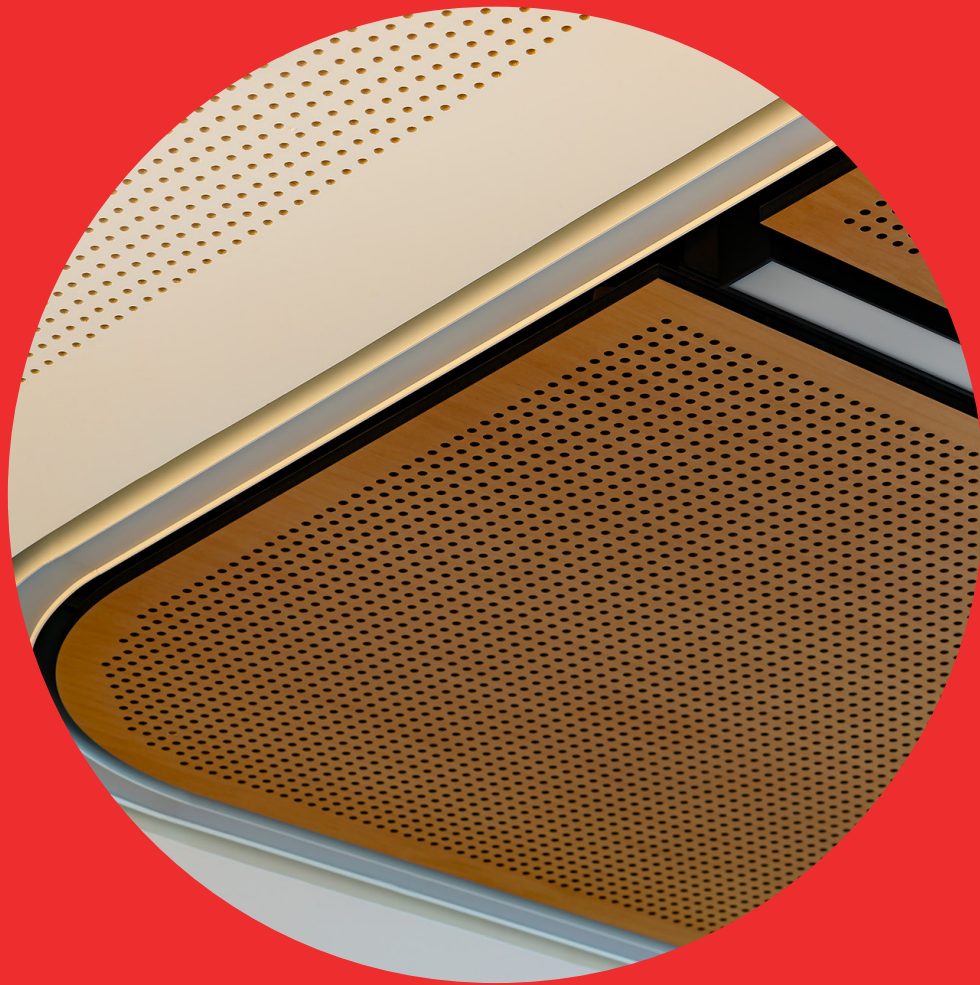


sonawood™



Perforated Acoustic Wood Panels Technical Installation Manual



sonawood™

Perforated Acoustic Wood Panels for Ceilings and Walls

Technical Installation Manual

Sonawood™ is a perforated wood ceiling tile with an integrated acoustic backing and pre-finished in a selection of decorative surfaces. Sonawood™ perforations are suitable for use in many internal ventilation applications

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Perforated Acoustic Wood Panels for Ceilings and Walls

1.0 General Information

Description

Asona Sonawood™ is a perforated wood panel lining for acoustic ceilings and walls. Made in NZ, Sonawood™ is manufactured in a range of perforation patterns and open areas to meet acoustic and aesthetic requirements. Panels are screw fixed to a metal suspension system, or direct fixed to the building structure. Asona Sonawood™ is a durable lining for control of unwanted noise reverberation in residential and commercial construction; open plan living and office spaces, meeting rooms, receptions, hallways, hotels, healthcare, retirement facilities, auditoria, libraries, halls, malls etc.

Application

Asona Sonawood™ panels are designed for ceiling lining or high wall application (ie above 2.0m). Installation options include:

- Suspended steel systems (Rondo KEY-LOCK® or Rondo Xpress® Drywall Grid or Rondo ScrewFix®)
- Direct fixed Rondo steel battens on steel brackets
- Direct fixed Rondo steel battens
- Kiln dried timber battens

