an etex company

Kalsi

Kalsi Cladding & Ceiling

MARLEY
Building Systems

MARLEY

Building Systems

Marley is part of ETEX, a Belgian Industrial group that manufactures and markets high quality building materials and systems.

We strive to be the leader in sustainable and affordable building solutions. To meet these needs and anticipate new trends, we have developed a strategy based on our four core businesses: cladding and building boards in fibre cement and plaster, roofing materials, passive fire protection and high performance insulation and ceramic tiles. This has earned us a place in the market as a leading supplier of high quality and affordable roofing, cladding and construction products.

Combined with Marley Roofing's 60 year industry experience we aim to not only supply products and services that redefine building methodology, but also give complete peace of mind to our customers.

SABS ISO 14001 SABS OHSAS 18001 pwc ISO 9001 Certified Company

Marley Building Systems Product Portfolio

Marley Building Systems' product portfolio includes all types of concrete and clay tiles, fibre cement slates, profiled roof sheeting, fibre cement and gypsum based cladding solutions and decorative façades.

With over 100 years' experience, we have industry knowledge that is second to none and can offer our customers complete confidence in the products and services we provide.

Marley Building Systems' market leading products deliver a combination of eco-friendly materials and surpasses all performance demands.

EQUITONE

Our Equitone through-coloured façade materials are designed by and for architects. Every Equitone panel is unique, showing the raw, untreated texture of the fibre cement base material.

No matter what design options you explore, the through-coloured nature of Equitone assures crisp, monolithic details to any façade.

Kalsi

Kalsi Fibre Cement materials stand for health, durability and quality. Our products are developed and world-renowned for their straightness, flexibility and ease of installation. Kalsi products are produced completely asbestos-free.

Kalsi products are used as part of a dry-construction system in the commercial, residential and industrial markets.

siniat

Siniat is a global brand of plasterboard and drywall systems and forms part of the Marley Building Systems offering. Available in South Africa, we have more than 25 years of experience on building sites with drywall construction around the world.

Excellence is achieved through our continual investment in technology combined with high quality materials to produce drywall products of the highest quality to meet international standards.

MARLEY Roofing

Marley Roofing has over 40 years of experience in the roofing industry with a wide range of concrete and clay tiles, and the more modern fibre cement slates and roofsheeting. Working with some of SA's leading roofers and providing a vast range of roofing products, we are confident that Marley Roofing can provide you with all your roofing needs.

Outstanding aesthetics and precision engineering of Marley Roofing's concrete roof tiles deliver a varied range, suitable for modern and traditional designs.

Kalsi Ceiling & Cladding Boards

Kalsi Fibre Cement materials stand for health, durability and quality. Our products are developed and world-renowned for their straightness, flexibility and ease of installation. Kalsi products are produced without asbestos fibres.

These products are used as part of a dry-construction system in the commercial, residential and industrial markets. Kalsi boards are manufactured in two modern production facilities - one located in China and the other in Indonesia.

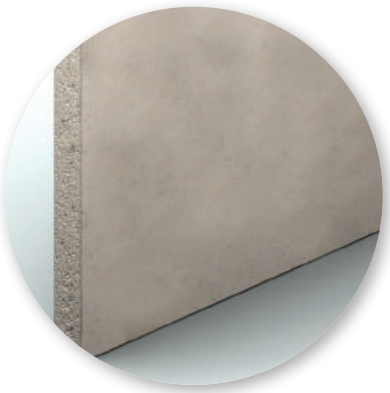
Kalsi boards are Calcium Silicate Fibre Cement boards. They are manufactured using a combination of cement, silica and cellulose which are then processed in an autoclave which ensures greater immediate dimensional stability.

Kalsi boards are produced by special technologies derived from the Etex Group's more than 100 years of international experience and industry leadership.

Main Benefits

- 100% ASBESTOS FREE
- Moisture and humidity resistant
- Resistant to termites and other insect attacks
- Non-combustible
- Can be curved for aesthetic solutions
- Dimensionally stable
- Impact resistant
- Easy to work and simple to install
- Accepts most aesthetic & architectural finishes
- Differing board thicknesses available, allowing flexibility in use

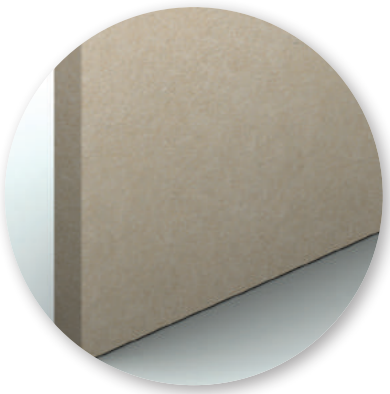
Flatsheet Surface Finishing



Type of surface
Smooth

Description
The surface finish of Kalsi board is smooth and off-white, making it appropriate for most typical applications.

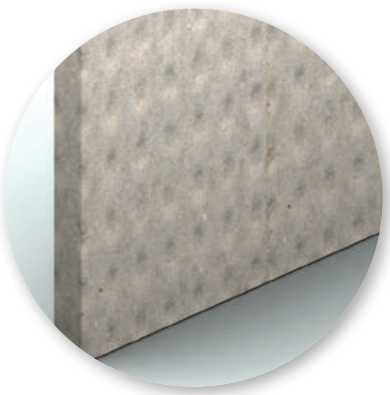
Thickness tolerance
Below 6mm: ± 0.6mm
Above 6mm: ± 10%



Type of surface - Available on order only. Terms and conditions apply.
Top Sanded

Description
The Top Sanded version is a premium finish with an improved upper surface ready to receive decoration.

Thickness tolerance
± 0.4mm

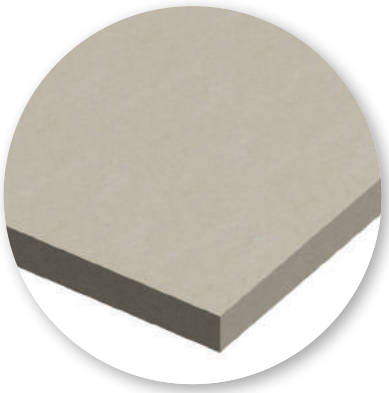


Type of surface - Available on order only. Terms and conditions apply.
Waffled

Description
The Waffled pattern creates a surface that offers opportunities for improved adhesion of ceramic tiles, making this particular Kalsi product ideal in backer board applications.

