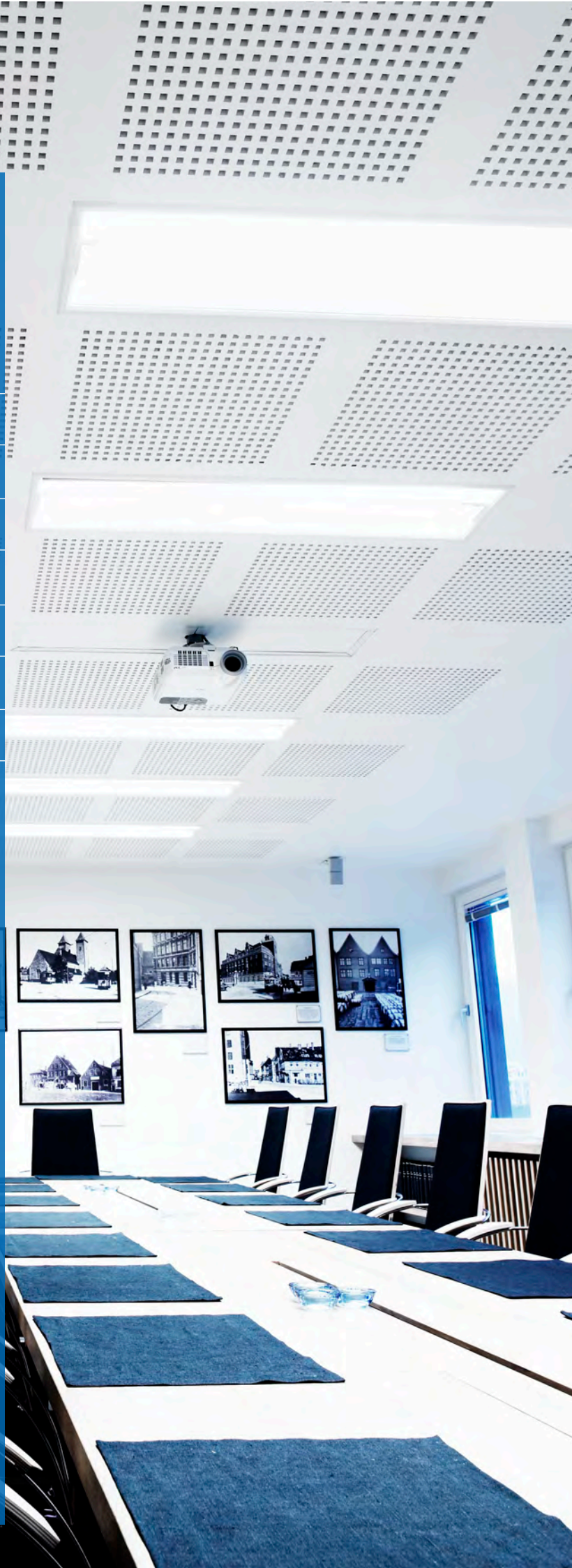
POTTER
INTERIOR SYSTEMS

Perforated Plasterboard Range

Building business together since 1966

CELEBRATING 50 YEARS
1966 2016

Contents



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Make an impression

Excellence in design is achieved with a balance of aesthetics and functionality. The Potter Interior Systems range of perforated plasterboard allows architects and designers to create beautiful ceilings and walls that achieve high levels of acoustic performance.

The panel perforations together with acoustic fabric lining and insulation, where used, reduce echo and noise reverberation to create more comfortable environments for work and leisure.

INTERNATIONAL ALLIANCE

Potter Interior Systems seeks to develop exclusive relationships with leading manufacturers throughout the world to deliver the best technologies and products to the New Zealand construction industry.

As part of the International Alliance program, the perforated range includes four Rigitone options with edge to edge, continuous patterns and three Protone options with patterns laid out in grids, developed by worldwide plasterboard specialist, Saint-Gobain. These products feature innovative Activ'Air technology to help improve indoor air quality.

ACTIV air

The contemporary patterns of the Rigitone and Protone ranges, along with the more traditional Gyprock Standard 6mm Round option provide a wide range of design versatility and acoustic performance for ceiling and wall projects.


YAMAHA

Acoustic control

Good acoustic design includes control of both sound transmission and sound absorption. Sound transmission is controlled by using solid or cavity elements sealed to prevent sound leakage. To combat sound transmission, Potter Interior Systems provides a range of systems which achieve high transmission reduction targets.

Sound absorption is the control of sound within a room where absorbing surfaces reduce the amount of sound bouncing back into the room of origin. The total amount of sound absorption in a room and hence the reverberation time, is critically important for speech intelligibility, privacy and general noise levels.

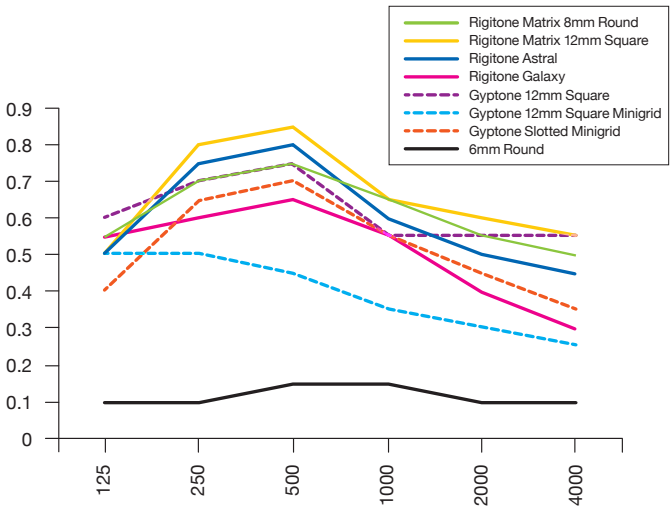
Potter Interior's range of perforated plasterboard provides high levels of reverberation control with much greater freedom for designers:

- Suitable for both ceilings and walls**
- Plasterboard provides ease of installation and versatility
- The surface is more durable than mineral fibre or similar acoustic absorbers

Acoustic assessment

A material's sound absorbing properties are expressed by the noise reduction coefficient (NRC), a simple measure that averages the absorption values over just a few frequencies. NRC typically ranges from 0 (total reflection) to 1.00 (total absorption). For perforated products, the NRC is dependent on the amount of open surface area, the type of acoustic fabric, the use of additional insulation material and the depth of the air cavity (plenum) behind the lining. Boards in the Rigitone and Protone ranges were tested for sound absorption in CSIRO Melbourne and Auckland University laboratories. Testing was performed with air cavities of 200mm and, in some cases 600mm, with and without insulation (50mm CSR Bradford glasswool batts at 14kg/m^3). PKA Acoustic Consulting provided complete acoustic predictions based on this data for the Rigitone and Protone ranges and previous testing data for the Standard 6mm Round board, along with perforated and slotted resonance formula calculations, as well as their database of sound absorption coefficient and acoustic laboratory tests. The acoustic absorption results graph shows the absorption coefficients for all boards in the perforated plasterboard range, with an uninsulated 200mm cavity installation.
The table below provides a quick comparison of the range's NRC values. Copies of the test reports are available by contacting specsupport@potters.co.nz

Acoustic absorption performance summary:
200mm plenum (air cavity), uninsulated
(Full details on following pages)



All boards in the Rigitone and Protone ranges are supplied with acoustic fabric backing as standard and were tested as supplied, resulting in far better acoustic performance results than Standard 6mm Round, which was tested as supplied without acoustic fabric. Standard 6mm Round is an entry level perforated product, often specified for aesthetics over performance. However, installers may use a third party acoustic fabric to provide far higher levels of acoustic performance if required.

