific materials so to calculate the overall R-value of an entire system (such as a wall system), the R-values of all components must be added together.

WHAT ARE 'UP' ↑ AND 'DOWN' ↓ R-VALUES?

'Up' values measure the flow of heat rising up through the insulation, while 'down' values measure the amount of heat passing down through the insulation.

These are also sometimes known as winter and summer values, respectively. These measurements are especially important when dealing with reflective insulation.

CLIMATIC ZONES OF SOUTH AFRICA



- Cold Interior
- Hot Interior
- Temperate Interior
- Temperate Coastal
- Subtropical Coastal
- Arid Interior

MINIMUM TOTAL R-VALUES OF ROOF ASSEMBLIES

Description	Climate zones					
	1	2	3	4	5	6
Minimum required total R-value (m^2.K/W)	3.7	3.2	2.7	3.7	2.7	3.5
Direction of heat flow	Up	Up	Down and Up	Up	Down	Up

METAL SHEETING ROOF ASSEMBLIES

Description	Climate zones					
	1	2	3	4	5	6
Direction of heat flow	Up	Up	Down and Up	Up	Down	Up
R-value (m^2.K/W) of roof covering material	0.30				0.36	0.30
Added R-value of insulation	3.35	2.85	2.35	3.35	2.29	3.15

CLAY TILE ROOF ASSEMBLIES

Description	Climate zones					
	1	2	3	4	5	6
Direction of heat flow	Up	Up	Down and Up	Up	Down	Up
R-value (m^2.K/W) of roof covering material	0.35				0.48	0.35
Added R-value of insulation	3.30	2.80	2.30	3.30	2.24	3.1

GUIDELINES FOR SUMMIT XPS INSULATION BOARD USAGE

- Summit XPS insulation board is a bulk insulator, used to prevent the transfer of heat through conduction and convection.
- The greater the thickness the more insulation Summit XPS board will provide.
- All other factors being equal, temperatures will be more stable in better-insulated buildings.
- Different climatic regions require different insulation interventions to achieve similar levels of comfort (as well as legal compliance).
- Summit XPS board is a thermal insulation solution. It should not be used in isolation as a sound barrier. Consult a noise reduction system specialist.

Contact us to determine the appropriate Summit XPS insulation board thickness for your application.

FIRE TEST

Summit XPS insulation board is classified as B/B1/2/H&V in terms of SANS 428, which means that although it is combustible, it poses no flame spread hazard.

Summit XPS can be installed horizontally or vertically in any building type – even those without a sprinkler system – with the exception of regulated buildings that require non-combustible materials. Exposed to fire, Summit XPS insulation board shrinks away from the heat source, with no flaming droplets or flame spread.

NAIL-UP

Summit XPS insulation board made of high-density (32-36kg/m3), rigid extruded polystyrene, 600mm wide and XXXmm thick.

- Boards are fixed to battens with Summit XPS adhesive applied at 300mm intervals, transverse to the trusses, at a maximum of 700mm apart.
- Boards are fastened along the edges with concealed clips, and secured to the battens with screws or pop rivets. Boards are secured to perimeter battens with drywall screws and washers at 300mm intervals.

OVER-PURLIN

Summit XPS insulation board made of high-density (32–36kg/m3), rigid extruded polystyrene, 600mm wide.

- Boards are fitted above the purlins using tongue-and-groove profiles, and concurrent with the roof covering, at approximately XXXmm centres.
- Butt joints require a 5mm gap between boards.

UNDERFLOOR AND SURFACE BED

Summit XPS insulation board made of high-density (32-36kg/m3), rigid extruded polystyrene, 600mm wide.

- Boards are fitted using tongue-and-groove profiles, and laid on plastic sheeting under reinforced concrete floors.

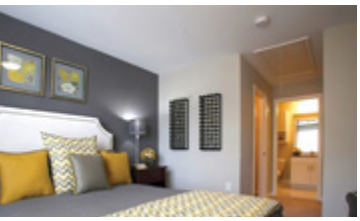
PROPERTIES:

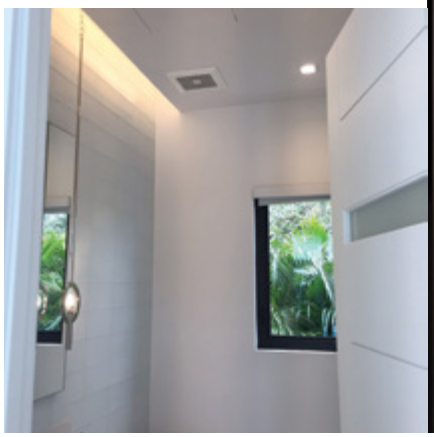
- Thermal conductivity = 0.03 W/m.K
- Density = 32kg/m^3 - 38kg/m^3

R-VALUE (m^2.K/W)

Standard Thickness	R-Value
30mm	1.00 m^2.K/W
40mm	1.33 m^2.K/W
50mm	1.67 m^2.K/W
80mm*	2.67 m^2.K/W

*Special Order Thickness





FINISHED ACCESS PANELS

Available in: 400 x 400mm and 600 x 600mm.

- Concealed snap lock: push to open/close.
- Powder-coated galvanized-steel frame and door.
- Easy to install.
- Steel bar hinge.

UNFINISHED ACCESS PANELS

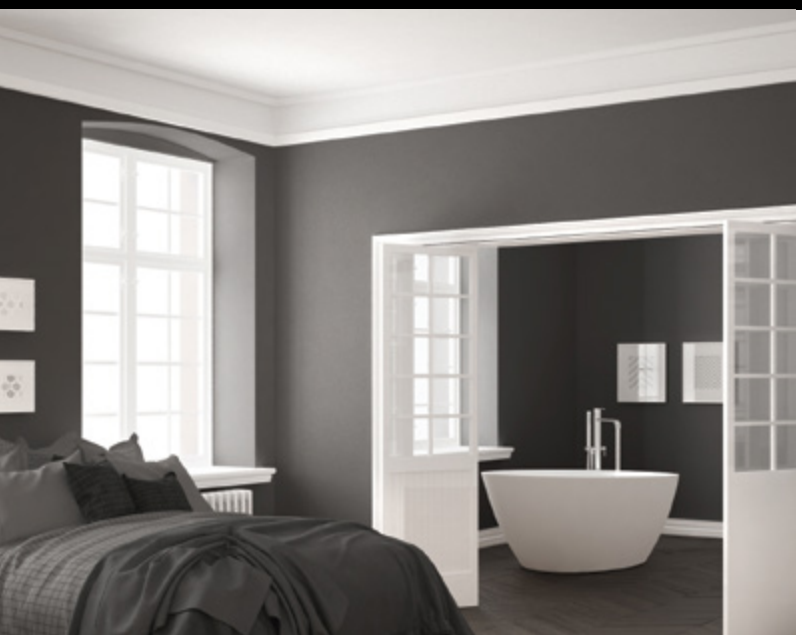
Available in: 400 x 400mm and 600 x 600mm.