Composition

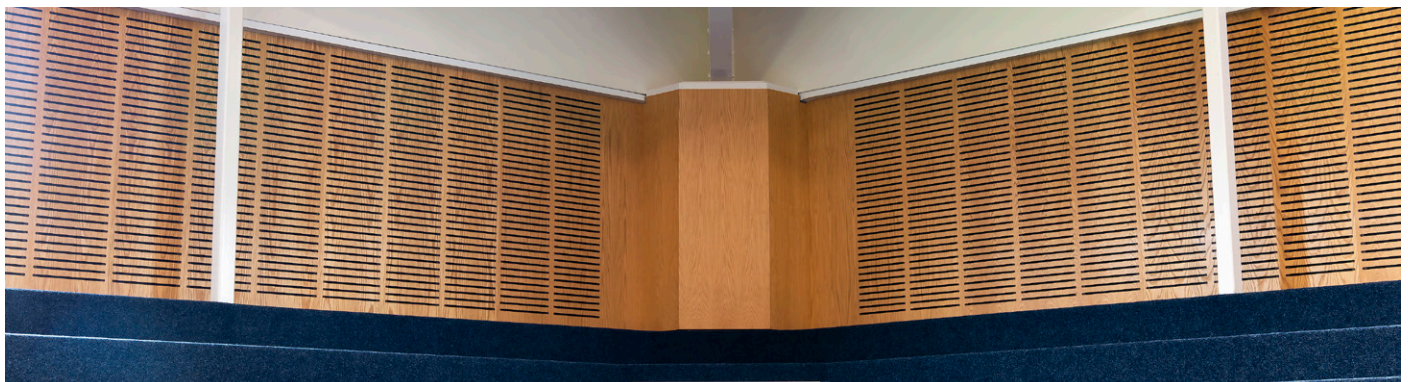
Sonawood™ panels are manufactured in NZ from MDF variations or plywood with acoustic tissue backing.

General

The installation details and information contained within this Asona Sonawood™ Technical Installation Manual provides an extensive range of construction methods that can be adapted to suit individual projects.

Disclaimer

"Asona Sonawood™ Panels and components as described must be used and installed in accordance with the installation instructions detailed within this guide. Use of any other installation methods, materials or components may result in component failure and void the warranty of the product and system



Asona Ltd.
Office and Factory
6 Mahunga Drive, Māngere
Bridge, Auckland 2022
New Zealand

Contact
T: +64(0)9 525 6575
E: info@asona.co.nz
W: www.asona.co.nz
NZBN: 9429036035175

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2.0 Technical Installation Specification

Back Loading:

Maximum weight that can be directly integrated into the ceiling eg: lighting, A/C grills, speakers etc, shall not exceed 1.5kg. Greater weights and any point loads shall be independently supported.

Installed Conditions:

Max 90% R/H at 30°C.

Maintenance:

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

Weight: (nominal)

Panel weight is subject to board type variation selection, thickness, density and perforation.

This may vary from 6.5—13.5 kg/m².

Handling & Storage

- Asona Sonawood™ panels should be handled as a “finishing” material.
- Do not drag panels when lifting from pallet.
- Handle with care, on edge, not flat, avoid bending and edge damage.
- Store Sonawood™ panels on a flat dry surface clear of the floor with adequate support to prevent bending, and protect edges.
- 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.
- Keep dry, clean, and free from dust and debris, and protected from weather.
- When storing onsite protect the panels from possible damage by other trades.

Limitations of Use

- The Sonawood™ panel is not designed for use in external applications.
- Not for use with negative air return plenums, in direct contact with moisture, or in extreme humidity conditions.
- Plywood types may be limited by the ply lamination process and acceptable machinability quality. Do not butt panels edge to edge.
- Panels are not to be used by sub-trades to support other services or equipment.
- Damaged product is not to be installed.

Installation

- The installation of Asona Sonawood™ panels can be carried out by tradespersons or suspended ceiling installers who are competent in installing MDF or plywood panels.
- 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.
- Allowance of 3mm minimum shall be made between panels to accommodate swelling and building movement.
- Fully support panels when positioning and fixing to framing. The use of mechanical lifting machines is recommended for ceilings.

Seismic Bracing

- If the panels are attached to a suspended ceiling, then the weight of the panels shall be included in the ceiling seismic design calculations. Install bracing as required by the seismic design. For preliminary advice, please contact Asona Ltd.

Do's

- Use the specified components as detailed in this manual.
- Ensure panels are aligned correctly to match perforation pattern clusters.
- Install with a 3mm gap typical between panels in both directions.

Don'ts

- Do not install Asona Sonawood™ panels until the building is watertight.
- Adhesives are not to be used to attach

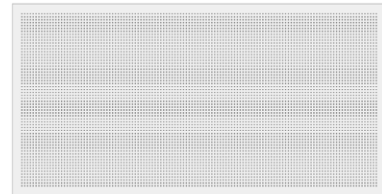
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Perforated Acoustic Wood Panels for Ceilings and Walls

3.0 Components & Ancillary Products

Sonawood Panel

1200 x 2400 x 12mm (W1L1 perforation cluster shown)
NOTE: standard 1200 x 2400mm panels are machined to 1197 x 2397mm to allow for the required 3mm gap between panels



Rondo KEY-LOCK® Furring Channel #129



Rondo KEY-LOCK® Top Cross Rail (TCR) #127



Rondo KEY-LOCK® Joiner Clip #139 #129 Furring Channel to TCR



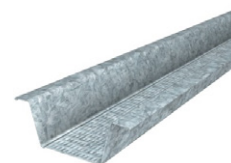
Rondo KEY-LOCK® Wall Track #140



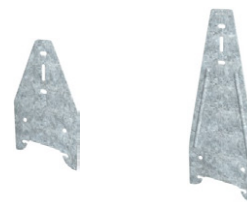
Rondo KEY-LOCK® Direct Fix Clips #226—(short) #394—(long) For #129 Furring Channel



Rondo ScrewFix® Furring Channel #F37



Rondo ScrewFix® Direct Fix Clips #FDfs—(short) #FDfL—(long) For #F37 Furring Channel



Asona Ltd.
Office and Factory
6 Mahunga Drive, Māngere
Bridge, Auckland 2022
New Zealand

Contact
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W: www.asona.co.nz
NZBN: 9429036035175

asona

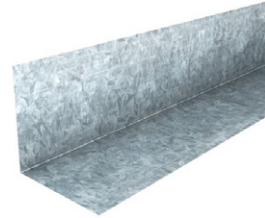
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3.0 Components & Ancillary Products, cont.

