viroc
by Investwood

Ceiling
Fact Sheets

Suspended Ceilings

Perforated Board

Please consult **Viroc Technical File** available at www.viroc.pt, on EN language, on Downloads page.
Other **Viroc Recommended Solutions files,** organized by type of application, available on request.

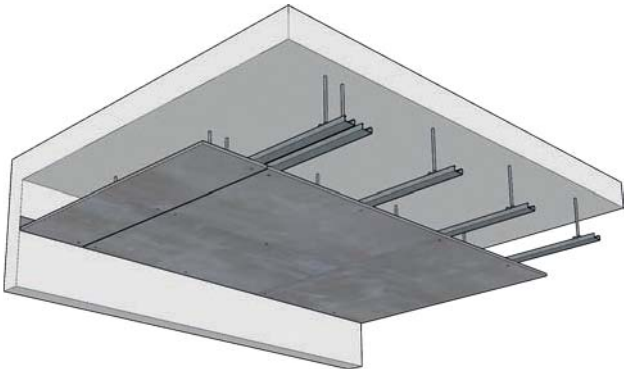
Application: Indoors and outdoors

Support structure: Metal

Fastening: Screws / rivets

Thickness:
10 mm (3/8") for dry indoors
12 mm (1/2") for moist indoors and outdoors

Board maximum size:
3000 x 1250 mm (118,11" x 49,21")



1. Description

Viroc is a cement bonded particle board. It is a composite material, composed by a compressed and dry mixture of pine wood particles and cement.
Its appearance is not homogeneous. A natural characteristic of the product is to have patches of various shades.
The Viroc panel is produced in different colours.

2. Relative humidity effect

Viroc boards have small size variations due to the air relative humidity.
In situations of extreme humidity and temperature amplitude, the expected maximum size variation of the board would be +0.5‰ to -1.0 ‰.
The fastening system near the edges will have to take into account those size variations.

3. Application Conditions

Suspended Ceilings can be used indoors and outdoors.
Before installation, the board must be exposed for 48 hours to the relative humidity of the location where it will be applied and should be left in a dry location out of direct sunlight.
It is the installer's responsibility to check the support structure conditions (distance between supports and respective width) for the correct application.

4. Support structure

Metallic profiles of galvanized steel can be used to support the boards.
The structure's components must always be aligned perpendicular to the board's longest side with spaces between them. The distance between structural components will depend on the thickness board but should never exceed 600 mm (24").
The structure that will support Viroc boards must be aligned and leveled and the board cannot be warped.

5. Fastening

The boards are fixed with screws or rivets.
For outdoor use, only stainless steel or aluminum screws are permitted. For indoor applications where corrosion is not a factor, simple galvanized elements can be used.
Distance between the holes to the edges should be 50 mm (2"), minimum.
Joints between boards must be 5 mm (3/16''), minimum.