- Concealed snap lock: push to open/close.
- Powder-coated aluminium frame with 12.5mm gypsum moisture-resistant board.
- Door to be skimmed & painted.
- Easy to install.

INSTALLATION GUIDELINES

- Remove the door from the frame.
- Create an opening within the plasterboard wall or ceiling by drawing around the outer rim of the Summit Trap Door – allow for an extra 5mm.
- Cut opening using a saw, and install the frame in the ceiling or wall.
- Ensure the frame is set square into the opening. Fix frame through the face of the plasterboard using approved screws (minimum two fixings per side, and maximum 300mm centres).
- For a secure fix, provide additional structural framing that is fixed to the ceiling framework around the opening. Re-fit door into frame and check operation prior to finishing.
- Remove the door again, and skim and paint around the fitted frame.
- Ensure all jointing material has been removed from the frame and door edge, as this will affect the door's operation.

Available from leading hardware retailers and SBS stores nationwide.



SUMMIT XPS CORNICE RANGE

Summit XPS cornices will add a designer touch to any home. Traditionally made from wood or gypsum, our cornices are made from our own locally manufactured extruded polystyrene (XPS), which offers many benefits.

A) Easy, quick installation
Polystyrene is lightweight, easy to cut and glue into place with Summit XPS Adhesive, and flexible enough to 'forgive' uneven surfaces.

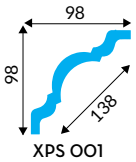
B) Versatile mounting surfaces
Polystyrene cornices can be mounted onto tile, concrete, wood, face brick, marble, vinyl, steel, granite and plastic.

C) Easy painting
The smooth surface of Summit XPS cornices merges well with white ceilings, and needs only one coat of white, water-based paint.

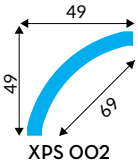
D) Durability
Providing excellent thermal insulation, polystyrene is water-resistant, flexible, durable and resistant to damage caused by household pests.

E) Design variety
Polystyrene cornices come in various styles to suit any interior aesthetic.

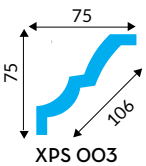
F) Suitability for wet areas
Polystyrene is resistant to moisture damage, which makes our cornices ideal for kitchens, bathrooms and outside patios.

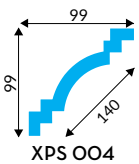
XPS OO1

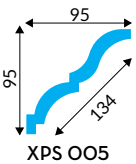
XPS OO2

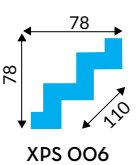
XPS OO3

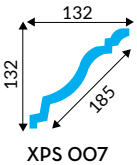
XPS OO4

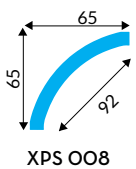
XPS OO5

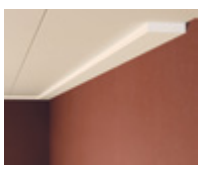
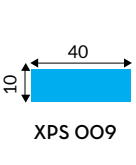
XPS OO6

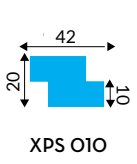
XPS OO7

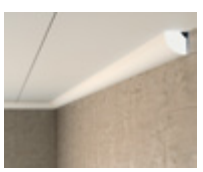
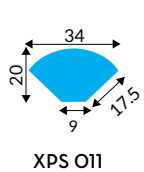
XPS OO8

XPS OO9

XPS O10

XPS O11

KNAUF CEILING INSULATION

KNAUF CEILING INSULATION

Knauf ceiling insulation is made from high-performance glass mineral wool. Glass mineral wool consists of 80% high-quality recycled materials – sand or recycled glass, with limestone and soda ash added before the mixture is melted in a furnace. The molten glass is spun into millions of fine 'wool' strands, and bound into mats with the revolutionary bio-based ECOSE® Technology. The density of the product determines its thermal insulation value.

ECOSE® Technology offers the following benefits:

- No added formaldehyde (a common ingredient in other glass-wool products that can cause irritation and allergic reactions).
- No added artificial colours or bleaches.
- Energy savings – ECOSE® Technology binding consumes 70% less energy compared to traditional formaldehyde-based binders, and reduces CO^2 emissions by up to 25%.
- Durability – the insulation is rot-proof, does not sustain vermin and will not encourage the growth of fungi, mould or bacteria.

WHY KNAUF?

- Pleasant to handle and install
- No itch, no smell
- Virtually no dust
- Rolls perforated for easier and faster installation

KNAUF CEILING INSULATION

INSTALLATION BENEFITS

- 2 to 3 times fewer trips up the roof for the installer
- Saves time, lowers cost, increases profit
- Less space taken up on vehicle per m²/job
- Faster installation

FIRE CLASSIFICATION

Knauf ceiling insulation is rated EUROCLASS A1 under BS EN 13501-1, as well as A/A1/1** in accordance with SANS 428:2012, SANS 10177-5 A (non-combustible) and SANS 10177-10 A1 (no flame spread). A fire test report is available on request.

PRODUCT SPECIFICATIONS

Knauf ceiling insulation is available in perforated rolls, in multipacks of 2 x 50mm-thick rolls, or as 1 x 100mm-thick rolls. Factory-applied perforation cuts make it easy to create two precise, equally sized, 600mm-wide rolls, or 800mm + 400mm-wide rolls, depending on the spacing of your rafters. This results in easy, dust-free installation.

Product Description	R-value (m².k/w)
50mm Knauf Multipack (uncut) ceiling roll	1.05
50mm Knauf Combi-cut ceiling roll	1.25
100mm Knauf Multipack (uncut) ceiling roll	2.1
100mm Knauf Combi-cut ceiling roll	2.5
135mm Knauf Combi-cut ceiling roll	3.38

GUIDELINES FOR SUMMIT XPS INSULATION BOARD USAGE

- The greater the thickness, the more insulation Summit XPS board will provide
- Summit XPS board is a thermal insulation solution. It should not be used in isolation as a sound barrier. Consult a noise reduction system specialist .

