

KNAUF



Stratopanel

ACOUSTIC PERFORATED PLASTERBOARD

WITH AIR PURIFYING **CLENEO**
TECHNOLOGY

FOR CEILINGS AND WALLS

Disclaimer

Products manufactured and systems designed by Knauf are produced in accordance with the Building Code of Australia and relevant Australian Standards. Information in this document is to be used as a guide only and is subject to project approval as many aspects of construction are not comprehensively covered. It is also the responsibility of the project to determine if Knauf's products and systems are suitable for the intended application. Knauf Plasterboard Pty Ltd will not be held responsible for any claims resulting from the installation of its products or other associated products not in accordance with the recommendations of the manufacturer's technical literature or relevant Australian Standards.

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please contact Knauf's Customer Service Centre on

1300 724 505
(Knauf Plasterboard) or
1300 725 675
(Knauf Metal)

Warranty

Knauf Plasterboard and Knauf Metal products are guaranteed by a 10 Year Warranty.

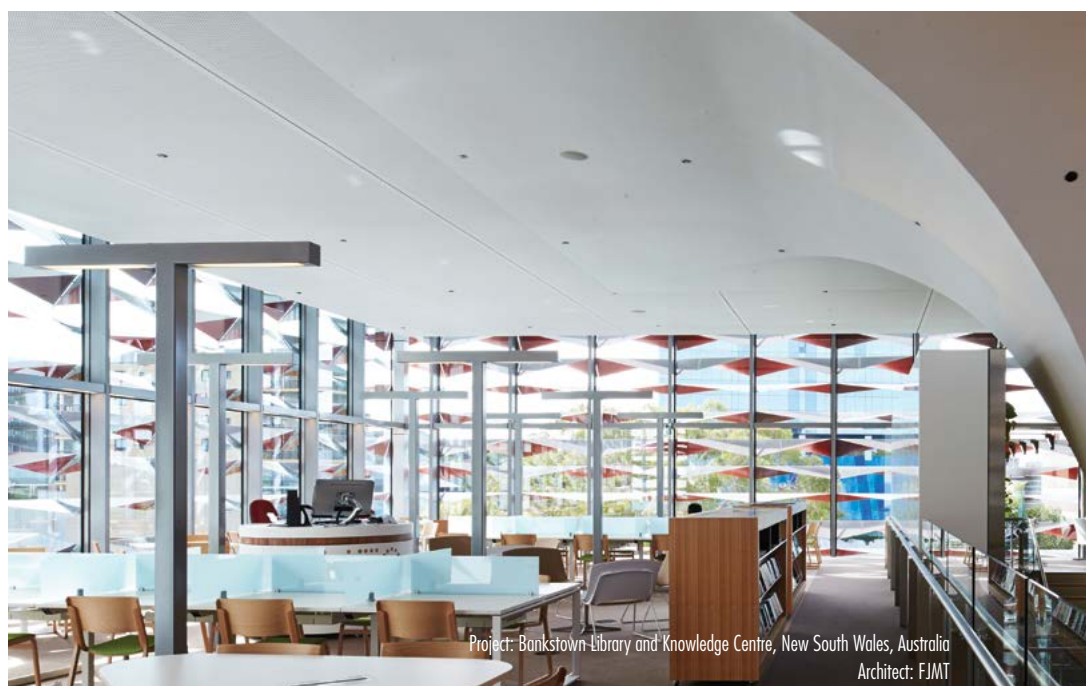
Visit www.knauf.solutions

Version 5

November 2020

Stratopanel with CLEANEO Technology is manufactured in accordance with quality systems certified as complying to ISO 9001:2015.

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Stratopanel with CLEANEO Technology brings a breath of fresh air to acoustic wall and ceiling linings. Delivering excellent acoustic performance, stunning aesthetics and CLEANEO air cleaning properties, Stratopanel is the smart choice for all commercial applications.

Stratopanel is the new name for Cleaneo and incorporates the original CLEANEO Technology. Manufactured with high quality, ultra-sharp perforations in a variety of continuous perforated patterns for a seamless finish, Stratopanel with CLEANEO Technology meets the high level of acoustic performance required for commercial public areas such as offices, retail centres, schools, hospitals, conference halls and hospitality spaces. It is also the world's first acoustic wall and ceiling lining with built-in air purification.

Stratopanel with CLEANEO Technology incorporates dehydrated zeolite, an aggregate mineral with a nanoporous structure in the patented manufacturing process. Zeolite, together with gypsum, creates a large inner layer of surfaces within the board itself. This inner layer works to reduce both smells and airborne pollutants such as volatile organic compounds (VOCs) e.g. formaldehyde, benzene and ammonia.

Excellent acoustic performance, a range of seamless aesthetic designs to choose from and the unique CLEANEO air purifying technology are the key benefits of using Stratopanel.



Project: Griffith University Students Centre, Queensland, Australia
Architect: Cox Rayner Architects



YOU HEAR SOUND BUT YOU FEEL ACOUSTICS

Good acoustics are unnoticeable. The comfort you feel, when being in a room with good acoustics, is the essence of a perfect balance between the sound you hear and the room you see. It is this combination of sound, materials and surfaces that creates great living spaces.

Our mission is to help make your inspiration a reality, and we leave nothing to chance in pursuit of that goal.

ACOUSTIC CALCULATOR

Knauf Reverberation Time Calculator is an innovative acoustic online tool that calculates the Reverberation Time (RT60 or T) of a room.

The acoustic calculator has been developed in-house and is unique and exclusive to Knauf. It allows designers to use their selected pattern to achieve the desired room acoustics and references the Australian Standard AS/NZS 2107.



Find it at knaufcalculators.com.au/



Project: Melbourne School of Design Building, Victoria, Australia
Architect: John Wardle Architects



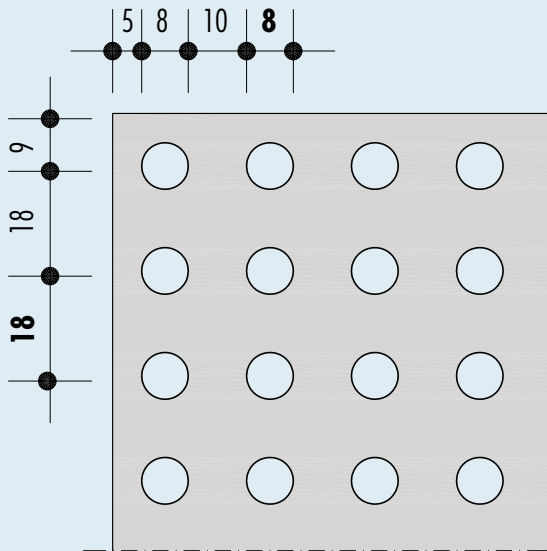
Project: Northern Beaches Christian School, New South Wales, Australia
Architect: BVN

Product Range

STANDARD PERFORATION RANGE

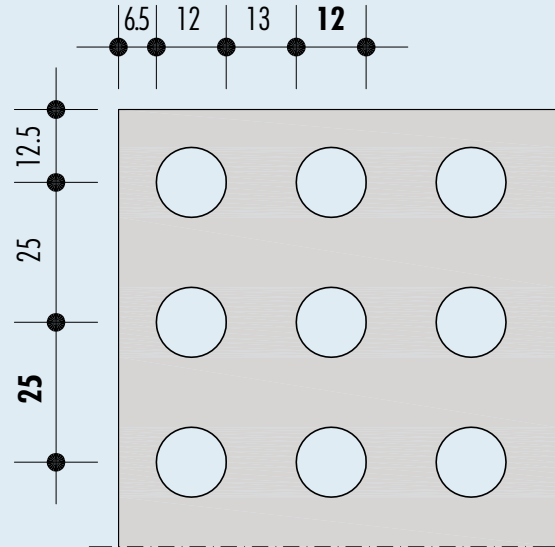
(Stocked in Australia with Black acoustic fleece)

CIRCULAR 8/18 R



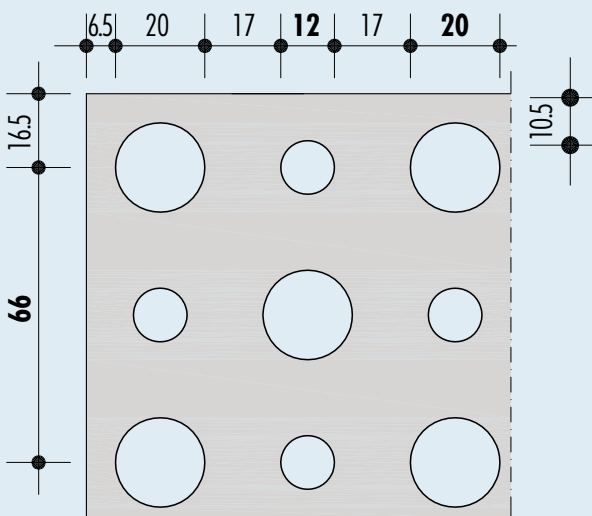
Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1188	1998	9.9	15.5

CIRCULAR 12/25 R



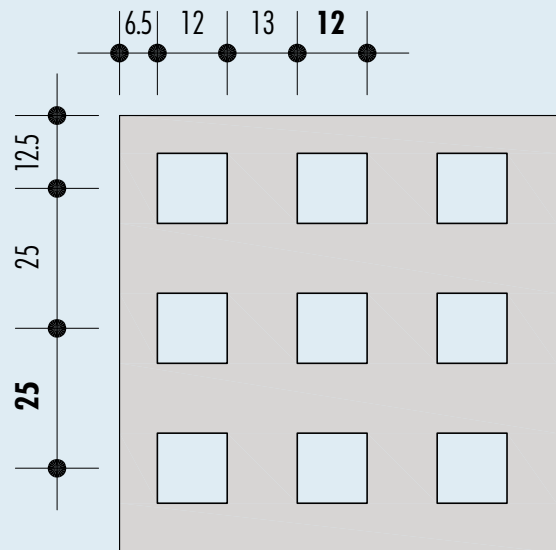
Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1200	2000	9.6	18.1

ALTERNATING CIRCULAR 12/20/66 R



Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1188	1980	9.4	19.6

SQUARE 12/25 Q



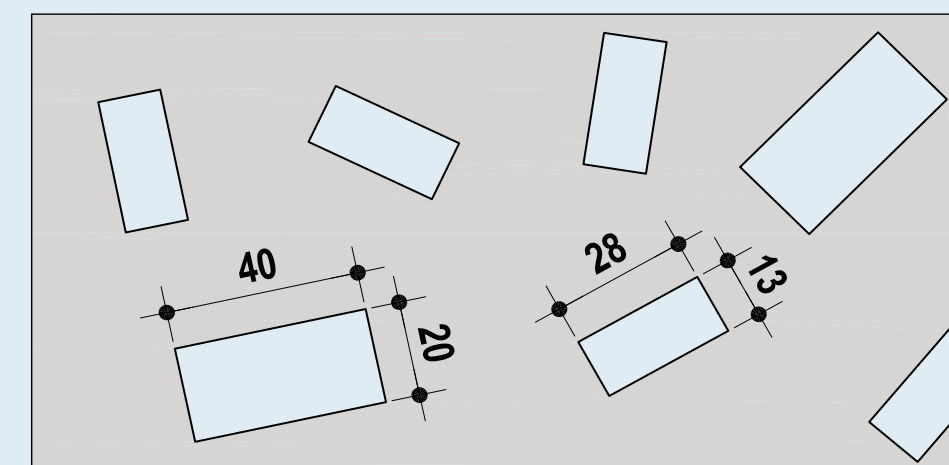
Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1200	2000	9.2	23.0

*Weights indicated are nominal

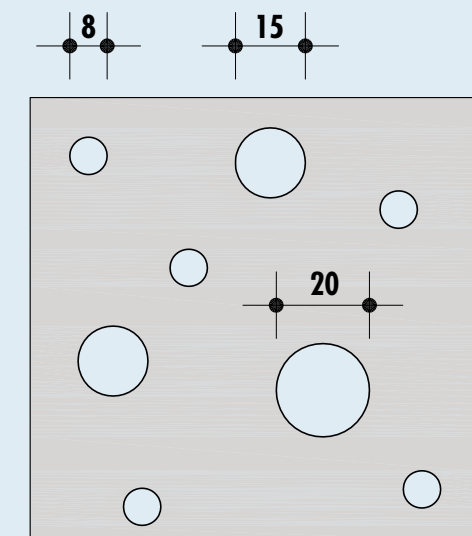
RANDOM RECTANGULAR RE ^{NEW}

Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1199	1999	9.3	13.6

Knauf has introduced an exciting new pattern with a stunning and distinctive look that is guaranteed to deliver both great acoustics and unique style to your next project.



RANDOM PLUS 8/15/20 R



Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1200	2000	10.5	9.9



*Weights indicated are nominal

SPECIALTY PERFORATION RANGE

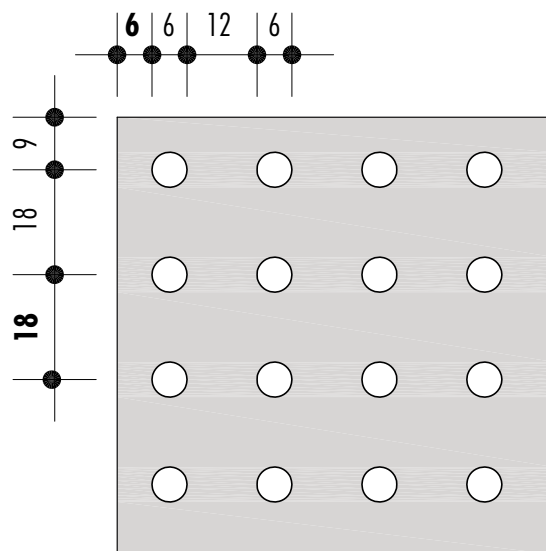
(Available to order with typical lead times of 12-16 weeks)

ROOM FOR EXPRESSION

Knauf provides **room for expression** with an additional selection of specialty Stratopanel perforations available to order for unique, stand-out projects. These patterns are not stocked in Australia but are shipped from our state-of-the-art facility in Iphofen, Germany.

