sonawood panel™

PERFORATED WOOD PANELS FOR CEILINGS AND WALLS



TECHNICAL DATA SHEET BPIR - CLASS 1

Acoustic Ceiling and Wall Solutions

sonawood panel™

Perforated Wood Panels for Ceilings and Walls

Technical Data Sheet - BPIR Class 1

Sonawood™ is a made in NZ perforated wood panel with acoustic tissue backing designed to control unwanted noise in interior spaces. Panels may be customised according to substrate, decorative finish, acoustic perforations and sized to meet individual project requirements. SlimSet 50™ and SlimSet 60™ Access Hatches available where maintenance for plenum services is required.



Hobsonville Point secondary school



Orangutang enclosure—Auckland Zoo

Application

Sonawood™ is ideal for corporate offices, hotels, retail, schools and sports centres.

Composition

Substrates are from FR MDF, MDF, Plywood, or FR Plywood, with natural wood veneer, low pressure laminates, paint, stain or clear coat finishes, and acoustic backing. Framing is from galvanised steel or timber.

Features & Benefits

- An attractive high performance acoustic ceiling or wall panel that can be customised to size and perforation.
- Available in a range of standard hole and slot perforation patterns to meet acoustic performance criteria.
- Custom slot perforations with micro bevel edge are available as a H & S risk management option for acoustic wall linings subject to soft body impacts such as sports halls.
- Range of substrates—FR MDF, FR Plywood, or standard MDF or Plywood, all acoustic tissue backed as standard.
- Veneer finish and plywood options provide the warmth of natural wood and are typically clear coated or stained.
- Pre-finished low pressure laminate finishes provide excellent colour and pattern consistency at lower cost.
- Panels available raw for on site coating or factory finished with UV, powder coat or premium 2 pack coatings.
- Fire Group 3, 2-S, 1-S performance subject to substrate and perforated open area selected.
- Tuneable acoustic performance, NRC 0.1 up to 0.80.
- Also available as a lay-in ceiling tile to fit Rondo DX grid.
- Range of fixing options, face fix, concealed fix, split rail.
- Standard 600 x 600 mm and 500 x 500mm SlimSet™ integrated access hatches.
- Asona in-house design service for shop drawings prior to manufacture. Ideal to integrate M/E services, penetrations (eg power outlets), borders etc.

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Sonawood Panel Selection Options

Early Fire Reaction Group	1-S / 2-S / 3
Substrate Type	MDF / Black FR MDF / FR MDF / Plywood / FR Plywood
Finish Type	Natural wood veneer / Low pressure laminate / Paint / Stain / Clear coat
Wood Veneer Cut *	Crown / Quarter / Rotary / Recut
Wood Veneer Layup *	Book / Slip / Planked / Planked Rustic
Panel Size (nominal)	1200 x 2400mm / _____ x _____ mm
Installation Method	

* Contact Asona for detailed information on Natural Wood Veneer cut and layup options)

NZBC C/AS2 Risk Groups and EFR Group Requirements

4.12.1 Surface finish requirements for walls and ceilings

4.12.1.1 *Surface finish* requirements shall be as specified in Table 4.12.1.1 for walls and ceilings.

Table 4.12.1.1: Maximum permitted Group Number for internal surface finishes

Paragraph 4.12.1.1

Location in the building	Maximum permitted Group Number for spaces not protected with an automatic fire sprinkler system	Maximum permitted Group Number for spaces protected with an automatic fire sprinkler system	Risk Group
Exitways and Importance Level 4 *buildings*: walls and ceilings	1-S	2	SM SI CA WB
Sleeping spaces where care or detention is provided: walls and ceilings	1-S	2	SI
Other sleeping spaces (excluding within *household units*) and crowd spaces: ceiling surfaces	2-S	2	SM CA WB
Other sleeping spaces (excluding within *household units*) and crowd spaces: wall surfaces	2-S	3	SM CA WB
All other occupied spaces: walls and ceilings	3	3	CA WB

Clause
4.12 Interior surface finishes, floor coverings and suspended flexible fabrics

Surface finish requirements for walls and ceilings

4.12.1 Surface finish requirements shall be as specified in Table 4.12.1.1 for walls and ceilings.

4.12.4 Exceptions to surface finish requirements

4.12.4.1 Surface finish requirements do not apply to:
a) Small areas of non-conforming product within a firecell with a total aggregate surface not more than 5.0 m².

Educational buildings

4.12.4.2 Unsprinklered firecells containing classrooms, passageways and corridors of educational buildings need not comply with Table 4.12.1.1 provided all the following conditions are satisfied:
a) The occupant load is less than 250, and
b) The firecells are at ground floor level and are served by at least two exitways or final exits, and
c) The material Group Number is no more than 2-S for surfaces 1.2m or more above floor level, and
d) The material Group Number is no more than 3 for surfaces less than 1.2 m above floor level.