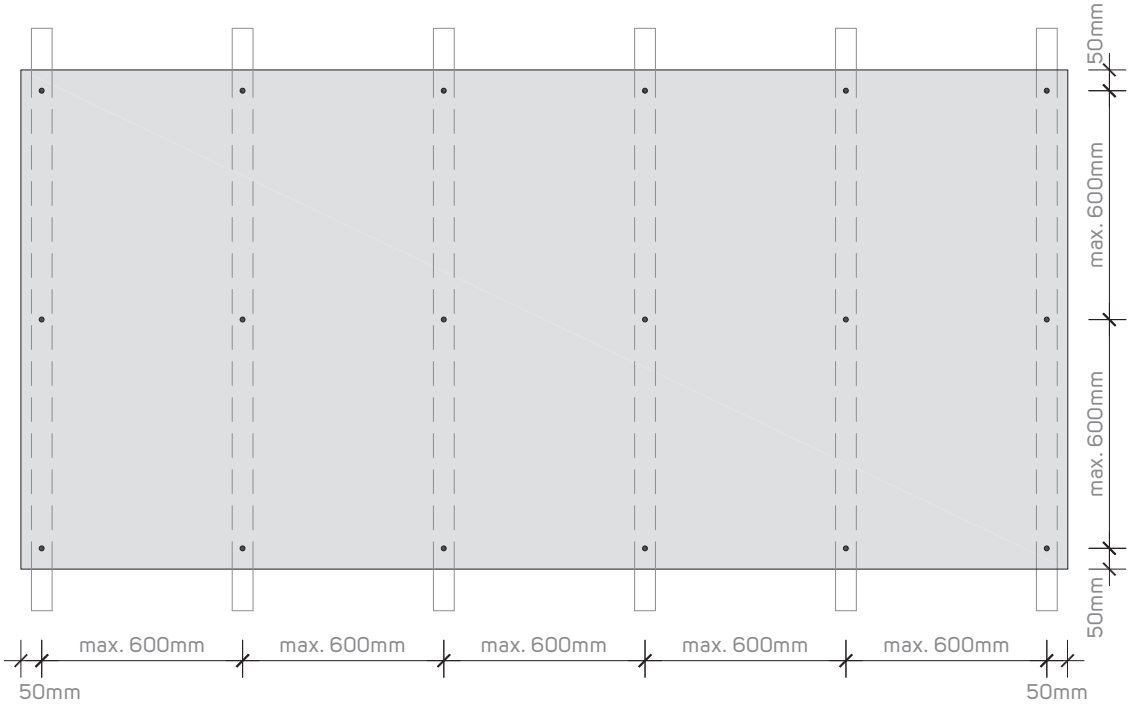
6. Surface treatment

Viroc boards may be protected with paint or varnish. Before applying varnish the panel surfaces must be completely clean and dry, free from grease, dust or surface salts. The surface should be cleaned by polishing with a cleaning disc.
Viroc S.A. has suitable cleaning discs available that can be supplied on request.
The first coat must cover both sides and edges of the board. The other coats need only to be applied on exposed face and edges.
For more information, see the application of paints and varnishes procedures.

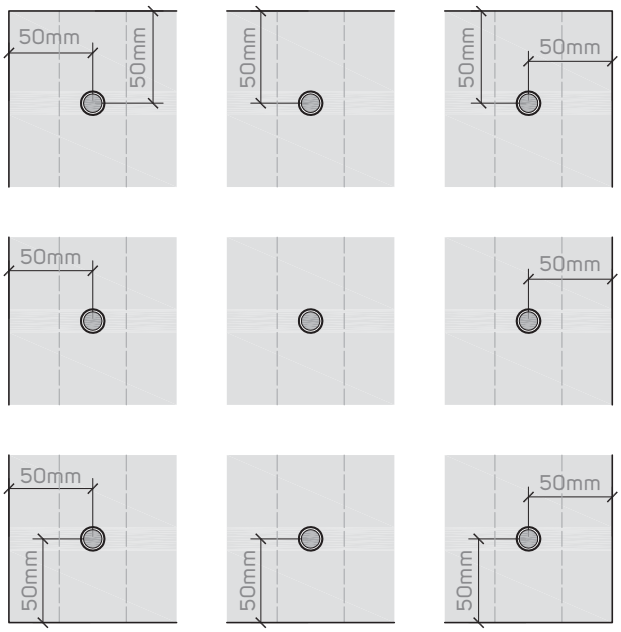
Notes & recommendations

Please consult Viroc Product Data Sheet to know the board tolerances and properties.
Always check standard safety procedures and local legislation requirements.
Please contact the finishing suppliers for application procedures.