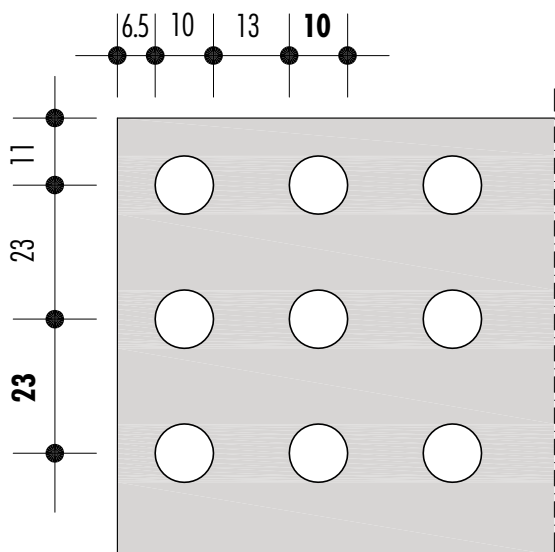
With a typical lead time of 12-16 weeks, your project is guaranteed a high quality and individual finish. Choose from the range of specialty perforations shown as well as a choice of black or white fleece and edge type of choice (see further details on page 9)

CIRCULAR 6/18 R



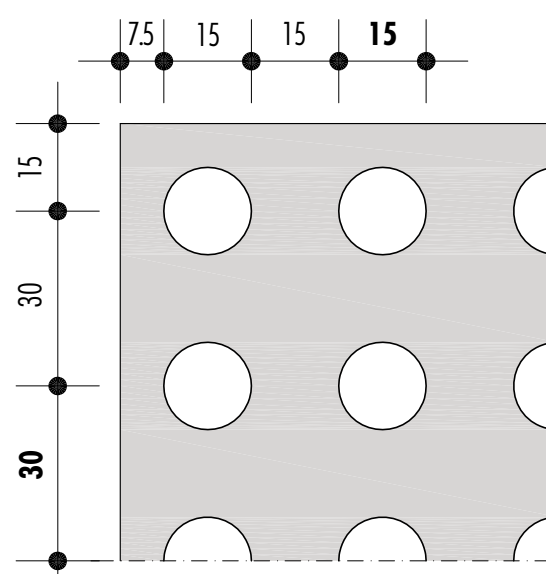
Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1188	1998	10.7	8.7

CIRCULAR 10/23 R



Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1196	2001	9.9	14.8

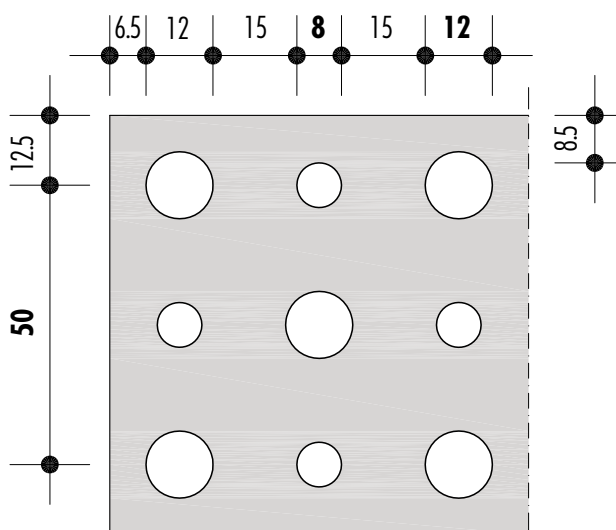
CIRCULAR 15/30 R



Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1200	1980	9.3	19.6

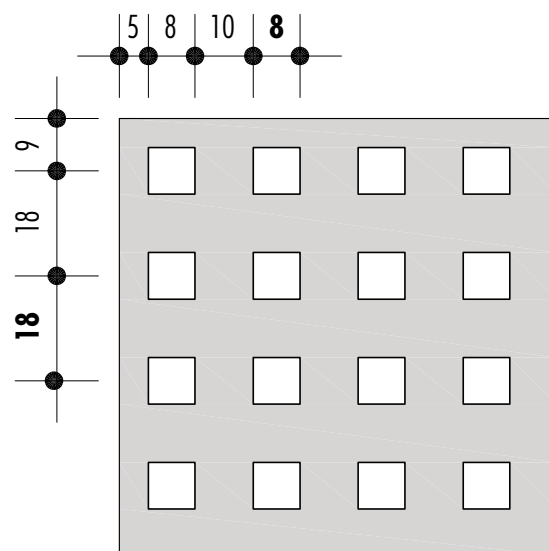
*Weights indicated are nominal
Minimum quantities and lead times apply to non stock items

ALTERNATING CIRCULAR 8/12/50 R



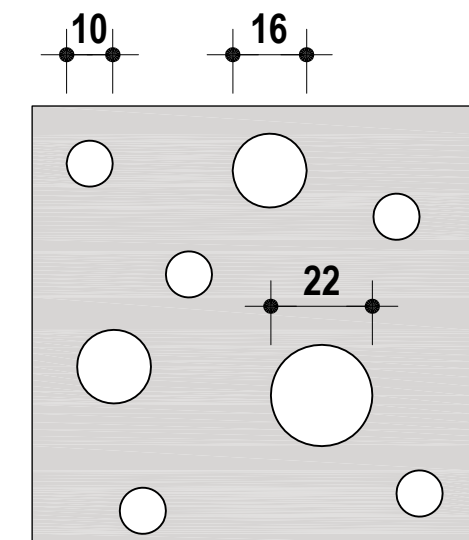
Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1200	2000	10.2	13.1

SQUARE 8/18 Q



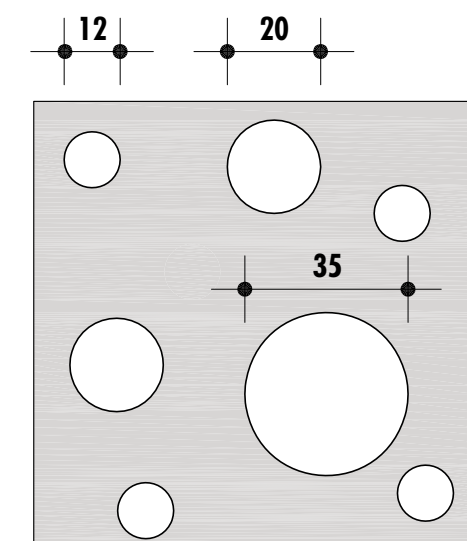
Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1188	1998	9.4	19.8

RANDOM PLUS 10/16/22 R



Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1200	2000	8.4	12.6

RANDOM PLUS 12/20/35 R



Thickness (mm)	Width (mm)	Length (mm)	Weight* (kg/m ²)	Open Area (%)
12.5	1200	1875	10.5	9.8

*Weights indicated are nominal
Minimum quantities and lead times apply to non stock items

EDGE TYPE

UFF Edge

All standard Stratopanel perforation patterns now come with the NEW UFF edge profile – literally 'Umlaufende Falzfuge' which translates as surrounding notch joint.

The unique next generation technology of UFF edge profile offers key benefits over the former FF edge:

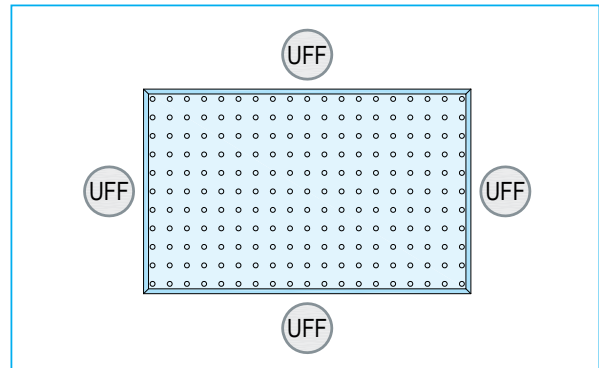
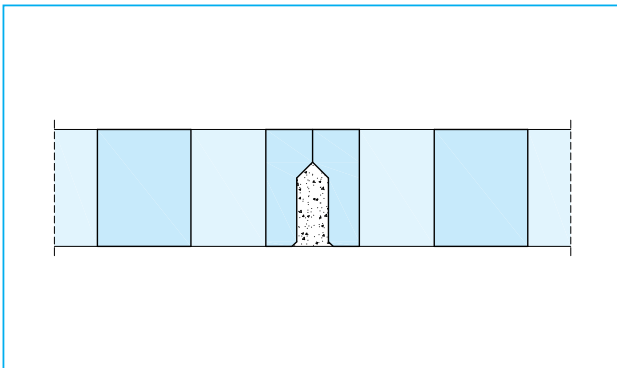
- Pre-primed on all four edges
- Improved tough edge protection
- 180° rotation of cut sheets possible
- Simpler installation with less site waste



Leave UFF joints unfilled when an expressed joint appearance is preferred, this installation has the advantage of not requiring control joints. For specification support please contact the Knauf Knowhow team at knowhow@knauf.com.au.

The new UFF edge profile easily facilitates precise alignment of the perforated boards, ensuring that the boards are straight and the continuous perforation patterns align perfectly.

UFF edge is used when a totally jointless appearance is required. Joints are tapeless and virtually invisible when professionally finished with Uniflott jointing.



Design	Perforation pattern	Perforation ratio (%)	Board dimensions		Edge type
			Width mm	Length mm	UFF
Standard perforation patterns					
Circular R	8/18 R	15.5	1188	1998	•
	12/25 R	18.1	1200	2000	•
Square Q	12/25 Q	23.0	1200	2000	•
Alternating Circular R	12/20/66 R	19.6	1188	1980	•
Random PLUS R	8/15/20 R	9.9	1200	2000	•
Random Rectangular RE	-	13.6	1199	1999	•
Specialty perforation patterns					
Circular R	6/18 R	8.7	1188	1998	◦
	10/23 R	14.8	1196	2001	◦
	15/30 R	19.6	1200	1980	◦
Square Q	8/18 Q	19.8	1188	1998	◦
Alternating Circular R	8/12/50 R	13.1	1200	2000	◦
Random PLUS R	10/16/22 R	12.6	1200	2000	◦
	12/20/35 R	9.8	1200	1875	◦

• Standard stock

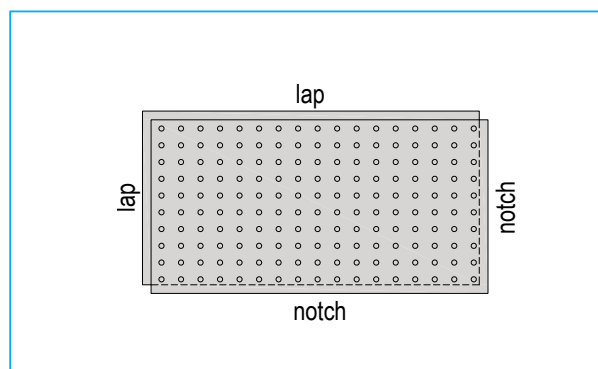
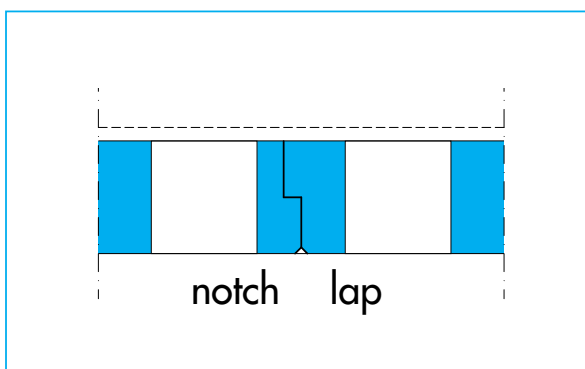
◦ Available to order minimum quantities and lead times apply

SPECIALTY EDGE TYPE

(Available to order with typical lead times of 12-16 weeks)

Linear Edge

Knauf provides **room for expression** with Linear edge, offering the fastest installation for acoustic plasterboard. Linear edge boards come with bright white paper and do not need a sealer undercoat. The Linear edge enables boards to be installed without jointing compounds, resulting in a 1 mm bevelled 'micro V-joint' all around each sheet. The lap and notch cut edge on one long and one short side allows for a precise fit, resulting in the 'V-joint' becoming virtually invisible when painted. As no joint setting is required linear edge boards are also easily removable and reusable.



Design	Perforation pattern	Perforation ratio (%)	Board dimensions		Edge type
			Width mm	Length mm	Linear
Standard perforation patterns					
Circular R	8/18 R	15.5	1188	1998	○
	12/25 R	18.1	1200	2000	○
Square Q	12/25 Q	23.0	1200	2000	○
Alternating Circular R	12/20/66 R	19.6	1188	1980	○
Specialty perforation patterns					
Circular R	10/23 R	14.8	1196	2001	○

○ Available to order minimum quantities and lead times apply

ACCESS PANEL

Stratopanel Access Panels are designed specifically for Stratopanel wall and ceiling linings. A range of patterns and sizes matched to the Stratopanel perforations to maintain a seamless finish over access points in the wall or ceiling system.

600 x 600 Stratopanel access panels are stocked for the standard perforation patterns. Other sizes and patterns are available to order.



INSTALLATION STRATOPANEL CEILING ACCESS PANEL

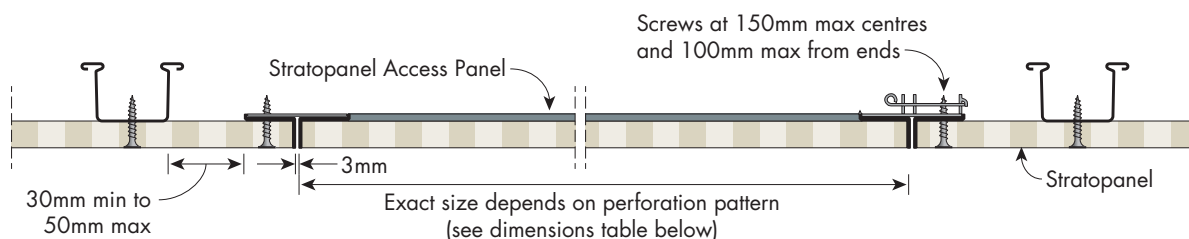


FIGURE 1 Stratopanel Access Panel
Section








ACCESS PANEL DIMENSIONS

Perforation pattern	Access panel size in mm [Stratopanel opening = Access panel size + 4mm]							
	approx. 200x200	approx. 300x300	approx. 400x400	approx. 500x500	approx. 600x600	approx. 700x700	approx. 800x800	
Standard perforation patterns								
Circular R	8/18 R	217 x 217	307 x 307	415 x 415	505 x 505	613 x 613•	703 x 703	811 x 811
	12/25 R	201 x 201	301 x 301	401 x 401	501 x 501	601 x 601•	701 x 701	801 x 801
Square Q	12/25 Q	201 x 201	301 x 301	401 x 401	501 x 501	601 x 601•	701 x 701	801 x 801
Alternating Circular R	12/20/66 R	265 x 265	331 x 331	463 x 463	529 x 529	661 x 661•	727 x 727	793 x 793
Random Plus R	8/15/20 R	200 x 200#	300 x 300#	400 x 400#	500 x 500#	600 x 600#•	700 x 700#	800 x 800#
Random Rectangular RE	Random RE							
Specialty perforation patterns								
Circular R	6/18 R	217 x 217	307 x 307	415 x 415	505 x 505	613 x 613	703 x 703	811 x 811
	10/23 R	208 x 208	300 x 300	415 x 415	507 x 507	622 x 622	714 x 714	806 x 806
	15/30 R	211 x 211	301 x 301	421 x 421	511 x 511	601 x 601	721 x 721	811 x 811
Square Q	8/18 Q	217 x 217	307 x 307	415 x 415	505 x 505	613 x 613	703 x 703	811 x 811
Alternating Circular R	8/12/50 R	200 x 200	300 x 300	400 x 400	500 x 500	600 x 600	700 x 700	800 x 800

#Access panels for random perforation patterns are supplied with a blank plasterboard infill panel. Remove the plasterboard infill panel as a template to cut a hole in the random perforation board and use this cut piece in place of the blank panel.