Sonawood finishes Group Number

Substrate	Finish	Perforated	Non-perforated
MDF	Laminate (LPL)	3	3
	Natural veneer	3	3
	Paint[1]	3	3
FR MDF Black	Laminate (LPL)	2-S	1-S
	Natural veneer	TBC	1-S
	Paint[1]	2-S	1-S
FR MDF	Laminate (LPL)	2-S	1-S
	Natural veneer	TBC	1-S
	Paint[1]	2-S	1-S
Plywood	Natural	3	3
	Coatings[2]	3	3
	Stain	3	3
FR Plywood	Poplar	1-S	1-S

[1] Paint option includes powder coated or wet
[2] Coatings include clear, UV
Intumescent also available which will provide a 1-S

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Finish Options

Substrate Type

MDF



Black FR MDF



FR MDF MR



Plywood



Finish Type

Low Pressure Laminates—wood look or solid colours available* (refer to Asona for full range)

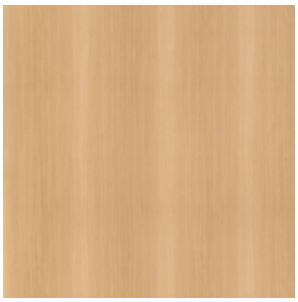
Nordic Pine



Premium Oak



Tawa



French Oak



Sovereign Oak



Rimu



Tahoe Walnut



Black Forest Oak



Standard Substrate Size

Panels are machined from substrates sized to allow for side trimming and for expansion and contraction on site. For example 2440 x 1220mm substrates are machined to 2397 x 1197mm for a nominal 2400 x 1200mm panel with allowance for 3mm gap between panels.
Nominal sizes:
2400 x 1200mm, 2700 x 1200mm, others to order
Thickness:
12mm*, others to order, consult Asona
(*13mm for natural wood veneers)

* Colour representations are as close as printing permits. Clear coat and intumescent coating may affect final colour. Always make your colour selections from an actual sample, not from a digital screen.

Natural wood veneers—wide range available, contact Asona. (Supplied precoated clear. May be supplied "raw" for site intumescent coating.)

Painted and stained finishes—wide range available, contact Asona.
(Paint finish suitable for MDF only; Stain finish suitable for Veneer and Plywood only)

NOTE: Material type and wood species selection may affect surface finish and surface chipping on plywood. FR Plywood available in Poplar wood species only. Consult Asona prior to specification.

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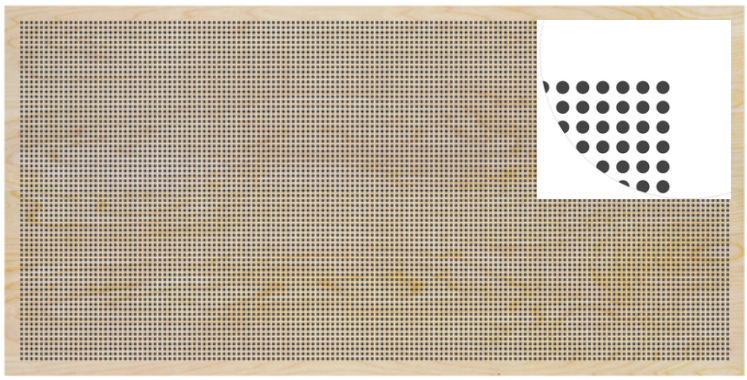
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Hole Perforation Patterns *

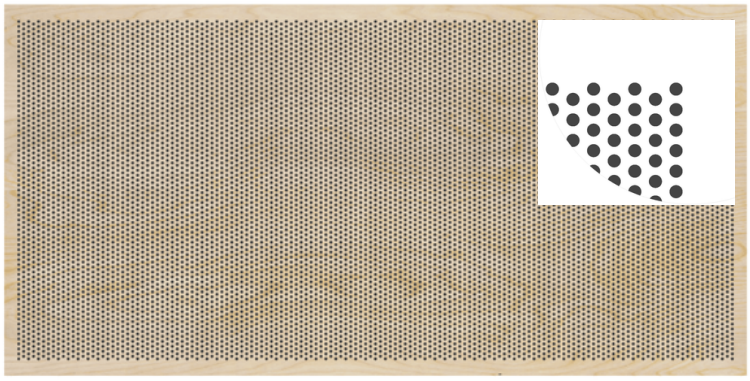
Square - 16 or 32mm centres

with borders



Diagonal - 16 or 32mm centres

with borders



Hole Perforation Cluster Options

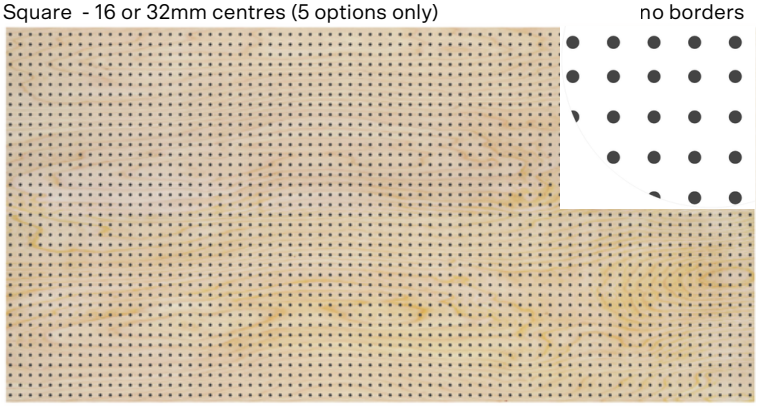


Hole Perforation Diameter and Centres

		Hole Diameter					
		Ø6	**Ø8**	**Ø10**	**Ø12**	**Ø16**	**Ø50**
Hole Centres	**16mm**	✓	✓	✓	X	X	X
	32mm	✓	✓	✓	✓	✓	X
	100mm	X	X	X	X	X	✓