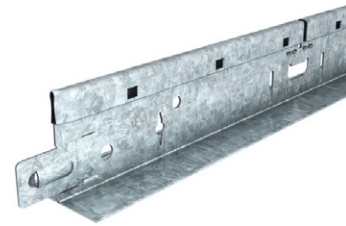
Rondo Wall Trim

#553—35mm x 35mm
#XD5—40mm x 40mm



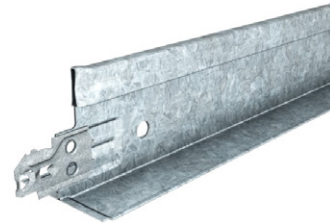
Rondo Xpress® Drywall Grid

#XD1/XD1H—Main Tee, 3600mm



Rondo Xpress® Drywall Grid

#XD2—Cross Tee, 1200mm & 600mm



Rondo Xpress® Drywall Grid

#XD6—Wall Trim Channel, 3600mm x 40 x 38 x 19mm



Rondo Xpress® Drywall Grid

#DXCL—Suspension Clip



Suspension

HW-Ø2.5 Hanger Wire, 3600mm

#DXDF-Direct Fix Strap



Asona Ltd.
Office and Factory
6 Mahunga Drive, Māngere
Bridge, Auckland 2022
New Zealand

Contact
T: +64(0)9 525 6575
E: info@asona.co.nz
W: www.asona.co.nz
NZBN: 9429036035175

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Perforated Acoustic Wood Panels for Ceilings and Walls

4.0 Installation

4.1 Standard Method— Suspended Ceilings

The preferred installation method is to mount Sonawood™ panels onto steel framing. Recommended systems are Rondo KEY-LOCK®, Rondo Xpress® Drywall Grid, Rondo ScrewFix®. These are typically suspended but there are direct-fix options. See 4.2 Installation shall not commence until the building is watertight and dry.

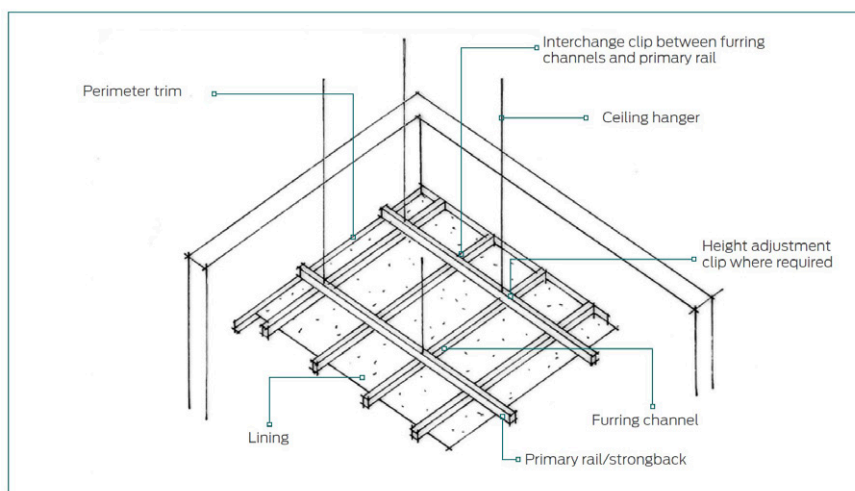
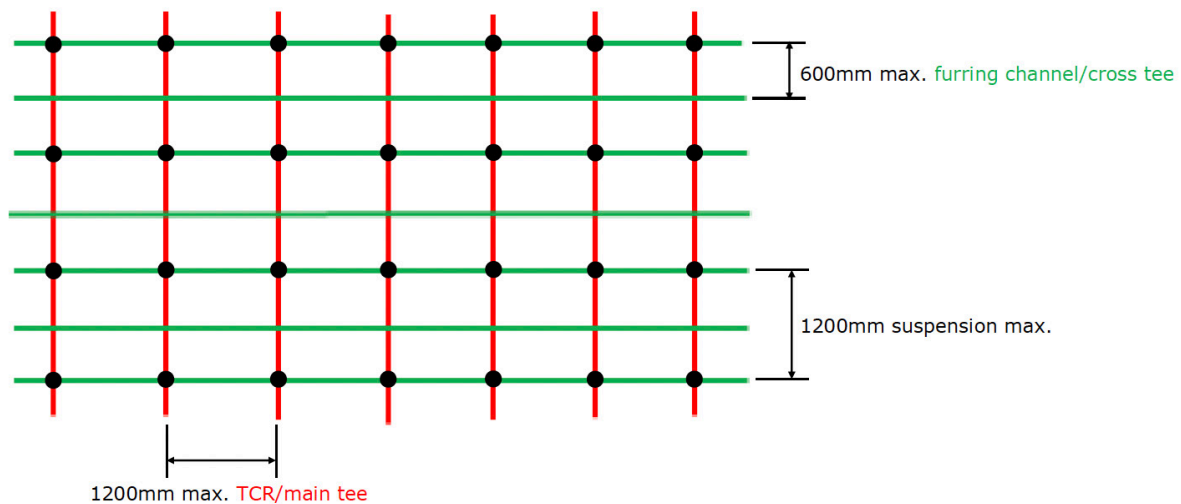
Installation Overview:

Set out panel panels carefully, as layout and panel fastening centres will dictate framing positioning.