NRC value summary:
(Full details on following pages)

Perforated Pattern	Sheet Size (mm)	Open Area %	Acoustic Fabric	Plenum (Air Cavity)					
				65mm		200mm		600mm	
				Empty	Batts*	Empty	Batts*	Empty	Batts*
Rigitone									
Matrix 8mm Round	1188 x 1998 x 12.5	15.5%	Yes	N/A	N/A	0.65	0.75	0.65	0.75
Matrix 12mm Square	1200 x 2000 x 12.5	23.0%	Yes	N/A	N/A	0.70	0.90	0.70	0.85
Astral	1188 x 1980 x 12.5	19.6%	Yes	N/A	N/A	0.65	0.85	0.65	0.80
Galaxy	1200 x 1960 x 12.5	10.0%	Yes	N/A	N/A	0.55	0.60	0.60	0.65
Protone									
12mm Square	1200 x 2400 x 12.5	16.0%	Yes	0.55	0.70	0.65	0.70	0.65	0.70
12mm Square Minigrid	1200 x 2400 x 12.5	6.0%	Yes	0.35	0.40	0.40	0.40	0.40	0.45
Slotted Minigrid	1200 x 2400 x 12.5	13.0%	Yes	0.45	0.60	0.60	0.60	0.55	0.60
Gyprock Standard									
6mm Round	1200 x 3600 x 13	8.3%	No	0.10	0.35	0.15	0.40	0.15	0.45

Bold values in all tables are test report data. Non-bold values are PKA's acoustic predictions.
*Batts denotes that 50mm Bradford glasswool batts (14kg/m^3) were included in the cavity.
**Rigitone is suitable for ceilings only.

Three core ranges

Rigitone™ Range

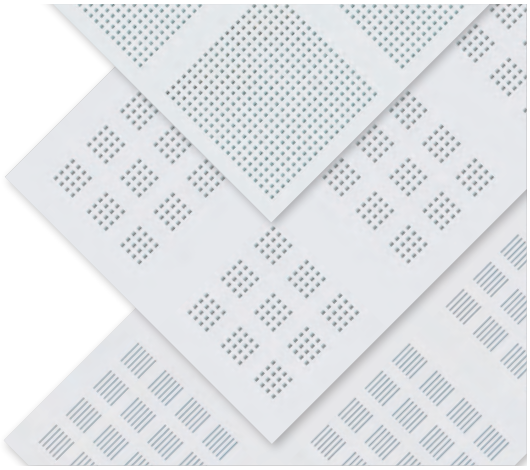
Rigitone perforated plasterboard is a superior and modern acoustic solution that delivers a monolithic design due to its edge to edge pattern layouts. The Rigitone range combines functionality and aesthetics in the modern design of ceilings. Integrating lighting, ventilation systems, loudspeakers and such is straightforward and simple. Due to the variety of perforation sizes and patterns, board dimensions vary slightly but are nominally 1200mm x 2000mm x 12.5mm.

The edges of Rigitone boards are square cut and pre-primed for a unique installation method using ready-mixed Rigitone Filler, creating a continuous, seamless finish.

Protone™ Range

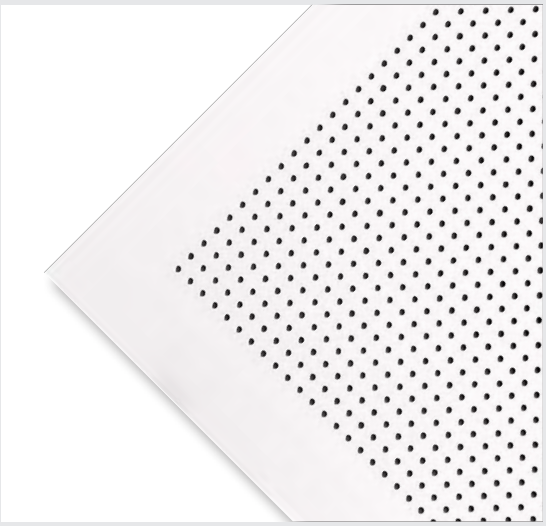
Protone perforated plasterboard contributes to aesthetics and excellent acoustics for walls and ceilings. The range features three contemporary perforation patterns, each with different percentages of open area to meet most acoustic application requirements. Each board in the range is supplied at a size of 1200mm x 2400mm x 12.5mm.

Unlike standard plasterboard, all four edges of Protone perforated plasterboards are recessed to make flush jointing quicker and easier with the normal tape and three coat jointing system.



Gyprock Standard 6mm Round

6mm Round is the traditional Gyprock perforated board product that has been extensively used throughout NZ and Australia for many years. It provides an economical aesthetic solution for ceilings or walls. This 1200mm x 3600mm x 13mm board features recesses on the two long edges with square cuts at each short edge. 6mm Round is supplied without an acoustic fabric backing and acoustic performance is adequate for most situations where moderate levels of attenuation are required.

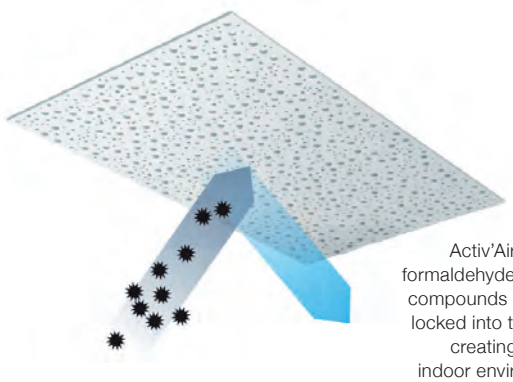


ACTIV air

Many materials, such as particleboard, furniture, carpets and paint emit formaldehyde, one of the most prevalent VOCs. This means that high concentrations of formaldehyde, which has been classified as a known carcinogen by The World Health Organisation and the US Department of Heath, can frequently be found in the air we breathe in many indoor spaces.

Activ'Air is a patented technology that converts formaldehyde into non-harmful inert compounds that are permanently locked in the board and cannot be released back into the air. Controlled testing has shown that Activ'Air can reduce the concentration of formaldehyde within an environment by up to 60% when installed in ceilings, even when there is continuous airflow containing formaldehyde.

Installing Rigitone or Protone plasterboard containing Activ'Air technology to ceilings and/or walls will have an enduring impact on air quality and will improve the environment for people working and living in the space.



Activ'Air converts formaldehyde into inert compounds which are locked into the board, creating healthier indoor environments.

Acoustic fabric

Rigitone and Protone perforated plasterboard is supplied with a highly effective acoustic fabric that dramatically improves the acoustic performance of the board. This unique fabric is exclusive to Potter Interior's and apart from improved acoustic performance, it provides other benefits:

- Eliminates dust from ceiling cavities coming down into the room
- Effectively masks the ceiling framework so that it is not seen from below through the perforations
- Contributes to better fire protection compared to a board without fabric backing

Rigitone and Protone boards are supplied with a white fabric as standard.

Perforated plasterboard is not recommended for installation in areas subject to greater than 70% relative humidity including indoor swimming pools and bathrooms. Protone boards support point loads up to 3kg. Adequate independent or additional support must be provided for services and lighting systems that exceed this limit.

Protone Access Panels

Access panels are available in each of the three Protone board patterns. These consist of a plasterboard frame that is easily set into the ceiling and a 510mm x 510mm hatch piece with a matching perforation pattern that fits neatly into the frame. These panels provide access to the ceiling cavity while ensuring a seamless look across the surface.