Square - 16 or 32mm centres (5 options only)

no borders



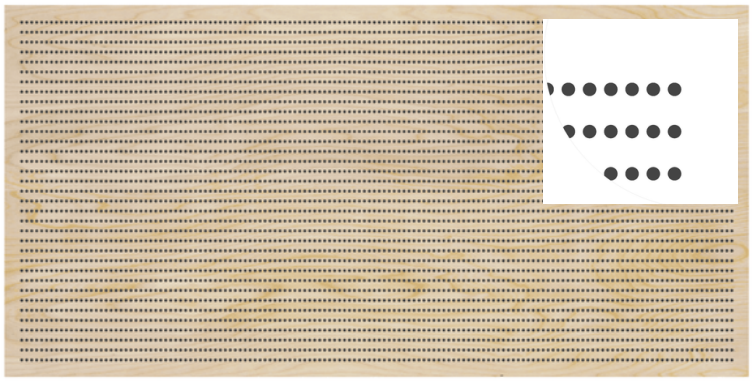


Hole Perforation Diameter and Centres

		Hole Diameter				
		Ø6	**Ø8**	**Ø10**	**Ø12**	**Ø16**
Hole Centres	**16mm**	✓	✓	X	X	X
	32mm	X	✓	X	✓	✓

Linear - 16x32mm centres (4 options only)

with borders





Hole Perforation Diameter and Centres

		Hole Diameter			
		Ø6	**Ø8**	**Ø10**	**Ø12**
Hole Centres	**16mm x 32mm**	✓	✓	✓	✓

* Based on a standard 2400 x 1200mm panel size

Refer to https://asona.co.nz/technical-library for technical drawings.

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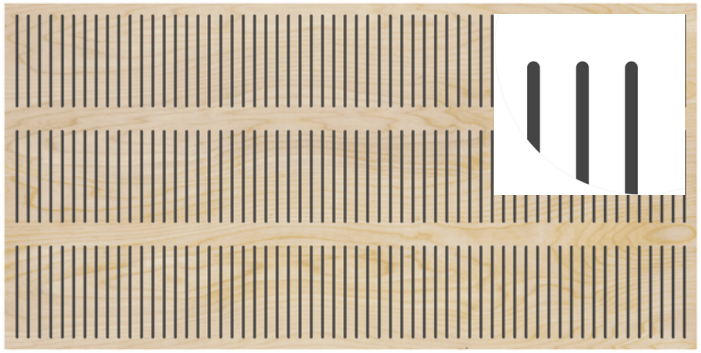
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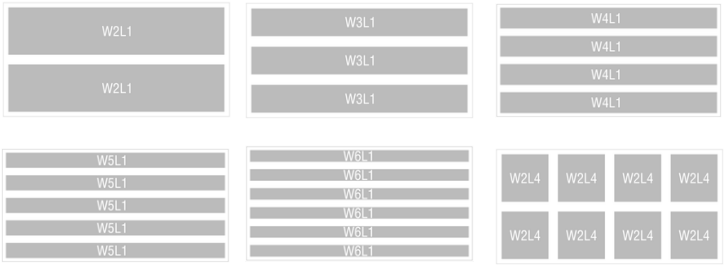
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Slot Perforation Patterns *

Slot-width direction with borders



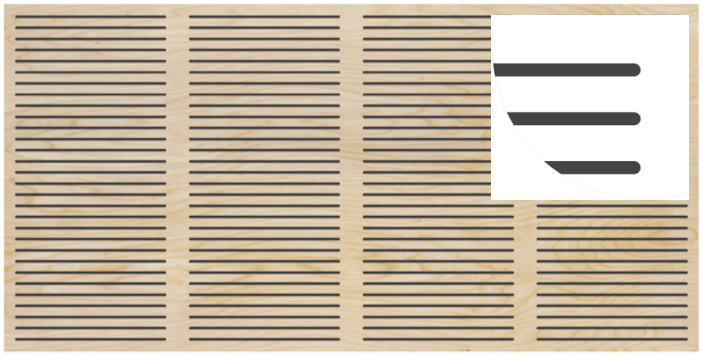
Slot Perforation Cluster Options

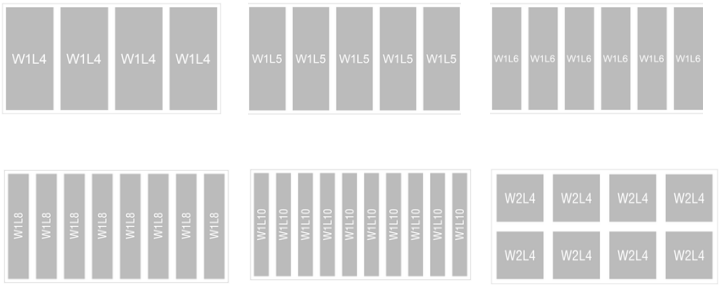


Slot Perforation Size Options - 8mm, 10mm, 12mm

Select micro bevel edged slot perforations for low level wall applications (< 1.8 m) subject to high energy soft body impacts. Upcharge applies.