• Standard stock (other sizes and patterns available to order - minimum quantities and lead times apply)

ACCESSORIES

<p>UNIFLOTT JOINTING COMPOUND</p> <p>Uniflott is a jointing compound used to deliver a strong, seamless finish. Uniflott must be used for the installation of Stratopanel. As an approximate guide a 5 kg bag will cover 50 m² of installed Stratopanel (FF edge).</p>	
<p>KNAUF WIDE FURRING CHANNEL</p> <p>Knauf Furring channel with a wide fixing face (>60mm) must be used at all short edge joints.</p>	
<p>PVA Based Primer</p> <p>Prime cut edges of Stratopanel and plasterboard strips with PVA based primer, prior to jointing with Uniflott.</p>	
<p>Cap Screws</p> <p>Screw and cap for easy fixing of boards with round perforations. Cap Screws remove the need for setting screw heads, as screw fixings are hidden in the perforations holes improving the appearance of the final finish. They are ideal for use with Linear edge which does not require jointing. Available in 8, 10 and 12mm diameter and now also in 12mm square. Allow approximately 32 caps per sheet.</p>	 
<p>Jet Spatula with Raised Edge</p> <p>Very useful tool for 'chipping' off excess filler from joints once Uniflott hardens. This helps to reduce damage to perforations.</p>	
<p>Jet Trowel with Punch</p> <p>Trowel which can be used to easily patch screw heads in Stratopanel with finishing compound, providing a neat finish.</p>	

Performance

AIR CLEANING

The quality of the air we breathe has a profound effect on human health and wellbeing.

Apart from just being generally unpleasant, poor air quality in buildings can lead to headaches, fatigue and concentration problems. Studies show that we spend up to 90% of our time indoors, so it's vitally important that we maintain the quality of the air in buildings. But the air in many public and private buildings is heavily contaminated with toxic compounds and unpleasant odours and the problem isn't confined to offices and residential buildings. Many schools suffer from very poor indoor air quality, which can impact the concentration and performance of students. The air in hospitals can also be contaminated and despite so much care being taken to keep wards and operating theatres clean, patients can be exposed to health risks from breathing contaminated air.

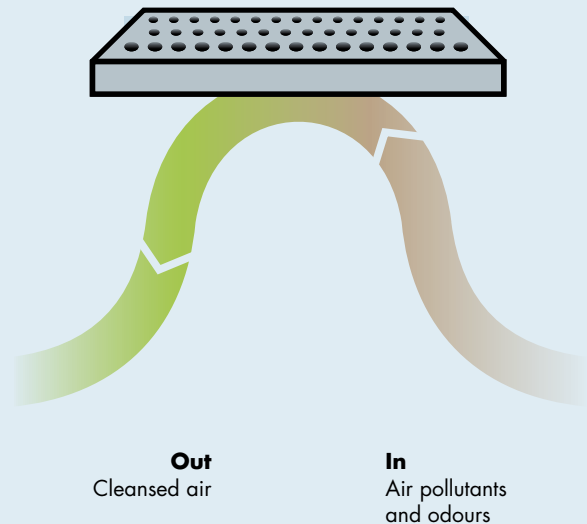
Everyday substances including paints and lacquers, cleaning and fabric-care products, perfumes, hair sprays, glues and solvents all create potentially harmful emissions, including a family of chemicals called Volatile Organic Compounds (VOCs), which have been linked to allergies, asthma and even cancer.

Computers and electronic equipment further contribute to the problem. Even the very materials that the building's made of can release pollutants, from plywood or particleboard to foam insulation and other materials. It's an unsettling thought that the room you're sitting in right now, may be silently exhaling a mixture of toxins, including formaldehyde, benzene and trichloroethylene, into the air that you're breathing.

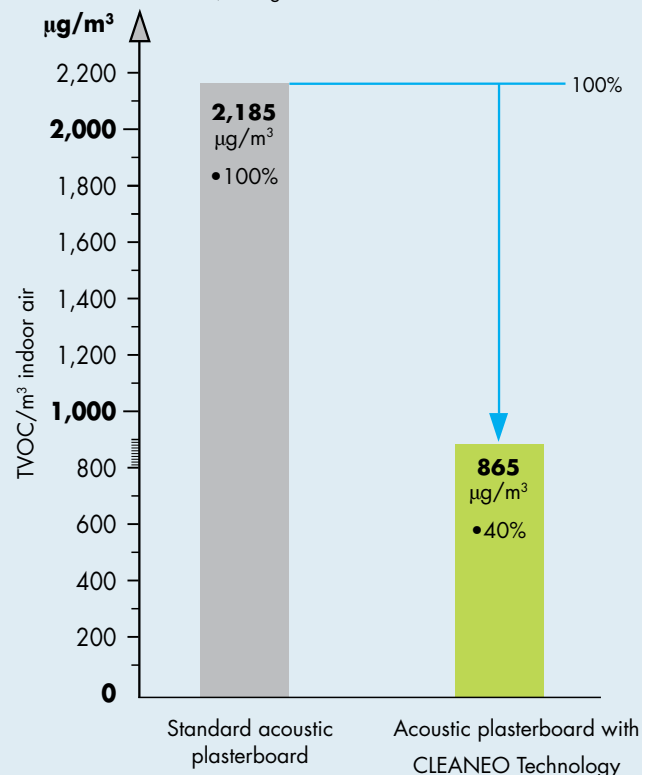
To make matters worse, in a bid to maximise energy efficiency, many new buildings are effectively airtight cells. As well as effectively containing heat, some modern buildings can trap pollutants, allowing the contaminants to build up.

In most commercial buildings, ceilings and walls provide the greatest surface area interacting with indoor air. When the ceiling or walls are lined with Stratopanel with CLEANEO Technology, cleaner air and a major impact on wellbeing can be achieved.

How CLEANEO Technology Works



Example*: **Reduction TVOC in room for smokers** comparing measurements with samples from passive accumulations, room volume 75m³, configuration rate 0.3m²/m³



*Source: Stuttgart College of Technology with supporting measurements and tests undertaken by Stuttgart Central Laboratory, University of Kaiserslautern and others.

HOW IT WORKS

CLEANEO Technology is derived from a natural volcanic rock called Zeolite. Stratopanel contains zeolite which absorbs and eliminates a host of environmental air pollutants including VOCs such as formaldehyde. As the air streams through the perforations in the Stratopanel, unpleasant pollutants are removed, leaving the air cleaner. And the CLEANEO effect continues to improve air quality long after installation.

With a three dimensional pore system and pore diameters of less than one millionth of a millimetre, the zeolites help create a gigantic inner surface layer

which acts as a naturally occurring 'sieve' capable of capturing and removing gas and liquid impurities from the air.

Independent laboratory tests at the Fraunhof Institute for Building Physics in Germany highlight the effectiveness of CLEANEO products, demonstrating a significant reduction in the number of airborne pollutants including tobacco smoke, triethylamine, ammonia, formaldehyde, benzene, aromatic hydrocarbons and chlorinated hydrocarbons.

ACOUSTIC PERFORMANCE

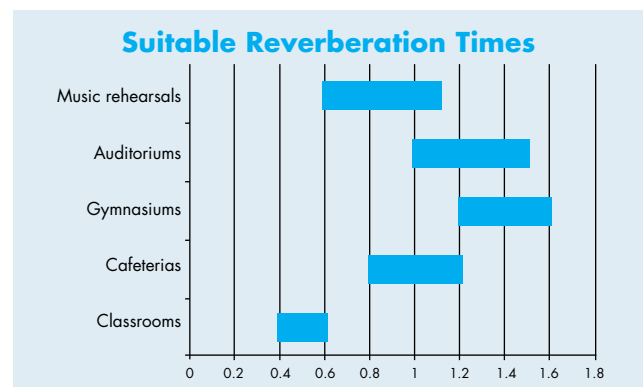
Whilst Stratopanel has unique air purifying capabilities, its main function is as an acoustic lining.

When designing restaurants, offices, hospitals and other public buildings, good acoustics help create a comfortable environment. In a classroom it is important that low frequencies are well absorbed, so that excessive noise does not distract the pupils from learning. At the same time, the high consonant frequency range should be well reflected since this is essential for good speech intelligibility.

In restaurants large glass facades and hard materials on floors and walls amplify the noise, therefore it is important, even in lively restaurants, to spread and dampen the sound in selected places. The degree to which sound is reflected or absorbed can be described by "reverberation time", i.e. echo within a room. The α_w rating, or NRC to a more limited extent, of a product describes how well it absorbs sound and therefore controls the reverberation time. Well-designed acoustic products absorb sound evenly across the

frequency range, therefore no area of the frequency range has low sound absorption and high reverberation. By using Stratopanel, it is not necessary to compromise acoustic performance.

Stratopanel lining has excellent sound absorption values across the frequency range and achieves an α_w or NRC rating of up to 0.8*, depending on the choice of pattern, use of Knauf insulation and the void depth. The ideal reverberation time depends on the use of the space and the graph below highlights some suggested reverberation times (in seconds) to optimise the acoustic environment.



*Square pattern 12/25 Q, 65 or 112.5mm cavity with 50mm EarthWool (min 14kg/m³)



To find out more about acoustics in schools, hospitals, workplaces or restaurants - download our acoustic design ebooks at [knauf.solutions](https://www.knauf-solutions.com) or contact our Technical team for further advice.

Acoustic Performance

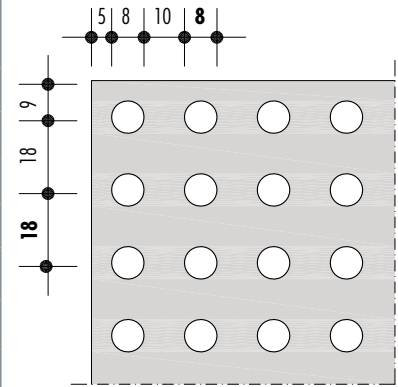
STANDARD RANGE

CIRCULAR 8/18 R

Furring Channel Centres: 333mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.15	0.3	0.6	0.75	0.65	0.6	0.6	0.6
	200	0.45	0.6	0.7	0.6	0.55	0.65	0.6	0.6
	400	0.55	0.65	0.6	0.6	0.55	0.65	0.6	0.6
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.35	0.55	0.7	0.75	0.65	0.65	0.7	0.65
	200	0.5	0.65	0.7	0.65	0.6	0.7	0.65	0.65
	400	0.55	0.65	0.6	0.7	0.6	0.65	0.65	0.65

Open Area: 15.5%

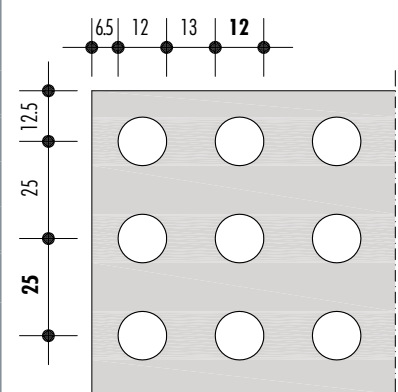


CIRCULAR 12/25 R

Furring Channel Centres: 333.3mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.15	0.3	0.6	0.8	0.7	0.55	0.6	0.6
	200	0.45	0.65	0.75	0.65	0.6	0.6	0.65	0.65
	400	0.55	0.7	0.65	0.65	0.6	0.6	0.65	0.65
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.3	0.55	0.75	0.8	0.7	0.6	0.75	0.7
	200	0.5	0.7	0.75	0.7	0.65	0.65	0.7	0.7
	400	0.55	0.65	0.7	0.75	0.65	0.65	0.7	0.7

Open Area: 18.1%

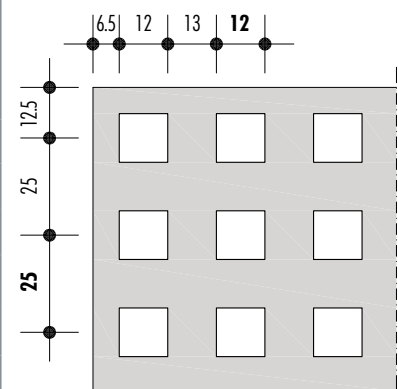


SQUARE 12/25 Q

Furring Channel Centres: 333.3mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.1	0.3	0.6	0.8	0.75	0.6	0.6	0.6
	200	0.5	0.7	0.8	0.7	0.65	0.65	0.7	0.7
	400	0.6	0.75	0.65	0.7	0.65	0.6	0.7	0.7
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.3	0.6	0.85	0.9	0.75	0.7	0.8	0.8
	200	0.55	0.75	0.8	0.75	0.75	0.75	0.8	0.75
	400	0.6	0.75	0.7	0.8	0.75	0.7	0.75	0.75

Open Area: 23.0%

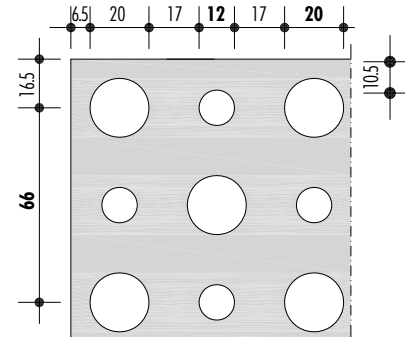


ALTERNATING CIRCULAR 12/20/66 R

Furring Channel Centres: 330mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.1	0.3	0.6	0.8	0.6	0.55	0.6	0.6
	200	0.45	0.65	0.8	0.65	0.5	0.6	0.6	0.65
	400	0.6	0.7	0.65	0.65	0.55	0.6	0.65	0.65
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.3	0.55	0.8	0.85	0.6	0.65	0.7	0.7
	200	0.55	0.7	0.8	0.75	0.6	0.65	0.7	0.7
	400	0.6	0.7	0.7	0.8	0.6	0.65	0.7	0.7

Open Area: 19.6%

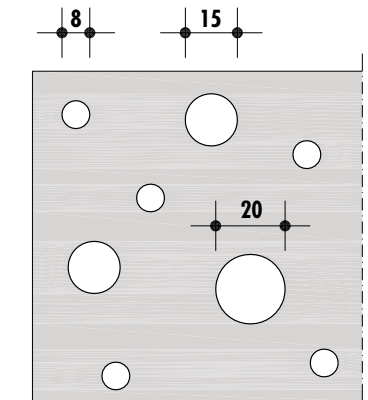


RANDOM PLUS 8/15/20 R

Furring Channel Centres: 333.3mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.15	0.3	0.5	0.6	0.45	0.45	0.5	0.45
	200	0.4	0.5	0.55	0.5	0.4	0.45	0.5	0.5
	400	0.45	0.5	0.5	0.5	0.4	0.45	0.5	0.5
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.35	0.45	0.55	0.55	0.4	0.45	0.5	0.5
	200	0.45	0.5	0.55	0.5	0.4	0.5	0.5	0.5
	400	0.45	0.5	0.5	0.55	0.45	0.45	0.5	0.5