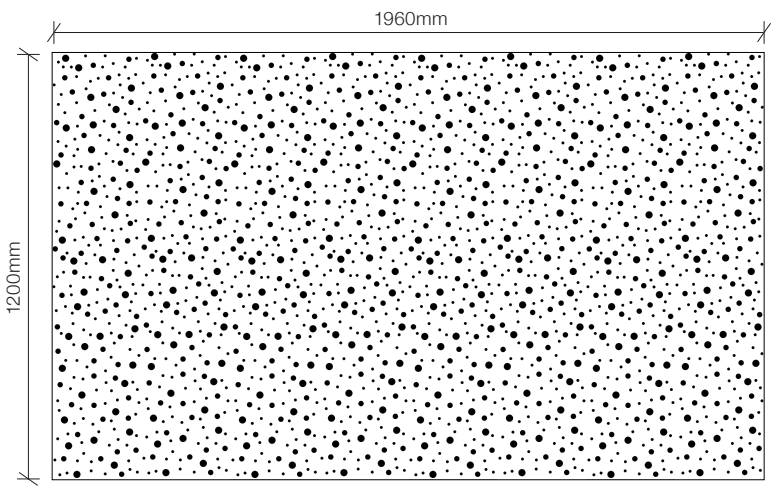
Rigitone Galaxy (8-15-20 Super)

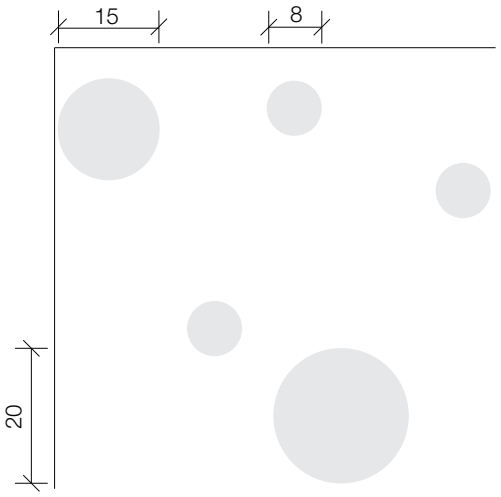
ACTIV air

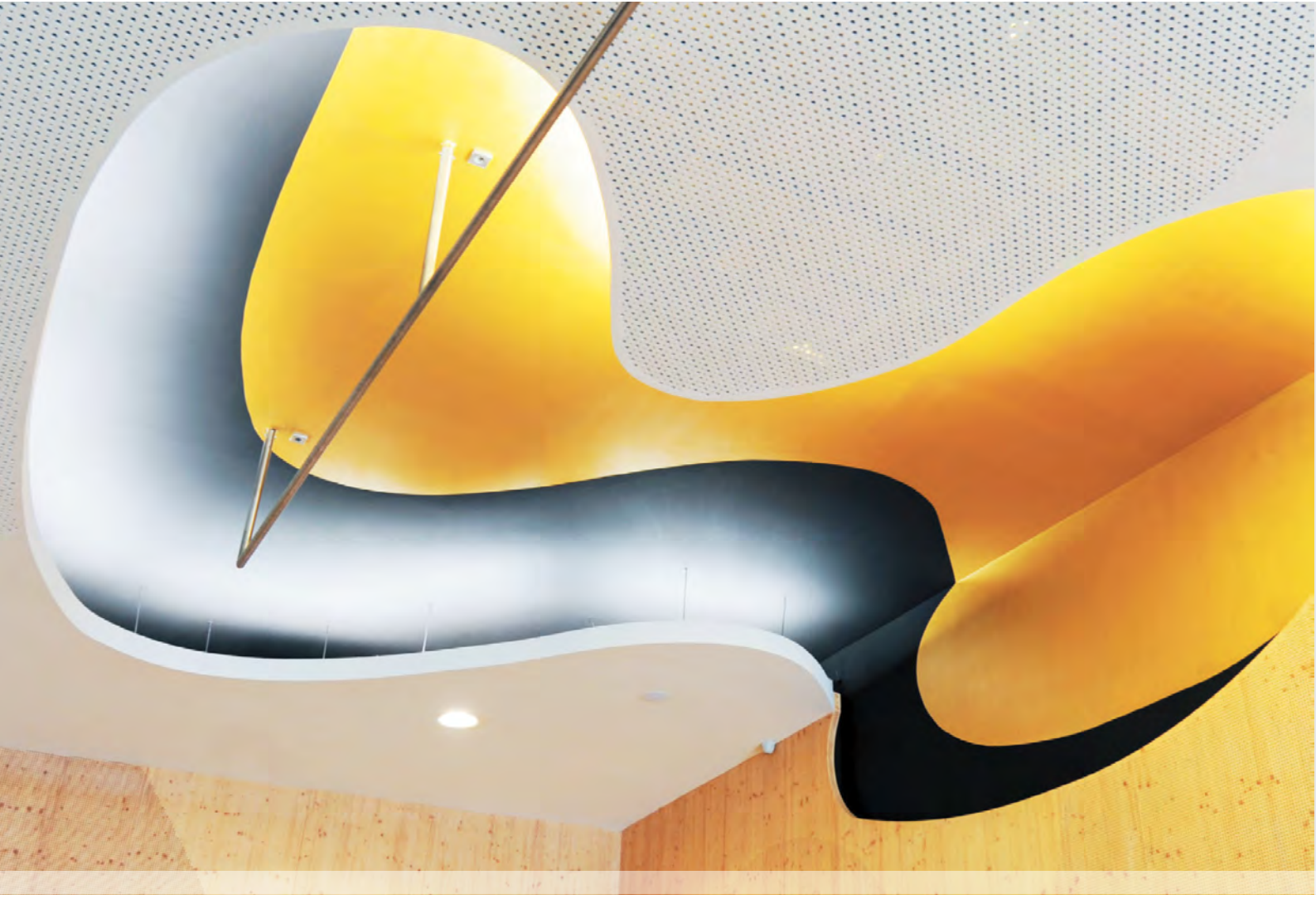
An irregular scattered pattern consisting of 8mm, 15mm and 20mm round perforations, providing a 10% open area. Supplied with a white acoustic fabric backing.

Galaxy 10% open area				Sound Absorption Coefficient α_p					
Plenum (Air Cavity)	Plenum Insulation	α_w	NRC	Octave Band Centre Frequencies (Hz)					
				125	250	500	1000	2000	4000
200mm	Empty	0.45(L)	0.55	0.55	0.60	0.65	0.55	0.40	0.30
	50mm glasswool (14kg/m³)	0.55(L)	0.60	0.60	0.65	0.60	0.60	0.45	0.45
600mm	Empty	0.60	0.60	0.60	0.60	0.60	0.60	0.50	0.50
	50mm glasswool (14kg/m³)	0.65	0.65	0.60	0.60	0.65	0.70	0.55	0.55

Bold values are test report data conducted at the CSIRO Melbourne laboratories. Non-bold values are acoustic predictions by PKA Acoustic Consulting. (L) denotes excess performance at 250Hz







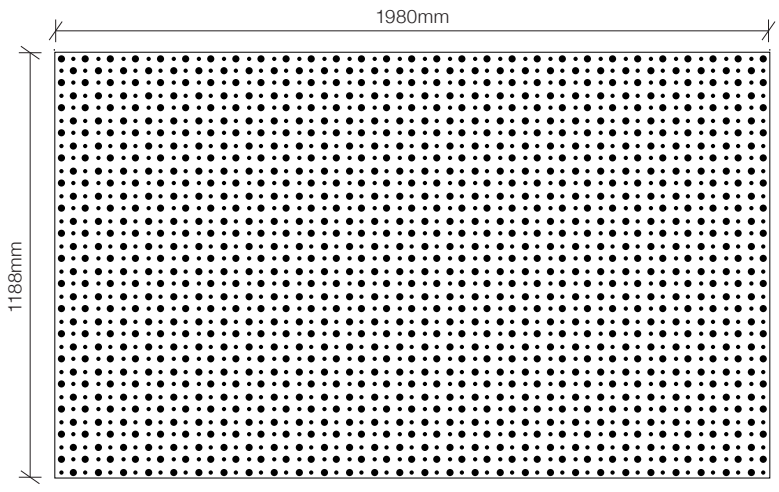
Rigitone Astral (12-20/66)