Thickness tolerance
± 0.4mm

Edge Finishing



Edge treatment
Square Cut

Dimension tolerance
Length & Width
Below 1000mm: ± 5mm
Between 1000mm: ± 0.5% and 1600mm
Above 1600mm: ± 8mm

Edge treatment - Available on order only. Terms and conditions apply
Rebated R2 or R4 (*)

Dimension tolerance
Length: ± 2mm
Width: ± 2mm
Squareness: ± 2mm

Rebated (R2) - Available on order only. Terms and conditions apply.
With two rebates along both long edges of the board

*Rebated (R4) - Available on order
With rebates along all four edges of the board

Benefits
- Allows for perfect jointing between two adjacent boards
- Reduction of jointing compound consumption
- Faster and easier to work when jointing the boards

KALSI CEILING

Kalsi Ceiling

Kalsi Ceiling is ideal for ceiling applications, in both wet and dry areas. Kalsi Ceiling is durable, offering exceptional dimensional stability and years of functional service. It's also the best solution for all ceilings in tropical or sub-tropical climates as it resists humid weather.

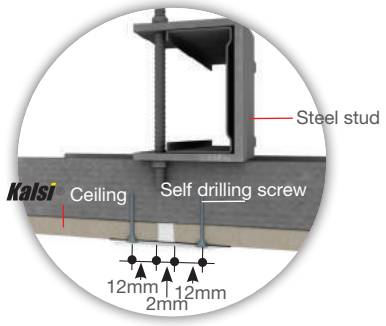
Kalsi Ceiling in a thickness of 4mm can be nailed to timber framing. The joints between the boards in this particular ceiling system are designed to remain open and should not be flush jointed, due to the low thickness of the boards. Metal or PVC cover strips can be used to finish the joint.

Kalsi® Ceiling Standard Dimensions

Thickness (mm)	Width (mm)	Length (mm)	Weight per m^2 of sheet (kg/m^2)
4,0mm	1200	2400	6.6
	1200	3000	
	1200	3600	
6mm	1200	2400	8.7
	1200	3000	
	1200	3600	

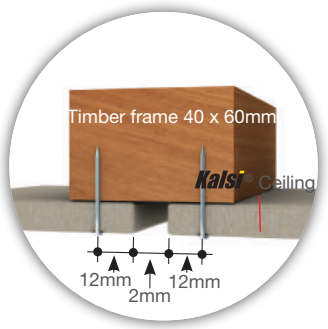
Kalsi Ceiling in a thickness of 6mm is used in semi-exposed external or interior ceilings and can be nailed onto a timber structure or screwed onto a steel frame. Joints between the boards can be flushed or left open. Kalsi Ceiling 6mm is ideal for use as sheltered external ceilings including eaves, soffits and car park ceilings, etc. Also good for use within internal wet area ceilings such as laundries, bathrooms, kitchens, laboratories, wash areas, swimming pools and aquatic centres.

Installation with Steel Framing

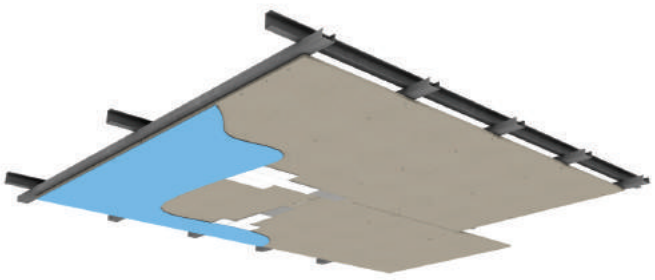


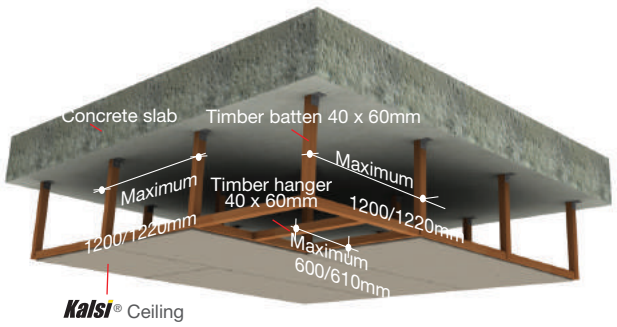
Joint edge details

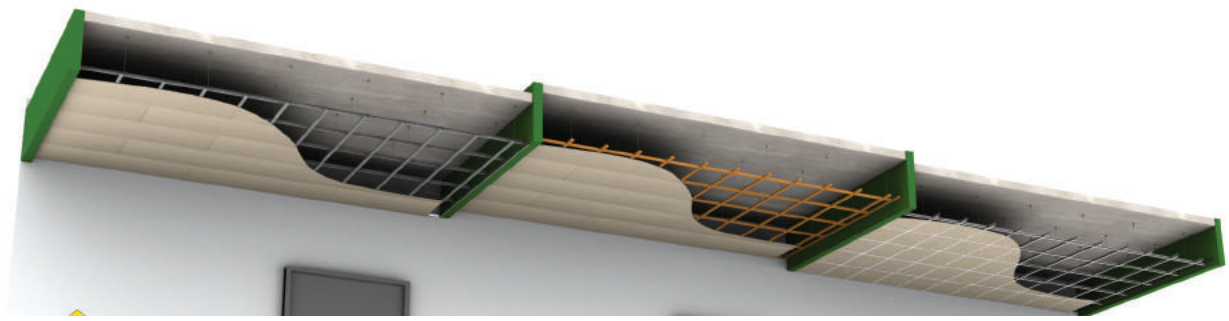
Installation with Timber Framing



Joint edge details







KALSI PARTITION

company

Kalsi Partition

Kalsi Partition, when combined with light steel framing to construct non-loadbearing interior partitions, is widely used for its versatility, simplicity and speed of installation.