INSTALLATION GUIDES

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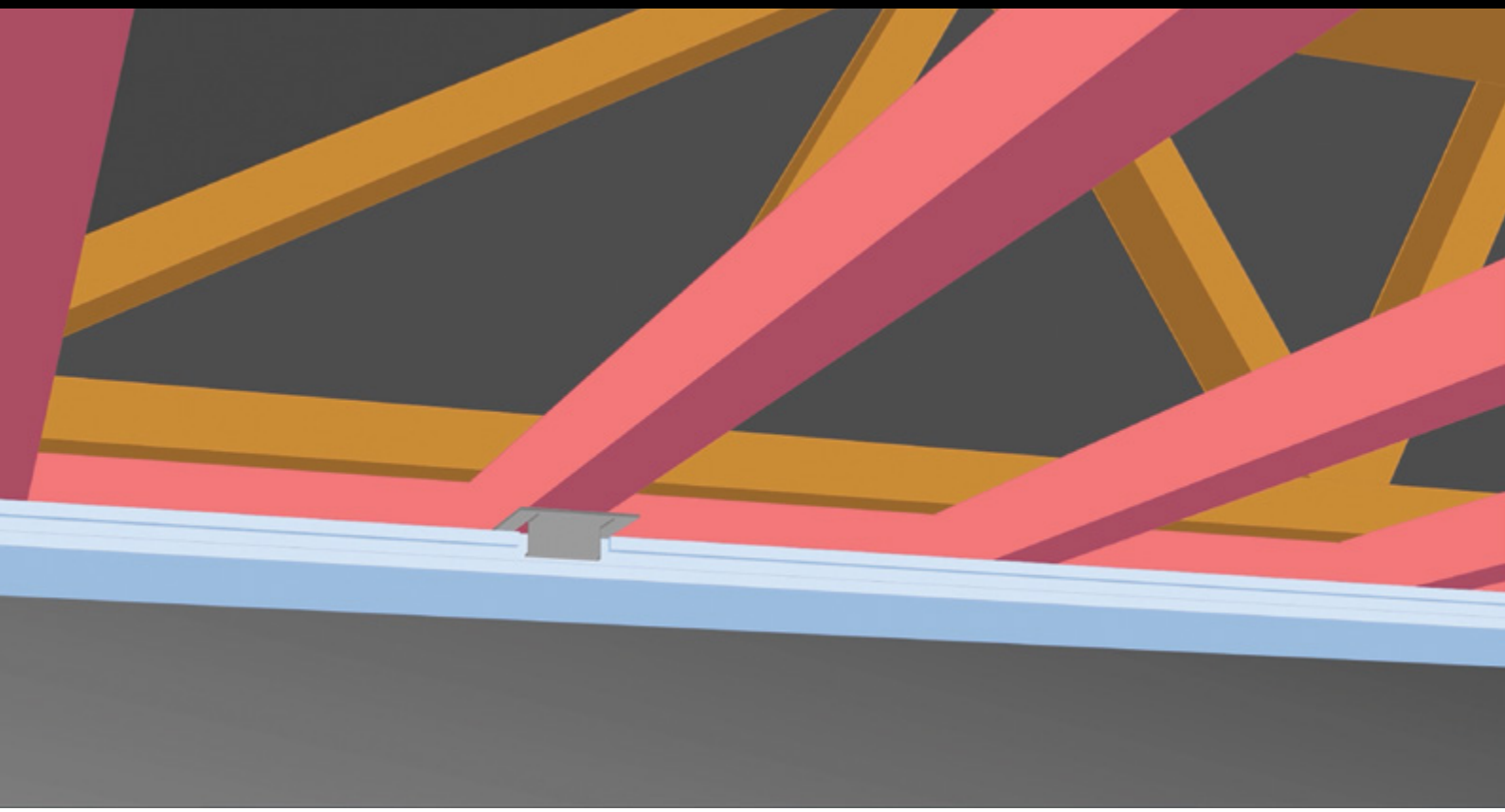
OVER-TRUSS/OVER-RAFTER	28
UNDERFLOOR, CAVITY WALL & PERIMETER INSULATION	32

STORAGE, HANDLING AND INSTALLATION: GENERAL

- Store Summit XPS insulation board in original packaging, out of the sun and weather elements. Handle with care to prevent damage to edges.
- Always paint Summit XPS insulation board in applications where direct or reflected sunlight will fall on it, to protect it from UV rays.
- If painting, use two coats of good-quality water-based matt PVA paint. The first coat should be an acrylic filler coat to cover minor surface indentations and imperfections
- If leaving it unpainted, wipe Summit XPS insulation board with a cloth soaked in dishwashing liquid immediately prior to installation to remove static charges from the board's surface.

NAIL-UP CEILING INSTALLATION



TYPICAL USES

- Residential buildings, school projects and office developments
- Retail & commercial developments

APPLICATION GUIDELINES

- Choose either smooth board with bevelled edge or pine-groove finish.
- Run Summit XPS insulation board from wall to wall, avoiding butt joints.
- Fit & level battens at maximum 700mm centre to centre, and fit perimeter battens around the room.
- Always use Summit XPS adhesive, recommended screws and concealed clips.
- Ensure that planned lighting is compatible with Summit XPS insulation board.
- Paint Summit XPS insulation board with two coats of a good-quality water-based matt PVA paint to prevent discoloration.
- For sound insulation, overlay Summit XPS insulation board with fibrous acoustic insulation.

IMPORTANT NOTES

- Summit XPS insulation board is fixed to the battens with adhesive and concealed fixing clips.
- Drywall/chipboard screws with washers should be used on the perimeter, where cornices will be installed.
- Summit XPS adhesive coverage is approximately 30m^2 per litre.
- Clip usage is three per square metre.
- Summit XPS insulation board can be retrofitted below an existing ceiling to cover damage, provide insulation or change the appearance. It can also be fixed below a concrete soffit by fitting the battens below the soffit (or other ceiling) to allow for rough or sagging surfaces.
- To fix Summit XPS insulation board between existing trusses, rafters and battens, the recommended screws, clips and adhesive should be used, as for nail-up ceilings.

INSTALLATION GUIDELINES

1. Fit timber or steel battens at maximum 700mm centre to centre, transversely to the trusses, as well as around the perimeter of the room. For truss spacing exceeding 750mm and for high wind–load areas, reduce the battens centre-to-centre spacing.

2. Fix initial panel to perimeter battens with drywall screws and washers at 300mm intervals, so they can be concealed by the cornices.

3. Summit XPS insulation board sheets must be of sufficient length to span the battens without butt jointing. Trim the boards on site, allowing for a 5mm gap to each wall.