Slot-length direction with borders

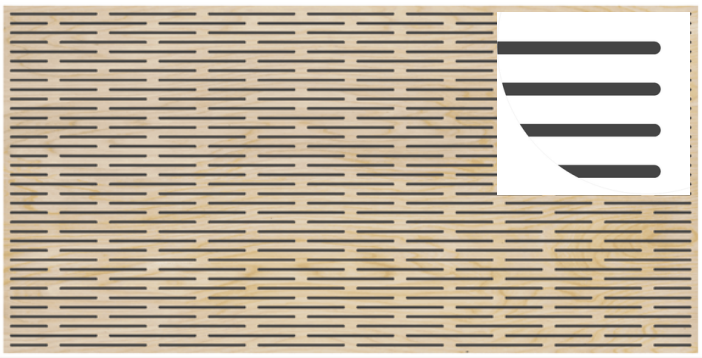




Slot Perforation Size Options - 8mm, 10mm, 12mm

Select micro bevel edged slot perforations for low level wall applications (< 1.8 m) subject to high energy soft body impacts. Upcharge applies.

Slot-Staggered with borders

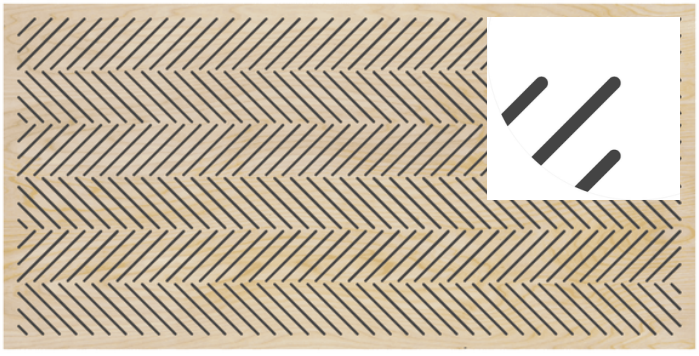


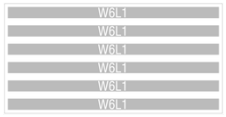


Slot Perforation Size Options - 8mm, 10mm, 12mm

Select micro bevel edged slot perforations for low level wall applications (< 1.8 m) subject to high energy soft body impacts. Upcharge applies.

Slot-Herringbone with borders





Slot Perforation Size Options - 8mm, 10mm, 12mm

Select micro bevel edged slot perforations for low level wall applications (< 1.8 m) subject to high energy soft body impacts. Upcharge applies.

* Based on a standard 2400 x 1200mm panel size

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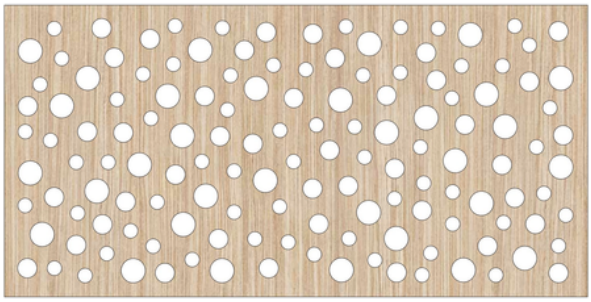
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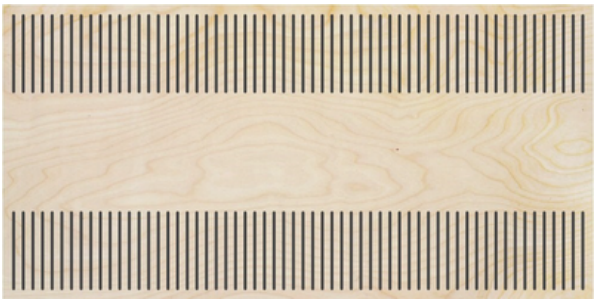
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Custom Perforation Patterns

Custom Perforations / Service Penetration Blank Areas
Example: random perforation with 3 hole sizes. Custom borders or blank areas are available to suit service integration penetrations.
Consult Asona for detailing and shop drawings.