- TCR/Main Tee framing shall be 1200mm centres maximum
- Suspension 1200mm maximum
- Furring channel/battens/cross tees at 600mm maximum.

Additional products attached to the ceiling may require reducing the framing centres to take the additional weight. Refer to Rondo's Design manuals for appropriate spacings.

Framing and Suspension maximum centres:



Asona Ltd.
Office and Factory
6 Mahunga Drive, Māngere
Bridge, Auckland 2022
New Zealand

Contact
T: +64(0)9 525 6575
E: info@asona.co.nz
W: www.asona.co.nz
NZBN: 9429036035175

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4.0 Installation

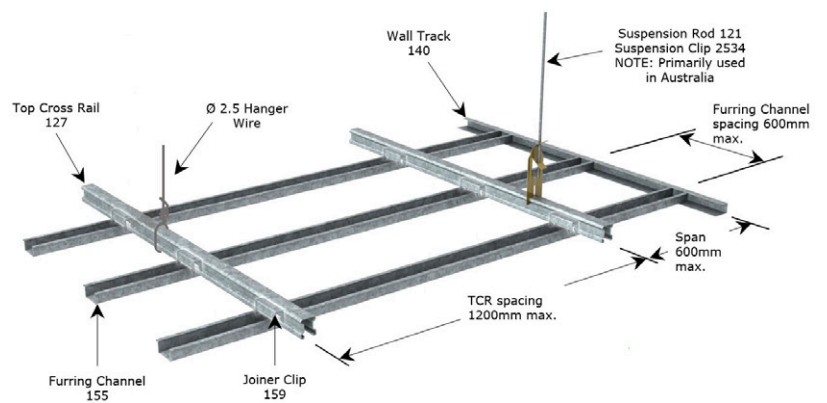
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The preferred installation method is to mount Sonawood™ panels onto steel framing. Recommended systems are Rondo KEY-LOCK®, Rondo Xpress® Drywall Grid, Rondo ScrewFix®. These are typically suspended but there are direct-fix options. See 4.2 Installation shall not commence until the building is watertight and dry.

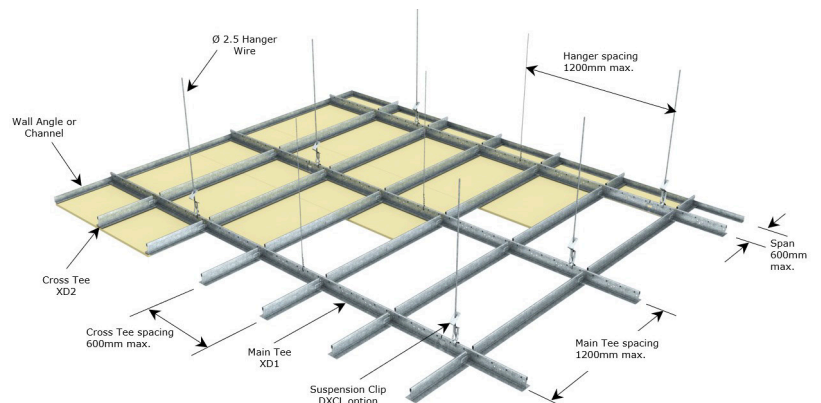
Installation Overview:

Suspended ceiling framing options

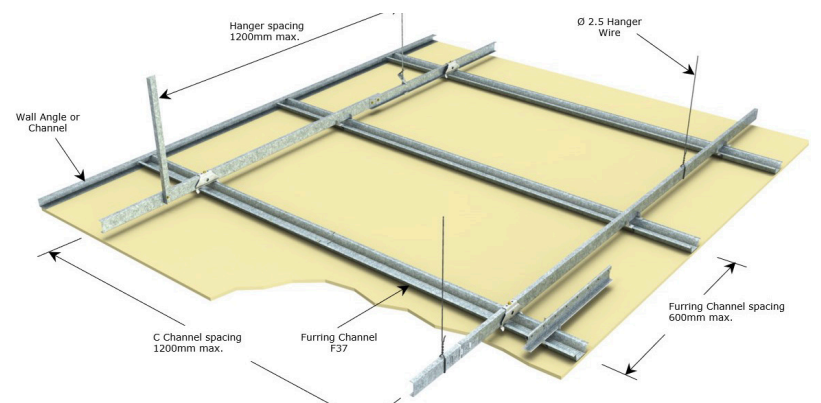
Rondo KEY-LOCK®



Rondo Xpress®



Rondo ScrewFix®



Asona Ltd.
Office and Factory
6 Mahunga Drive, Māngere
Bridge, Auckland 2022
New Zealand