7. Fixture position

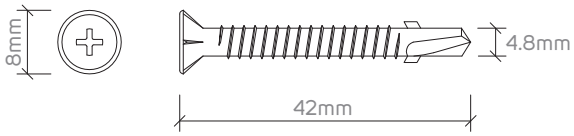


8. Distance between fastening elements to the edges

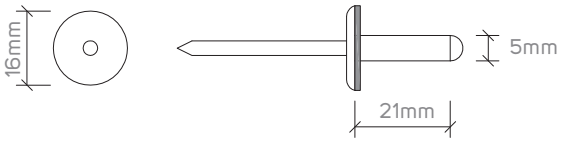


9. Fastening elements for exterior

EMET C8-4.8x42

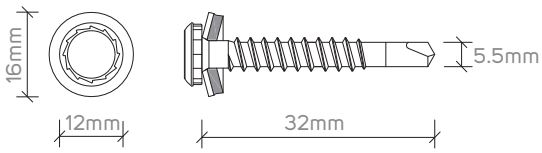


Rivet C16-W16-5x21

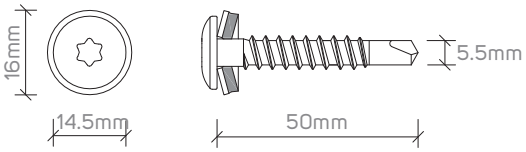


Alternative screws for exterior