Open Area: 9.9%

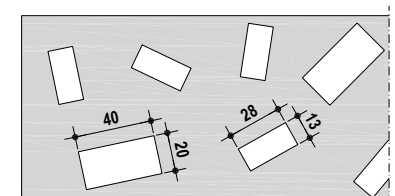


RANDOM RECTANGULAR RE

Furring Channel Centres: 333.3mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.15	0.3	0.55	0.7	0.45	0.4	0.5	0.5
	200	0.4	0.5	0.65	0.6	0.4	0.45	0.5	0.55
	400	0.45	0.55	0.55	0.6	0.45	0.45	0.55	0.55
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.3	0.5	0.65	0.7	0.45	0.45	0.55	0.55
	200	0.45	0.55	0.65	0.65	0.45	0.45	0.55	0.55
	400	0.45	0.55	0.6	0.65	0.45	0.5	0.55	0.55

Open Area: 13.6%



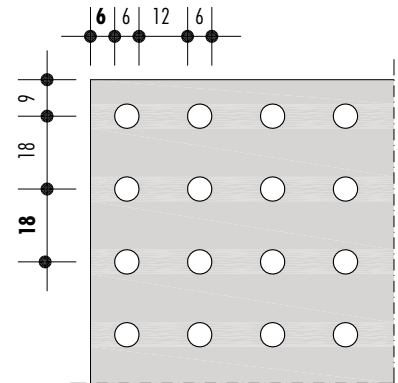
SPECIALITY RANGE

CIRCULAR 6/18 R

Furring Channel Centres: 333mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.2	0.3	0.45	0.55	0.45	0.45	0.5	0.45
	200	0.4	0.45	0.5	0.45	0.4	0.5	0.45	0.45
	400	0.4	0.45	0.45	0.45	0.45	0.5	0.45	0.45
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.35	0.45	0.5	0.5	0.45	0.5	0.5	0.5
	200	0.4	0.45	0.5	0.45	0.45	0.5	0.5	0.45
	400	0.4	0.45	0.45	0.5	0.45	0.5	0.5	0.45

Open Area: 8.7%

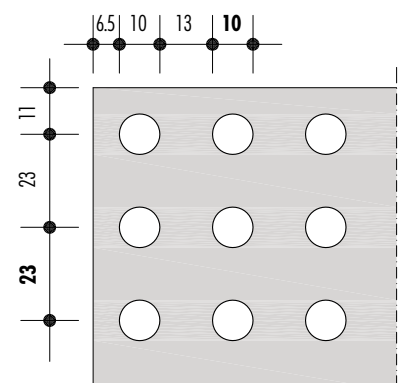


CIRCULAR 10/23 R

Furring Channel Centres: 333.5mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.15	0.3	0.6	0.7	0.65	0.6	0.6	0.55
	200	0.45	0.6	0.65	0.6	0.55	0.6	0.6	0.6
	400	0.55	0.65	0.6	0.6	0.55	0.6	0.6	0.6
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.35	0.55	0.7	0.7	0.6	0.65	0.7	0.65
	200	0.5	0.65	0.7	0.65	0.6	0.65	0.65	0.65
	400	0.55	0.65	0.6	0.65	0.6	0.65	0.65	0.65

Open Area: 14.8%

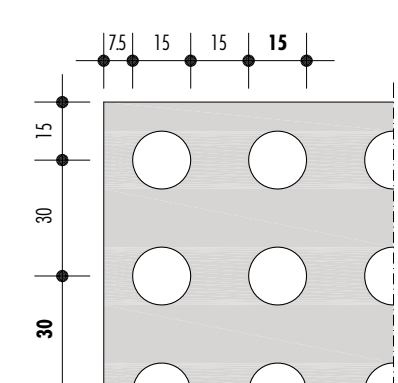


CIRCULAR 15/30 R

Furring Channel Centres: 330mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.15	0.3	0.6	0.8	0.65	0.6	0.6	0.6
	200	0.45	0.65	0.75	0.65	0.6	0.6	0.65	0.65
	400	0.55	0.7	0.65	0.65	0.6	0.6	0.65	0.65
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.3	0.55	0.8	0.8	0.65	0.65	0.75	0.7
	200	0.5	0.7	0.75	0.7	0.65	0.65	0.7	0.7
	400	0.55	0.7	0.65	0.75	0.65	0.65	0.7	0.7

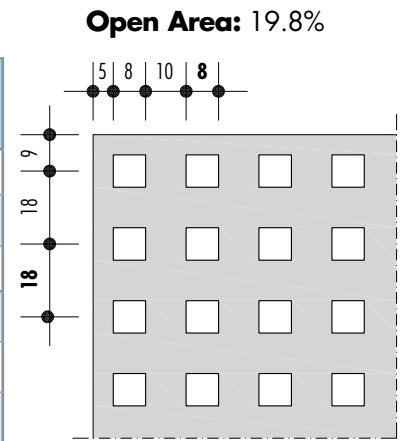
Open Area: 19.6%



SQUARE 8/18 Q

Furring Channel Centres: 333mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.1	0.3	0.6	0.8	0.7	0.65	0.6	0.6
	200	0.45	0.65	0.75	0.65	0.6	0.7	0.65	0.65
	400	0.55	0.7	0.65	0.65	0.6	0.7	0.65	0.65
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.3	0.55	0.8	0.8	0.7	0.75	0.75	0.7
	200	0.55	0.7	0.75	0.7	0.7	0.75	0.75	0.7
	400	0.6	0.7	0.7	0.75	0.7	0.75	0.75	0.7

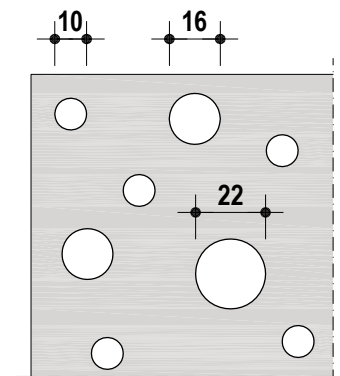


RANDOM CIRCULAR 10/16/22 R

Furring Channel Centres: 333.3mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.15	0.30	0.60	0.70	0.50	0.45	0.50	0.55
	200	0.45	0.60	0.70	0.55	0.45	0.45	0.55	0.55
	400	0.50	0.60	0.60	0.55	0.45	0.50	0.55	0.55
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.35	0.55	0.75	0.70	0.45	0.50	0.60	0.55
	200	0.50	0.60	0.65	0.65	0.45	0.50	0.60	0.55
	400	0.50	0.55	0.60	0.65	0.50	0.60	0.55	0.60

Open Area: 12.6%

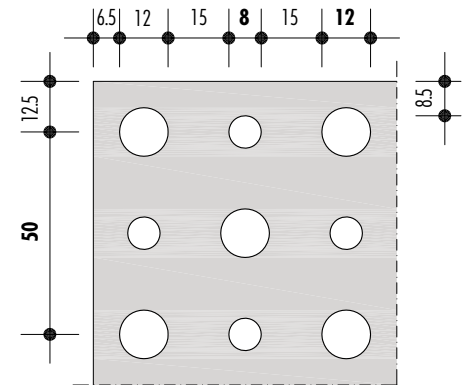


ALTERNATING CIRCULAR 8/12/50 R

Furring Channel Centres: 333.3mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.15	0.3	0.6	0.7	0.6	0.5	0.6	0.55
	200	0.45	0.6	0.65	0.6	0.5	0.55	0.6	0.6
	400	0.55	0.65	0.6	0.6	0.55	0.55	0.6	0.6
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.35	0.55	0.7	0.7	0.6	0.5	0.65	0.65
	200	0.5	0.65	0.65	0.65	0.55	0.55	0.65	0.65
	400	0.55	0.65	0.6	0.65	0.55	0.55	0.6	0.6

Open Area: 13.1%

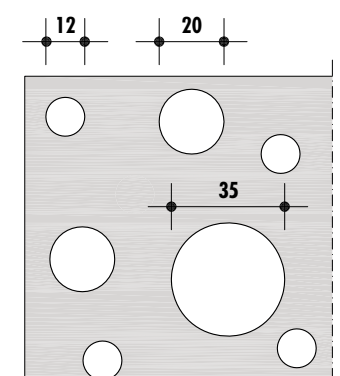


RANDOM PLUS 12/20/35 R

Furring Channel Centres: 312.5mm

	Ceiling Cavity (mm)	α_p Frequency (Hz)						α_w	NRC
		125	250	500	1000	2000	4000		
Without Insulation	65	0.15	0.3	0.55	0.55	0.4	0.35	0.45	0.45
	200	0.4	0.5	0.6	0.45	0.35	0.35	0.45	0.45
	400	0.45	0.55	0.55	0.45	0.35	0.35	0.45	0.5
50mm EarthWool 14 kg/m ³ or 75mm EarthWool 11 kg/m ³	65	0.35	0.5	0.65	0.55	0.35	0.35	0.45	0.5
	200	0.45	0.55	0.6	0.5	0.35	0.4	0.45	0.5
	400	0.45	0.5	0.55	0.5	0.35	0.4	0.45	0.5

Open Area: 9.8%





ST. MONICA'S PARISH PRIMARY SCHOOL

ARCHITECT: BALDASSO CORTESE ARCHITECTS

St Monica's Parish Primary School is situated in the north-western suburbs of Melbourne, in Moonee Ponds. The Senior Centre provides an indoor space for the 150 seniors that increases and diversifies their learning environment. The modern multi-function area accommodates six acoustically separated classrooms, a large central shared open learning area, and a presentation space.

One of the main features of the Senior Centre is a feature curved ceiling, with pebble shaped coffers and skylights with a steel structural support behind. Stratopanel allowed excellent acoustic performance while also allowing the architectural feature of the curved ceiling to be achieved due to the flexibility in the material. The perforations from Stratopanel had to be lined up perfectly to produce a seamless finish that brought the ceiling to life.



“One of the key considerations when building or upgrading a public area is managing the acoustics. Schools have the challenge that they are intended for study, but are often noisy with large numbers of students in one place at any one time,” said Gabriella Muto, Architect at Baldasso Cortese Architects.

“We had used Stratopanel from Knauf previously and knew that the acoustic perforated plasterboard would work well in this environment and be perfect for the classroom and presentation spaces,” Gabriella continues.

Stratopanel provides exceptional acoustic performance ideal for schools and other busy commercial public areas such as conference halls and hospitality spaces. It is also the world’s first acoustic wall and ceiling lining with built-in air purification.

Care and Use



SAFETY

Stratopanel with CLEANEO Technology is not classified as hazardous according to the criteria of the National Occupational Health and Safety Commission (NOHSC). It is non-toxic and non-flammable.

Safety Data Sheets (SDS) for Stratopanel with CLEANEO Technology are available at **knauf.solutions** or by calling **1300 724 505**.

HANDLING, DELIVERY AND STORAGE

To ensure Stratopanel remains in the best condition prior to installation it is important to follow these key recommendations. Generally the board should be protected from any damage or conditions which could affect the final appearance or performance.

- Stratopanel must be kept dry and should be stacked clear of the floor, fully protected from the weather and delivered to sites when lock up stage is complete.

- To reduce the possibility of damage, delivery to site should occur immediately before installation.
- Care should be taken not to damage edges or the surface of the board.
- Exposure to excessive humidity during storage can result in plasterboard becoming damp and soft, and may appear defective. In this case the plasterboard should be allowed to dry out and handled with care during installation.
- Linear edge Stratopanel is UV resistant and will not become discoloured if exposed to direct sunlight or fixed and left standing unpainted for long periods.



To help protect plasterboard from absorbing humidity:

- Avoid open sources of water such as wet floors
- Wrap the plasterboard with plastic
- Provide ventilation
- Install soon after delivery
- Install during dry weather for best results.

Installation

GENERAL REQUIREMENTS

- Install control joints in plasterboard ceilings at:
 - 12m maximum intervals
 - All control joints in the structure
 - Any change in the substrate material
 - At the junction of a large room and passageway.
- Separate plasterboard from building elements made with other materials, such as columns by creating control joints that allow for movement, e.g. utilising a shadow line profile.
- All ceilings in this section are non-trafficable. Do not walk on plasterboard ceilings!
- Attach ceiling fixtures to framing members only. Ensure the framing is designed to carry any additional load.
- Do not rigidly fix Stratopanel to the perimeter.
- Use single shot screw guns for better screw placement between perforations.
- Cut all openings for services for jointing with Unifott.
- Locate ceiling services between framing to avoid cutting of top cross rails or furring channels. If furring channels are cut then provide additional support with top cross rails and hangers. Refer to Figures 5 and 6.
- Particular attention should be given to plasterboard ceilings in close proximity to steel roofing (ie: raked ceiling or similar) as they experience large temperature variations. Careful consideration must be given for higher rates of expansion and contraction of roof and/or ceiling framing, and controls joints at close intervals will be required otherwise cracking of the ceiling and joint peaking may occur.

FRAMING

- Stagger joints in TCR and furring channel by 1200mm
- Install additional framing members around openings
- Fix short edges of Stratopanel boards to wide furring channel.
- Downstruts must be installed for Top Cross Rail suspended ceilings in all buildings except air-conditioned hospitals, offices and shopping centres (other than loading docks) that are effectively sealed where the external walls have non-opening windows.
- Do not fix Stratopanel directly to timber joists.