Contact
T: +64(0)9 525 6575
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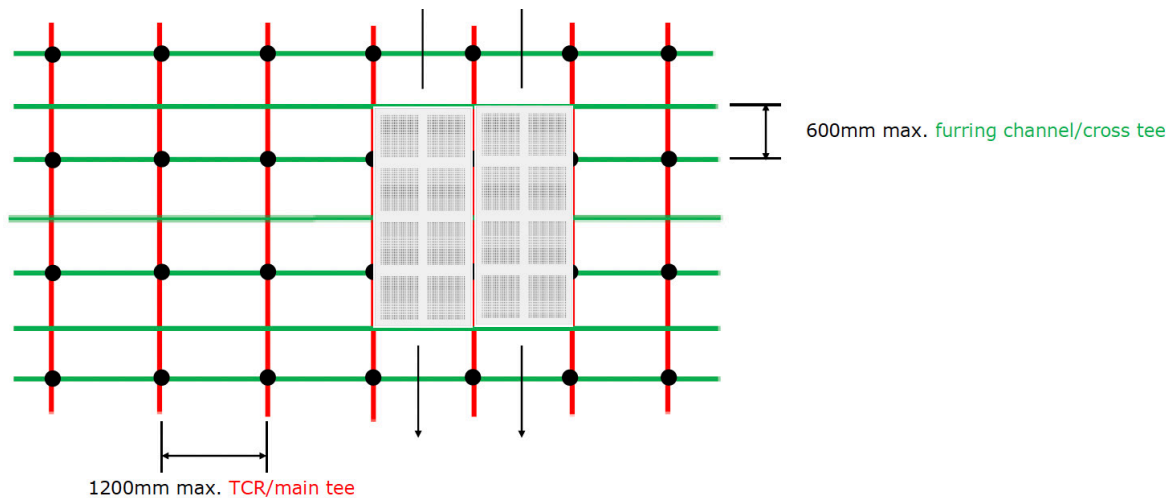
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Perforated Acoustic Wood Panels for Ceilings and Walls

4.0 Installation

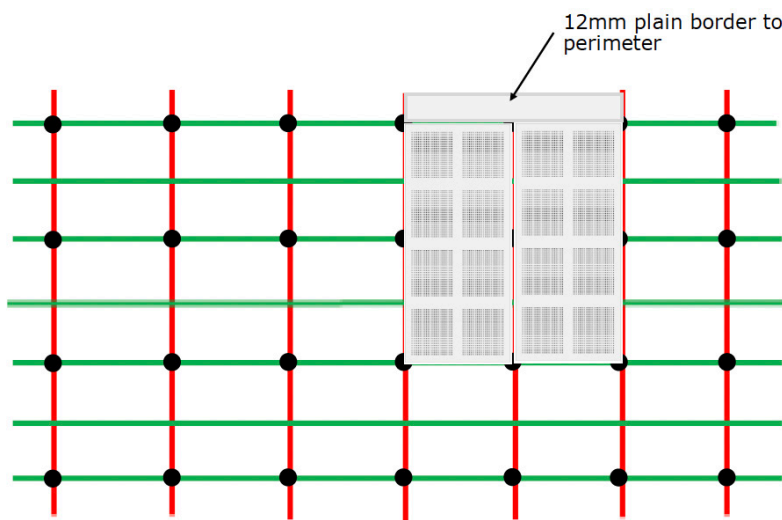
Ceiling Layout

- Divide the ceiling panel layout from the centre of the room to ensure a uniform border and pattern, or as detailed on the architectural RCP.
- Panels are installed perpendicular to furring channel or cross tees.
- Position short ends to finish on furring channel or cross tees.
- Ensure perforations of adjacent panels align.



Alternative Ceiling Layout with Plain Border

- Position the ceiling panel layout from the centre of the room to the last full panel. (The balance to the wall can use standard 12mm non-perforated panels to provide a seamless border)
- Panels are installed perpendicular to furring channel or cross tees.
- Position short ends to finish on furring channel or cross tees.
- Ensure perforations of adjacent panels align.



Perforated Acoustic Wood Panels for Ceilings and Walls

4.2 Standard Method— Direct Fixed Ceilings

Installation shall not commence until the building is watertight and dry.

Installation Overview:

Where the installation of Sonawood™ panels is to be direct fixed to the building structure (floors/joist/purlins) is required, set out the steel furring channel/battens to suit the panel layout, 600mm centres maximum. If attaching to timber joists of a trafficable floor, it is recommended to use direct fix brackets to assist isolation from potential floor deflection and alignment. Direct fix brackets shall be used at 1200mm centres maximum.

Rondo Furring Channel/Batten

Rondo KEY-LOCK®

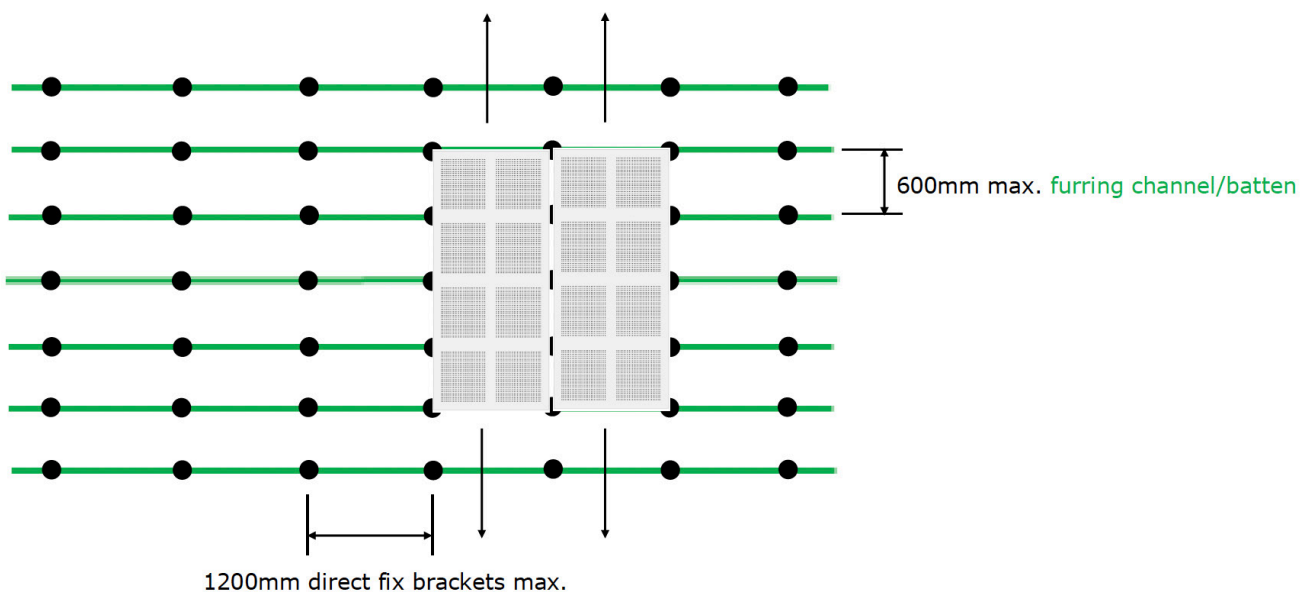
- #F37 Furring Channel/Batten
- #FDFS Direct Fix Bracket (short)
- #FDL Direct Fix Bracket (long)