EMET V12-A16-5.5x32

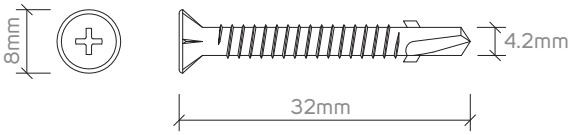


EMET C14-A16-5.5x50

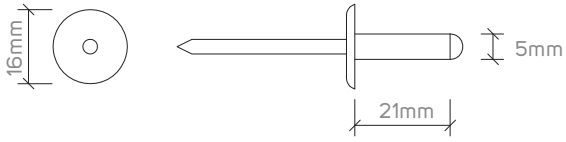


10. Fastening elements for interior

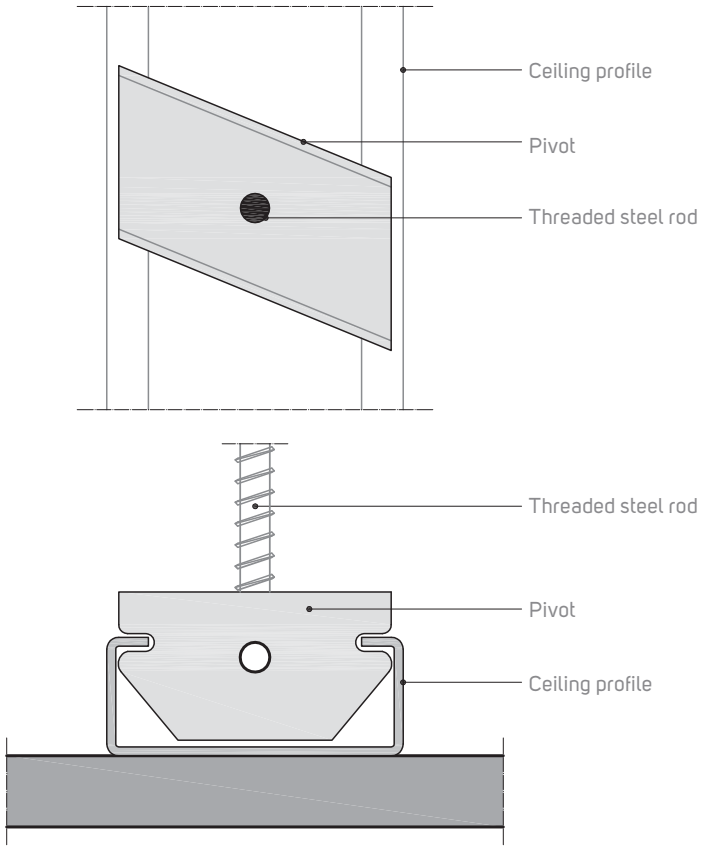
IMET C8-4.2x32



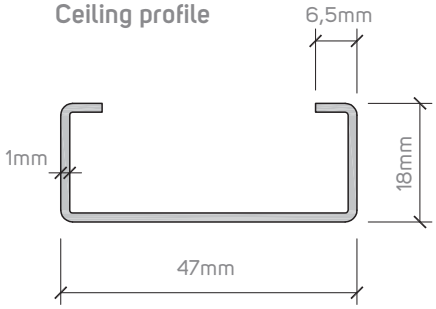
Rivet C16-5x21



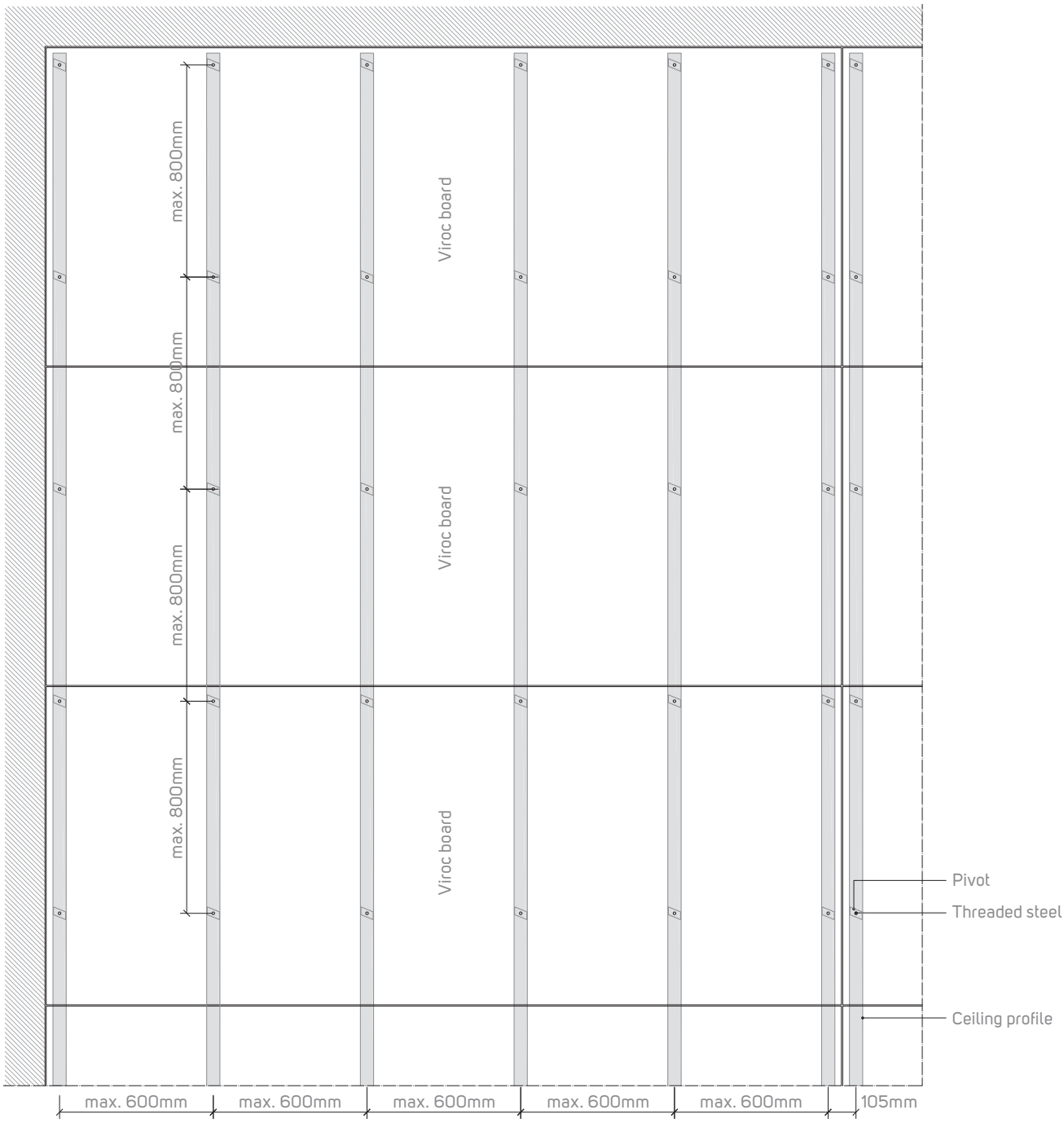
11. Pivot detail



Ceiling profile