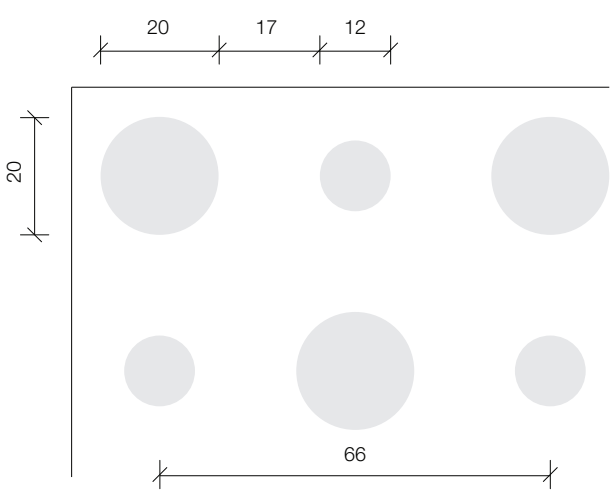
ACTIV air

A regularly staggered pattern consisting of 12mm and 20mm round perforations spaced at 33mm centres, providing a 19.6% open area. Supplied with a white acoustic fabric backing.

Astral 19.6% open area				Sound Absorption Coefficient α_p					
Plenum (Air Cavity)	Plenum Insulation	α_w	NRC	Octave Band Centre Frequencies (Hz)					
				125	250	500	1000	2000	4000
200mm	Empty	**0.55(LM)**	**0.65**	**0.50**	**0.75**	**0.80**	**0.60**	**0.50**	**0.45**
	50mm glasswool (14kg/m³)	**0.80(L)**	**0.85**	**0.70**	**0.85**	**0.85**	**0.85**	**0.70**	**0.70**
600mm	Empty	0.65	0.65	0.60	0.65	0.65	0.65	0.60	0.50
	50mm glasswool (14kg/m³)	0.80	0.80	0.70	0.70	0.80	0.85	0.75	0.75

Bold values are test report data conducted at the CSIRO Melbourne laboratories. Non-bold values are acoustic predictions by PKA Acoustic Consulting. (L) denotes excess performance at 250Hz (M) denotes excess performance at 500Hz, 1000Hz





Rigitone Matrix 12mm Square (12/25 Q)

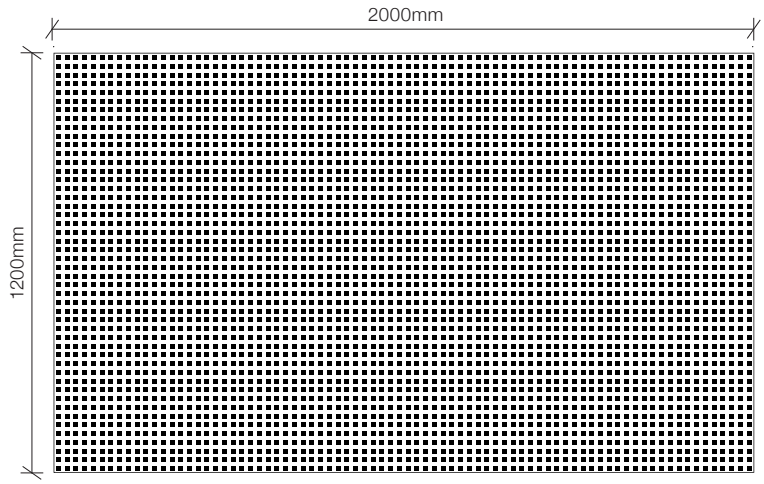
ACTIV air

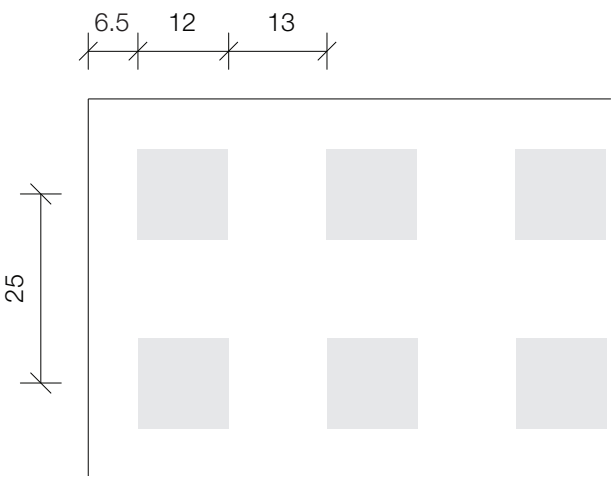
A pattern of 12mm square perforations spaced at 25mm centres, providing a 23% open area. Supplied with a white acoustic fabric backing.

Indent item only.
Please inquire regarding stock timing.

Matrix 12mm Square 23% open area				Sound Absorption Coefficient α_p					
Plenum (Air Cavity)	Plenum Insulation	α_w	NRC	Octave Band Centre Frequencies (Hz)					
				125	250	500	1000	2000	4000
200mm	Empty	0.65(L)	0.70	0.50	0.80	0.85	0.65	0.60	0.55
	50mm glasswool (14kg/m³)	0.85(L)	0.90	0.70	0.90	0.90	0.90	0.80	0.75
600mm	Empty	0.65(L)	0.70	0.65	0.70	0.65	0.70	0.65	0.55
	50mm glasswool (14kg/m³)	0.90	0.85	0.70	0.70	0.85	0.95	0.90	0.95

Bold values are test report data conducted at the CSIRO Melbourne laboratories. Non-bold values are acoustic predictions by PKA Acoustic Consulting. (L) denotes excess performance at 250Hz





Rigitone Matrix 8mm Round (8/18)

A pattern of 8mm round perforations spaced at 18mm centres, providing a 15.5% open area. Supplied with a white acoustic fabric backing.

Indent item only.

Please inquire regarding stock timing.

Matrix 8mm Round 15.5% open area				Sound Absorption Coefficient α_p					
Plenum (Air Cavity)	Plenum Insulation	α_w	NRC	Octave Band Centre Frequencies (Hz)					
				125	250	500	1000	2000	4000
200mm	Empty	**0.60(L)**	**0.65**	**0.55**	**0.70**	**0.75**	**0.65**	**0.55**	**0.50**
	50mm glasswool (14kg/m³)	**0.75(L)**	**0.75**	**0.70**	**0.80**	**0.75**	**0.75**	**0.70**	**0.70**
600mm	Empty	0.65(L)	0.65	0.60	0.70	0.65	0.60	0.60	0.55
	50mm glasswool (14kg/m³)	0.75	0.75	0.70	0.75	0.70	0.70	0.75	0.75

