



Functional Boards

Installation manual for:
Cembrit Aqua Block

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www.cembrit.nl



Product Description

Cembrit Aqua Block is a modern building material made from natural and environmentally friendly raw materials. The new technology has been developed by Cembrit, holding more than

80 years of experience within the manufacture of fibrecement. Our wide experience ensures a sustainable product which has accumulated all the advantages of fibre-cement.

Quality:

- Cembrit products are manufactured in accordance with the quality management system ISO 9001:2000 and the environmental management system ISO 14001:2004
- Cembrit complies with the provisions set out in the Construction Products Directive (CPD 89/106/EU).
- Cembrit product specifications and classifications comply with EN 12467:2004 and 13501-1:2002

Cembrit Aqua Block is light weight fibre-cement board produced from cement, cellulose fibres and fillers. The board has been especially developed for use in wet room areas with a constantly high humidity or even direct moisture impact. The board is equipped with an impermeable membrane on both sides. The boards will not be affected by water; therefore it will not expand, rot or deteriorate.

Building with Cembrit Aqua Block is fast and simple. It is part of a complete building system which is suitable for both new buildings and renovation in:

Bath rooms	Hotels
Kitchens	Car washes
Laundries	Etc.
Swimming pools	
Hospitals	

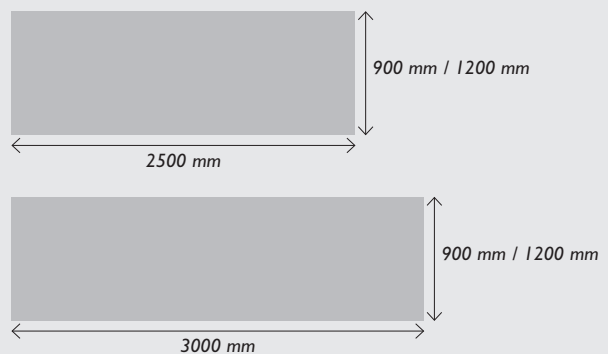
Surface and colour

Cembrit Aqua Block features a tough and strong surface which is moisture resistant, and has high impact strength. The surface appears in a typical green colour. The backside carries an identification which indicates that this side should be turned against the underlying construction.

Delivery Programme

Width mm	900	900	1200	1200
Length mm	2500	3000	2500	3000
Thickness mm	8,0	10,0	8,0	10,0
Density kg / m ³	1500	1500	1500	1500
Weight kg / m ²	12,2	15,3	12,2	15,3
Weight kg / board	27,5	41,3	36,6	55,1

Cembrit Aqua Block boards are delivered with saw-cut edges on long sides and water jet cut edges on short side. The boards have predrilled Ø4 holes on long sides.



Accessories

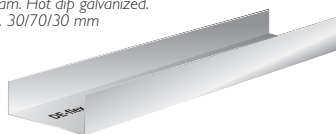


DE-flex steel studs
0.8x2500/3000 mm
Hot dip galvanized
C-Stud 5/43/70/40/5 mm



DE-flex steel studs
0.8x2500/3000 mm
Hot dip galvanized
Comer Stud 5/40/40/5 mm

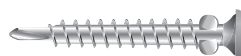
DE-flex steel beam. Hot dip galvanized.
0.56x3600 mm. 30/70/30 mm



DE-flex tape for sealing of screws and joints.
Width 60 mm, length 25 m



DE-flex corner tape made of synthetic rubber for
sealing of corner joints wall-wall, wall-floor and
pipe penetrations, Width 83 mm, length 10 m.



DE-flex zinc plated installation screw
Li-SS 4.2x25 for steel 0.56-1.2 mm
Li-SWIS 4.2x45 for wood

Fixing of attachments

Light fixing like hangers etc. is possible with different kinds of expander plugs etc. (see table below)