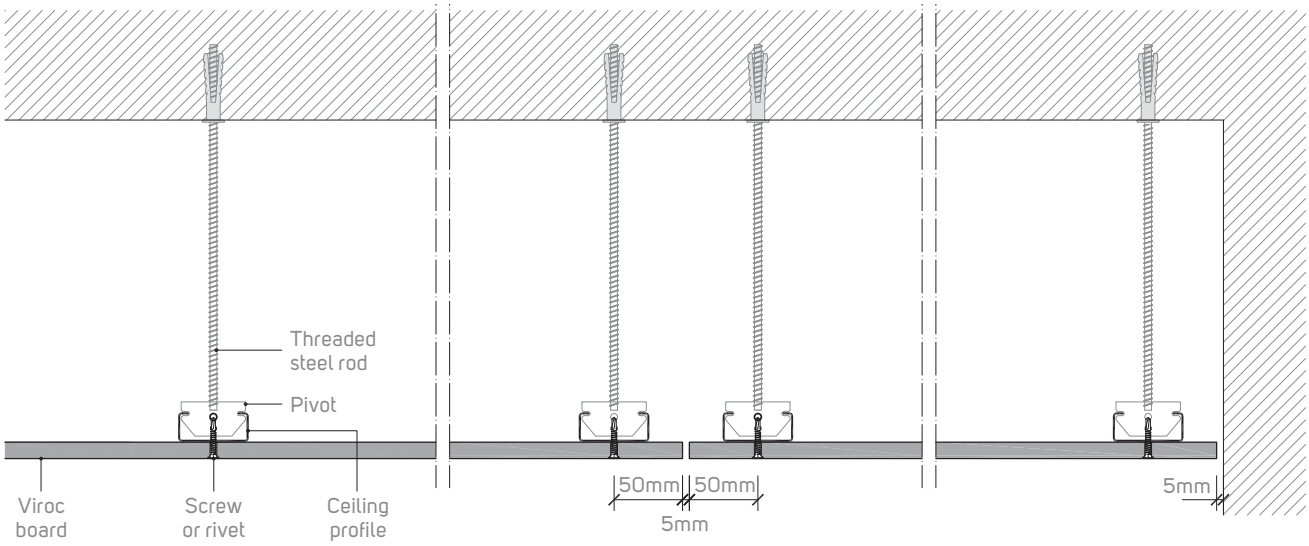


12. Support structure

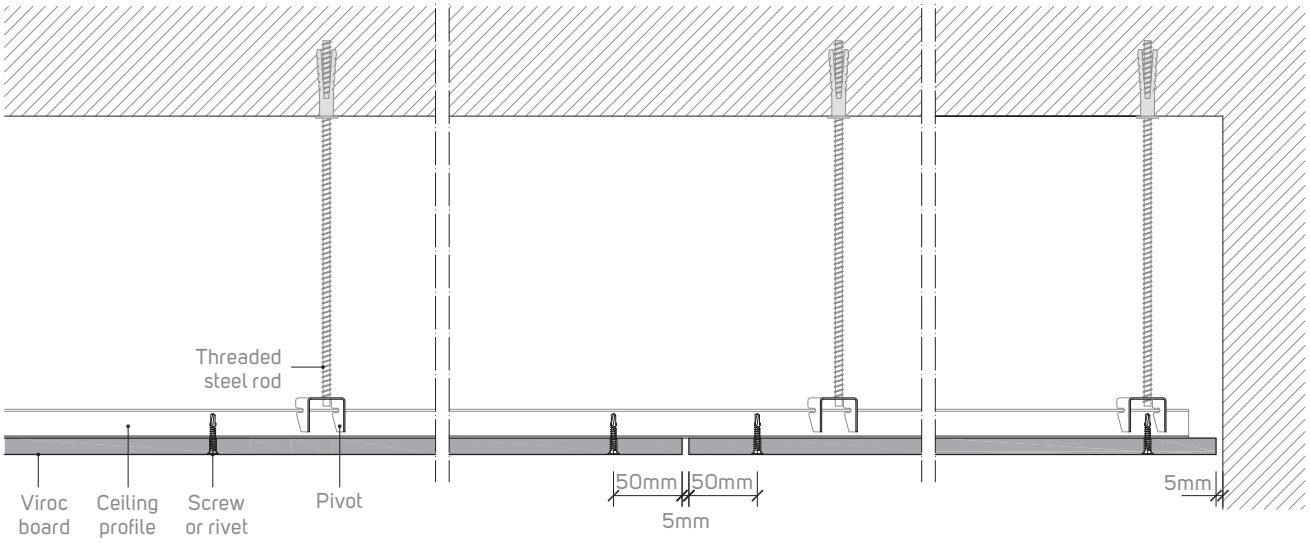


13. Construction details

Transversal section

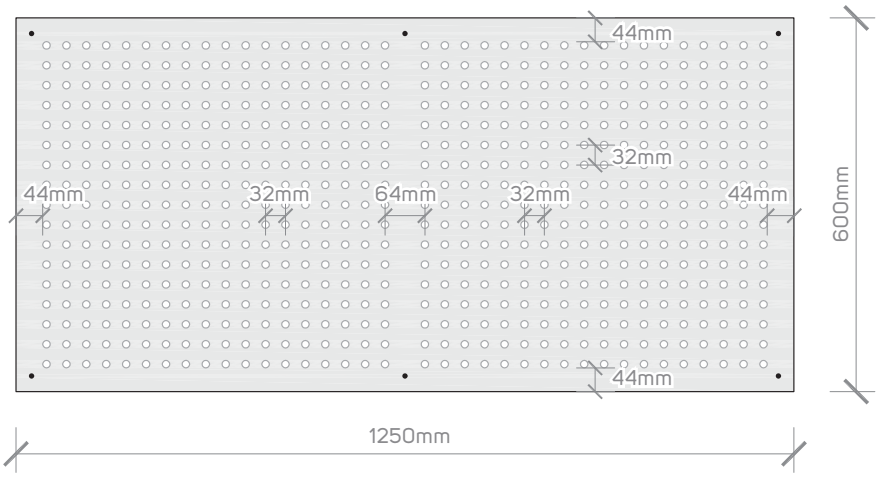


Longitudinal section

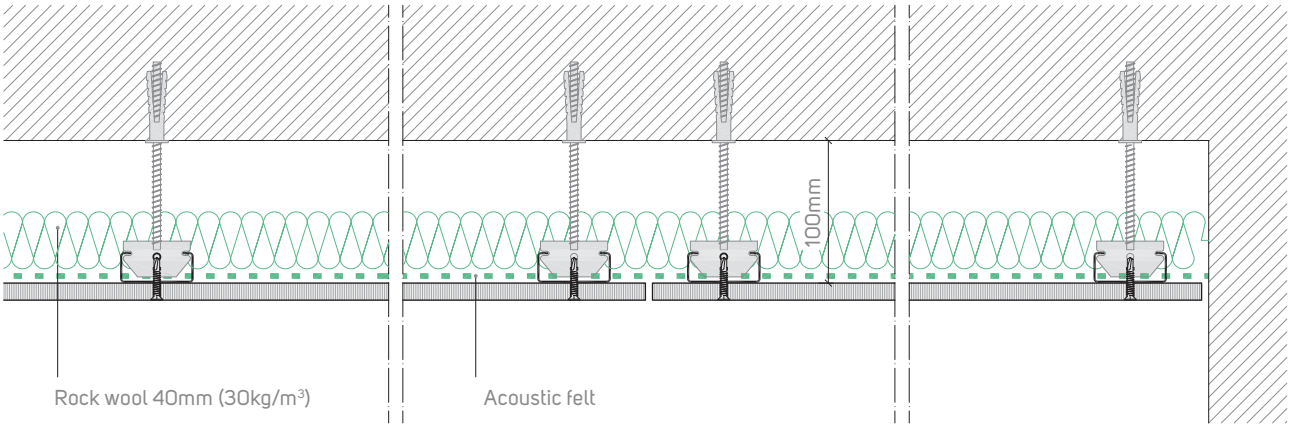


14. Sound absorption

Viroc board dimensions: 1250x600x12mm
Holes: 12mm diameter, 32mm dist.