Rondo ScrewFix®

- #F37 Furring Channel/Batten
- #FDFS Direct Fix Bracket (short)
- #FDL Direct Fix Bracket (long)

Ceiling Layout

- Divide the ceiling panel layout from the centre of the room to ensure a uniform border and pattern, or as detailed on the architectural RCP.
- Panels are installed perpendicular to furring channel/battens.
- Position short ends to finish on furring channel/batten.
- Ensure perforations of adjacent panels align.



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Perforated Acoustic Wood Panels for Ceilings and Walls

4.3 Panel Attachment and Fixing Centres

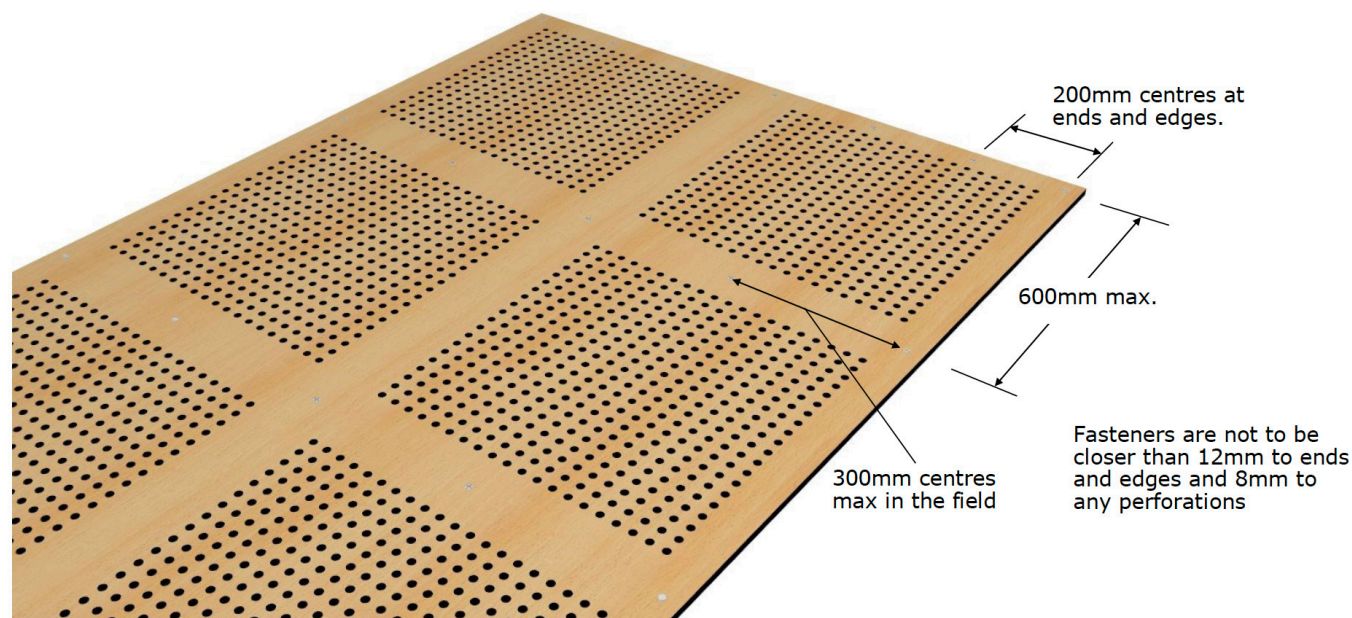
Installation shall not commence until the building is watertight and dry.

Panel Attachment

- Fully support Sonawood™ panels when positioning and fixing to framing. The use of mechanical lifting machines is recommended for ceilings.
- Fix off to the installed steel framing using 6g x 25mm minimum countersunk head screws.
- Fix off to timber battens with 40mm panel pins or 6g x 32mm minimum countersunk head screws.

Fixing Centres:

- Use screws at a maximum of 200mm centres at panel ends and edge joints and 300mm in the field. Do not use adhesives.
- Screws are not to be closer than 12mm from sheet ends or edges.
- Where possible, ensure that the furring channels or Xpress® tees line up with the clear spaces between perforations. If they cannot be aligned with clear spaces, ensure fasteners are placed centrally between and no closer than 8mm to the edge of perforations.