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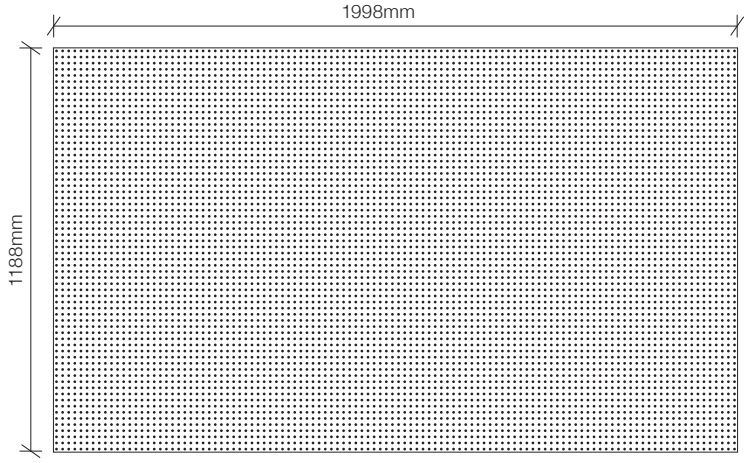
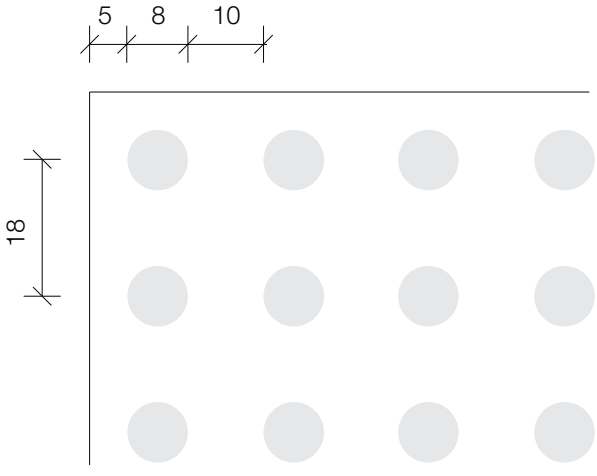
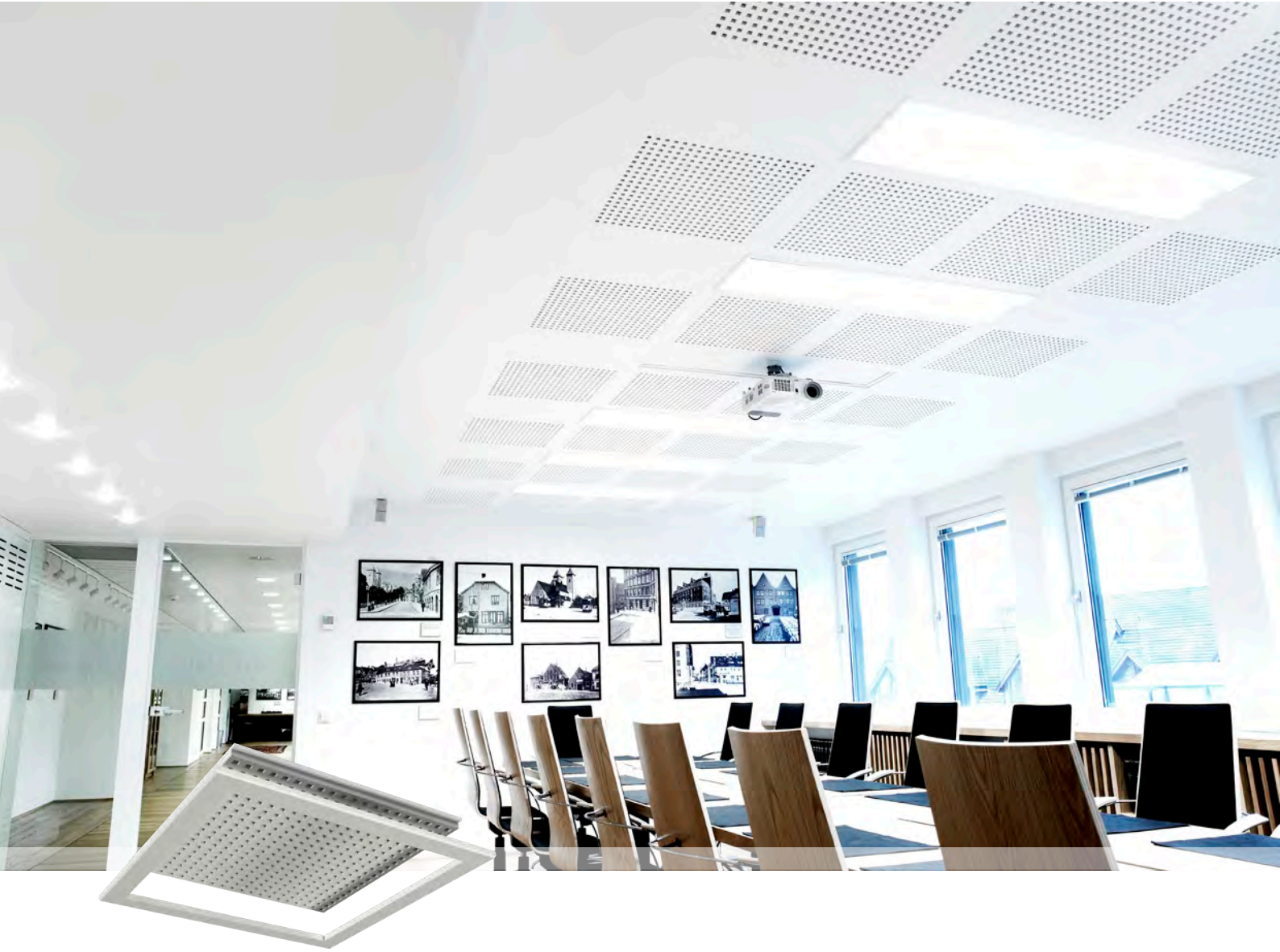






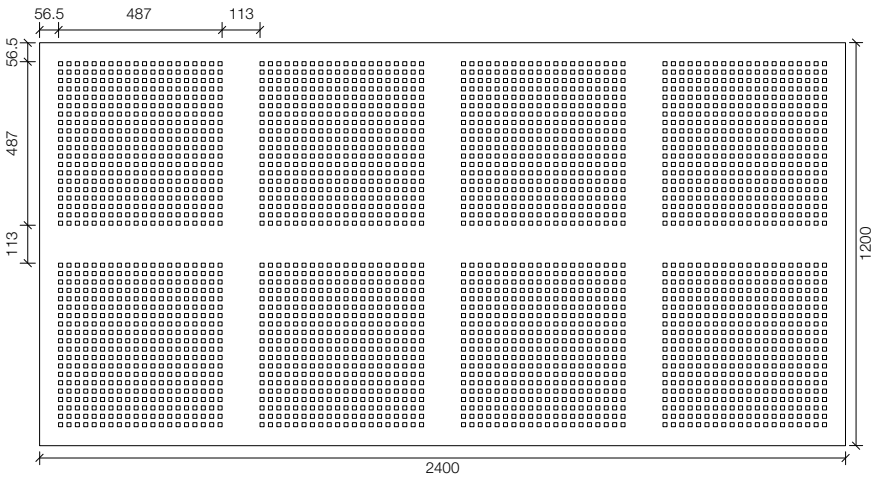
Protone 12mm Square (41)

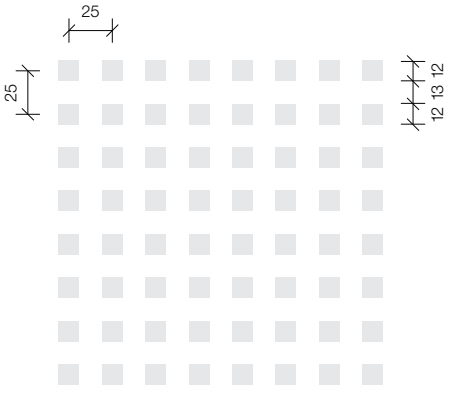
Eight large square groupings per sheet, each with 400 x 12mm square perforations at 25mm centres, providing a 16% open area. Supplied with white acoustic fabric backing.