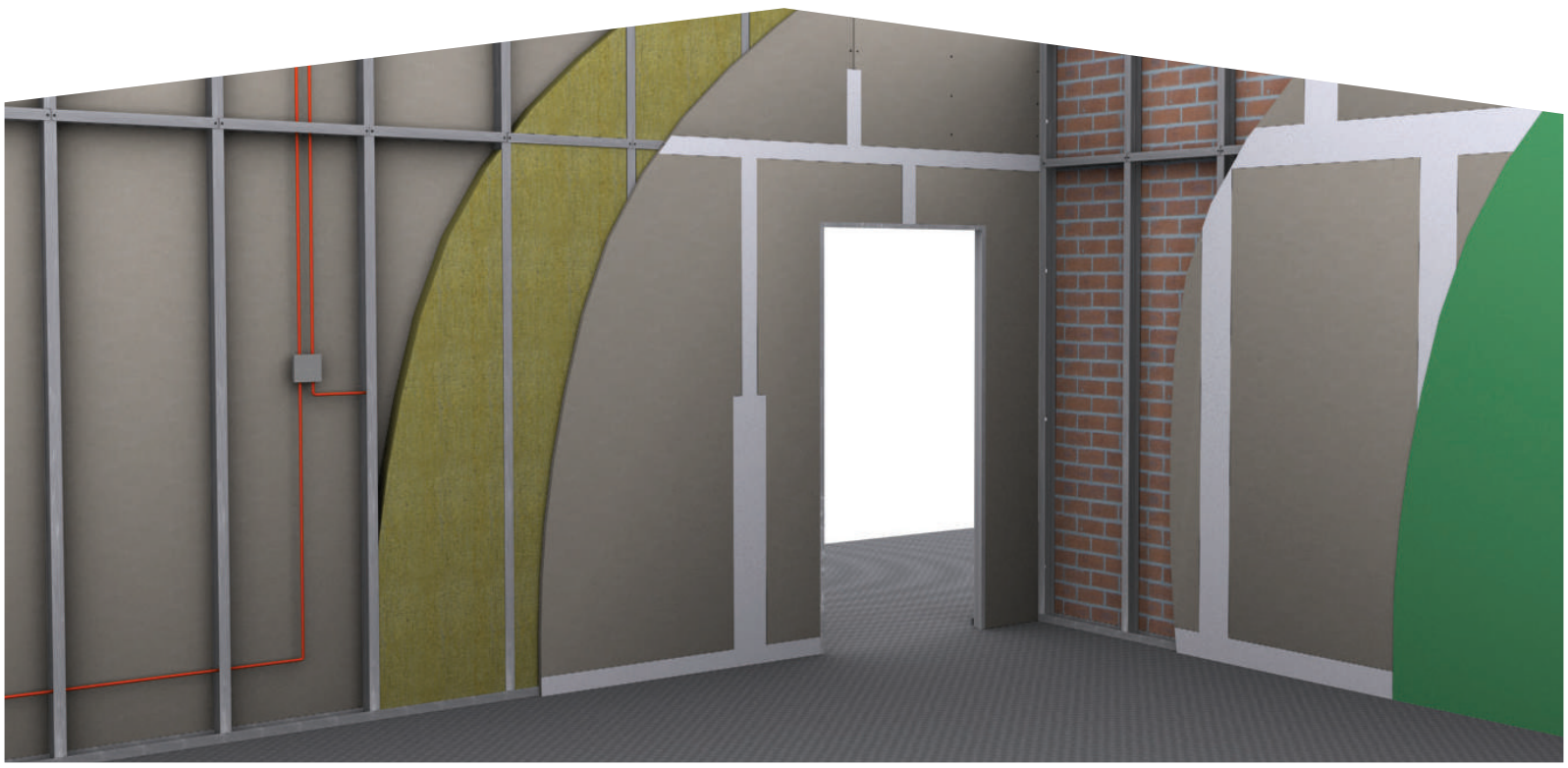
The high impact resistance, strength, durability and moisture resistance make Kalsi Partition adaptable to the most rigorous of demands, and can be used to quickly overcome most installation problems. Profiting from the partition cavity, installation of cabling, pipework and other services becomes very versatile. Kalsi Partition is particularly well suited for partition in tropical and sub-tropical regions where high humidity can damaged other building materials.

Kalsi Partition is well suited for interior partitions and drywall system applications with flush or open joints. Kalsi provides excellent durability and dimensional stability.

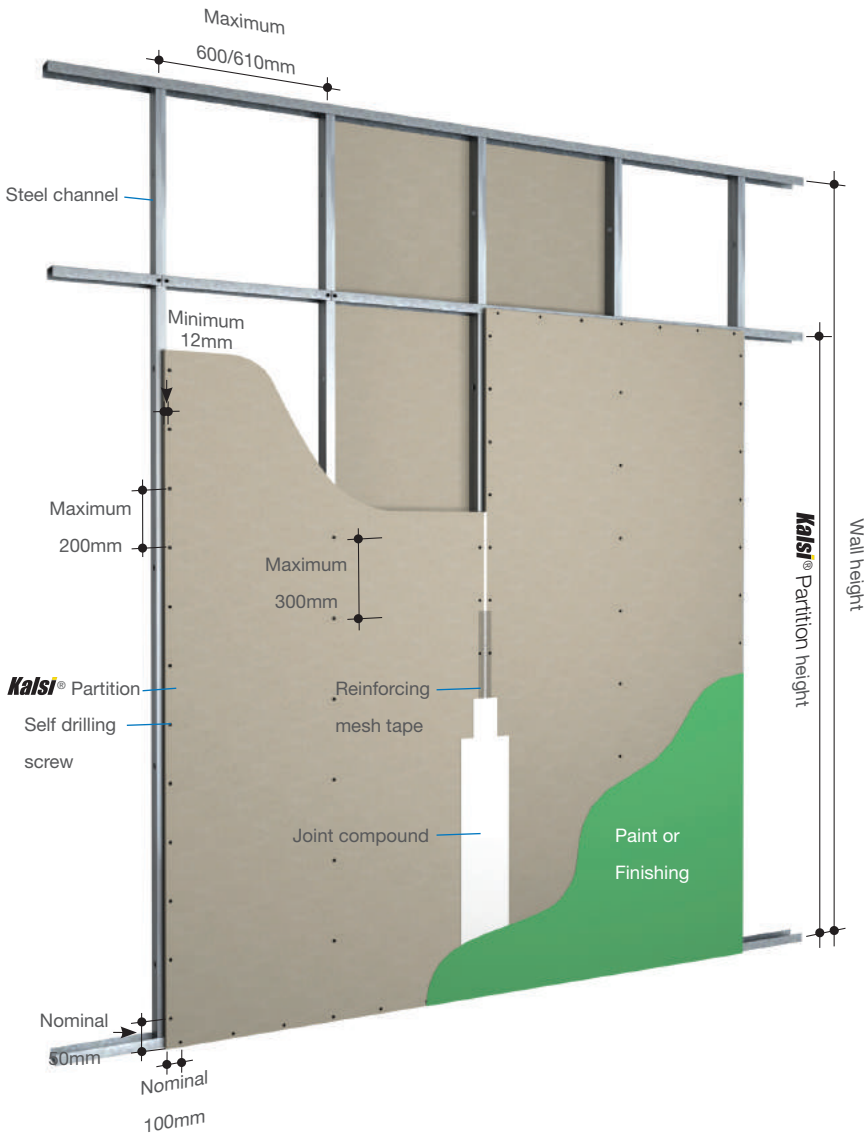
Available Surface Finish

Top Sanded (available on order)

Smooth



Kalsi Partition Installation



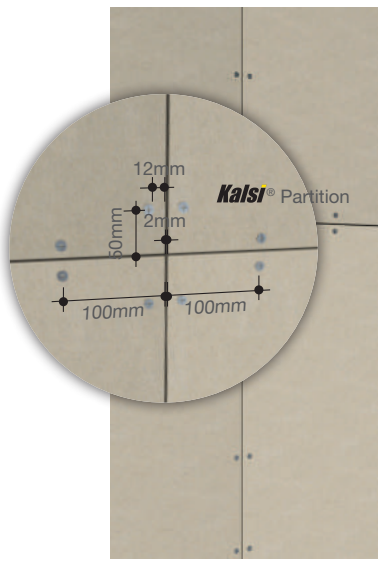
NOTE: In the above detail, the depiction is of steel framing members; Kalsi® Partition can also be fixed onto timber framing

Kalsi® Partition Technical Properties

Density (kg/m³)	≥ 1300
Bending strength (N/mm²):- • Lengthwise • Widthwise	 13.0 9.5
Modulus of Elasticity (N/mm²):-	8500
Water absorption capacity by weight (%)	< 30
Moisture content (%)	10
Thermal conductivity (W/mK)	0.20
Building regulation classification	Class 0

Corner Completion

To obtain square and regular corners, and to minimise the risk of impact damage, we recommend the use of appropriate corner beads when finishing.