Asona Ltd.
Office and Factory
6 Mahunga Drive, Māngere
Bridge, Auckland 2022
New Zealand

Contact
T: +64(0)9 525 6575
E: info@asona.co.nz
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NZBN: 9429036035175

asona

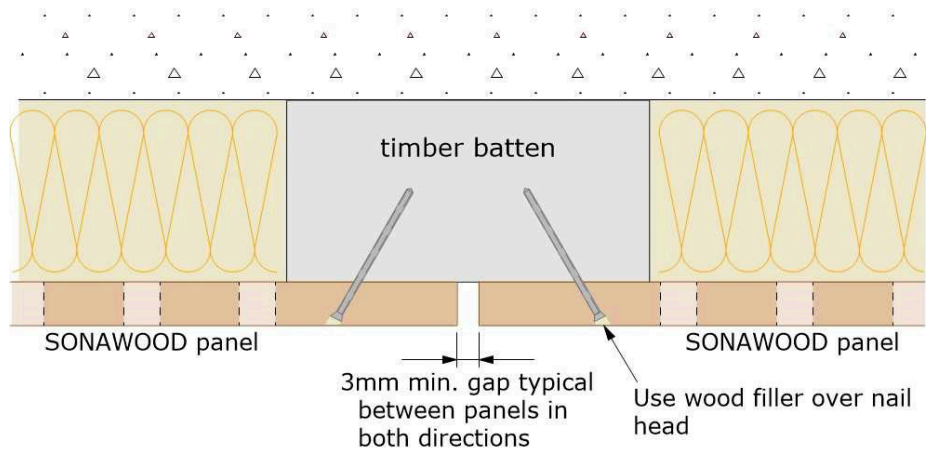
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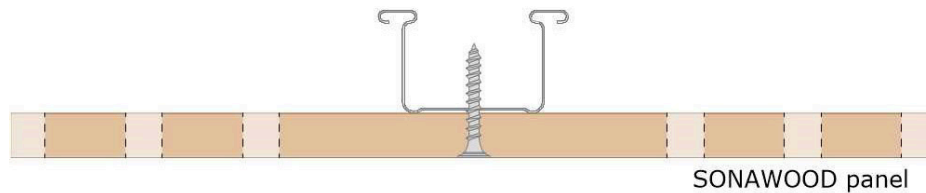
5.0 Fixing Options

Asona Sonawood™ panels can be installed using several different methods, incorporating face fixing, secret fixing and step slot fixing.

Face Fixing to Timber Battens

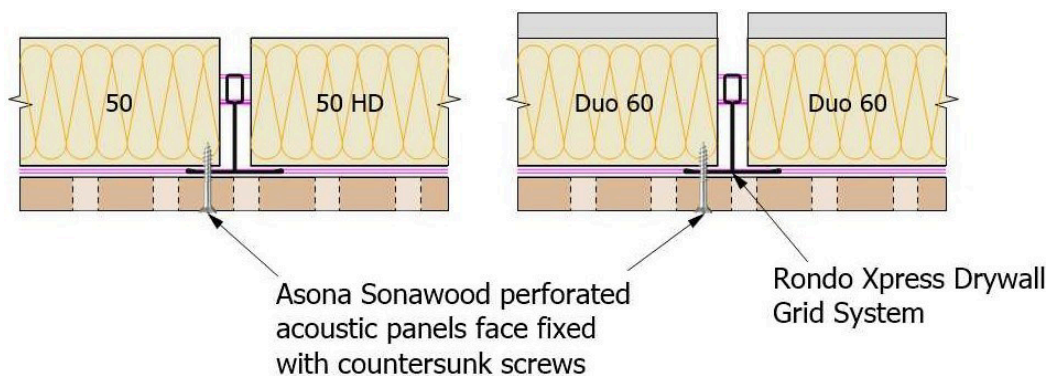


Face Fixing to Furring Channel/Battens



Face Fixing to Rondo Xpress

Triton acoustic tile options



Asona Ltd.
Office and Factory
6 Mahunga Drive, Māngere
Bridge, Auckland 2022
New Zealand

Contact
T: +64(0)9 525 6575
E: info@asona.co.nz
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NZBN: 9429036035175

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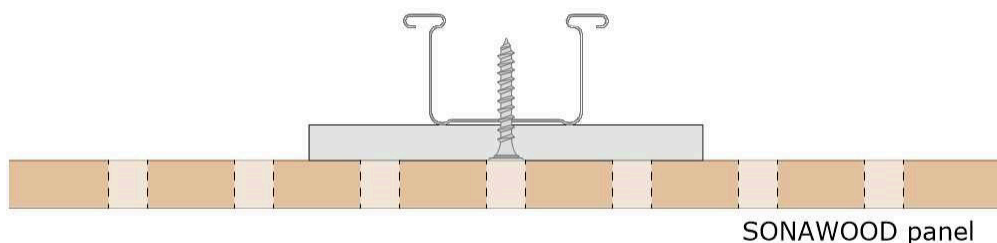
5.0 Fixing Options

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Secret fix / hidden screw fixing to #FFB mounting strip