4. Apply 5ml drops of recommended adhesive along the battens, at 200mm intervals.

5. Break out top of the groove at each intersection of the board edge and battens to fit a concealed clip into the edge of the Summit XPS insulation board. Screw or pop rivet clip into battens, pressing upwards to ensure adhesive contact.
(Refer to detail 2: Cross-sectional detail.)

6. Fit subsequent Summit XPS insulation boards, using the tongue-and-groove joints.

7. Trim the final board and fit to complete the installation. Fix initial panel to perimeter battens with drywall screws and washers at 300mm intervals, so they can be concealed by the cornices.

8. Fit Summit XPS cornice of your choice.

9. Sand the grooves lightly, and fill any indentations with plaster key and crack filler paste.

10. Wipe all surfaces clean of excess paste.

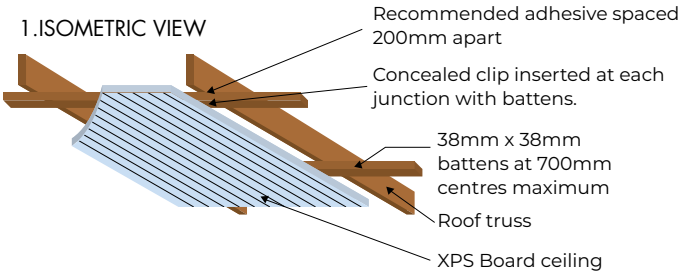
11. Finish with two coats of good-quality water-based matt PVA paint. The first coat should be an acrylic filler coat to cover minor surface indentations and imperfections.

CARE AND MAINTENANCE

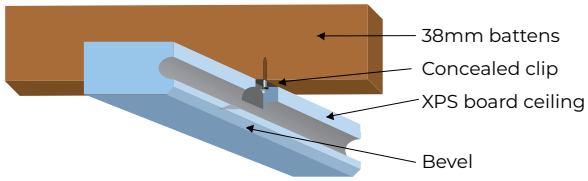
- Use only water-based cleaners, adhesive and paint.
- **Contact with ANY solvent or solvent-based product will damage Summit XPS insulation board.**
- If installing Summit XPS insulation board under eaves and on verandas, halve the battens spacing and double the number of clips/screws and adhesive fixing points to accommodate wind and air-pressure differences.
- In external installations, paint to prevent discoloration.