Indicative Open Area %



Hole Diameter

Hole Centres	Ø6	Ø8	Ø10	Ø12	Ø16	Ø50
16mm	9.8	17.4	27.2	-	-	-
32mm	-	4.4	-	9.9	17.7	-
100mm	-	-	-	-	-	19.4



Hole Diameter

Hole Centres	Ø6	Ø8	Ø10	Ø12	Ø16
16mm	11.0	19.6	-	-	-
32mm	-	11.0	-	11.0	19.6



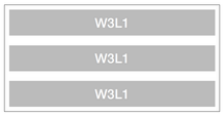
Hole Diameter

Hole Centres	Ø6	Ø8	Ø10	Ø12	Ø16	Ø50
16mm	9.5	16.8	26.2	-	-	-
32mm	-	4.2	-	9.6	17.0	-
100mm	-	-	-	-	-	18.8



Hole Diameter

Hole Centres	Ø6	Ø8	Ø10	Ø12	Ø16	Ø50
16mm	9.0	16.0	25.0	-	-	-
32mm	-	4.0	-	9.0	16.0	-
100mm	-	-	-	-	-	16.2



Hole Diameter

Hole Centres	Ø6	Ø8	Ø10	Ø12	Ø16	Ø50
16mm	8.0	14.3	22.2	-	-	-
32mm	-	3.8	-	8.3	15.0	-
100mm	-	-	-	-	-	14.2



Hole Diameter

Hole Centres	Ø6	Ø8	Ø10	Ø12	Ø16	Ø50
16mm	8.7	15.5	24.0	-	-	-
32mm	-	3.9	-	8.7	15.5	-
100mm	-	-	-	-	-	15.0



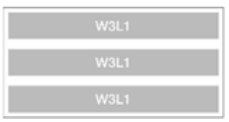
Hole Diameter

Hole Centres	Ø6	Ø8	Ø10	Ø12	Ø16	Ø50
16mm	8.0	14.4	22.3	-	-	-
32mm	-	3.6	-	8.0	14.2	-
100mm	-	-	-	-	-	14.8



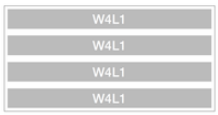
Slot Width Direction

Ø8	Ø10	Ø12
17.3	21.7	26.0



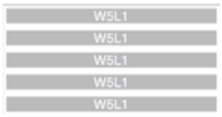
Slot Width Direction

Ø8	Ø10	Ø12
16.0	19.9	23.9



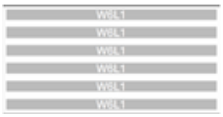
Slot Width Direction

Ø8	Ø10	Ø12
14.0	18.2	21.8



Slot Width Direction

Ø8	Ø10	Ø12
13.2	16.5	19.8



Slot Width Direction

Ø8	Ø10	Ø12	
11.9	14.8	17.7	
16.7	21.0	25.4	Herringbone



Slot Length Direction

Ø8	Ø10	Ø12
17.3	21.7	26.0



Slot Length Direction

Ø8	Ø10	Ø12
16.7	20.8	24.9



Slot Length Direction

Ø8	Ø10	Ø12
16.0	20.8	23.9



Slot Length Direction

Ø8	Ø10	Ø12
14.6	18.2	21.8



Slot Length Direction

Ø8	Ø10	Ø12
13.2	16.5	19.8



Slot Width or Length Direction

Ø8	Ø10	Ø12
15.6	19.4	23.3

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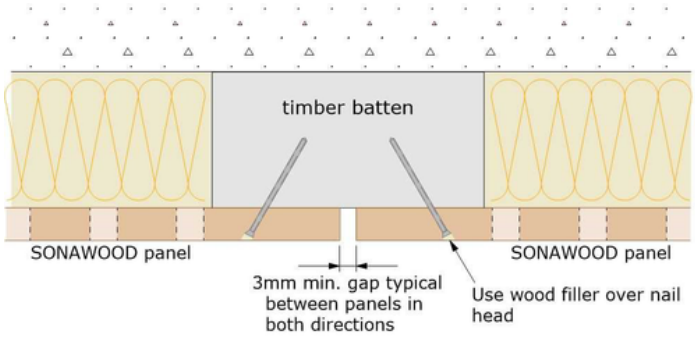
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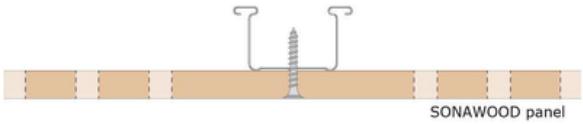
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Installation Options

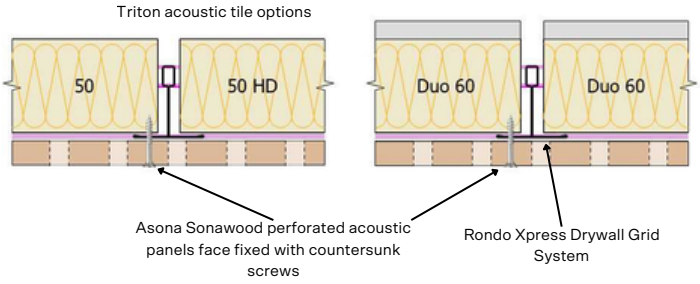
Face fix with 40mm panel pins



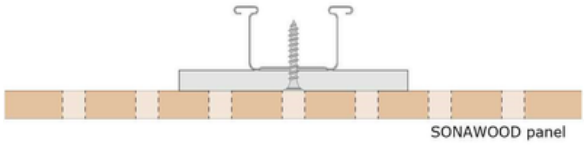
Face fix with countersunk screws to Rondo KEY-LOCK® furring channel/batten