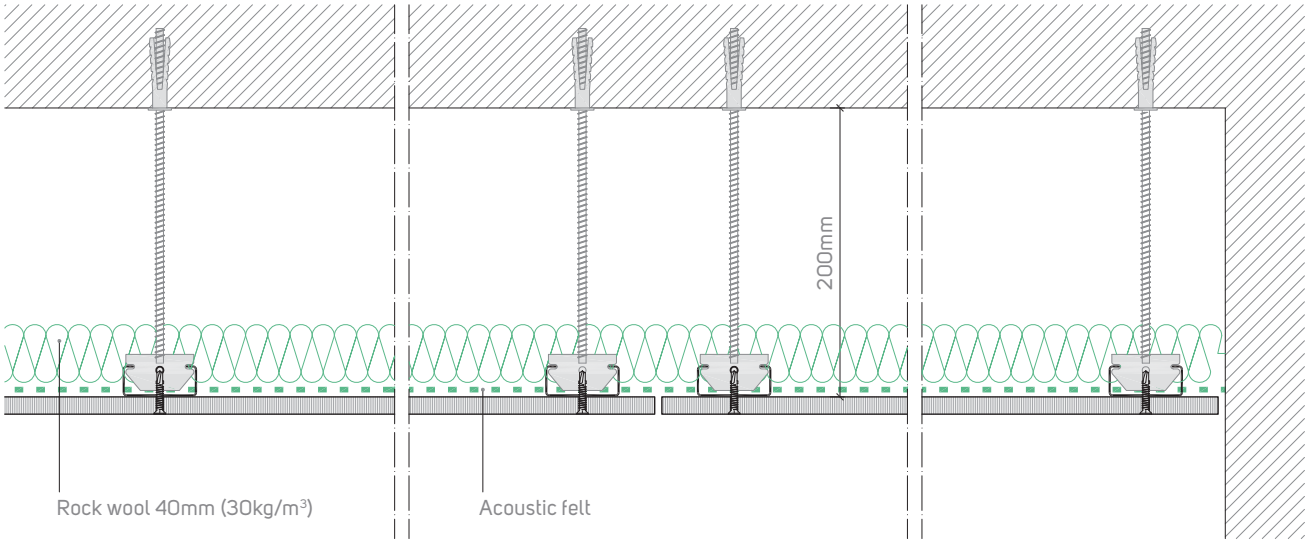
14.1 Air gap dimension: 100mm



Sound absorption coefficient (α) - EN ISO 354

f (Hz)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
α	0.00	0.14	0.24	0.50	0.69	0.83	0.86	0.81	0.67	0.56	0.49	0.43	0.36	0.29	0.28	0.23	0.24	0.07

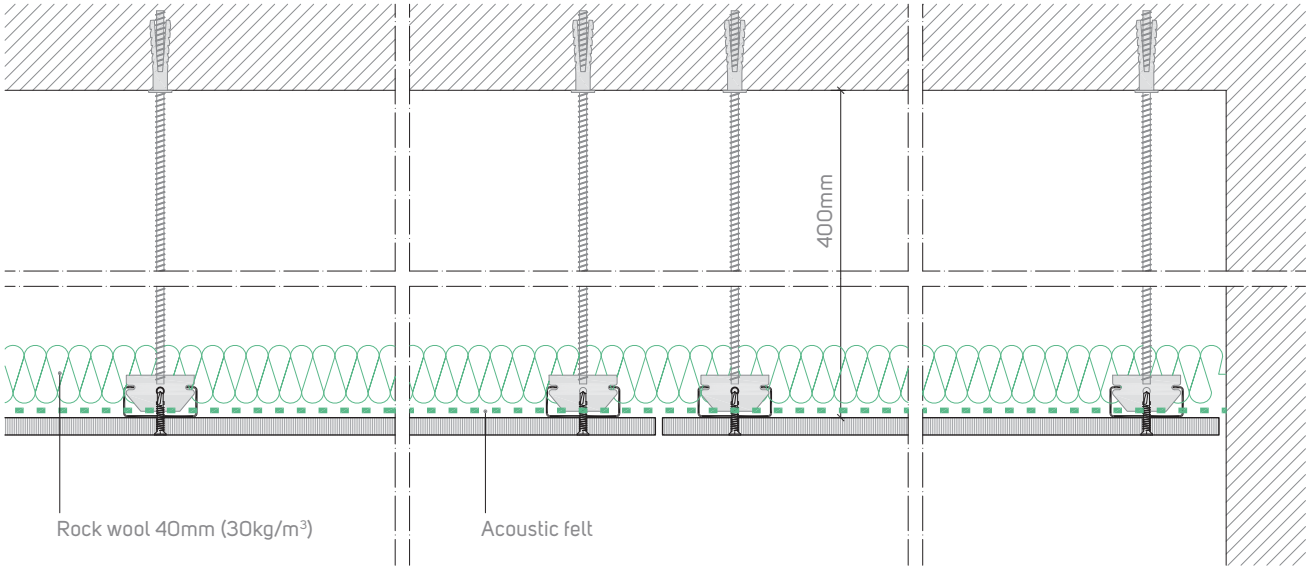
14.2 Air gap dimension: 200mm



Sound absorption coefficient (α) - EN ISO 354

f (Hz)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
α	0.23	0.37	0.53	0.78	1.00	0.80	0.80	0.72	0.69	0.64	0.60	0.48	0.37	0.29	0.27	0.23	0.25	0.10

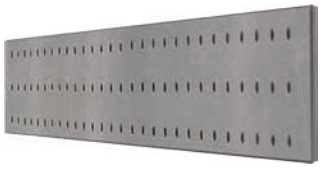
14.3 Air gap dimension: 400mm



Sound absorption coefficient (α) - EN ISO 354

f (Hz)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
α	0.74	0.71	0.86	0.71	0.77	0.67	0.67	0.76	0.76	0.72	0.62	0.50	0.38	0.28	0.27	0.20	0.21	0.01