NAIL-UP CEILING INSTALLATION

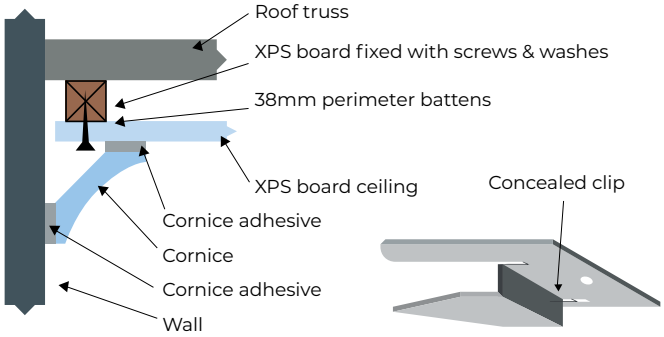
1.ISOMETRIC VIEW



2.CROSS-SECTIONAL DETAIL



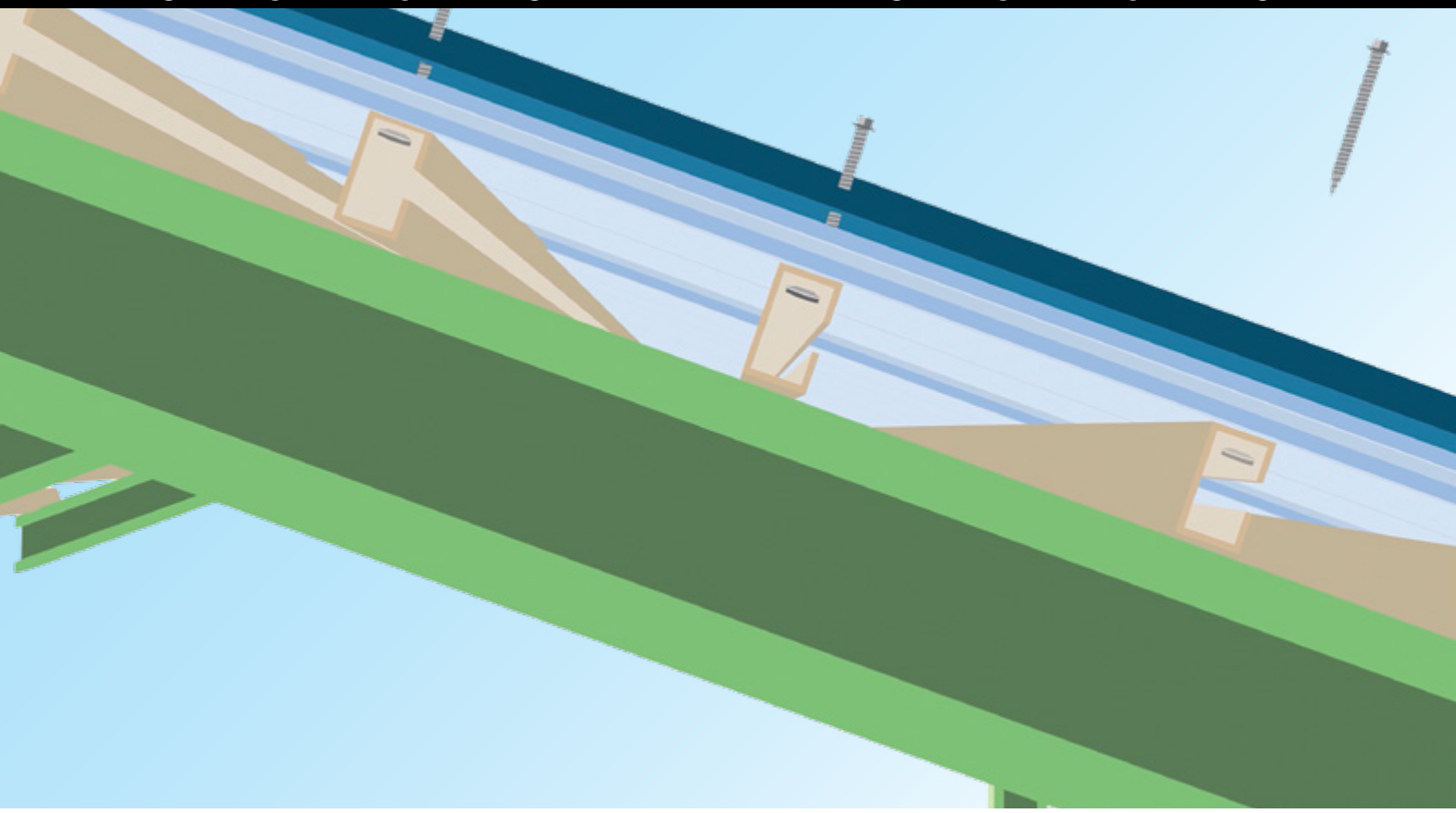
3.CORNICE DETAIL



LIGHTING AND SUMMIT XPS BOARD

- Lamp fixtures fixed through Summit XPS insulation board should be fitted with bulbs that generate temperatures of no more than 70°C. Above this temperature, Summit XPS insulation board will soften and retract from the heat source.
- Fluorescent lamp holders (with fitted ballast) should be spaced approximately 3mm away from Summit XPS insulation board using washers, and fixed to the supporting battens or trusses.
- Lightweight LED lights are preferable for Summit XPS insulation board.
- Heavier light fittings should always be hung from timber that's fixed above the Summit XPS insulation board.
- Energy-saving bulbs should be used when installing lamp fittings in close proximity to Summit XPS insulation board.
- Downlighter lamp fittings should be swivel-type, with energy-saving or LED bulbs.
- For 12V installations, transformers should be positioned off the board on battens/trusses, and 200mm away from the lamp fittings. A minimum of 150mm space is required above Summit XPS insulation board for sufficient ventilation.

OVER-PURLIN INSTALLATION



TYPICAL USES

- Industrial and commercial applications
- Retail applications
- Agricultural structures

APPLICATION GUIDELINES

- Summit XPS insulation board can follow a 5m radius in curved roof applications. Choose either smooth board with straight edge (if using H- or T- sections), or smooth board with a bevelled edge or pine-groove finish.
- For minimum deflection, recommended spans should not be exceeded. Aluminium T- or H- sections can be used to increase the unsupported spanning capability of Summit XPS insulation board where the limit per thickness is exceeded.
- Summit XPS insulation board is clamped to the purlin via roof screws that secure the roof sheets, or via clip-lock-type fittings. Longer roof screws are needed to accommodate the thickness of the board.
- If Summit XPS insulation board is clamped in direct contact with a pre-painted roof sheet, fit 3mm MDF spacers to prevent possible squeaking noise. Spacers are not necessary if a clip-lock system is used, or with galvanized or Aluzinc roof sheets.
- Roof ridge vents should be installed when using 40mm or thicker Summit XPS insulation board to prevent heat build-up, especially under painted roof sheets.
- Summit XPS insulation board can be used to clad the sides of the steel-framed buildings.
- Summit XPS insulation board is an extrusion, and therefore flow lines can be visible. For an aesthetically pleasing finish, paint the board with two coats of good-quality water-based matt PVA paint. The first coat should be an acrylic filler coat to cover minor surface indentations and imperfections.

Please consult the Swartland website or one of our representatives for the appropriate thickness of Summit XPS insulation board to use in your region.

OVER-PURLIN INSTALLATION

INSTALLATION GUIDELINES

1. Wipe boards with a dishwashing liquid immediately prior to installation to remove static charges built up during transport or handling, and to prevent dust particles from sticking to the surface.

2. Lay the boards from apex to eave, always beginning and ending on a purlin.

3. If butt joints are necessary, make sure they are centred on top of the purlins, with a 5mm expansion gap. Please note: as a result of width tolerances, butt-joined or staggered boards might not align perfectly.

4. Join boards longitudinally using the tongue-and-groove edge profile, locking them together tightly.

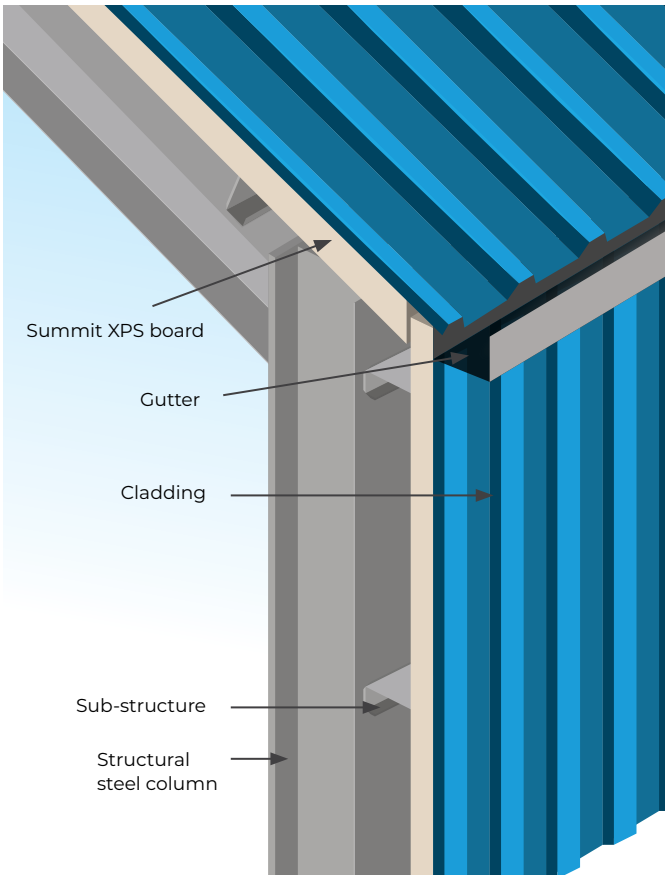
5. Fix the roof sheets using roof screws at the same time as Summit XPS insulation board, so that the board is secured between purlins and roof sheets.

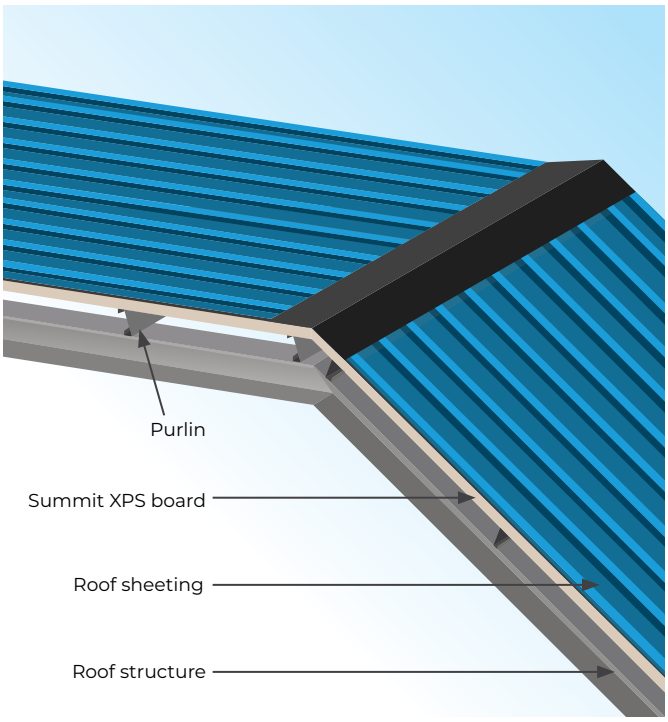
6. Recommended purlin spacing limitations for unsupported Summit XPS insulation board are listed in the table below, and allow for a 15mm deflection at mid-span. **Please note:** the recommended purlin spacing is reduced under painted roof sheets because of the higher temperatures.