SPAN (FRAMING CENTRES) FOR STRATOPANEL STANDARD RANGE

Perforation Patterns	Furring Channel Spacing
Circular 8/18 R	333mm
Circular 12/25 R	333.3mm
Square 12/25 Q	333.3mm
Alternating Circular 12/20/66 R	330mm
Random Plus 8/15/20 R	333.3mm
Random Rectangular RE	333.3mm

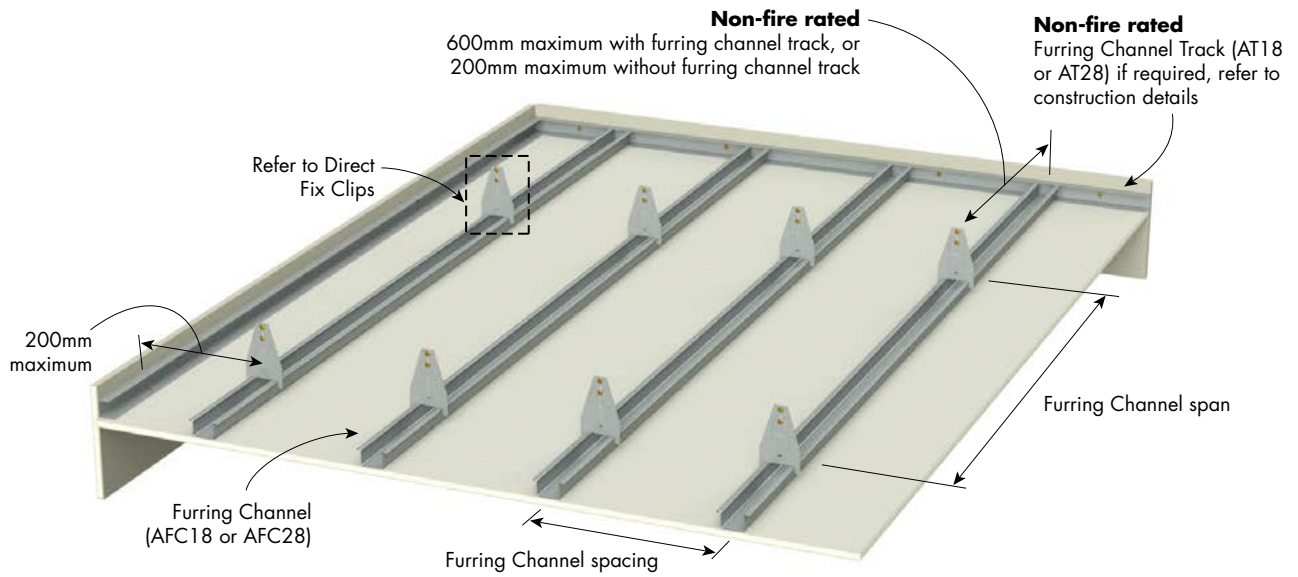
SPAN (FRAMING CENTRES) FOR STRATOPANEL SPECIALTY RANGE

Perforation Patterns	Furring Channel Spacing
Circular 6/18 R	333mm
Circular 10/23 R	333.5mm
Circular 15/30 R	330mm
Square 8/18 Q	333mm
Alternating Circular 8/12/50 R	333.3mm
Random Plus 10/16/22 R	333.3mm
Random Plus 12/20/35 R	312.5mm



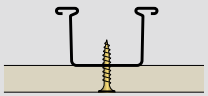
- Stratopanel must have an air cavity behind it for it to perform as a sound absorber.
- Stratopanel installations in close proximity to metal roofs (ie: raked ceiling or with small ceiling cavities) require smaller control joint intervals or joints left unfilled as they are exposed to larger rates of thermal expansion. Also consider using Stratopanel with Linear edge.
- Excessive vibration of the ceiling (by installing ceiling services, etc) is known to cause jointing cracking and joint peaking.

FIGURE 2 Internal Direct Fix Ceiling Frame



28mm FURRING CHANNEL CEILING SPAN TABLE

Refer to Section 2.3 for assistance determining the relevant wind pressures for a specific project.

28mm Furring Channel (AFC28) Ceiling Span Table						
Furring channels at 333mm maximum spacing						
Wind Region	Ultimate Wind Pressure W_u (kPa)	Serviceability Wind Pressure W_s (kPa)	Single Span		2 or more Spans	
			Maximum Span (mm)	Connection Demand (kN)	Maximum Span (mm)	Connection Demand (kN)
REGION A	0.39	0.25	1430	0.14	1770	0.43
	0.47	0.3	1350	0.15	1670	0.46
	0.54	0.35	1280	0.16	1590	0.48
REGION B	0.59	0.25	1430	0.19	1770	0.57
	0.71	0.3	1350	0.20	1670	0.63
	0.83	0.35	1280	0.22	1590	0.68





1. Table based upon downward (suction) and upward (uplift) pressures, intended for internal use only.
2. Table includes self weight and 2 kg/m² insulation weight with an additional 3 kg/m² service load. No further allowance for additional point loads or live loads.
3. Contact Knauf or a structural engineer to check ceiling for earthquake actions. Specific project information is required.
4. Table refers to Knauf Furring Channel of Base Metal Thickness (BMT) 0.42mm of grade G550 steel with Zinalume™ AM150 corrosion protection. Maximum production lengths available are 6.0m
5. Designed in accordance with AS/NZS 4600:2018 Cold Formed Steel Structures and AS/NZS 2785:2000 Suspended Ceilings - Design and Installation.
6. Wind pressures determined in accordance with AS/NZS 1170.2 Wind Actions.
7. Connections to clips must be checked with the Clip Capacity Table in Section 5.1.
8. Ultimate Limit State Load Case 1: 1.2G + W_u (Suction) + $Q_{0.03kPa}$ Service Load
Ultimate Limit State Load Case 2: 0.9G + W_u (Uplift).
9. Serviceability Limit State Load Case 1: G, with deflection limited to Span/500.
Serviceability Limit State Load Case 2: W_s , with deflection limited to Span/360.
10. Perimeter anchors at 600mm maximum centres and 100mm maximum from track ends with minimum 0.7 kN shear capacity.
11. The nominated lateral pressures and deflection limits must be checked for suitability for a specific project.
12. For BCA Building Importance Level 4, please contact Knauf.

KNAUF INTERNAL WIND LOAD CALCULATOR



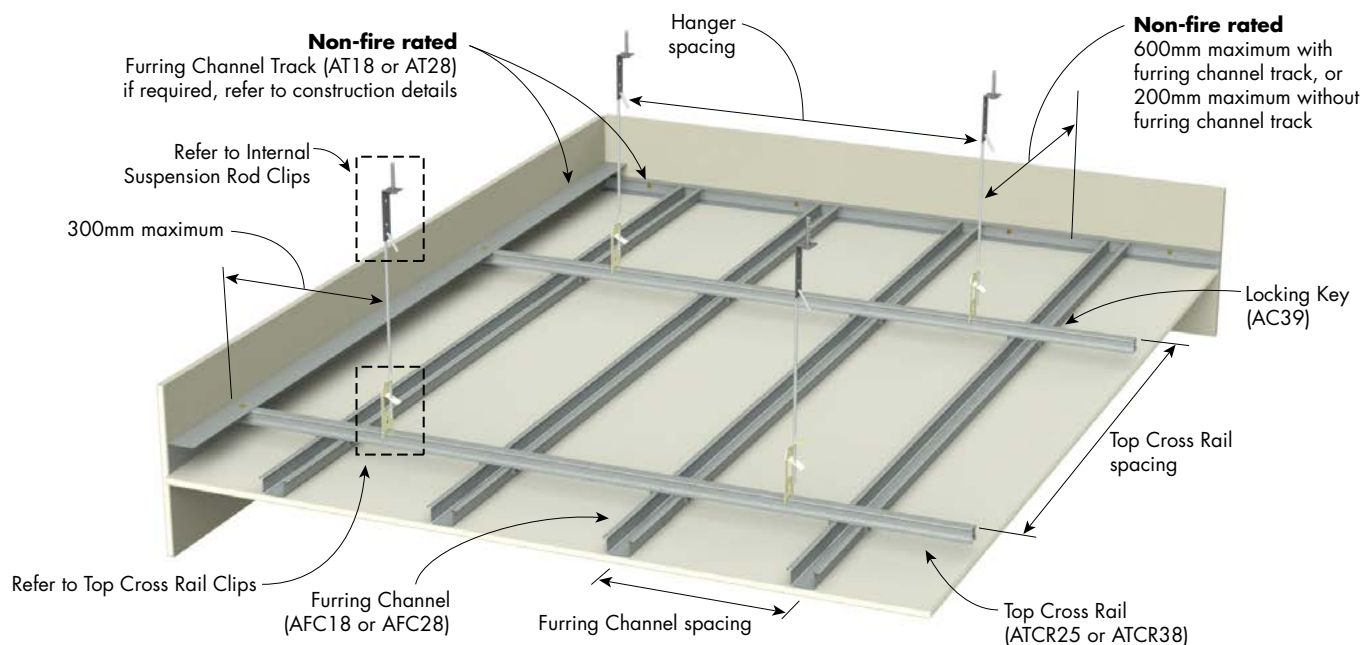
Refer to Section 2.3 for assistance determining the relevant internal wind pressures for a specific project. Or use the Knauf Internal Wind Load Calculator by clicking on the link or by using your phone's camera on the QR code.

CEILING CLIP CAPACITY TABLE - DIRECT FIX CEILING FRAMES

Image	Name	Code	ULS Design Capacity (kN)
	Furring Channel A Clip 80mm drop (standard and wide versions)	AC26-80 ACW26-80	1.23
	Furring Channel A Clip 180mm drop	AC26-180	1.23
	Furring Channel Anchor Clip 7.5mm hole (standard and wide versions)	AC37-7H ACW37-7H	1.69
	Furring Channel Anchor Clip M6 thread	AC37-M6	1.69

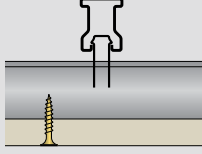
1. Clip capacities are applicable to Knauf products only.
2. Clip capacities determined in accordance with AS/NZS 4600:2005 Cold Formed Steel Structures, Section 8.2.
3. Suitable for internal use only.

FIGURE 3 Internal Suspended Ceiling Frame



TOP CROSS RAIL CEILING SPAN TABLE - REGION A

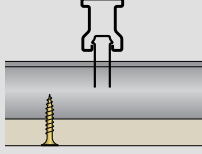
Refer to Section 2.3 for assistance determining the relevant wind pressures for a specific project.

Top Cross Rail Span Table Suspended ceiling lined with Stratopanel and 28mm Furring channels (AFC28) at 333mm maximum spacing						Up to BCA Building Importance Level 3	
Ultimate Wind Pressure W_U (kPa)	Serviceability Wind Pressure W_S (kPa)	Top Cross Rail	Top Cross Rail Spacing (mm)	Double Span		3 or more Spans	
				Hanger Spacing (mm)	Hanger Demand (kN)	Hanger Spacing (mm)	Hanger Demand (kN)
0.39	0.25	TCR25	900	1060	1.04	1150	1.03
			1050	980	1.12	1060	1.11
			1200	920	1.20	990	1.18
		TCR38	900	1270	1.24	1370	1.23
			1050	1170	1.34	1270	1.33
			1200	1100	1.43	1200	1.42
0.47	0.3	TCR25	900	1000	1.11	1080	1.10
			1050	920	1.19	1000	1.19
			1200	860	1.28	930	1.26
		TCR38	900	1190	1.32	1290	1.31
			1050	1100	1.43	1190	1.41
			1200	1030	1.53	1110	1.51
0.54	0.35	TCR25	900	950	1.17	1020	1.15
			1050	880	1.26	950	1.25
			1200	820	1.35	890	1.34
		TCR38	900	1130	1.39	1220	1.37
			1050	1050	1.51	1130	1.48
			1200	980	1.61	1060	1.59

- Table based upon downward (suction) and upward (uplift) pressures, intended for internal use only. Down-struts are required for uplift.
- Table includes self weight and 1 kg/m² insulation weight with an additional 3 kg/m² service load. No further allowance for additional point loads or live loads.
- Downstruts must be installed for TCR suspended ceilings in all buildings except air-conditioned hospitals, offices and shopping centres that are effectively sealed where the external walls have non-opening windows.
- Contact Knauf or a structural engineer to check ceiling for earthquake actions. Specific project information is required.
- Table refers to Knauf Furring Channels of 0.42mm Base Metal Thickness (BMT) of grade G550 steel and Knauf Top Cross Rails of 0.75mm BMT of grade G300, both with Zinalume™ AM150 corrosion protection. Maximum production lengths available are 6.0m
- Furring Channels checked for 2-or-more spans only. If required, contact Knauf for Single Span furring channel check.
- Designed in accordance with AS/NZS 4600:2018 *Cold Formed Steel Structures* and AS/NZS 2785:2000 *Suspended Ceilings - Design and Installation*.
- Wind pressures determined in accordance with AS/NZS 1170.2 *Wind Actions*.
- Connections to clips must be checked with the *Clip Capacity Table* in Section 5.1.
- Ultimate Limit State Load Case 1: 1.2G + Wu (Suction) + Q_{0,03kPa Service Load}
Ultimate Limit State Load Case 2: 0.9G + Wu (Uplift).
- Serviceability Limit State Load Case 1: G, with deflection limited to Span/500.
- Serviceability Limit State Load Case 2: G + Ws, with deflection limited to Span/200.
- Perimeter anchors at 600mm maximum centres and 100mm maximum from track ends with minimum 0.7 kN shear capacity.
- The nominated lateral pressures and deflection limits must be checked for suitability for a specific project.
- For BCA Building Importance Level 4, please contact Knauf.

TOP CROSS RAIL CEILING SPAN TABLE - REGION B

Refer to Section 2.3 for assistance determining the relevant wind pressures for a specific project.

Top Cross Rail Span Table Suspended ceiling lined with Stratopanel and 28mm Furring channels (AFC28) at 333mm maximum spacing						Up to BCA Building Importance Level 3	
Ultimate Wind Pressure W_U (kPa)	Serviceability Wind Pressure W_S (kPa)	Top Cross Rail	Top Cross Rail Spacing (mm)	Double Span		3 or more Spans	
				Hanger Spacing (mm)	Hanger Demand (kN)	Hanger Spacing (mm)	Hanger Demand (kN)
0.59	0.25	TCR25	900	910	1.20	990	1.19
			1050	850	1.30	920	1.29
			1200	790	1.39	860	1.38
		TCR38	900	1090	1.43	1180	1.42
			1050	1010	1.55	1090	1.53
			1200	950	1.67	1020	1.64
0.71	0.3	TCR25	900	850	1.29	920	1.28
			1050	790	1.40	850	1.38
			1200	740	1.50	800	1.48
		TCR38	900	1020	1.55	1100	1.53
			1050	940	1.66	1020	1.65
			1200	860	1.74	950	1.76
0.83	0.35	TCR25	900	800	1.38	860	1.35
			1050	740	1.49	800	1.47
			1200	690	1.58	750	1.57
		TCR38	900	960	1.65	1030	1.62
			1050	870	1.75	950	1.74
			1200	760	1.74	830	1.74

1. Table based upon downward (suction) and upward (uplift) pressures, intended for internal use only. Down-struts are required for uplift.
2. Table includes self weight and 1 kg/m² insulation weight with an additional 3 kg/m² service load. No further allowance for additional point loads or live loads.
3. Downstruts must be installed for TCR suspended ceilings in all buildings except air-conditioned hospitals, offices and shopping centres that are effectively sealed where the external walls have non-opening windows.
4. Contact Knauf or a structural engineer to check ceiling for earthquake actions. Specific project information is required.
5. Table refers to Knauf Furring Channels of 0.42mm Base Metal Thickness (BMT) of grade G550 steel and Knauf Top Cross Rails of 0.75mm BMT of grade G300, both with Zinalume™ AM150 corrosion protection. Maximum production lengths available are 6.0m
6. Furring Channels checked for 2-or-more spans only. If required, contact Knauf for Single Span furring channel check.
7. Designed in accordance with AS/NZS 4600:2018 *Cold Formed Steel Structures* and AS/NZS 2785:2000 *Suspended Ceilings - Design and Installation*.
8. Wind pressures determined in accordance with AS/NZS 1170.2 *Wind Actions*.
9. Connections to clips must be checked with the *Clip Capacity Table* in Section 5.1.
10. Ultimate Limit State Load Case 1: 1.2G + W_U (Suction) + Q_{0,03kPa Service Load}
 Ultimate Limit State Load Case 2: 0.9G + W_U (Uplift).
11. Serviceability Limit State Load Case 1: G, with deflection limited to Span/500.
12. Serviceability Limit State Load Case 2: G + W_S, with deflection limited to Span/200.
13. Perimeter anchors at 600mm maximum centres and 100mm maximum from track ends with minimum 0.7 kN shear capacity.
14. The nominated lateral pressures and deflection limits must be checked for suitability for a specific project.
15. For BCA Building Importance Level 4, please contact Knauf.