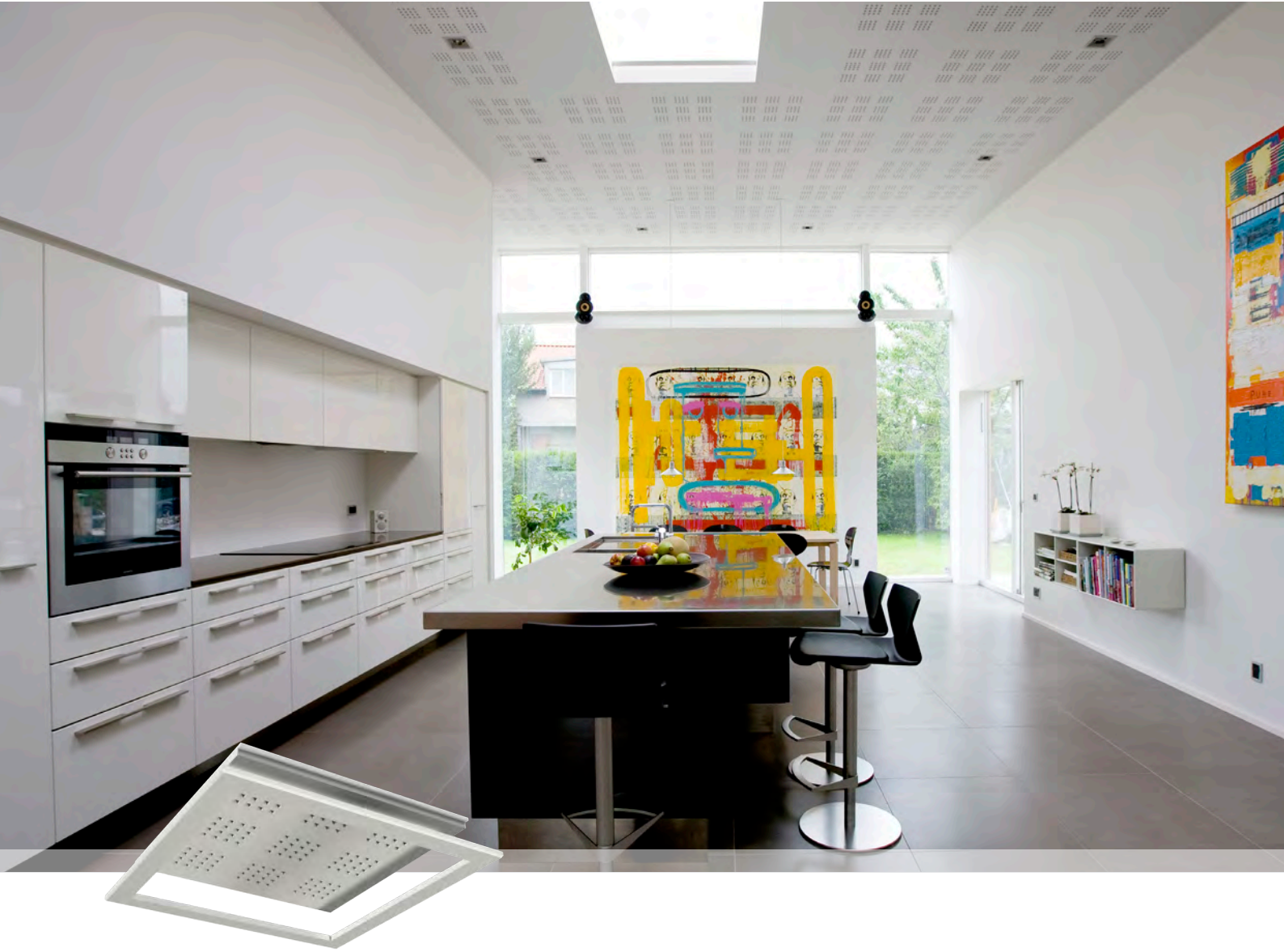
An access panel consisting of a frame and matching 510mm x 510mm hatch is available.

12mm Square 16% open area				Sound Absorption Coefficient α_p					
Plenum (Air Cavity)	Plenum Insulation	α_w	NRC	Octave Band Centre Frequencies (Hz)					
				125	250	500	1000	2000	4000
65mm	Empty	0.55	0.55	0.20	0.35	0.55	0.75	0.60	0.40
	50mm glasswool (14kg/m³)	0.70	0.70	0.40	0.65	0.80	0.70	0.65	0.55
200mm	Empty	**0.60(L)**	**0.65**	**0.60**	**0.70**	**0.75**	**0.55**	**0.55**	**0.55**
	50mm glasswool (14kg/m³)	**0.70**	**0.70**	**0.65**	**0.70**	**0.70**	**0.65**	**0.65**	**0.60**
600mm	Empty	0.65(L)	0.65	0.65	0.70	0.65	0.60	0.60	0.65
	50mm glasswool (14kg/m³)	0.70	0.70	0.70	0.65	0.70	0.70	0.70	0.70

Bold values are test report data conducted at the Auckland University acoustic laboratory. Non-bold values are acoustic predictions by PKA Acoustic Consulting. (L) denotes excess performance at 250Hz







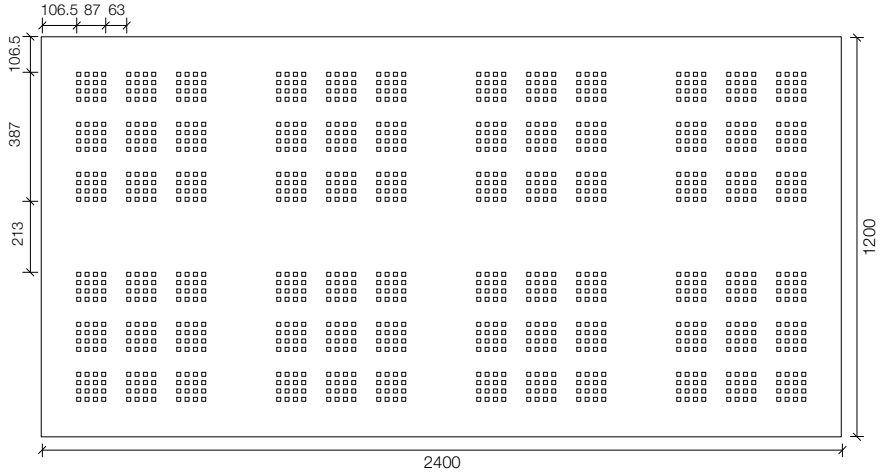
Protone 12mm Square Minigrid (47)

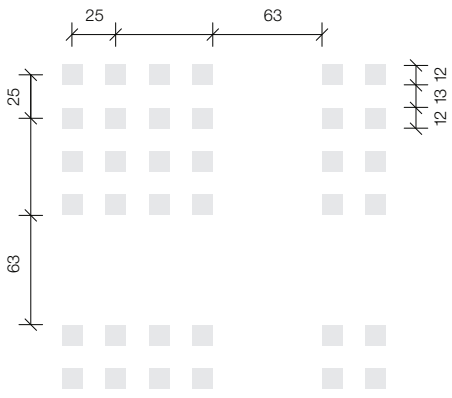
Eight large square groupings per sheet, each with nine mini grids of 16 x 12mm square perforations at 25mm centres. This subtle pattern provides an open area of 6% and features a white acoustic fabric backing.