7. Use profiled roofing closures or cover strips in areas where exposed board ends can potentially be damaged by birds or vermin.

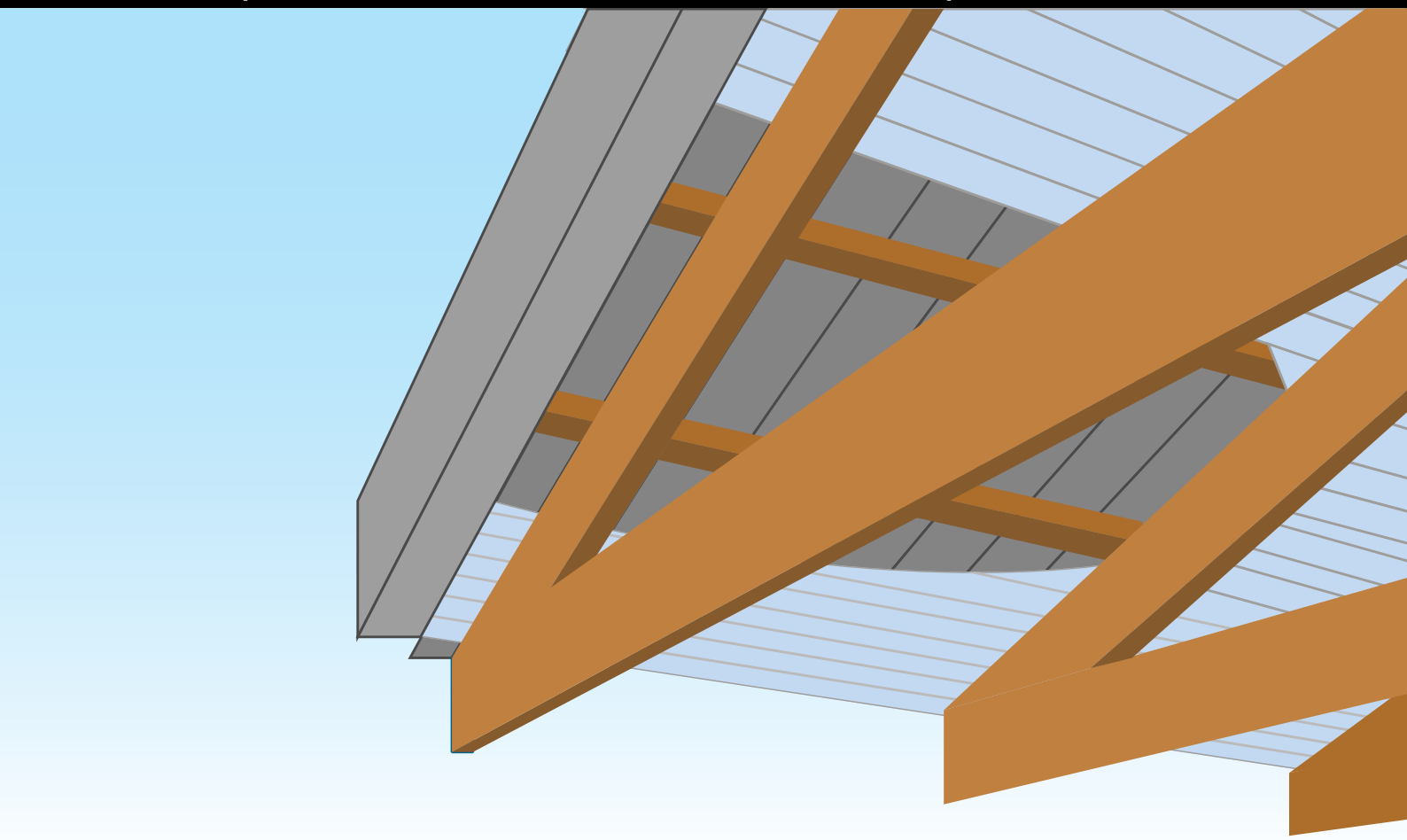
In industrial and commercial applications, the designed purlin spacing can exceed the spacing recommended for Summit XPS insulation board. Please consult the Swartland website or one of our Summit XPS insulation board representatives for installation advice.

Maximum purlin spacing		
Thickness	**Galvanized sheeting**	**Painted sheeting**
30mm	1 400mm	1 200mm
40mm and thicker	1 600mm	1 500mm





OVER-TRUSS/OVER-RAFTER INSULATION



TYPICAL USES

- Insulated pitched roofs in residential housing, community housing and office space

APPLICATION GUIDELINES

- Summit XPS insulation board can be installed over trusses to create an exposed-truss finish. Choose either plain/smooth board, bevelled edge or pine-finish board.
- The boards should be laid horizontally in long lengths, beginning and ending on a truss or rafter.
- For over-truss installation, the top chords of the trusses must be braced below the Summit XPS insulation board, in accordance with the architect/roofing engineer's specifications, to prevent lateral deflection under load.

NB: Battens and purlins fixed above Summit XPS insulation boards do not provide the necessary lateral restraint to the top chord truss members.

- For installation under battens or purlins, Summit XPS insulation board should be secured with recommended screws that are fixed through the purlins. Pre-drilling guide holes will ensure that screws are centred correctly over the truss or rafter. The screws will provide adequate resistance to uplift forces.
- Battens/purlins and top chord truss members should be SA pine, Grade 4 or higher.
- The minimum width of a top chord is 50mm.
- Summit XPS insulation board is a thermal insulator, and should not be used in isolation as a sound barrier. If fitted below steel roof sheeting, a layer of acoustic insulation can be installed over the boards to help dampen weather noise.

There are certain limitations when it comes to the spacing of the battens/purlins and trusses. These are dependent on roof covering, and ensure that the compressive bearing pressure of Summit XPS insulation board is not exceeded. Please consult the Swartland website or one of our representatives for more information.