CEILING CLIP CAPACITY TABLE - SUSPENDED CEILING FRAMES

Image	Name	Code	ULS Design Capacity (kN)
	Spring Adjustable Purlin to Suspension Rod Clip	AC60DF	1.80
	Spring Adjustable Anchor to Suspension Rod Clip	AC60LDF	1.80
	Suspension Rod Flat Bracket	AC74	1.06
	Suspension Rod Multi-purpose Bracket	AC47-74 (5mm diameter hole)	1.06
		AC47-749 (9mm diameter hole)	
	Spring Adjustable Suspension Rod to Top Cross Rail Clip	AC60	1.80
	Anchor to Top Cross Rail Clip	AC24	1.80
	Top Cross Rail to Purlin Clip	AC66	1.80
	Spring Adjustable Side Mounted Top Cross Rail Clip	AC61S	1.31

1. Clip capacities are applicable to Knauf products only.
2. Clip capacities determined in accordance with AS/NZS 4600:2005 Cold Formed Steel Structures, Section 8.2.
3. Suitable for internal use only.

DOWNSTRUT

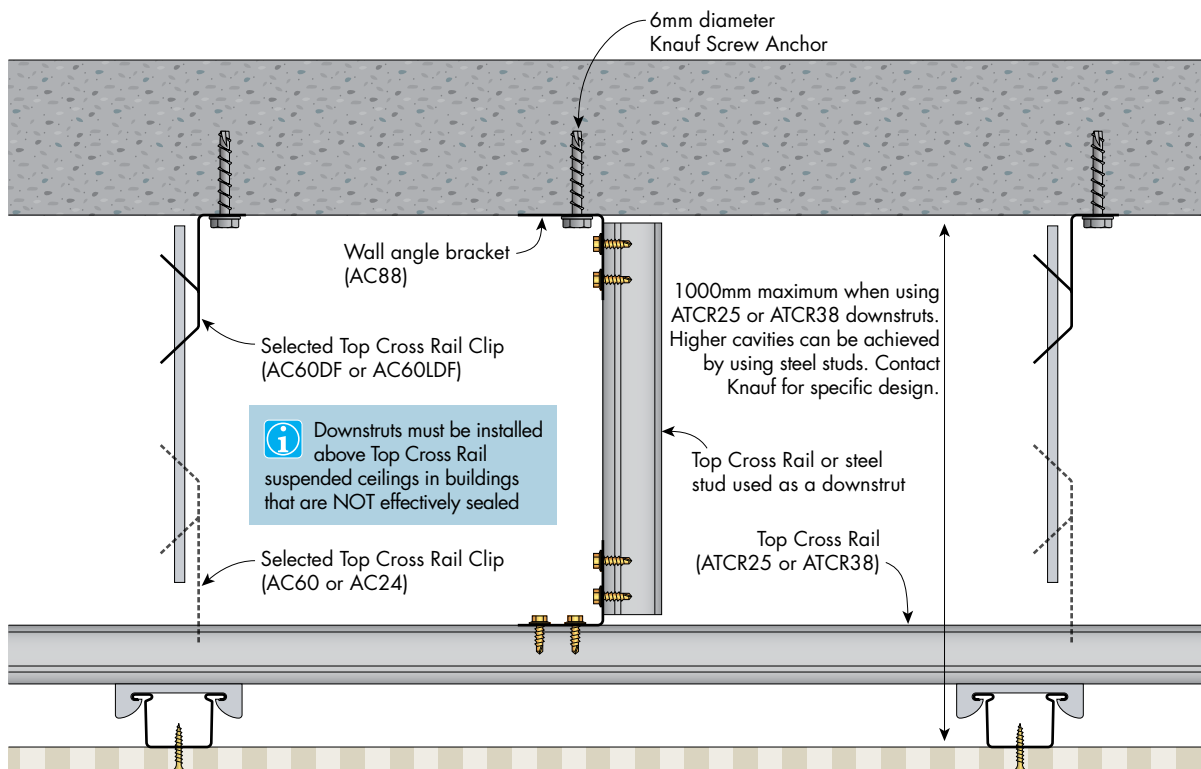
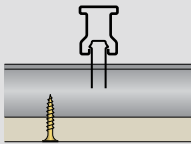


FIGURE 4 Downstrut Section

DOWNSTRUT TABLE - REGION A

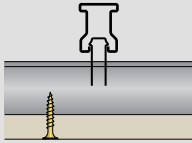
Refer to Section 2.3 for assistance determining the relevant wind pressures for a specific project.

Downstrut Interval Table (along Top Cross Rail) Suspended ceiling lined with Stratopanel and 28mm Furring channels (AFC28) at 333mm maximum spacing					Up to BCA Building Importance Level 3
Ultimate Wind Pressure W_u (kPa)	Serviceability Wind Pressure W_s (kPa)	Top Cross Rail	Top Cross Rail Spacing (mm)	Double Span	3 or more Spans
				Maximum Downstrut Intervals (mm)	Maximum Downstrut Intervals (mm)
0.39	0.25	TCR25	900	1570	1670
			1050	1470	1570
			1200	1400	1490
		TCR38	900	1960	2070
			1050	1860	1960
			1200	1780	1870
0.47	0.3	TCR25	900	1430	1530
			1050	1340	1430
			1200	1260	1350
		TCR38	900	1820	1920
			1050	1720	1780
			1200	1630	1670
0.54	0.35	TCR25	900	1330	1430
			1050	1250	1330
			1200	1180	1260
		TCR38	900	1330	1770
			1050	1250	1640
			1200	1180	1540

- Downstruts must be installed for TCR suspended ceilings in all buildings except air-conditioned hospitals, offices and shopping centres that are effectively sealed where the external walls have non-opening windows.

DOWNSTRUT TABLE - REGION B

Refer to Section 2.3 for assistance determining the relevant wind pressures for a specific project.

Downstrut Interval Table (along Top Cross Rail) Suspended ceiling lined with Stratopanel and 28mm Furring channels (AFC28) at 333mm maximum spacing					Up to BCA Building Importance Level 3
Ultimate Wind Pressure W_U (kPa)	Serviceability Wind Pressure W_S (kPa)	Top Cross Rail	Top Cross Rail Spacing (mm)	Double Span	3 or more Spans
				Maximum Downstrut Intervals (mm)	Maximum Downstrut Intervals (mm)
0.59	0.25	TCR25	900	1280	1360
			1050	1190	1280
			1200	1120	1200
		TCR38	900	1650	1690
			1050	1550	1560
			1200	1470	1460
0.71	0.3	TCR25	900	1160	1100
			1050	1090	1160
			1200	1020	1100
		TCR38	900	1520	1520
			1050	1410	1400
			1200	1230	1310
0.83	0.35	TCR25	900	1080	1150
			1050	1000	1080
			1200	930	1010
		TCR38	900	1380	1390
			1050	1180	1290
			1200	1030	1130

1. Downstruts must be installed for TCR suspended ceilings in all buildings except air-conditioned hospitals, offices and shopping centres that are effectively sealed where the external walls have non-opening windows.

INSTALLATION

STRATOPANEL CEILING ACCESS PANEL



FIGURE 5 Stratopanel Access Panel Framing
Perspective



FIGURE 6 Stratopanel Access Panel Framing
Perspective

LAYOUT

- › Start sheeting from the centre of the room. [Figure 7]
- › Sheet ceilings perpendicular to framing members.
- › All short edges must be over a wide furring channel (>60mm).

Note Cut boards can be turned by 180° on the perimeter connection. This will reduce the waste on site.

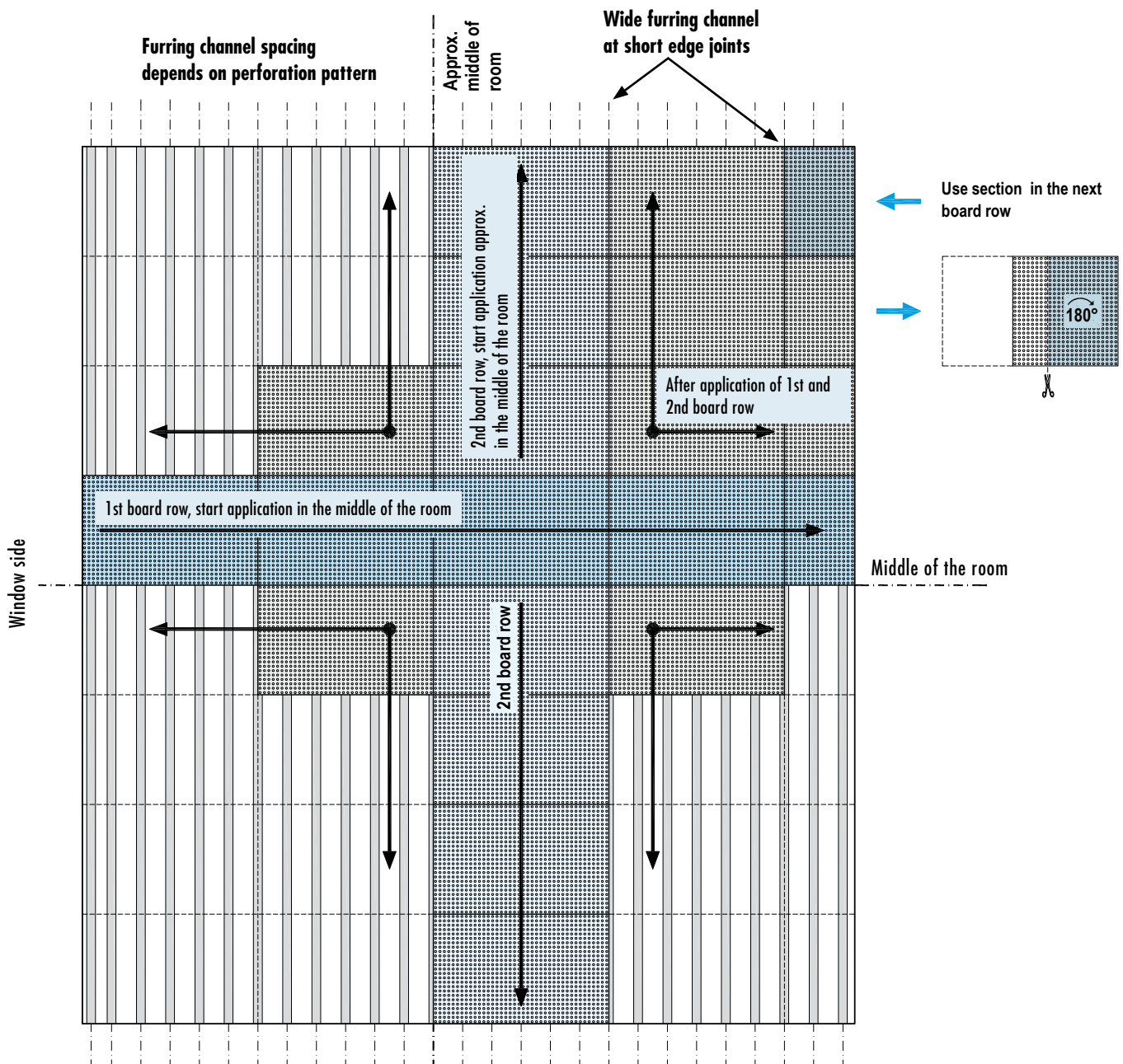


FIGURE 7 Installation Scheme

STRATOPANEL ALIGNMENT

- Place red and blue dots adjacent to each other for UFF edges. [Figure 8]
- Place linear notch edge adjacent to linear lap edge along short and long edges. [Figure 9]

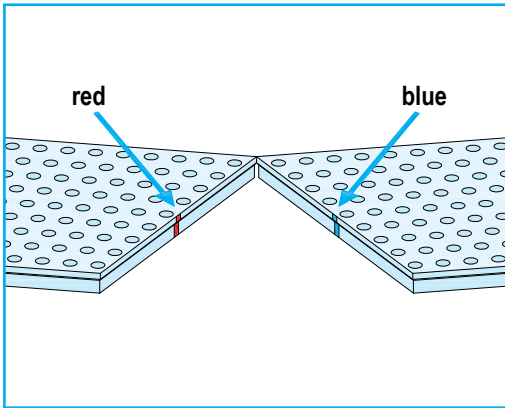


FIGURE 8 UFF Edges Alignment

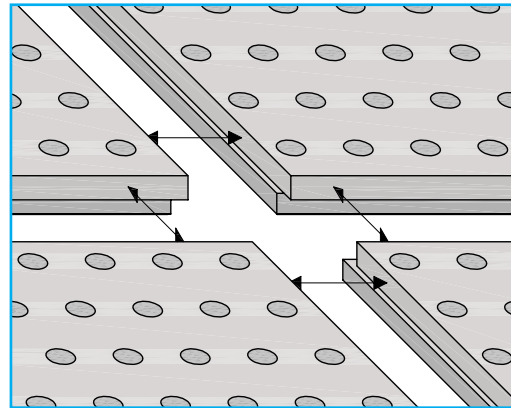


FIGURE 9 Linear Edges Alignment



Constantly check overall appearance of the ceiling via the straights and diagonals of the perforation rows during installation. [Figure 9]