Fixing

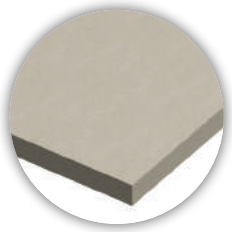
Screws must be positioned as per the above detail to minimise the possibility of cracking occurring

Kalsi Backer (Available on order)

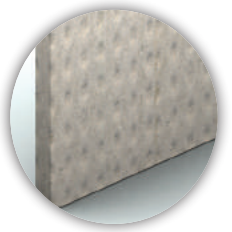
Kalsi Backer is specially designed as a wet area backer board. It has an embossed, waffle pattern on the visible surface that optimises the adhesion of finishes e.g. ceramic tiles. As a result, Kalsi Backer is particularly well suited for use in damp and high humidity areas such as bathrooms, kitchens, laboratories, wash areas, swimming pools and aquatic centres.

Kalsi® Backer Standard Dimensions

Thickness (mm)	Width (mm)	Length (mm)	Weight per m^2 of sheet (kg/m^2)
9	1200	2400	13.2
	1220	3000	



Square Cut

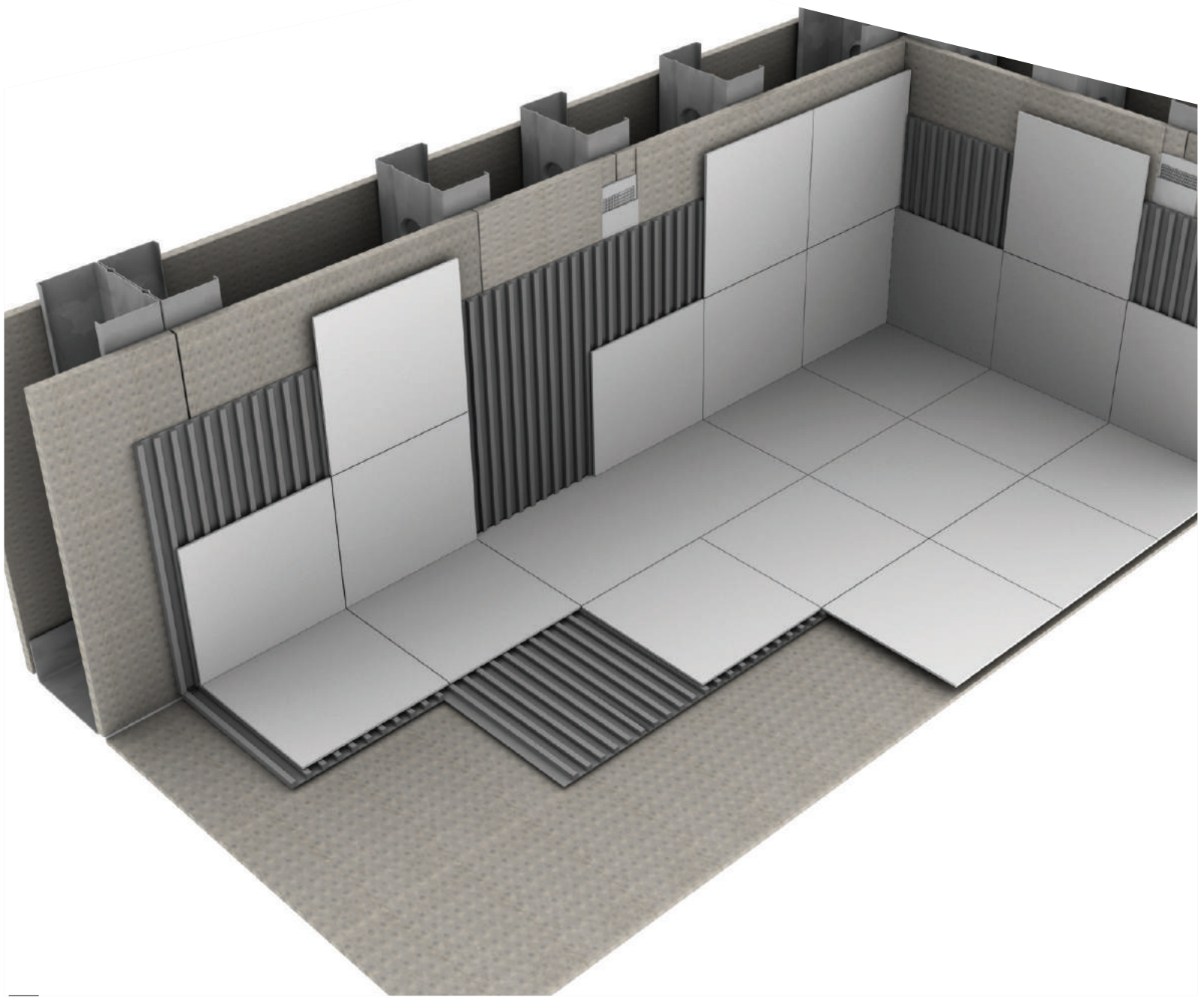


Waffle

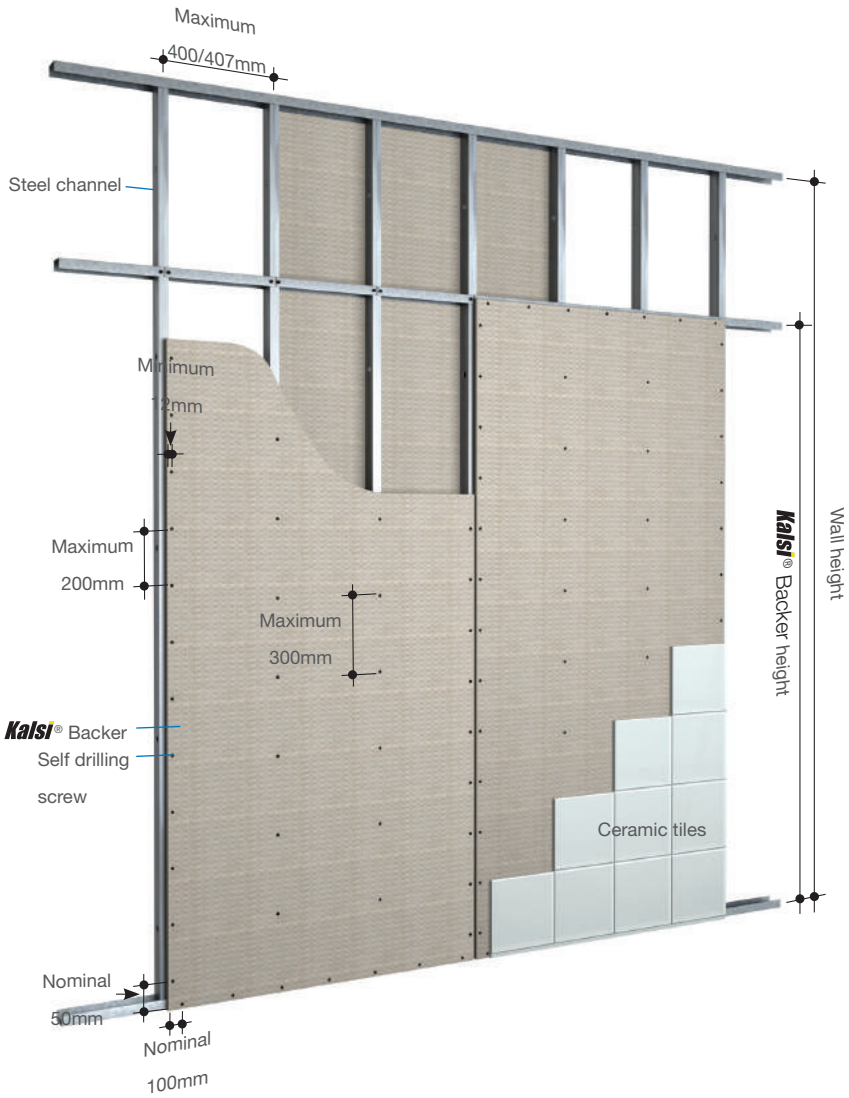
* Other dimensions are available upon request. The properties in the above table are mean values given for informational purposes.

For details of correct installation practices, please contact Marley Building Systems.

Available on order. Terms and conditions apply.



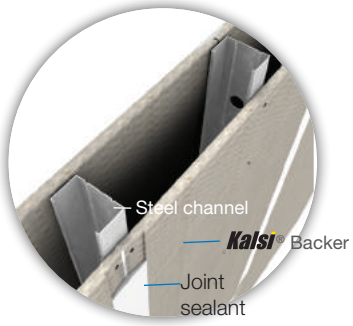
Kalsi Backer Installation



NOTE: In the above detail, the depiction is of steel framing members; Kalsi® Backer can also be fixed onto timber framing

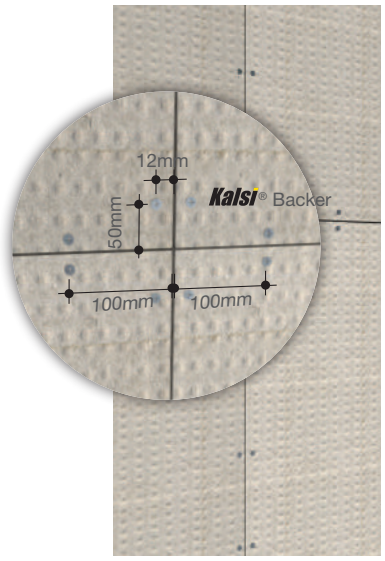
Kalsi® Backer Technical Properties

Density (kg/m^3)	≥ 1200
Bending strength (N/mm^2):- • Lengthwise • Widthwise	 12.0 9.0
Modulus of Elasticity (N/mm^2):-	7500
Water absorption capacity by weight (%)	< 30
Moisture content (%)	10