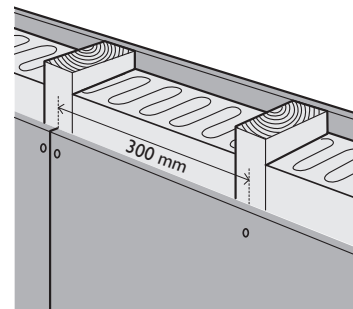
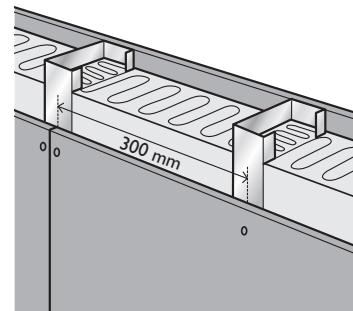
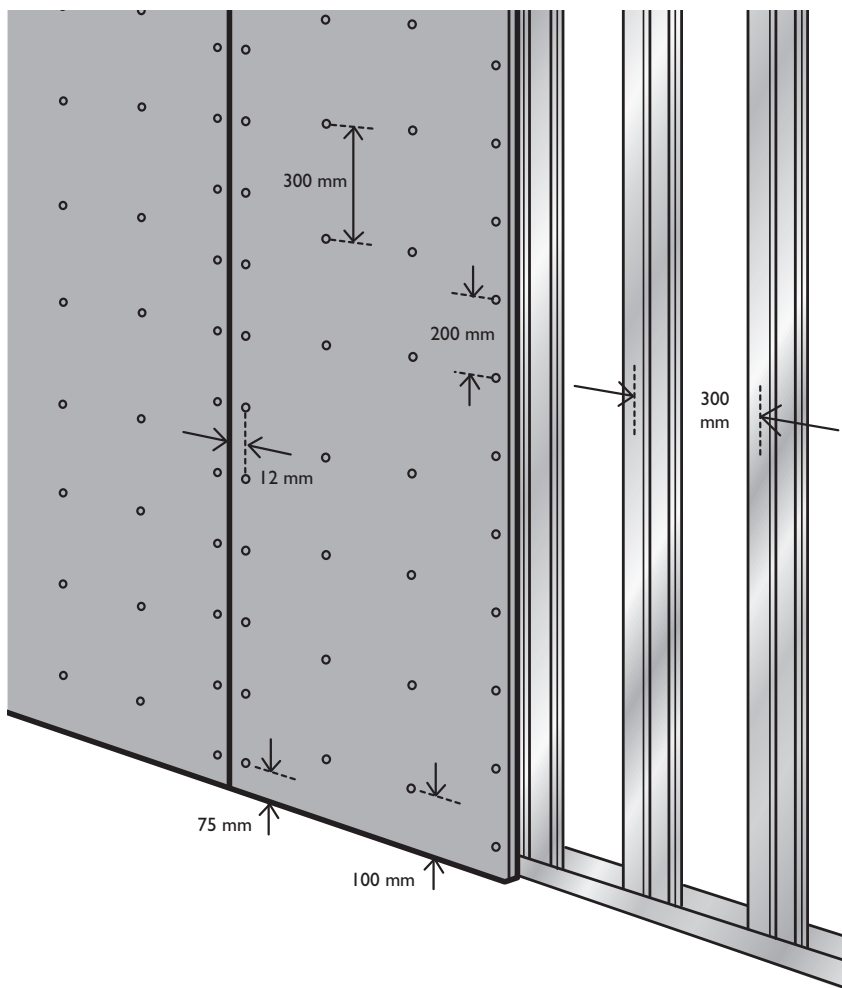
Fastenings	Shear Strength N, 8 mm	Tensile, Strength N, 8 mm
Thin steel nail	75	–
Hook	100	–
Plate screw	350	175
Rubber nut	600	375
Wing screw	850	300
Anchor screw	900	375

Fastening of heavy attachments requires a reinforcement of the sub-construction behind the SP boards.

Installation

Installation

Cembrit Aqua Block requires careful installation to ensure that its full potential is realised. In areas where tiling is required it is essential comply with the relevant codes of practice on board dryness and the secure and rigid bracing of the boards for tiling. Note! A Cembrit Aqua Block partition wall must not be carried out as a load bearing wall.



Aqua Block boards must be fixed in a vertical position to either timber or steel studs at 300 mm maximum centres. All edges vertical as well as horizontal must be supported. All framing must be straight, plumb and true.

Steel sub-frame

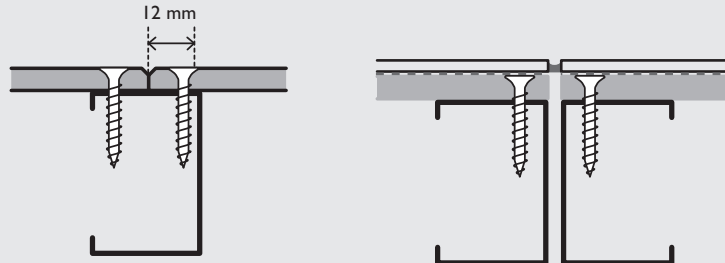
Steel frame profiles are attached to wall, floor and ceiling with adequate screws/fasteners.