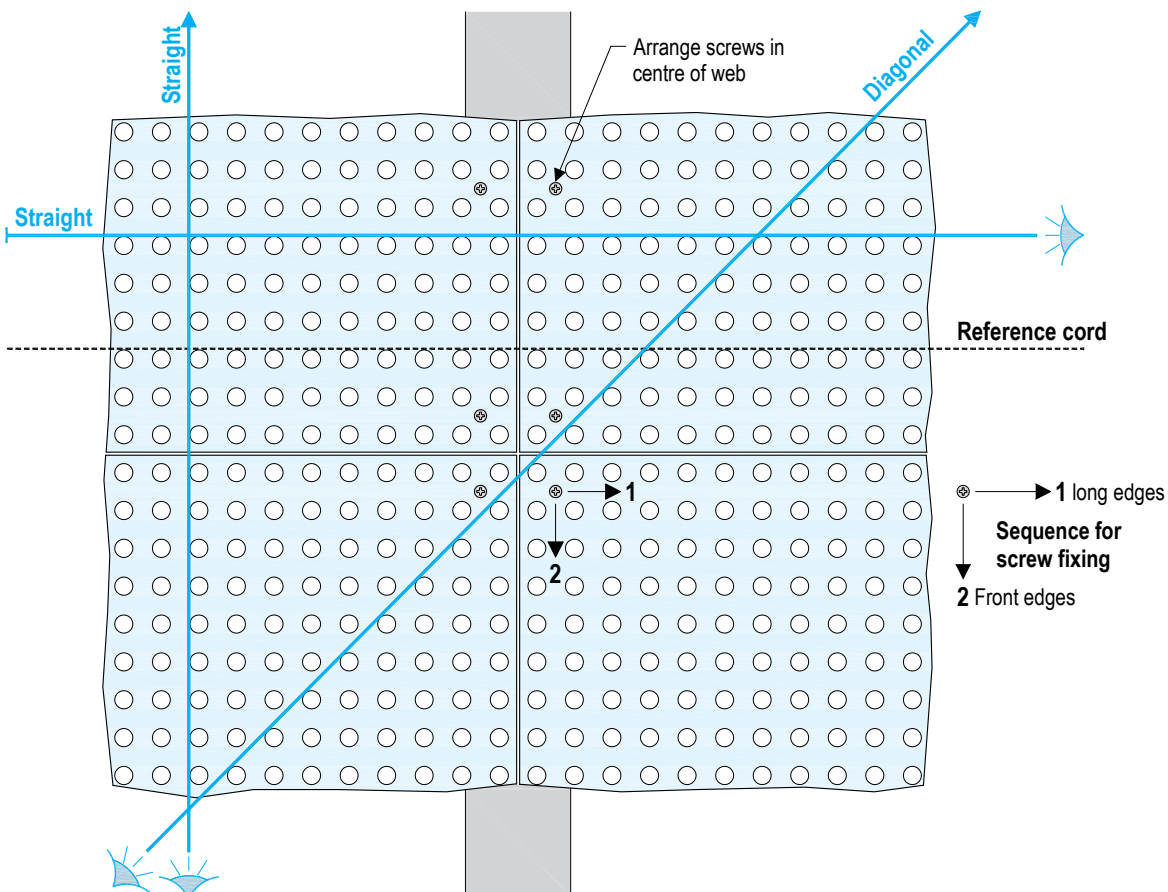


FIGURE 10 Checking Board Alignment

FIXING

- › Use fasteners only. Adhesive is not permitted.
- › Use 25mm 6g plasterboard screws into metal furring channels.
- › Drive fasteners to just below the sheet surface, taking care not to break the paper.
- › Fix screws at 200mm maximum centres along the short edge and 300mm in the field of the boards.
- › Press Stratopanel firmly on to the grid when screwing.
- › Start fastening from the corner, where the board meets previously attached boards.
- › Fasten long edge first and then short edge.
- › Use a straight edge across adjoining sheets to check both sheets are level across the joints. If necessary, adjust the level of the sheets by unscrewing perimeter screws slightly, so both sheets are level across joints.

CAP SCREWS

- › Use Cap Screws for easy installation in Stratopanel with 8, 10, 12mm diameter round perforations and 12mm square perforations [Figure 11].

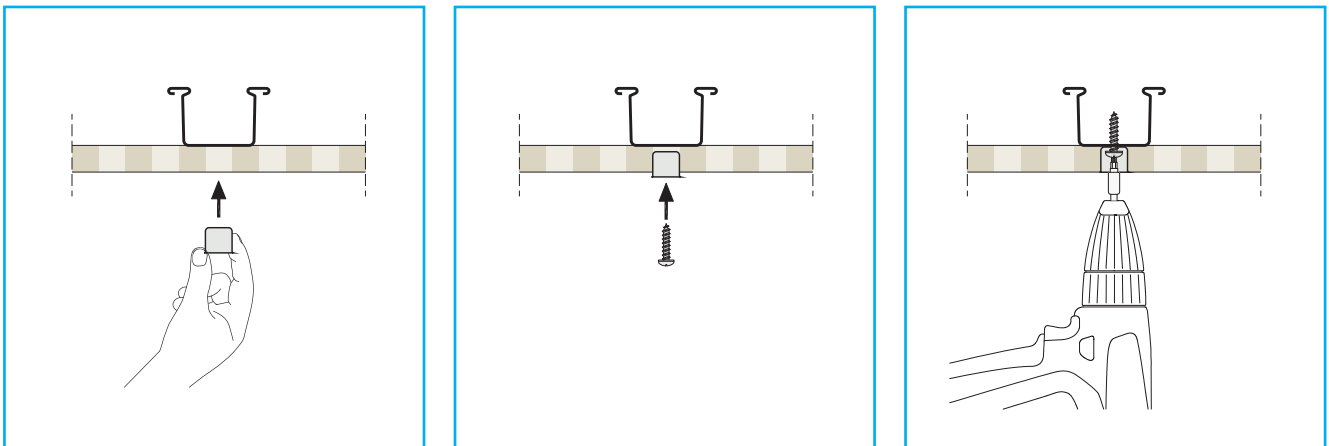


FIGURE 11 Cap Installation

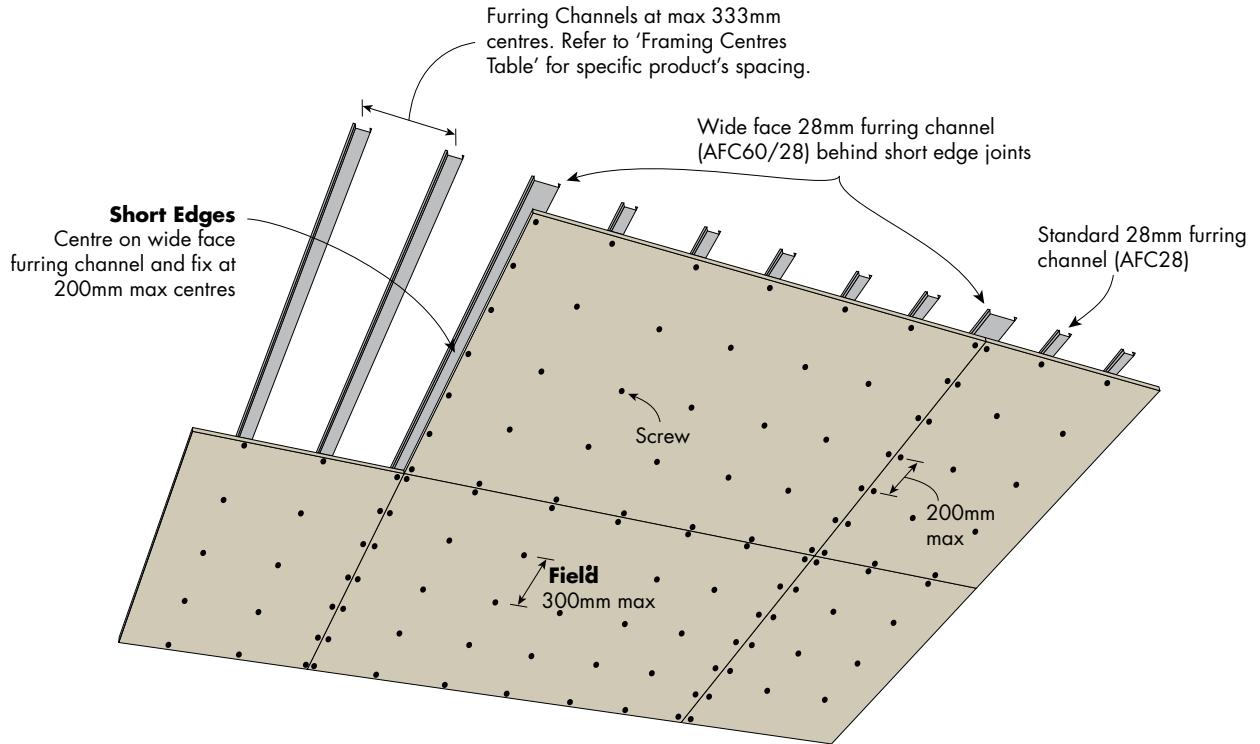
ACCESS PANEL

- › Mark out the opening in the Stratopanel board using the access panel frame or template on the box.
- › If any furring channel is cut, reinforce the opening with extra furring channel. Leaving a minimum 50mm area around the hole perimeter to allow for the access panel frame [Figures 1, 5 and 6].
- › Fix the Aluminium frame to the back of the Stratopanel.

No jointing is needed.

FIGURE 12 Stratopanel Internal Ceiling - 1 Layer

Screw Only Method



Fixing Pattern Table

Sheet Width	Screw Fixing Pattern
1200mm	S S S S S (5)

S = One screw

Maximum Ultimate Limit State Wind Load Table (kPa)

Plasterboard Thickness	Maximum Ceiling Frame Spacing
	333mm
12.5mm	1.55

1. Calculations do not include the framing which must be independently designed to suit the desired load.
2. Calculations include a ceiling insulation with maximum weight of 2.5 kg/m² (equivalent to R6.0 EarthWool Ceiling Batt).
3. If higher internal wind pressures are expected, please contact Knauf for specific design.

JOINTING AND FINISHING

UFF EDGE

- Jointing must not be conducted until all ceiling services and access panels are installed in the ceiling, otherwise the excessive vibration may cause cracking and joint peaking.
- Only use Uniflott for jointing.
- Use a wet brush to clean dust from joints after fixing the boards. *[Figure 13]*
- Prime site cut edges before jointing with PVA based primer.
- Mix Uniflott with clean water using a trowel (5 kg in approx. 2.4 L water).
- Fill joints fully with Uniflott using a caulking gun. *[Figure 14]*
- Scrape off excess Uniflott after hardening has begun (45 minutes in normal conditions). *[Figure 15]*
- Use Mastalite for finishing joints and screw heads. *[Figure 16 and 17]*
- Do not rigidly fix Stratopanel sheets to the perimeter.

The edges of Stratopanel UFF and Linear boards are already bevelled and primed off-the-shelf – only site cut edges require priming.

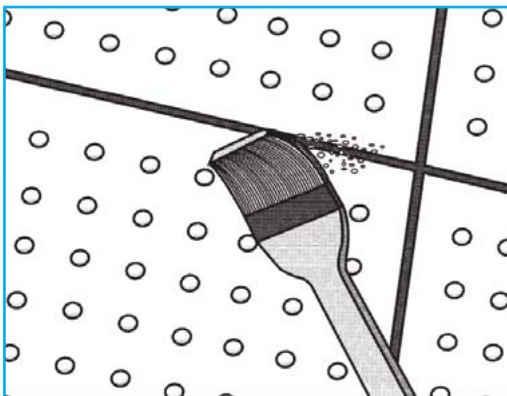


FIGURE 13 Cleaning of Joints

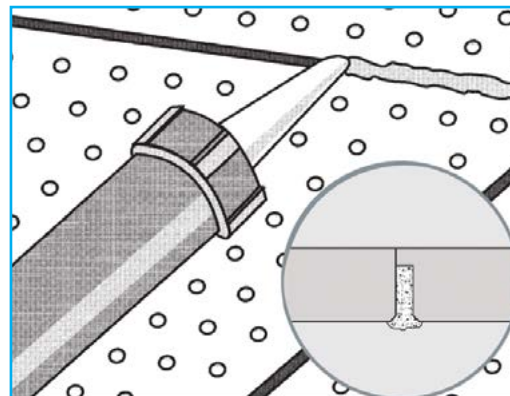


FIGURE 14 Joint Filling (with Uniflott)

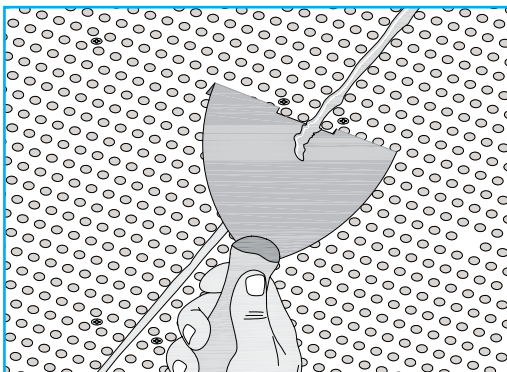


FIGURE 15 'Chipping' Off Excess Uniflott

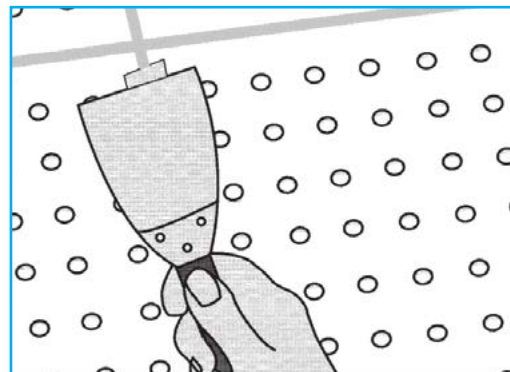


FIGURE 16 Finishing

LINEAR EDGE

- No jointing required. Fill screw heads with Mastalite or use screw caps. [Figure 17]

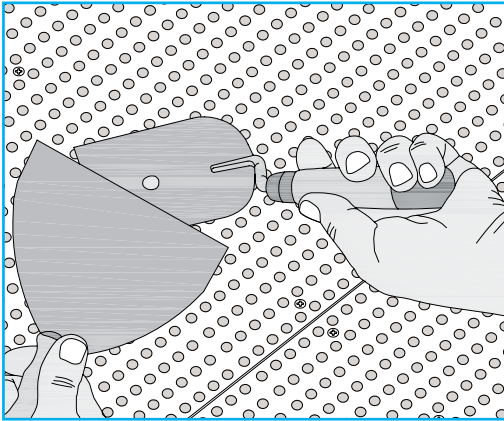


FIGURE 17 Filling of Screw Heads (if no Caps used)

PAINTING

A three coat paint system must be applied in accordance with Australian Standard AS/NZS 2311, *Guide to the painting of buildings*. Both the quality of the paint and how it is applied have a large effect on the finished appearance of the plasterboard.

- Only use roller application for painting.
- Spray application of paint is not permitted.
- Follow the paint manufacturer's instructions for application.
- Apply the paint with a short napped roller and avoid the application of excess paint at any time.

Roller application applies a uniform texture over the entire surface and ensures the paint does not clog up the perforations or contact the acoustic felt on the back of the plasterboard.