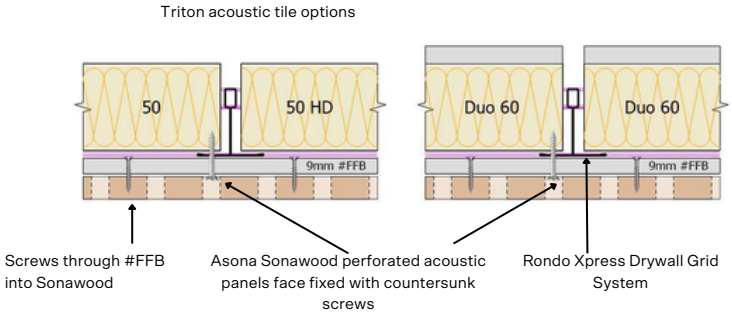
Face fix with countersunk screws to Rondo Xpress®



Secret fix / hidden screw to #FFB mounting strip to Rondo KEY-LOCK® furring channel/batten

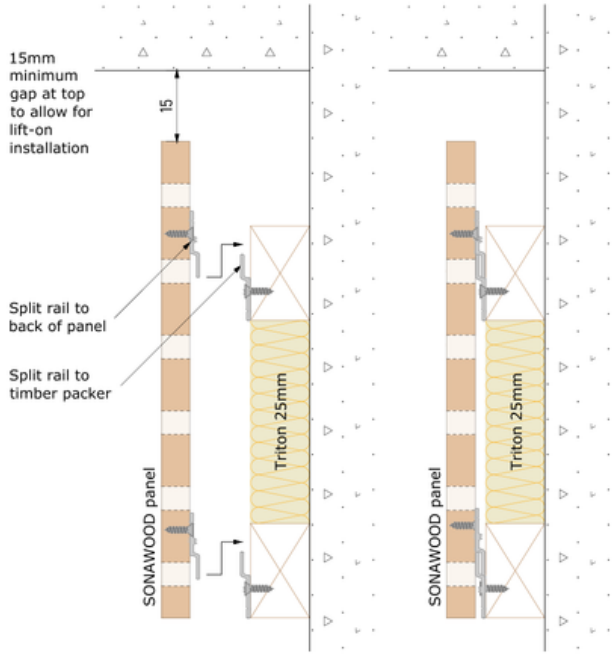


Secret fix / hidden screw to #FFB mounting strip to Rondo Xpress®

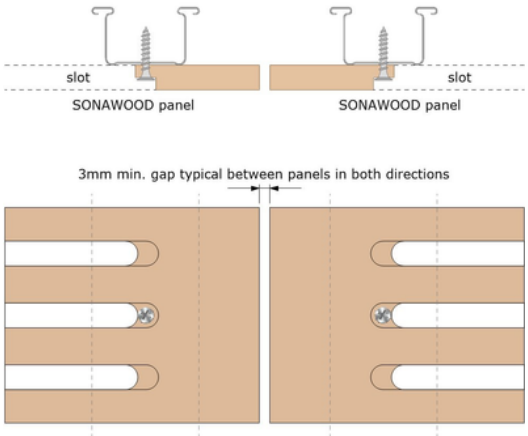


Demountable Mounting (Walls Only)

Concealed fix with split rail system — wall mounting only



Secret fix / hidden screw fixing to step slot end



Contact Asona for full Installation Manuals for the above mounting systems.

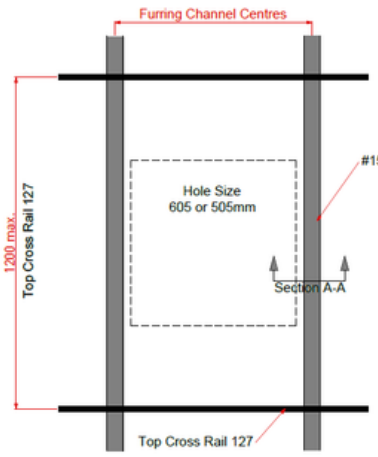
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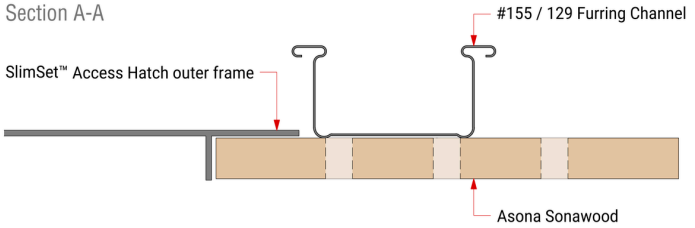
SlimSet™ Access Hatch Installation
Rondo Key-Lock® suspension layout