An access panel consisting of a frame and matching 510mm x 510mm hatch is available.

12mm Square Minigrid 6% open area				Sound Absorption Coefficient α_p					
Plenum (Air Cavity)	Plenum Insulation	α_w	NRC	Octave Band Centre Frequencies (Hz)					
				125	250	500	1000	2000	4000
65mm	Empty	0.35	0.35	0.20	0.25	0.35	0.45	0.35	0.20
	50mm glasswool (14kg/m³)	0.35(L)	0.40	0.35	0.45	0.50	0.40	0.30	0.25
200mm	Empty	**0.35(L)**	**0.40**	**0.50**	**0.50**	**0.45**	**0.35**	**0.30**	**0.25**
	50mm glasswool (14kg/m³)	**0.40(L)**	**0.40**	**0.55**	**0.50**	**0.45**	**0.40**	**0.30**	**0.30**
600mm	Empty	0.40(L)	0.40	0.55	0.50	0.35	0.40	0.35	0.35
	50mm glasswool (14kg/m³)	0.45	0.45	0.60	0.45	0.45	0.45	0.35	0.40

Bold values are test report data conducted at the Auckland University acoustic laboratory. Non-bold values are acoustic predictions by PKA Acoustic Consulting. (L) denotes excess performance at 250Hz





Protone Slotted Minigrid (6)

Eight large square groupings per sheet, each with 16 mini grids of six 6mm x 80mm slot perforations. This contemporary design provides 13% open area and is supplied with a white acoustic fabric backing.

An access panel consisting of a frame and matching 510mm x 510mm hatch is available.

Slotted Minigrid 13% open area				Sound Absorption Coefficient α_p					
Plenum (Air Cavity)	Plenum Insulation	α_w	NRC	Octave Band Centre Frequencies (Hz)					
				125	250	500	1000	2000	4000
65mm	Empty	0.45	0.45	0.15	0.25	0.45	0.55	0.45	0.30
	50mm glasswool (14kg/m³)	0.55(L)	0.60	0.45	0.60	0.70	0.60	0.50	0.40
200mm	Empty	0.50(L)	0.60	0.40	0.65	0.70	0.55	0.45	0.35
	50mm glasswool (14kg/m³)	0.55(L)	0.60	0.60	0.65	0.60	0.55	0.50	0.40
600mm	Empty	**0.50(L)**	**0.55**	**0.65**	**0.60**	**0.55**	**0.50**	**0.45**	**0.40**
	50mm glasswool (14kg/m³)	**0.60**	**0.60**	**0.65**	**0.55**	**0.60**	**0.60**	**0.55**	**0.45**

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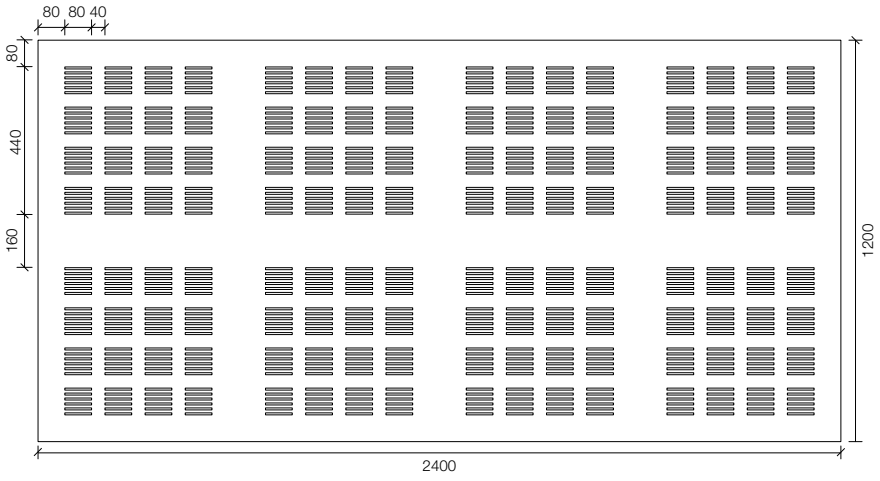
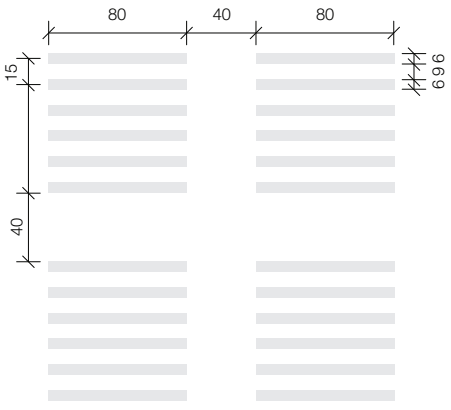
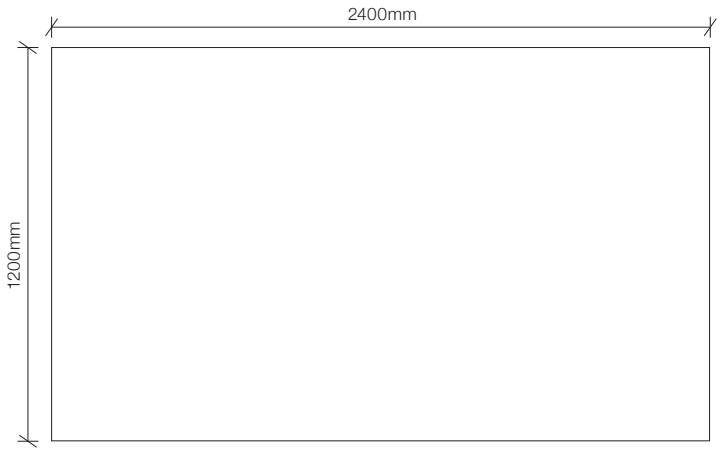




Protone Plain Plasterboard

Plain plasterboard to create consistency with Protone perforated plasterboard. To use is spaces around or between perforated plasterboard to ensure same texture, tone, joins and size throughout. Ideal for light and fixture areas.

Four recessed edge.



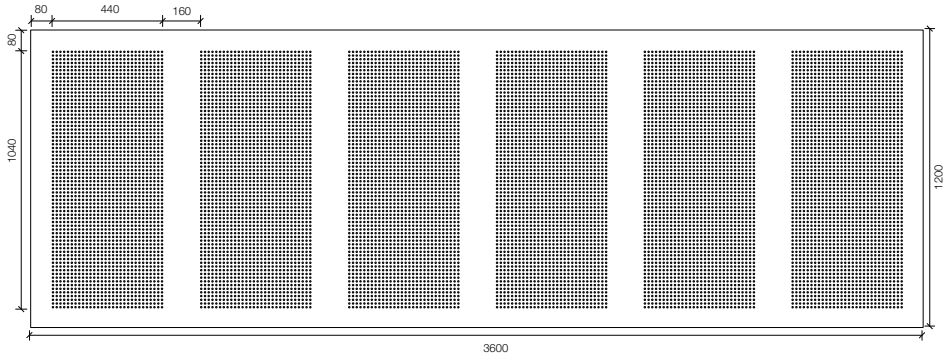
Gyprock 6mm Standard Round

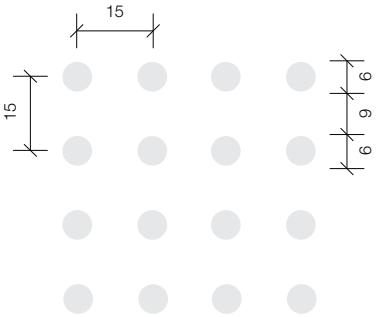
Six large rectangular groupings per sheet, each with 2,100 x 6mm diameter perforations at 15mm centres to provide an open area of 8.3%. This board is supplied with no acoustic fabric backing.