INSTALLATION GUIDELINES

1. Fix double-sided tape to the trusses to prevent the boards from moving during installation.

2. Pre-drill guide holes in the battens/purlins before fixing.

3. Lay Summit XPS insulation boards horizontally across trusses, always beginning and ending on a truss or rafter, and ensuring that the butt-joints are over the truss top chords.

4. Place counter batten above each truss or rafter, running along the truss top chord. This will secure Summit XPS insulation board and prevent uplift. Secure counter batten through the board into the rafter below with recommended screws at 300mm intervals. Do not over-tighten the screws, as this may cause the boards to deflect.

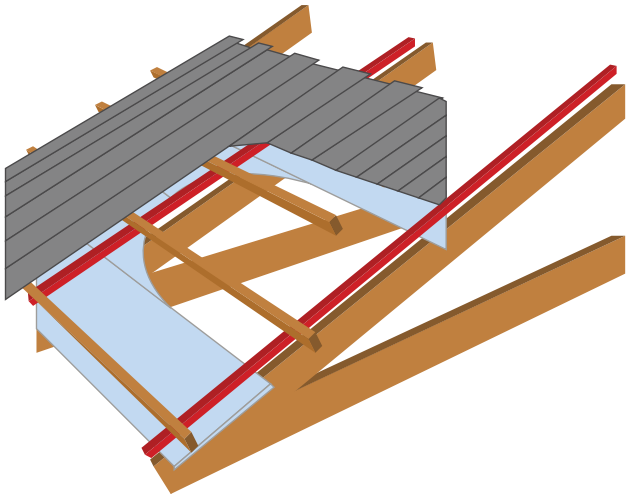
5. Place battens/purlins over Summit XPS insulation boards at required centres on top of the counter batten, secure with recommended screws into counter battens (and on top of the board).

6. Ensure that all screws are centred.

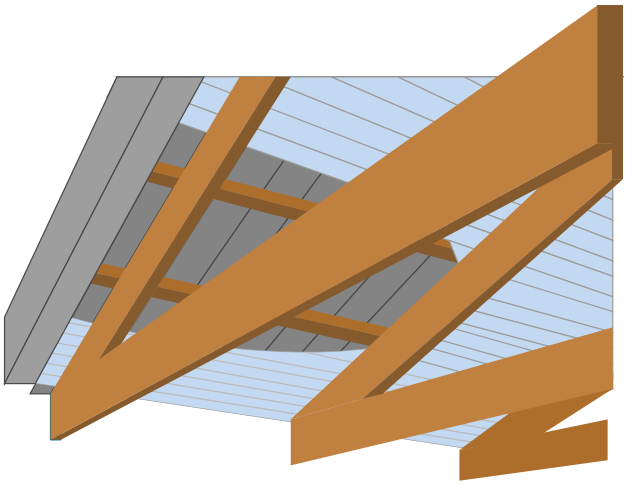
7. Brace truss top chords to prevent lateral deflection as per architect/roofing engineer's specification

8. Paint the visible surface of Summit XPS board with two coats of good-quality water-based matt PVA paint. This can also be done prior to installation – install mineral wool sound insulation above the Summit XPS insulation board if required.

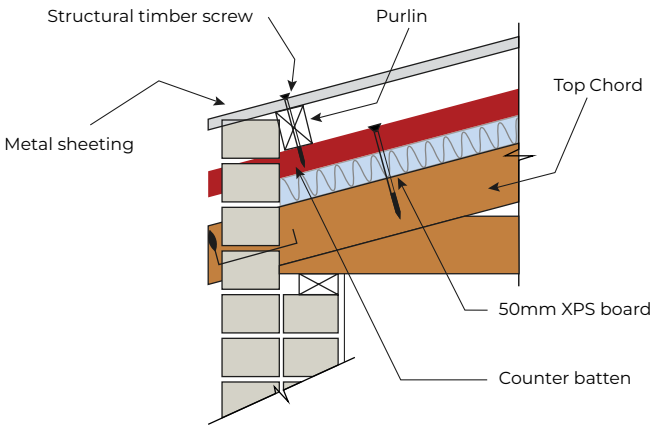
OVER-TRUSS/OVER-RAFTER INSULATION



Installed over-trusses, with additional top-chord bracing revealed under the XPS board.



XPS board over-truss installation viewed from beneath, including additional top-chord bracing as required by the truss designer.



TYPICAL USES: CAVITY WALL INSULATION

- Buildings aiming at energy efficiency and comfort living
- Cold storage/buildings designed with minimum mechanical cooling or passive cooling systems
- Agricultural and pharmaceutical buildings

TYPICAL USES: UNDERFLOOR INSULATION

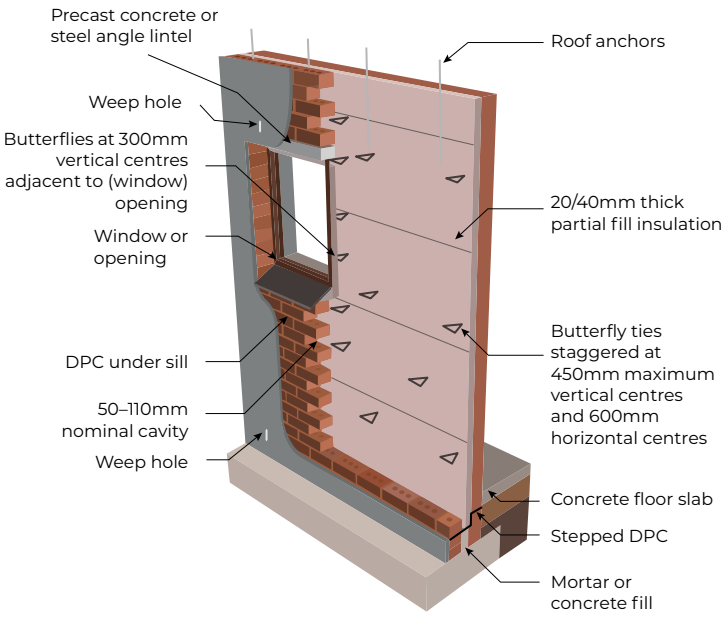
- Between mesh-reinforced floor screeds and surface bed, to prevent heat loss and increase comfort
- Below ice rinks, freezer rooms and certain agricultural applications, to minimise heat flow into cold-rooms
- Below domestic and commercial screeds where under-floor heating systems are installed

XPS INSULATION BOARD USAGE

Summit XPS insulation board is used to prevent the transfer of heat through conduction and convection. The greater the thickness, the more insulation it will provide. All other factors being equal, temperatures will be more stable in better-insulated buildings.