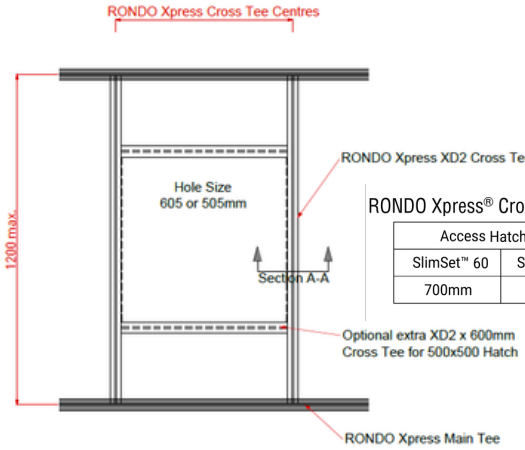
Furring Channel Centres

Furring Channel Type	Access Hatch Sizes	
	SlimSet™ 60	SlimSet™ 50
#155	715mm	615mm
#129	705mm	605mm

Section A-A



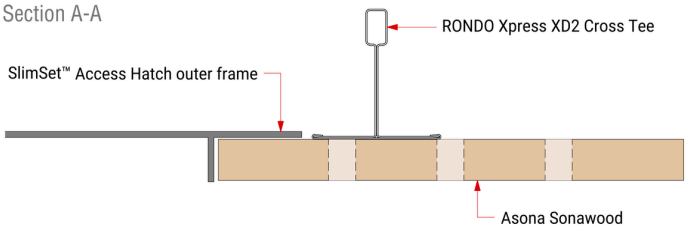
Rondo Xpress® suspension layout



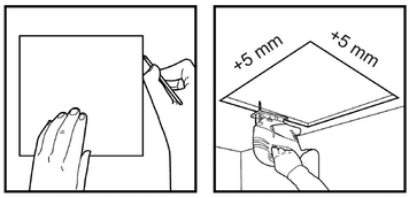
RONDO Xpress® Cross Tee Centres

Access Hatch Sizes	
SlimSet™ 60	SlimSet™ 50
700mm	600mm

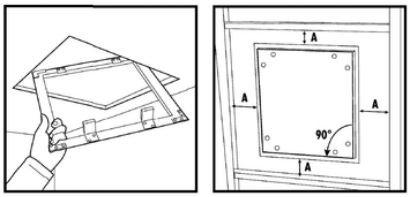
Section A-A



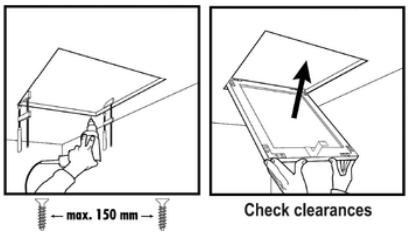
Hatch cut-out and installation



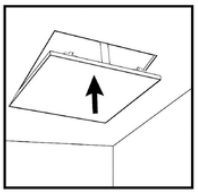
Locate position of hatch between suspension framing. Cut hole 5mm larger than hatch size, ie 605mm or 505mm.



Ensure the back of the Sonawood is debris free. Remove the lid from the hatch and feed the outer frame diagonally through the opening, ensuring the hatch is orientated in the right direction for the lid to open.



Temporarily clamp the frame and screw fix from the back through the external flange into the Sonawood on all four sides, Screws max at 150mm centres. Remove the clamps.



If suitable, use the hole cut-out piece for the lid, otherwise cut a section from another sheet to match the perforation pattern. Attach to lid frame. Reinstall the lid into the outer frame.

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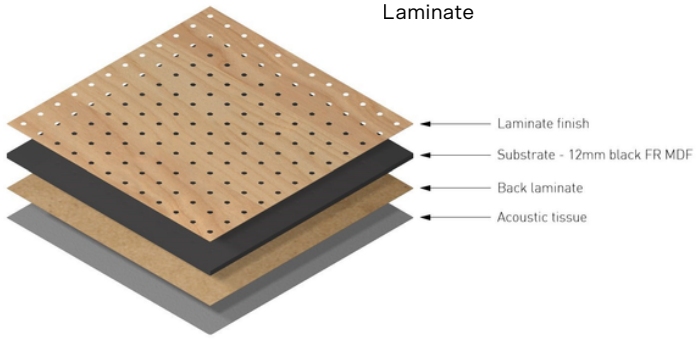
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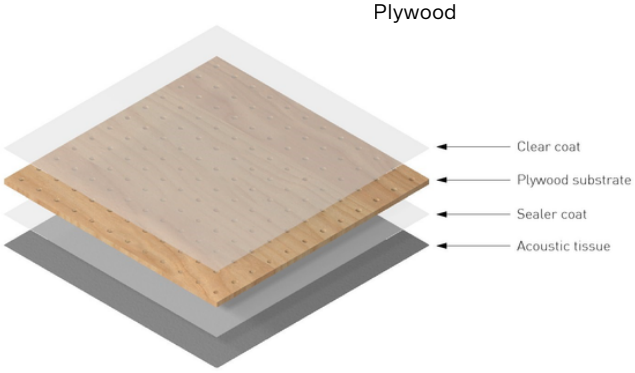
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Sonawood Composition Examples