Thermal conductivity (W/mK)	0.35
Building regulation classification	Class 0



Installation Pattern For Kalsi® Backer

The boards are generally installed with their long edges positioned vertically. For improved strength and bending resistance, boards should be installed such that joints are not coincident on either face.



Fixing

Screws must be positioned as per the above detail to minimise the possibility of cracking occuring.

WOODGRAIN SIDING

Kalsi Plank

Kalsi Plank is a practical alternative to timber. It is non-combustible and resists moisture, high humidity and termite attack.

Available in two attractive finishes, smooth grain or textured woodgrain (Pine and Cedar). Kalsi Plank provides the same visual aesthetic appeal and textural feeling as traditional timber but without the major disadvantages (e.g. high maintenance costs, short life span, damp, rot and major fire risk) usually associated with timber planks.

Kalsi Plank is just as efficacious for wall sections as it is for new buildings and renovation projects, such as dormer windows, façades and eaves.

Kalsi Plank can be fixed onto timber or steel framing.

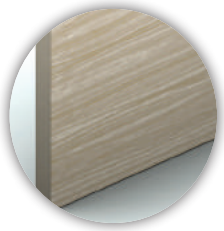
Kalsi® Plank Standard Dimensions

Thickness (mm)	Width (mm)	Length (mm)	Weight per m^2 of sheet (kg/m^2)
8	210	3600	13.7

* Other dimensions are available upon request. The properties in the above table are mean values provided for informational purposes.

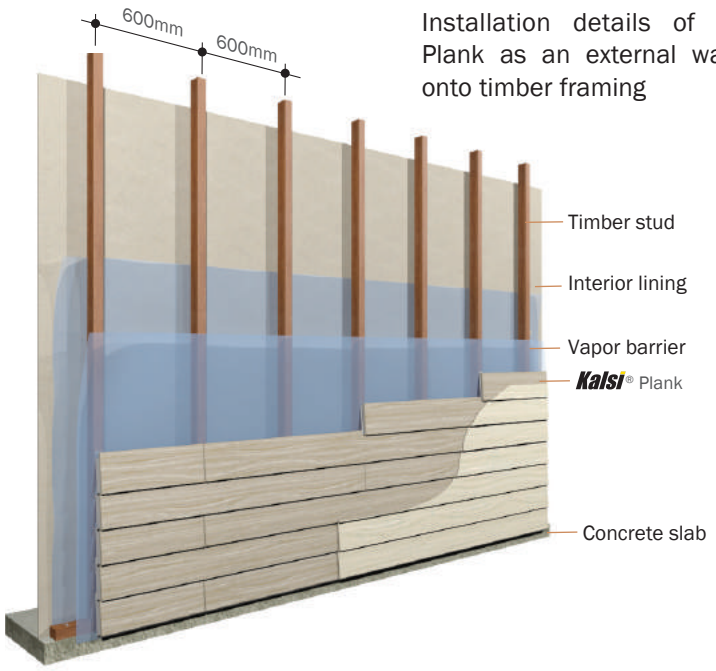
For details of correct installation practices, please contact Marley Building Systems.