- Framing profiles fixing distance 400 mm
- Stud profiles are fixed to the outer frame with a centre distance of 300 mm
- Corner profile is used at internal corners.
- Cut the boards 5 mm shorter than floor-to-ceiling height, and butt them firmly against the ceiling. Fix screws commencing at the centre of the board and working towards the edges
- DE-flex screws 4.2x25 mm is used with max 1.5 mm steel sub-frame

- The boards are fixed using the 4 mm pre-drilled holes placed 12 mm from the board edges
- Along board edges the fixing distance is 200 mm. Corner distance 75 mm
- At intermediate supports the fixing distance is 300 mm. Corner distance 100 mm.
- All joints must be supported. Joints should be staggered 300 mm and must not be in line with window and door frames
- If the length of the wall exceeds 6 boards (5.4 m) a 5 mm dilatation joint should be established. The joint is filled with a wet room silicone and covered with joint tape in wet areas



Installation



Wooden sub-frame

The perimeter frame of 45x95 mm planed wood is attached to wall floor and ceiling with adequate screws/fasteners.

- Framing profiles fixing distance 400 mm
- Stud profiles of 45x95 mm planed wood are fixed to the outer frame with a centre distance of 300 mm.
- Cut the boards 5 mm shorter than floor-to-ceiling height, and butt them firmly against the ceiling
- DE-flex screws 4.2x45 mm is used to fix the boards commencing at the centre of the board and working towards the edges
- The boards are fixed using the 4 mm pre-drilled holes placed 12 mm from the board edges

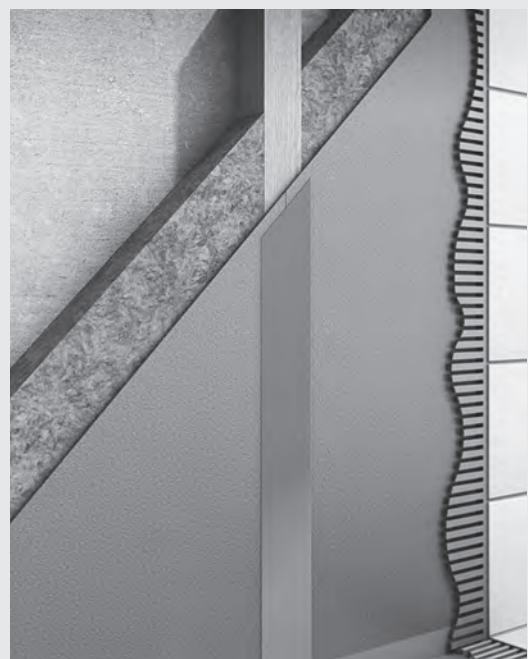
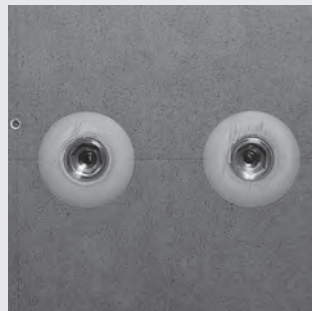
- Along board edges the fixing distance is 200 mm. Corner distance 75 mm
- At intermediate supports the fixing distance is 300 mm. Corner distance 100 mm
- All joints must be supported. Joint should be staggered 300 mm and must not be in line with window and door frames
- If the length of the wall exceeds 6 boards (5.4 m) a 5 mm dilatation joint should be established. The joint is filled with a wet room silicone

Finishing

Tiling

Cembril Aqua Block board is the perfect substrate for tiling. Before tiling all screw heads and joints between boards must be sealed with DE-flex sealing tape. All junctions along walls and floors as well as external and internal corners should be sealed with DE-flex corner tape. Penetrations are sealed with corner tape or special fittings.

The tile adhesive should be used according to the manufacturer's recommendations. The tiles should be bedded in allowing normal spacing for grouting. Ceiling, corner and floor junctions should be sealed with silicone.