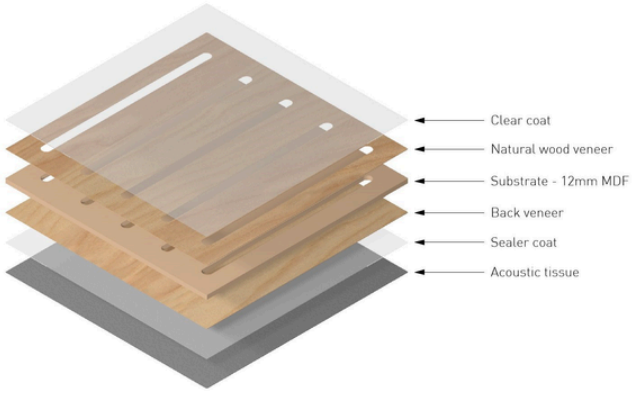
Laminate



Plywood



Natural Wood Veneer



Practical Sound Absorption Coefficients:

ISO 354 E-200, Test reports T2312-3 to 8
* with Triton 50 acoustic tile backer

ITEM	Open Area*	NRC	125 Hz	250 Hz	500 Hz	1K Hz	2K Hz	4K Hz
H8.16 NB	19.6	0.70	0.50	0.70	0.80	0.70	0.65	0.70
H8.16 NB*	19.6	0.75	0.60	0.75	0.75	0.80	0.80	0.80
SW10.520	21.7	0.65	0.55	0.70	0.80	0.60	0.60	0.55
SW10.520*	21.7	0.70	0.65	0.70	0.75	0.70	0.65	0.65
SW12.520	26.0	0.70	0.45	0.70	0.80	0.65	0.60	0.55
SW12.520*	26.0	0.80	0.70	0.80	0.80	0.80	0.70	0.70

Technical Specifications

Finishes: All panel types
Pre-finished in a range of decorative surface finishes from paint, clear coat lacquer, stain, or prefinished laminates. FR Plywood available in Poplar wood species only.

Limitations:
• For interior use only, and not in direct contact with moisture or in extreme humidity conditions.
• Not for use with negative air return plenums.
• Maximum humidity/temperature 90% R/H at 30°C.
• Maximum weight that can be directly integrated into the ceiling eg: lighting, A/C grill, speakers etc, shall not exceed 1.5kg. Greater weights shall be independently supported.
• Plywood types may be limited by the ply lamination process and acceptable machinability quality. Do not butt panels edge to edge. Lead times apply, contact Asona.
• For sports halls or similar application, to reduce risk of injury to hands or panel damage in low level wall applications subject to high energy impacts, careful consideration should be made on the selection of board material, perforation type, size, orientation, and framing centres.
Select micro bevel edged slot perforations for low level wall applications (< 1.8 m). Consult Asona.

Maintenance:
Clean with vacuum, soft brush. May be cleaned with a damp soapy cloth, clean away residual soap and dry after cleaning.

NZ Building Act
This product is not subject to a warning or ban under Section 26.

NZ Building Code Compliance:
• B2 Durability – Clause B2.3.1 (b) (i): Asona Sonawood with only normal maintenance will have a minimum durability of at least 15 years when installed in accordance with; manufacturer's installation requirements and AS/NZS 2785:2020.
• C3 Fire – Clause C/AS2 4.12.1: Asona Sonawood has a Fire Material

Group Number :
3—perforated plywood, MDF with LPL or natural wood veneer
2-S—perforated FR MDF with laminates
1-S—non perforated solid FR MDF with natural wood veneer, LPL or paint, FR Plywood perforated or non-perforated.
NZBC Building Product Specification Parts 8.5.4 or 8.5.5, tested in accordance with ISO 9705 or ISO 5660.

Warranty:
15 year limited warranty against manufacturing defects.

Weight: (subject to board type density and perforation open area) 4.2—10 kg/m² Contact Asona.

Installation:
Shall not commence until the building is water tight and dry. Sonawood wall panels shall be installed with a full perimeter support and plywood ceiling panels must have the face grain running at right angles to framing members. If panels are to be face fixed, timber framing members are recommended to enable more discrete fixings to be used. To minimise the risk of buckling, it is recommended that the panels be allowed to acclimatise in the area in which they are being installed no less than 2 days. Allowance of 3mm minimum shall be made between panels to accommodate swelling and building movement.
Refer full Installation Manual.

Specification:
Acoustical treatment shall be Sonawood perforated wood acoustical panel manufactured by Asona Limited. Tel: 09 525 6575, info@asona.co.nz. Substrates: (Black FR MDF) (FR MDF) (standard MDF) (Plywood) (FR Plywood); Fire Group (_);
Finish Type: Natural Wood Veneer (_), LPL (_) (Natural)
Finish: paint (_), stain (_), clear (_)
Panel Size: (_) x (_)mm x (_)mm thick,
Perforation: Type (_), Perforation Cluster: (_)
Slot type: (standard slot) (micro bevel slot)
Installation method: (_), Install SlimSet™ (60)(50) Access Hatch.
Contractor shall register the ceiling with Asona on practical completion. (Asona Masterspec 5172AA specification available).

NEW ZEALAND MADE

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