NON-FIRE RATED
WIDE FACE FURRING CHANNEL WITH UFF JOINT

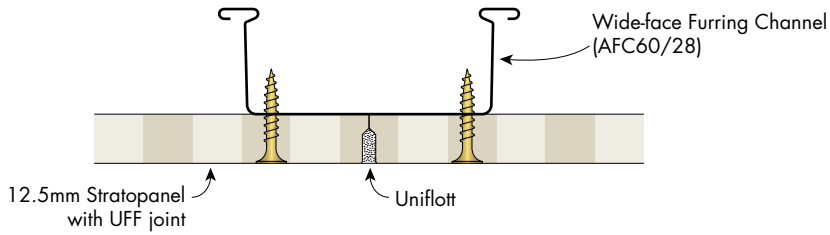


FIGURE 18 Stratopanel with UFF Joint
 Using Wide-face Furring Channel
 Section

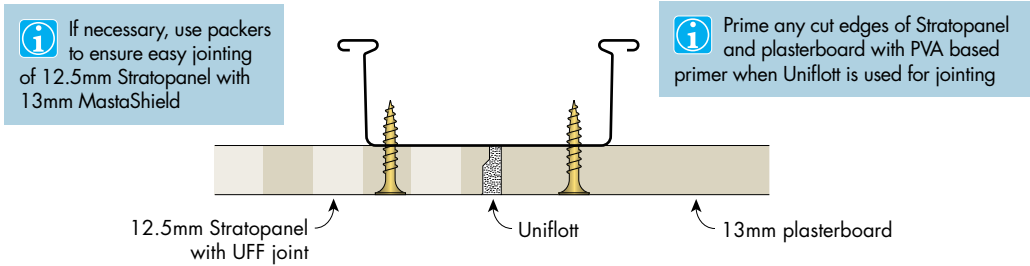


FIGURE 19 Stratopanel to ceiling border
 Using Wide-face Furring Channel
 Section

i The recommended ceiling border detail is to continue the Stratopanel to the wall and fill holes with MastaBase and a Knauf finishing coat. If using this detail, do not use screw caps along the ceiling border

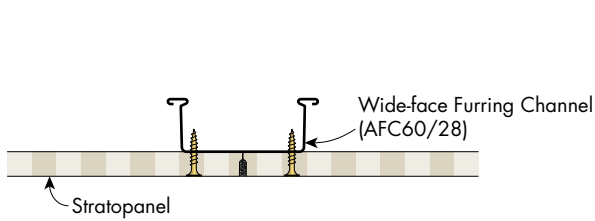


FIGURE 20 Short Edges - UFF Joint
 Stratopanel using Wide-face Furring Channel
 Section

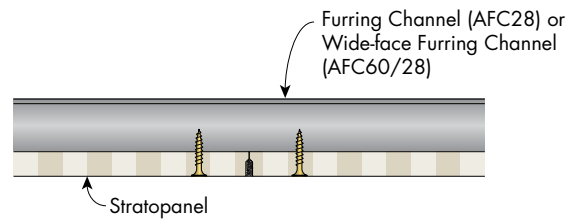


FIGURE 21 Long Edges - UFF Joint
 Stratopanel Suspended Ceiling
 Section

NON-FIRE RATED STRATOPANEL PERIMETER DETAILS

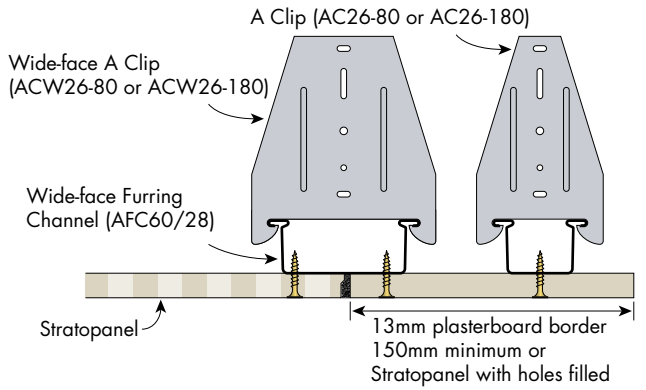


FIGURE 22 Perimeter Detail - Border
Stratopanel Direct Fix Ceiling Frame
Section

i The recommended ceiling border detail is to continue the Stratopanel to the wall and fill holes with MastaBase and a Knauf finishing coat. If using this detail, do not use screw caps along the ceiling border

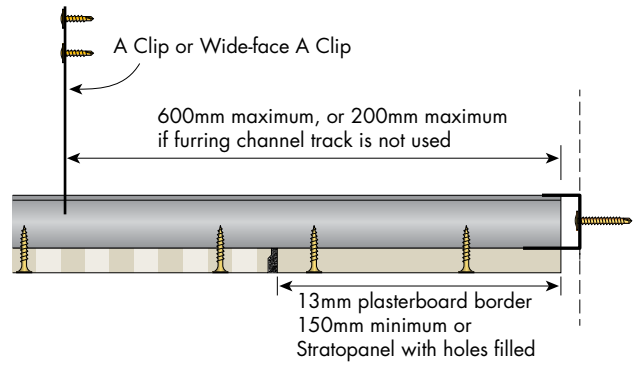


FIGURE 23 Perimeter Detail - Border
Stratopanel Direct Fix Ceiling Frame
Section

i If necessary, use packers to ensure easy jointing of 12.5mm Stratopanel with 13mm Mastashield

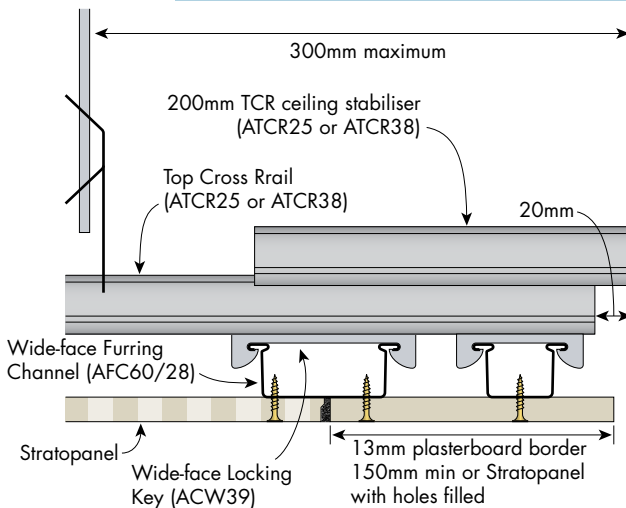


FIGURE 24 Perimeter Detail - Border
Stratopanel Suspended Ceiling Frame
Section

i Prime any cut edges of Stratopanel and plasterboard with PVA based primer when Uniflott is used for jointing

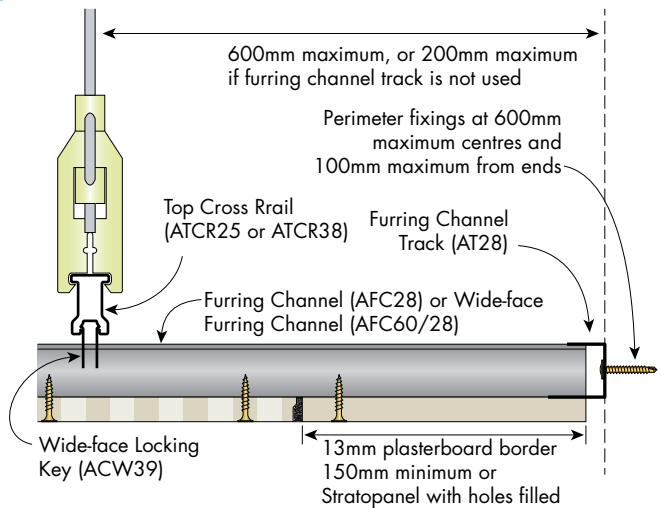


FIGURE 25 Perimeter Detail - Border
Stratopanel Suspended Ceiling Frame
Section

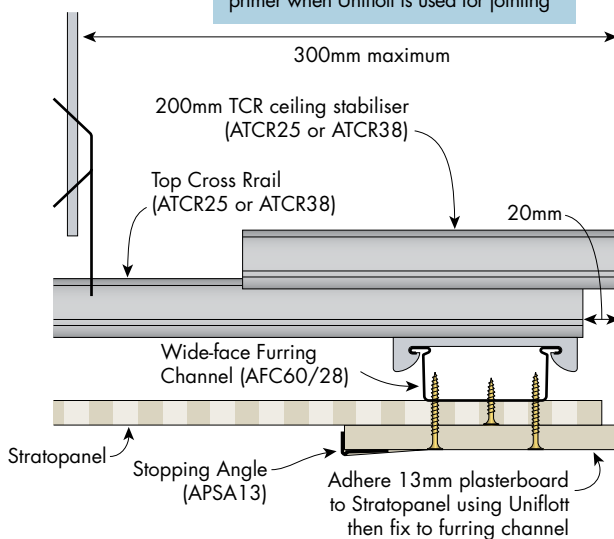


FIGURE 26 Perimeter Detail - Proud Border
Stratopanel Suspended Ceiling Frame
Section

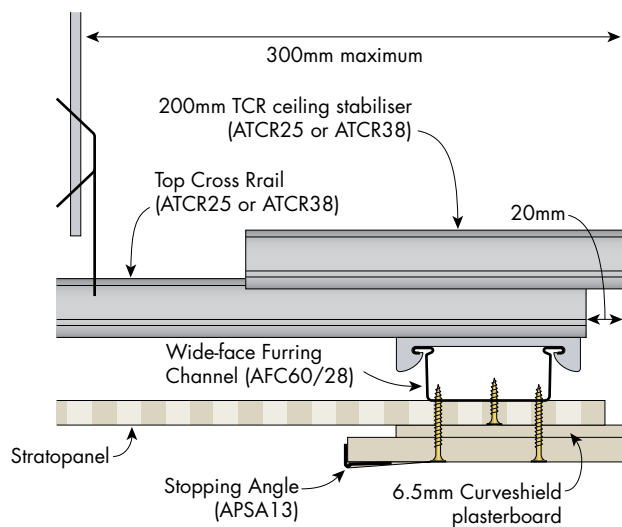


FIGURE 27 Perimeter Detail - Proud Shadow Border
Stratopanel Suspended Ceiling Frame
Section

NON-FIRE RATED CONTROL JOINTS

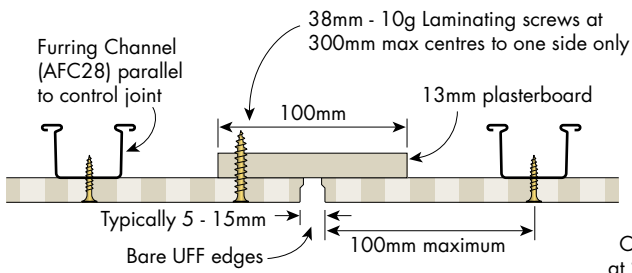


FIGURE 28 Control Joint - Bare UFF Edges
Parallel to furring channel
Section

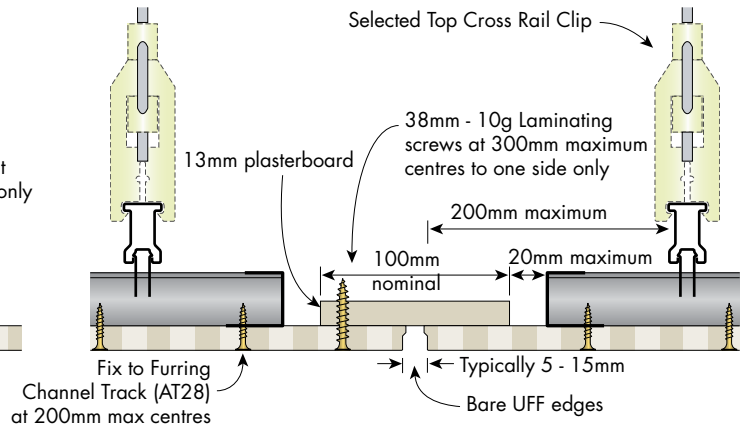


FIGURE 29 Control Joint - Bare UFF Edges
Perpendicular to furring channel
Section

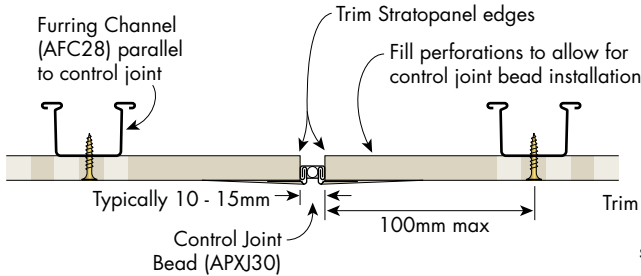


FIGURE 30 Control Joint - Control Joint Bead
Parallel to furring channel
Section

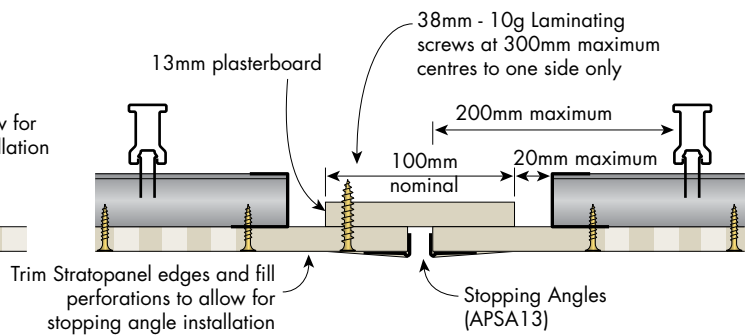


FIGURE 31 Control Joint - Stopping Angles
Perpendicular to furring channel
Section

CEILING PERIMETER FINISHING DETAILS

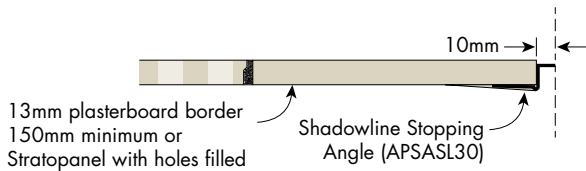


FIGURE 32 Finishing Detail - Shadowline
Section

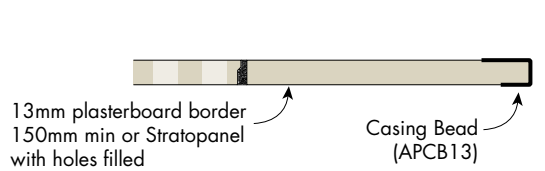


FIGURE 33 Finishing Detail - Casing Bead
Section

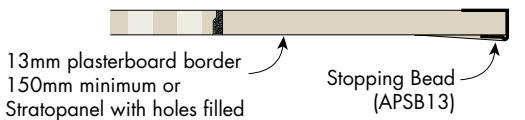


FIGURE 34 Finishing Detail - Stopping Bead
Section

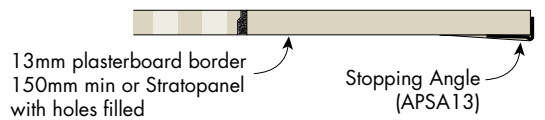


FIGURE 35 Finishing Detail - Stopping Angle
Section

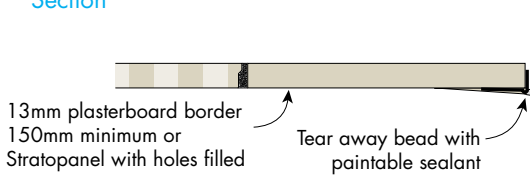


FIGURE 36 Finishing Detail - Tear Away Bead
Section

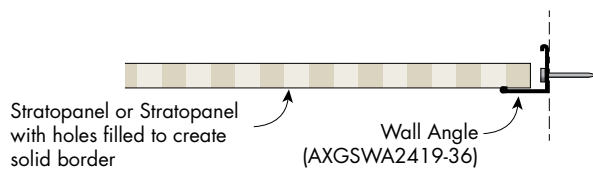


FIGURE 37 Finishing Detail - Wall Angle
Section

i Ceilings using a square set finishing detail have low tolerance for building movement and are more prone to cracking and joint peaking



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