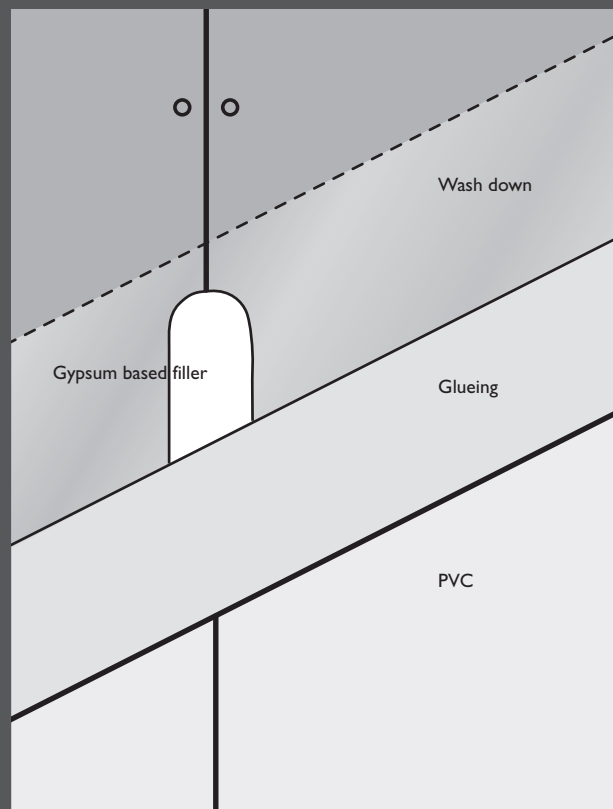


Finishing

PVC membrane

A PVC membrane is watertight and therefore requires no sealing of the Aqua Block boards.

Before applying the membrane the boards must be washed down with an adequate cleaner (like Alfix Grundrens). Joints and corners are filled out with gypsum based filler. After drying the surface is sanded and cleaned. Application of the PVC membrane must be done according to the supplier's instructions.



Finishing

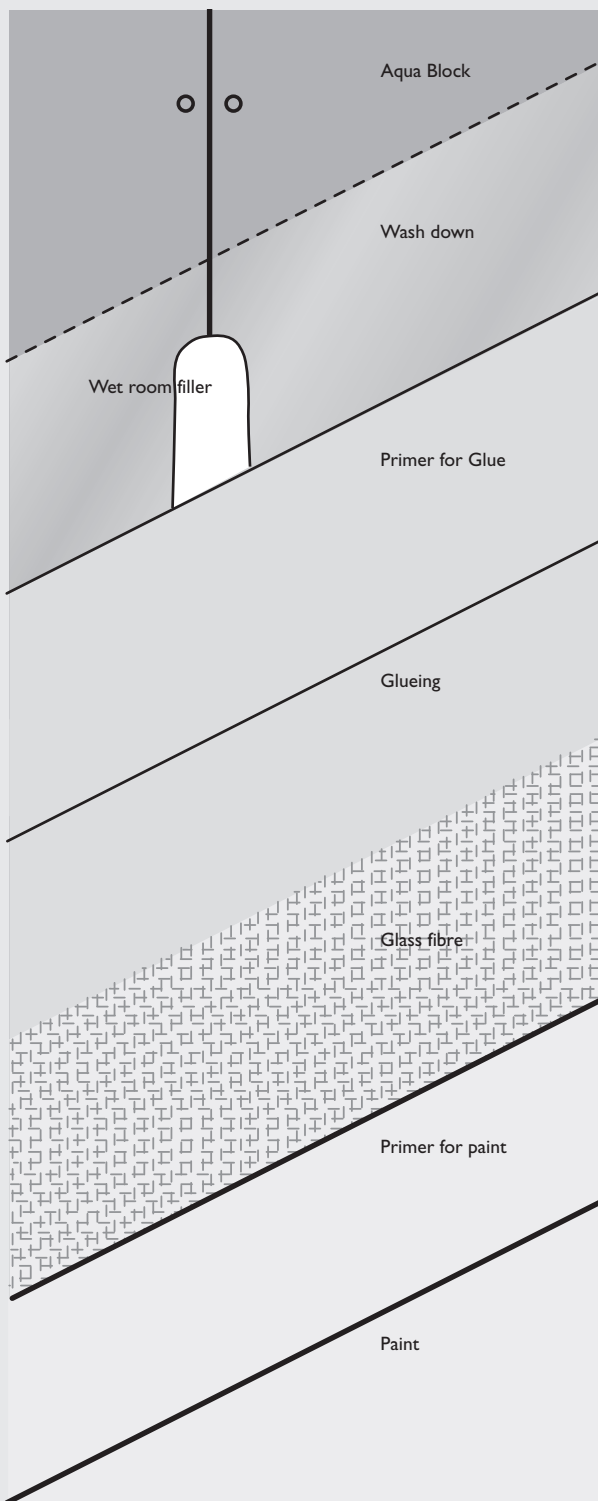
Painting and wallpapering

Cembrit Aqua Block boards require no special treatment before wallpapering, but all joints and screw holes should be filled prior to application.