Available Surface Finish

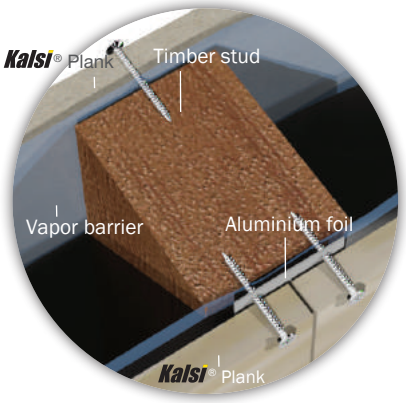


Woodgrain

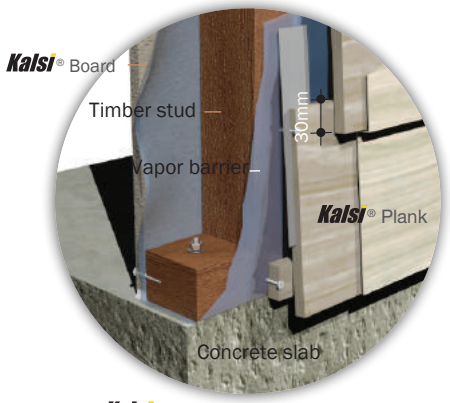
Kalsi Plank Installation



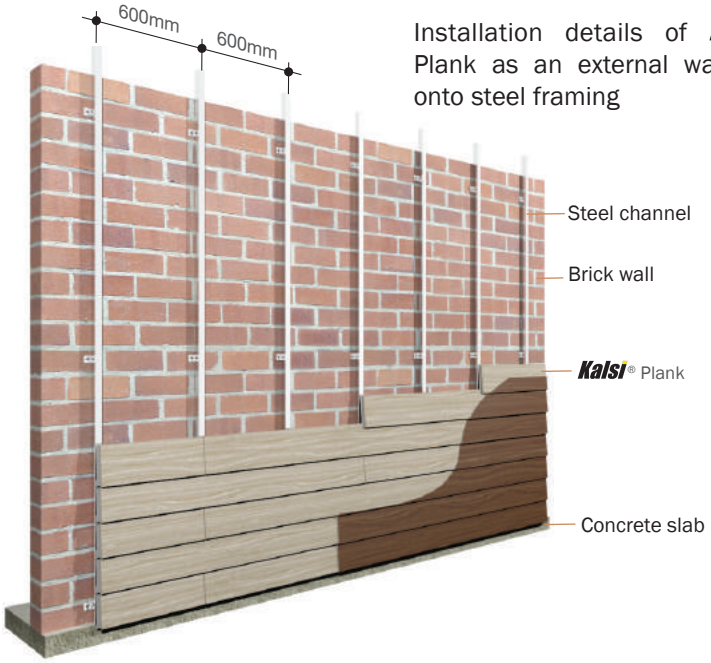
Installation details of **Kalsi®** Plank as an external wall fixed onto timber framing



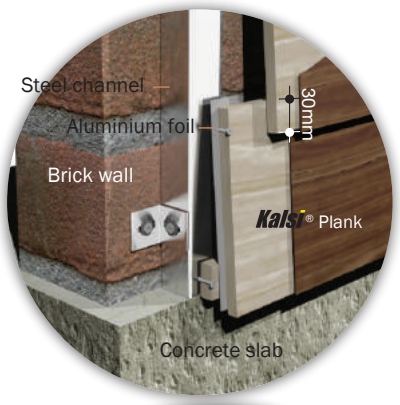
Kalsi® Plank can be either screwed or nailed onto timber framing



Kalsi® Plank Section through external wall on a timber frame



Installation details of **Kalsi®** Plank as an external wall fixed onto steel framing



Kalsi® Plank Section through external wall on a steel frame

Kalsi® Plank Technical Properties

Density (kg/m^3)	≥ 1300
Bending strength (N/mm^2):- • Lengthwise • Widthwise	 13.0 9.5
Modulus of Elasticity (N/mm^2):-	8500
Water absorption capacity by weight (%)	< 30
Moisture content (%)	10
Thermal conductivity (W/mK)	0.25
Building regulation classification	Class 0

NOTE: The drawings shown herein are merely typical construction details and do not imply fitness for use in all applications. For advice on the correct positioning of vapor barriers (inside or outside of wall) and assitance with calculation or interstitial condensation, etc. please consult Marley Building Systems.

KALSI CLADDING

Kalsi Cladding

Kalsi Cladding is one of the most popular boards used as a façade system. It is an autoclaved board which provides a durable, expressed joint modern appearance for building façades. The board can be top-sanded to ensure a smoother surface.

There is no restriction on the decorative finishes that can be applied, thus encouraging the architect's freedom in design, innovation and creative expression. For this application, water-based paints are recommended.

Kalsi Cladding can also be used as a base to create a flush-finished, monolithic plaster wall cladding (Stucco) without the need of masonry.

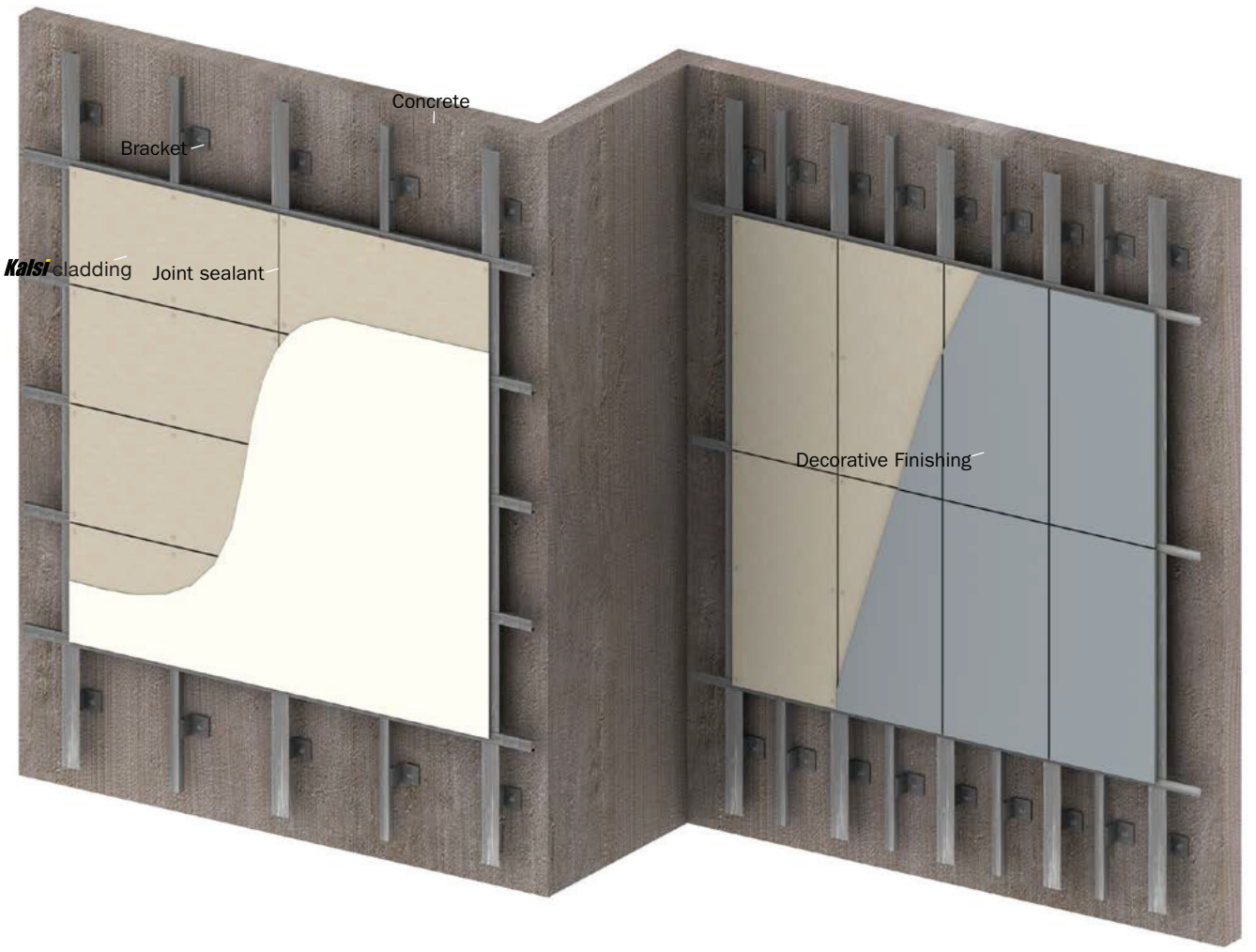
When used for external cladding, the joints between the boards can be open, closed, or semi-visible filled with a sealant specifically designed for climatic conditions and movement with UV resistance.