Perforated Board



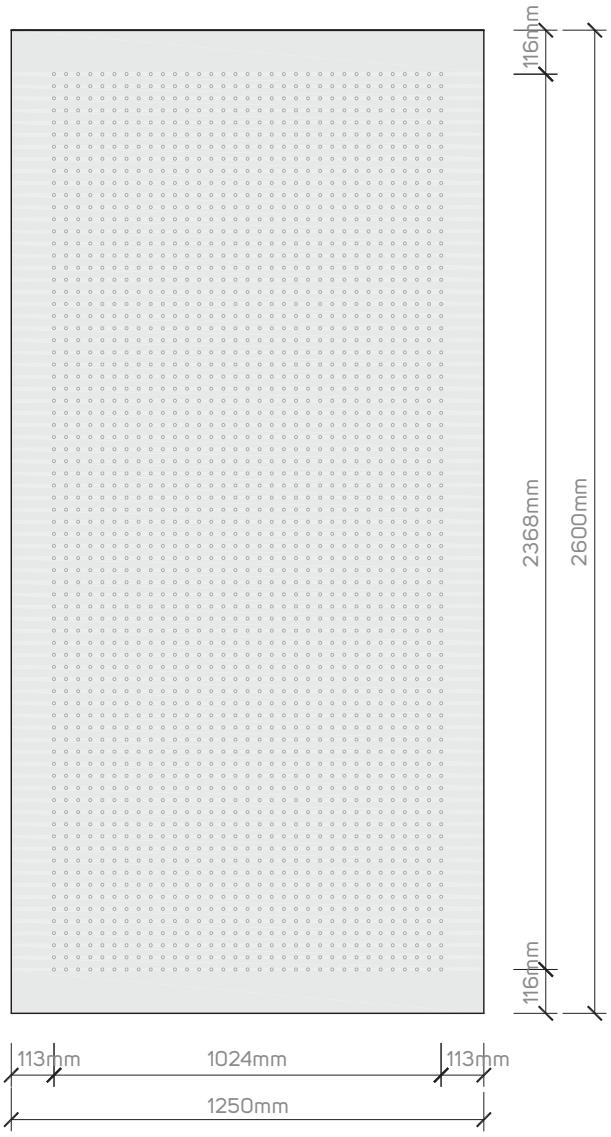
Dimension: 2600x1250mm

Holes: 2475

Diameters of holes: 8 mm

Wheelbase: 32 mm

Perforation rate: 3,83%



Perforated Board

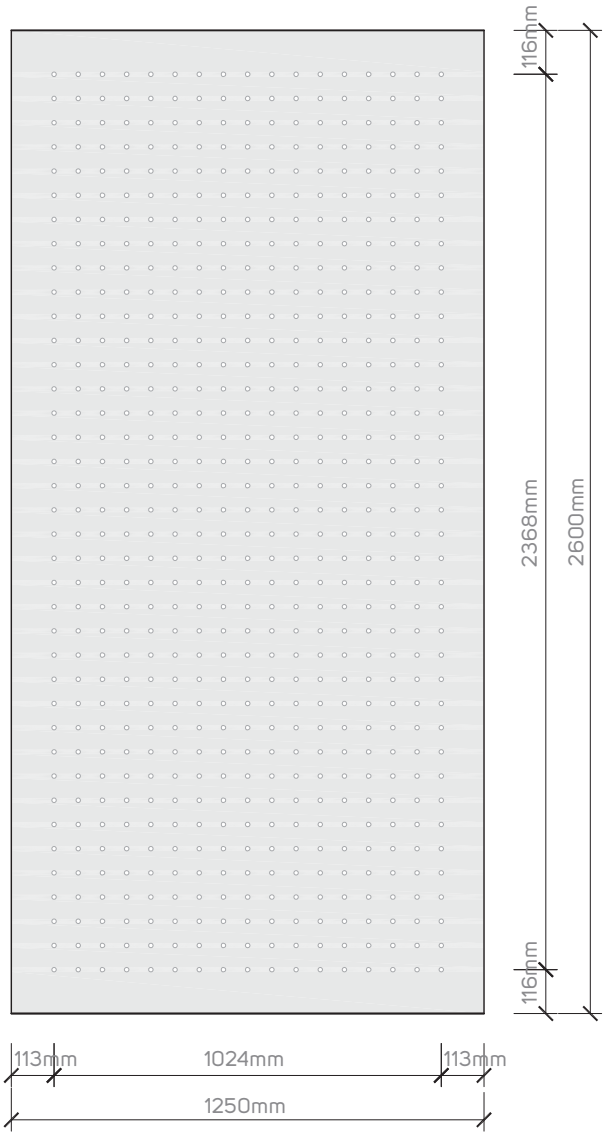
Dimension: 2600x1250mm

Holes: 646

Diameters of holes: 12 mm

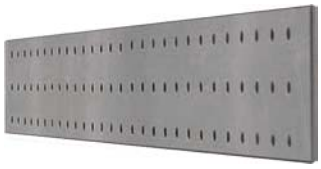
Wheelbase: 64 mm

Perforation rate: 2,25%



Edition 01 - 13/03/2013