APPLICATION GUIDELINES

- In taller residential homes, the ratio of roof area to wall area decreases, which increases the impact of heat transfer through walls. Cavity wall insulation is an excellent way to control that. It also helps prevent condensation and penetration of the inner leaf.
- Summit XPS insulation board can be installed in a potentially damp area without losing long-term thermal performance. It can also start below the damp-proofing.
- Foundation perimeter application is similar to underfloor slab insulation, but it can be a retrofitted.
- Summit XPS insulation board insulation will keep the floor slab at an even, moderate temperature, helping to control the overall temperature of the building.
- Summit XPS insulation board can be installed either below the screed (if reinforced) or above or below the loor slab.
- In applications with underfloor heating, Summit XPS insulation board should be installed below the screed.
- SANS 10400-XA requires that all heated floors be insulated to a minimum thermal resistance of 1 – the equivalent of a 30mm Summit XPS insulation board.
- Summit XPS insulation board should be installed below the floor slab in solar water-heating applications.
- Insulated floors will be about 5°C warmer.

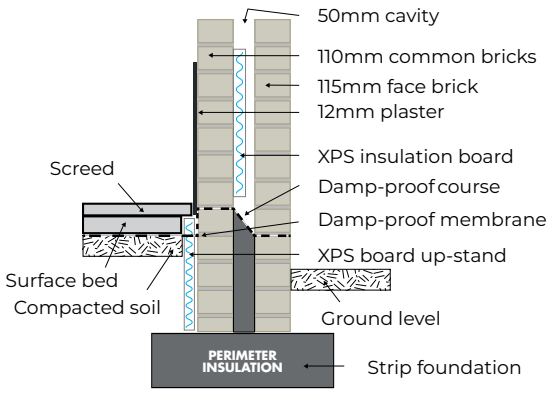


For instructions on storage, handling and finishing Summit XPS insulation board, visit www.summitxps.co.za

FULL FILL CAVITY

In areas where cavity is not built to perform moisture-barrier function, the between cavity width should be the thickness of the required insulation (e.g. 30mm).

PERIMETER INSTALLATION GUIDELINES



1. Construct walls, leading with the inner leaf, to height of approximately 1 400mm, which contains the first two rows of wall ties.

2. Wall ties (in accordance with SANS 28) shall be fixed at not greater than 450mm spacing in height and 600mm horizontal intervals. Additional wall ties shall be fixed adjacent to openings and movement joints at minimum 300mm vertical spacing and within 150mm of opening.

3. Clean any excess dirt from the cavity face of the leading leaf.

4. Place the first two rows of Summit XPS insulation board on edge against the leading leaf, with tongue-and-groove installed to shed moisture away from the inner leaf (or with tongue facing upwards). Mark where brick ties push against insulation and, using a sharp blade, cut slits in the insulation so wall ties can be pulled through. Strip of wall tie to be visible on outer edge of insulation – this assists in holding the board in place.

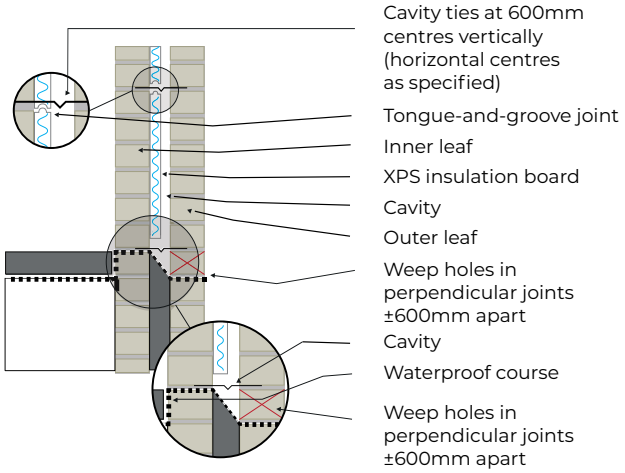
5. Construct the outer leaf, ensuring that the residual cavity is kept clean, and secure wall ties.

6. Trim Summit XPS insulation board on site with a sharp blade to fit snugly around window and door frames.

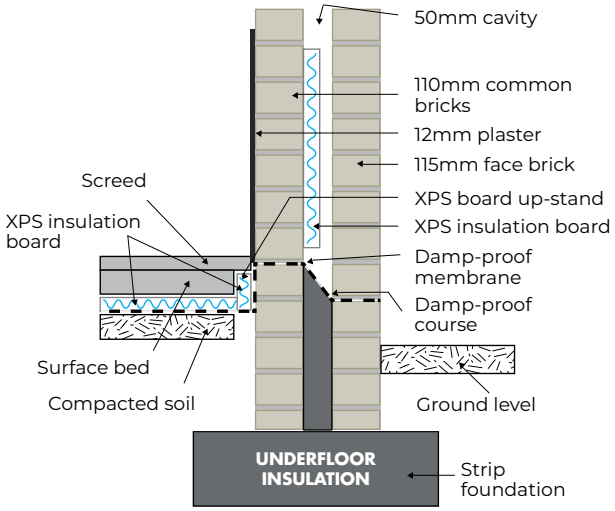
7. Insert Summit XPS insulation board against the outside foundations of the building, from the surface to the depth of the foundation or 600mm (whichever is greater). By insulating to this depth, the building will be protected from heat transfer through the floor from adjacent soil, which may vary in temperature from 40°C to frozen.

PARTIAL FILL CAVITY

In areas where insulation is to be installed in a cavity that also acts as a moisture barrier, the residual cavity is recommended to be at least 20mm wide plus the thickness of the insulation cavity normally between 50 and 110mm.



UNDERFLOOR INSTALLATION GUIDELINES



1. Prepare soil foundation, and treat with weed killer.

2. Place the DPC – the first layer of brick is laid over a damp-proof membrane as a moisture barrier, which will prevent moisture rising into the building's brickwork.

3. After cleaning, place Summit XPS insulation board panels with the tongue-and-groove edge profile to ensure secure jointing between boards.

4. Pour the reinforced concrete slab above the Summit XPS insulation board, following the specifications of a structural engineer. Space reinforcing above the board.

NB: Prevent board flotation when pouring of the slab.

SUMMIT

ABOVE EXPECTATIONS

SWARTLAND

The Swartland story began back in 1951 with Oupa Hanekom in the small town of Moorreesburg – a few wheat fields north of Cape Town.

When his son, Oom Jurgens, took over the reins, he introduced his personal philosophy of 'continuous improvement' to the business.

Today under the leadership of Jurie, James and Hans Hanekom, this desire to improve constantly is an integral part of the Swartland culture. It's a place where traditional values such as hard work and pride live in harmony with new technology and inspired ideas.

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