Kalsi® Cladding Standard Dimensions

Thickness (mm)	Width (mm)	Length (mm)	Weight per m^2 of sheet (kg/m^2)
9	1200	2400	13.2
	1200	3000	
12	1200	2700	17.5
	1200	3000	

Kalsi Cladding Installation

Framing and distance between screws



- The vertical support profiles can be fixed to the substrate either directly or by using support brackets. The type of anchorage used can be either self-drilling Tapcon type screws or anchor bolts, dependent upon the type of material forming the substrate.
- The maximum horizontal distance between vertical supporting profiles should not be more than 610mm.
- The maximum vertical distance between supporting brackets for a profile should not be more than 1500mm.

Each vertical supporting profile should have at least three points of support. Otherwise, the maximum vertical distance between supporting brackets should be reduced to 1000mm.

Kalsi® Cladding Technical Properties

Density (kg/m^3)	≥ 1300
Bending strength (N/mm^2):- • Lengthwise • Widthwise	 13.0 9.5
Modulus of Elasticity (N/mm^2):-	8500
Water absorption capacity by weight (%)	< 30
Moisture content (%)	10
Thermal conductivity (W/mK)	0.25
Building regulation classification	Class 0

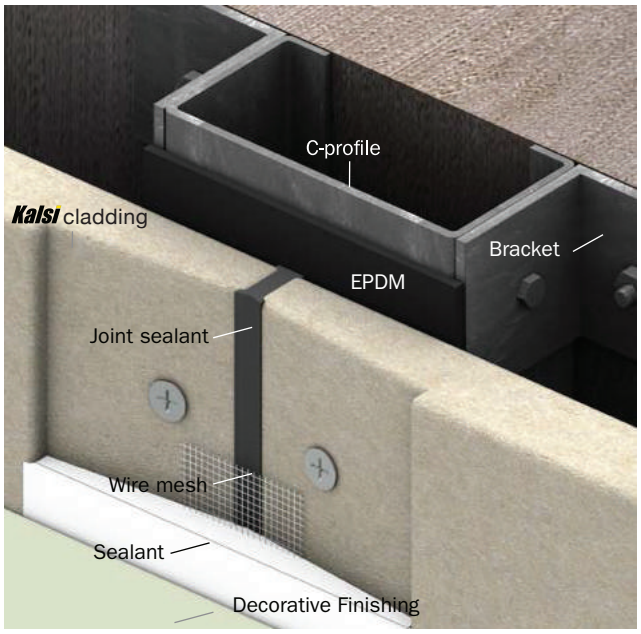
Kalsi Cladding Installation

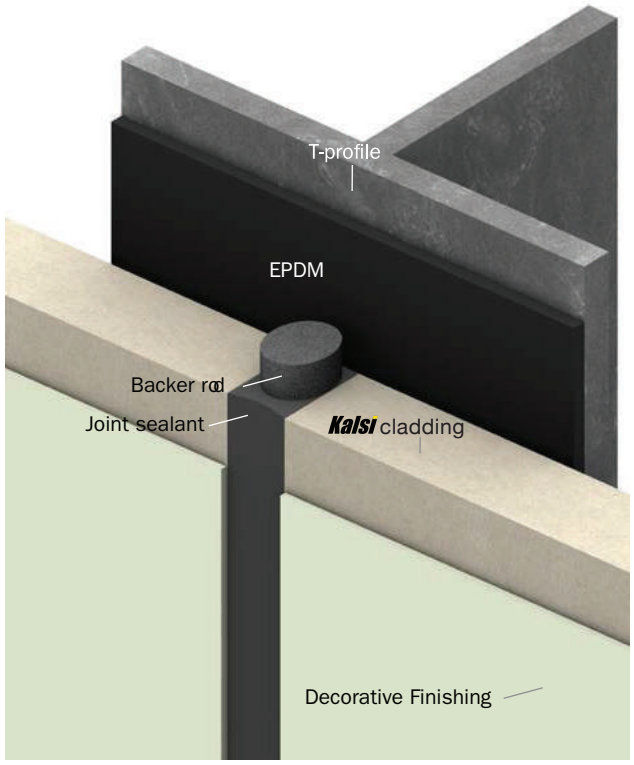
Fixings

In the detail below, Kalsi Cladding is fixed to a steel frame.

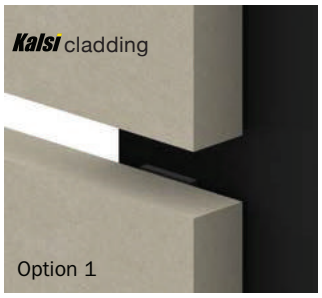
Alternatively, timber framing can be used.

Screws must be positioned as per details to minimise the possibility of cracking occurring

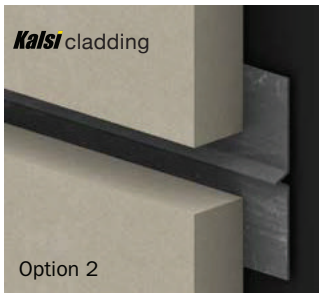




Visible and Semi Visible Joints



Open joints in which there is a clear gap between the edges of adjacent panels.



Baffled joints where some component is used to block the direct line through the joint, while not sealing the joint.