Perforated Board



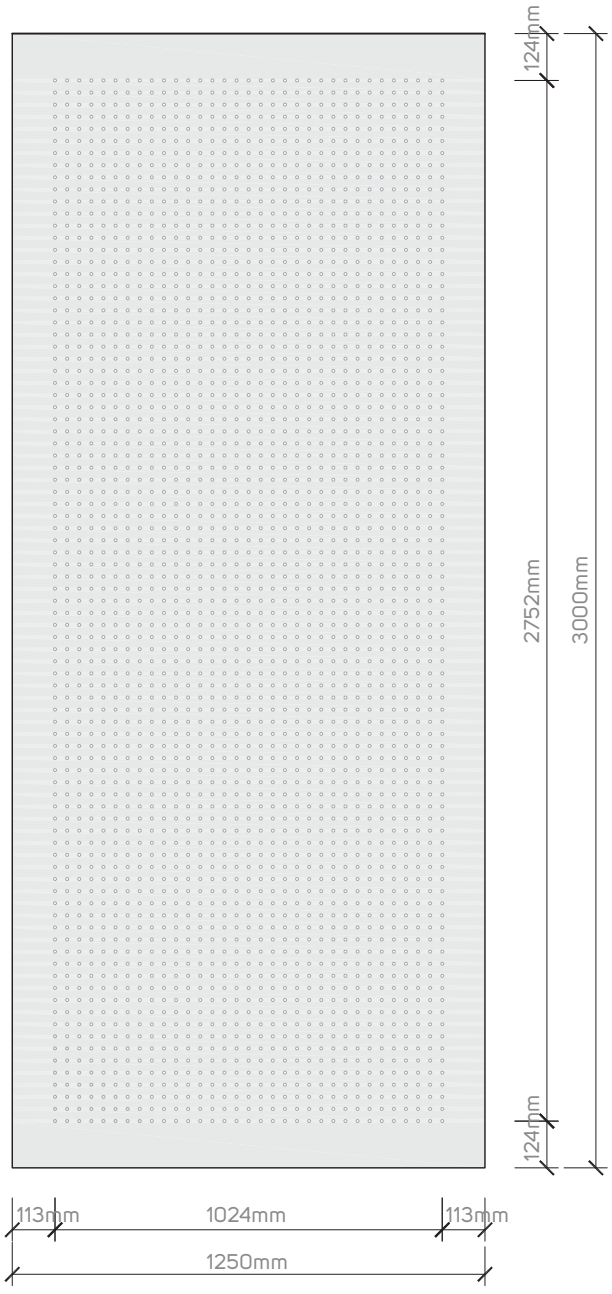
Dimension: 3000x1250mm

Holes: 2871

Diameters of holes: 8 mm

Wheelbase: 32 mm

Perforation rate: 3,85%



Perforated Board

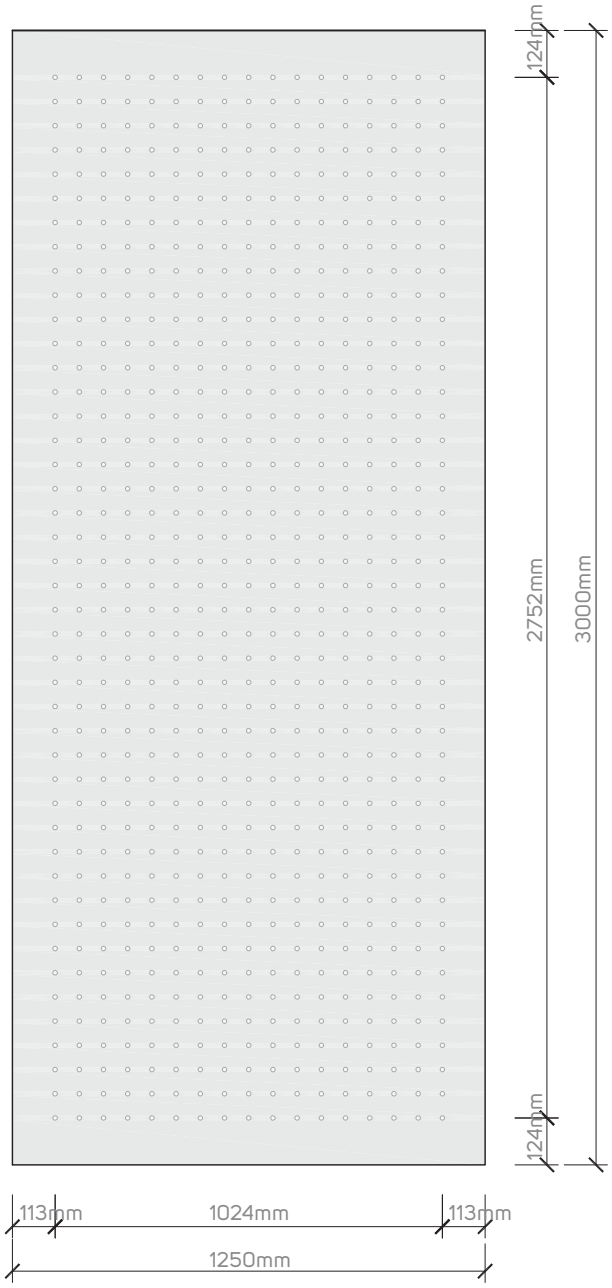
Dimension: 3000x1250mm

Holes: 748

Diameters of holes: 12 mm

Wheelbase: 64 mm

Perforation rate: 2,26%



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