Apply wallpaper using proprietary adhesive suitable for the wallpaper, and following the manufacturer's recommendations.

Aqua Block boards can be painted with adequate wet room paint. All joints and screw holes should be filled prior to application, and the substrate should be prepared with glass fibre reinforcement and a primer following the manufacturer's instructions.

Please refer to local legislation for wet areas.



Processing

Safety

As for all other building materials safety precautions must be taken into account and local laws and regulations must be observed.

Today, no specific requirements exist as to the methods and tools used when installing the Cembrit Aqua Block boards. Cutting and drilling are however subject to dust development, and proper precautions must be taken. Dust from fibre cement boards is characterized as mineral dust and a prolonged exposure to this may cause lung disease.

Cutting

Cutting to size may be done with normal slow or fast running hand tools or stationary equipment. When using fast running tools dust exhaustion must be employed. All Cembrit boards may be cut with a circular saw or a jigsaw equipped with a fine pitch hard-metal blade or a diamond tipped blade. Sharp edges are made with fast running diamond tipped tools. Due to the speed of the blade the dust is dispersed over a larger area. Therefore it is necessary to establish sufficient exhaustion, and if needed the operator should carry personal safety equipment.

General advice

Handling and Storage

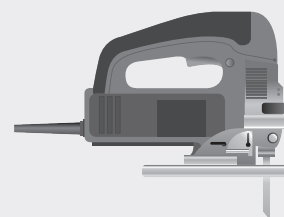
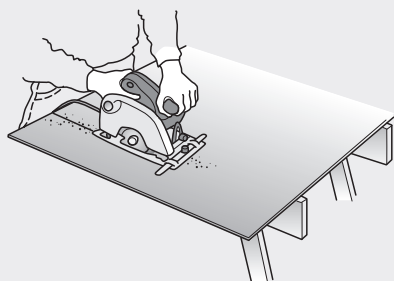
General advice

It is advisable immediately to remove dust caused by cutting and drilling from the surface of the boards with a brush or a duster.

Cembrit sawblades

Diameter	Ø160	Ø190	Ø216	Ø250	Ø300
Width mm	2.4 mm	2.4 mm	2.6 mm	2.6 mm	2.8 mm
Hole size	20 mm	30 mm	30 mm	30 mm	30 mm
Rpm	4800	4000	3500	3000	2800

Cut-outs and bigger holes may be made with a jigsaw equipped with a hard metal, bi-metal or diamond tipped blade. A min 8 mm hole is to be drilled at the inner corner to avoid cracking of the board. Smaller holes can be made with a keyhole saw.

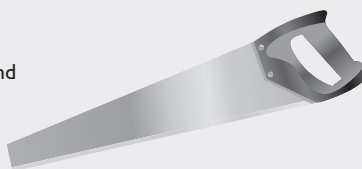


Drilling

Holes are drilled from the front side with a hard metal drill at 1500 rpm. Always put an underlay e.g. a woodchip-board under the Cembrit board in order to achieve neat drilling holes.

Hand tools

Hand tools do not develop a problematic amount of dust. They are normally used for minor tasks with limited demand to quality of cutting edges.



Handling and Storage

Cembrit Aqua Block boards should be stored on a flat and dry level surface. The plastic cover is for dust protection only and should be removed upon arrival at the building site. Hereafter the pallets should be kept under a roof or covered by a tarpaulin leaving the possibility of ventilation around the boards. Storing longer than 4 weeks the boards should be kept in a well ventilated warehouse.

The boards must be lifted off the pallet and not drawn over the next board. This will cause scratches and damages on the surface.

The plastic film between the boards should remain on the boards till immediately before installation. Unprotected boards will stick to each other.



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Cembrit employs more than 1100 people in 16 European countries and offers a wide range of products and solutions for roofs and facings, internal cladding and lining of ceilings and walls.

Cembrit is headquartered in Aalborg, Denmark. The manufacturing facilities are situated in Finland, Czech Republic, Poland, Hungary and Italy. These factories are specialized in fibre-cement based productions, drawing on the know-how of the group, which is based on more than 80 of experience.

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