6mm Round is suitable for any room where moderate acoustic control and a simple design is required.

Standard 6mm Round 8.3% open area				Absorption Coefficient α_p					
Plenum (Air Cavity)	Plenum Insulation	α_w	NRC	Octave Band Centre Frequencies (Hz)					
				125	250	500	1000	2000	4000
65mm	Empty	0.15	0.10	0.05	0.10	0.10	0.15	0.10	0.10
	50mm glasswool (14kg/m^3)	0.30	0.35	0.15	0.25	0.40	0.50	0.30	0.15
200mm	Empty	0.15	0.15	0.10	0.10	0.15	0.15	0.10	0.10
	50mm glasswool (14kg/m^3)	0.25(LM)	0.40	0.40	0.45	0.60	0.40	0.20	0.15
600mm	Empty	0.15	0.15	0.20	0.15	0.15	0.10	0.10	0.10
	50mm glasswool (14kg/m^3)	0.30(LM)	0.45	0.50	0.50	0.60	0.40	0.25	0.15

These acoustic predictions are for standard 6mm Round perforated plasterboard without acoustic fabric. Installers may use a third party acoustic fabric to provide far higher levels of acoustic performance if required. (L) denotes excess performance at 250Hz (M) denotes excess performance at 500Hz, 1000Hz





Installation

Rigitone accessories

The unique, seamless finish of Rigitone is made possible by the use of a specialised primer, filler and installation tools.

While all four edges of the boards are pre-primed, Rigitone Primer is used to prepare cut edges for jointing.

Patten Spacers are available to ensure boards are fixed with the exact gap required for jointing.

Rigitone joints are achieved using the Rigitone Filler sausage, dispensed with the Accessory Kit.

The Rigitone Accessory Kit includes the tools required to achieve the Rigitone system joint. From the barrel gun with proprietary nozzles that dispenses the filler accurately, to the screw head filler template and cleaning brush, this kit is an all-in-one installation solution.

Rigitone Primer

Rigitone Filler Accessory Kit

Rigitone Pattern Spacer

Rigitone Filler

Rigitone installation

Rigitone is specially designed to be screw fixed to suspended ceilings. Its unique installation method allows the product's perforated pattern to continue undisrupted where sheets meet. Unlike the traditional three coat plasterboard jointing systems, Rigitone boards are jointed by directing a specialised compound into a gap between the sheets. The filling method is made possible by the unique Rigitone Filler Accessory Kit, combined with the Rigitone Filler compound. While all four edges of Rigitone sheets are pre-primed, cut edges must be sealed with Rigitone Primer prior to installation, readying the surface for the filler compound.

Protone and Standard installation

Protone and Standard 6mm Round perforated plasterboard products are screw fixed to suspended concealed grid, or direct fixed to framing and finished with a three coat jointing system. The sheets are installed with the long edges at right angles to the direction of the framing with maximum 600mm centres.

Insulation is limited to 50mm thick and 14kg/m^3 density.

Joints should be sanded smooth prior to decoration. Full installation details available.

Painting

After the joints are completed, the surface of the plasterboard is painted in accordance with the paint manufacturer's specifications using a paint roller, taking care to paint the surface only, and not the voids.

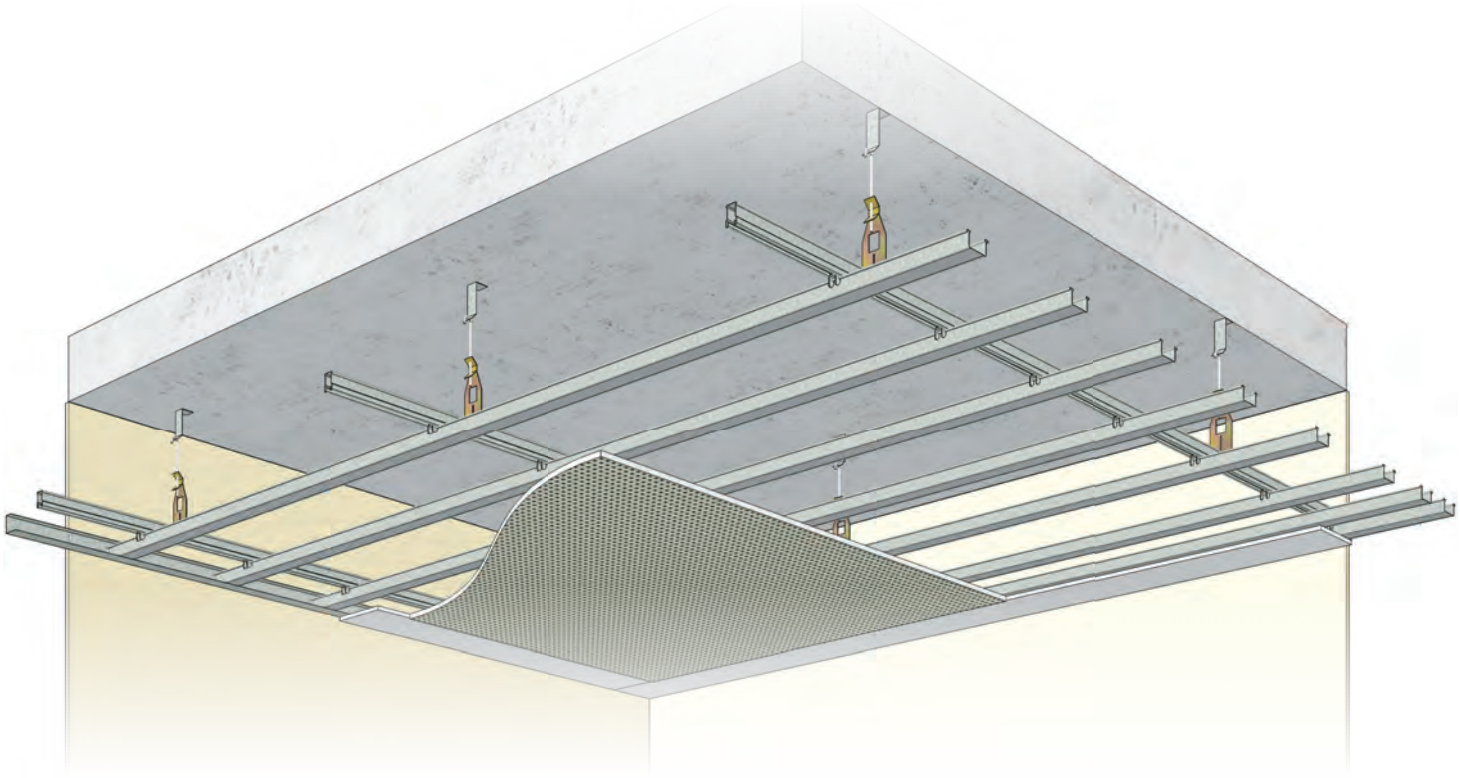
Long nap and heavily loaded paint rollers should be avoided for this reason. Water-based paints are required for boards that contain Activ'Air technology. Repainting will not impact the performance of Activ'Air.

Warranties

Potter Interior Systems products are designed to achieve optimal performance when part of a CSR integrated system.

Gyprock Standard 6mm Round perforated plasterboard is Manufactured For Life in Australia and is warranted by CSR for the usual lifetime of the product.

CSR warrants its International Alliance Rigitone and Protone products to remain free of defects in material and manufacture for a minimum of 7 years.



PROTONE 12mm SQUARE MINIGRID

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