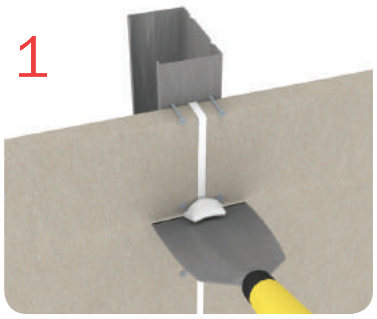
Semi visible or flexible joints. For filling the gaps between the boards, it is necessary to use an oil free polyurethane UV resistant joint sealant which can resist exterior conditions.

Joint Finishing for Kalsi Board

Flush joint procedure for internal application

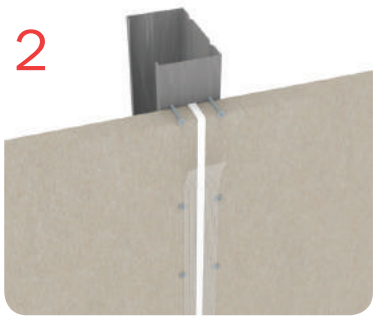
For best results when flush jointing, Marley Building Systems recommends the use of boards with rebated edges and Kalsi® Compound for internal application.

1



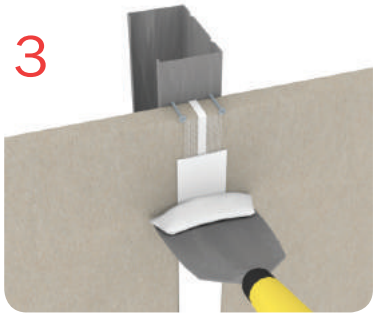
Ensure that the Kalsi® boards are cut to the correct size and properly positioned on the wall/ ceiling frame. Keep a 4mm gap between boards and fill the gap with jointing compound.

2



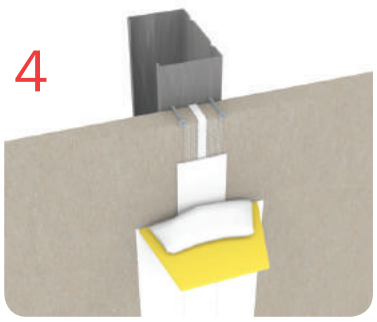
Fix tape onto the gap whilst the compound is wet.

3



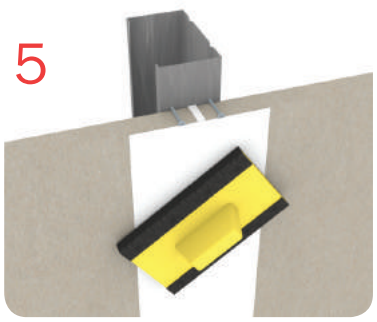
Using a suitable trowel, cover the tape with the thinnest possible “smear” layer of jointing compound, ensuring that screw heads are adequately covered.

4



Wait for the compound applied in step 3 to dry and then re-apply compound to fully fill the rebated edges so that the joint is flush with the surface of the boards.

5



After the compound is fully dry, use medium grain abrasive paper to smoothen the surface for the required level of finish.

Quality Assurance, Health & Safety

Quality Assurance

Marley Building Systems takes great care with the quality of its products and services by means of a rigorous process in the selection of raw materials, production processes, equipment, storage and delivery processes.

The company benefits from the international experience of its sister companies which are located in many countries, and from the efficient support of dedicated international industrial research and development experts, which allows our factories to operate with the latest and best adapted technologies and processes.

All fibre-cement products sold by Marley Building Systems are warranted against defects in material and manufacturing process. If you believe any Kalsi product you have purchased has a defect in material or manufacturing process, please contact Marley Building Systems for assistance. If the defective products, based on analysis, investigation and laboratory test results are proven not to comply with Marley Building Systems Quality Standards, we will replace the defective product with the same product.

This warranty does not apply to defects resulting from any distributors' or customers' actions, such as mishandling, mis-application, improper installation.

General installation instruction

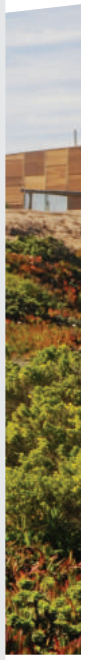
In order to achieve a good surface and uniform appearance, the supporting structure (frame) of any fibre cement products should always be properly designed and installed to provide a stable and strong framework.

Health & Safety

As for all natural minerals such as concrete and clay, quartz can be present and this product may also release dust containing quartz particles when it is mechanically machined (cutting, sanding, drilling, etc.). Inhalation of high concentrations of dust can irritate the respiratory system.

Dust can also irritate the eyes and/or the skin. The inhalation of quartz containing dust, in particular high concentrations of fine dust or over a long period of time, can lead to lung disease (silicosis) and an increased risk of lung cancer. Therefore for health and safety reasons, please apply the following safety precautions:

1. Avoid the inhalation of dust by using machinery with dust extraction equipment
2. Ensure adequate ventilation of the workplace
3. Avoid contact with the eyes and skin and avoid inhalation of dust by wearing appropriate personal protection gear (safety goggles, protective clothing and dust mask)



Environmental

Marley Building Systems continuously works on limiting its impact on the environment. We develop affordable and sustainable products which enable our customers to reduce their carbon footprint. Our high quality products help create comfortable and energy saving spaces for building users.

We aim to manufacture those products in an efficient and effective way by minimising: waste, energy consumption, water consumption and any pollution to the environment.

Our factories monitor measurable objectives in line with international environmental standards and are certified by recognised local environmental organisations. Those organisations have attested our commitment to care for our environment. Our factories are ISO 14001 certified and are constantly seeking improvements in the fields of energy efficiency and natural resource saving. Our Indonesian factory is certified by the Green Building Council Indonesia to support green building projects.

Kalsi boards are only made from natural and mineral materials. They are fully recyclable and highly sustainable.

Calcium Silicate Fibre Cement façades combined with proper insulation, can reduce energy losses of buildings by up to 30% and substantially reduce its CO_2 emissions.

ISO 14000

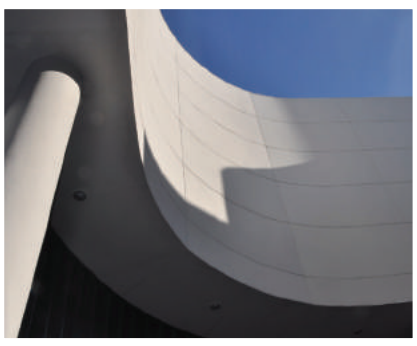
GREEN BUILDING COUNCIL INDONESIA

CHINA ENVIRONMENTAL LABELLING

WORLD GREEN BUILDING COUNCIL

Kalsi Cladding





Kalsi Ceiling



Kalsi Partition



Kalsi Plank



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Contact Marley Building Systems

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Eastern Region

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