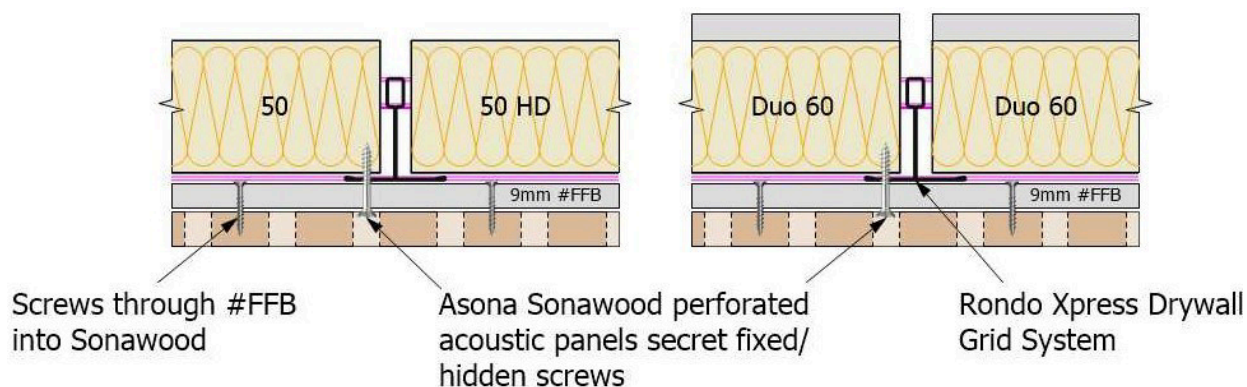
The #FFB mounting strips are screwed to the back of the Sonawood panel. Countersunk screws are then used through a perforation hole to screw into the #FFB strip.

Furring channel / battens



Rondo Xpress®

Triton acoustic tile options



Asona Ltd.
Office and Factory
6 Mahunga Drive, Māngere
Bridge, Auckland 2022
New Zealand

Contact
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E: info@asona.co.nz
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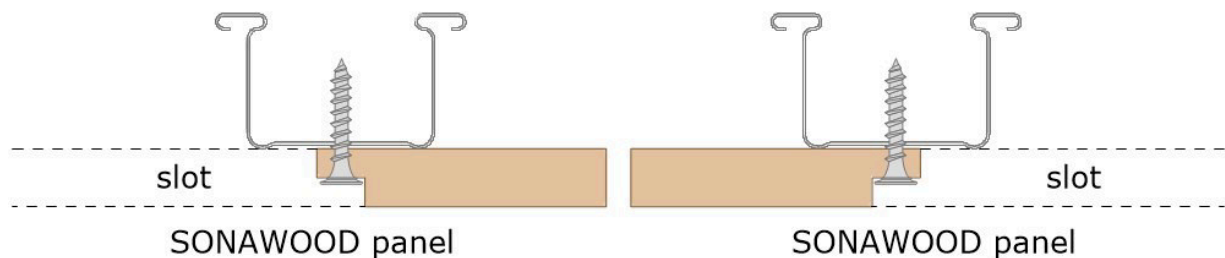
Perforated Acoustic Wood Panels for Ceilings and Walls

5.0 Fixing Options

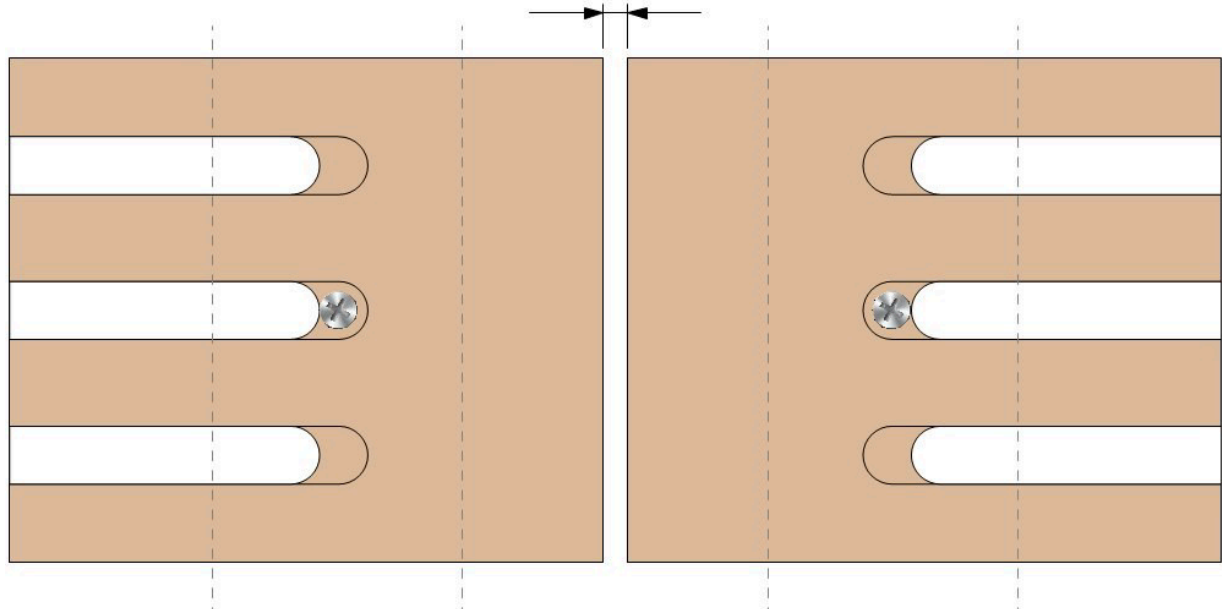
Asona Sonawood™ panels can be installed using several different methods, incorporating face fixing, secret fixing and step slot fixing.

Secret fix / hidden screw fixing to step slot end

This method is suitable for slot perforation designs. It permits the ease of face fixing but is semi-concealed within the slot perforation.



3mm min. gap typical between panels in both directions



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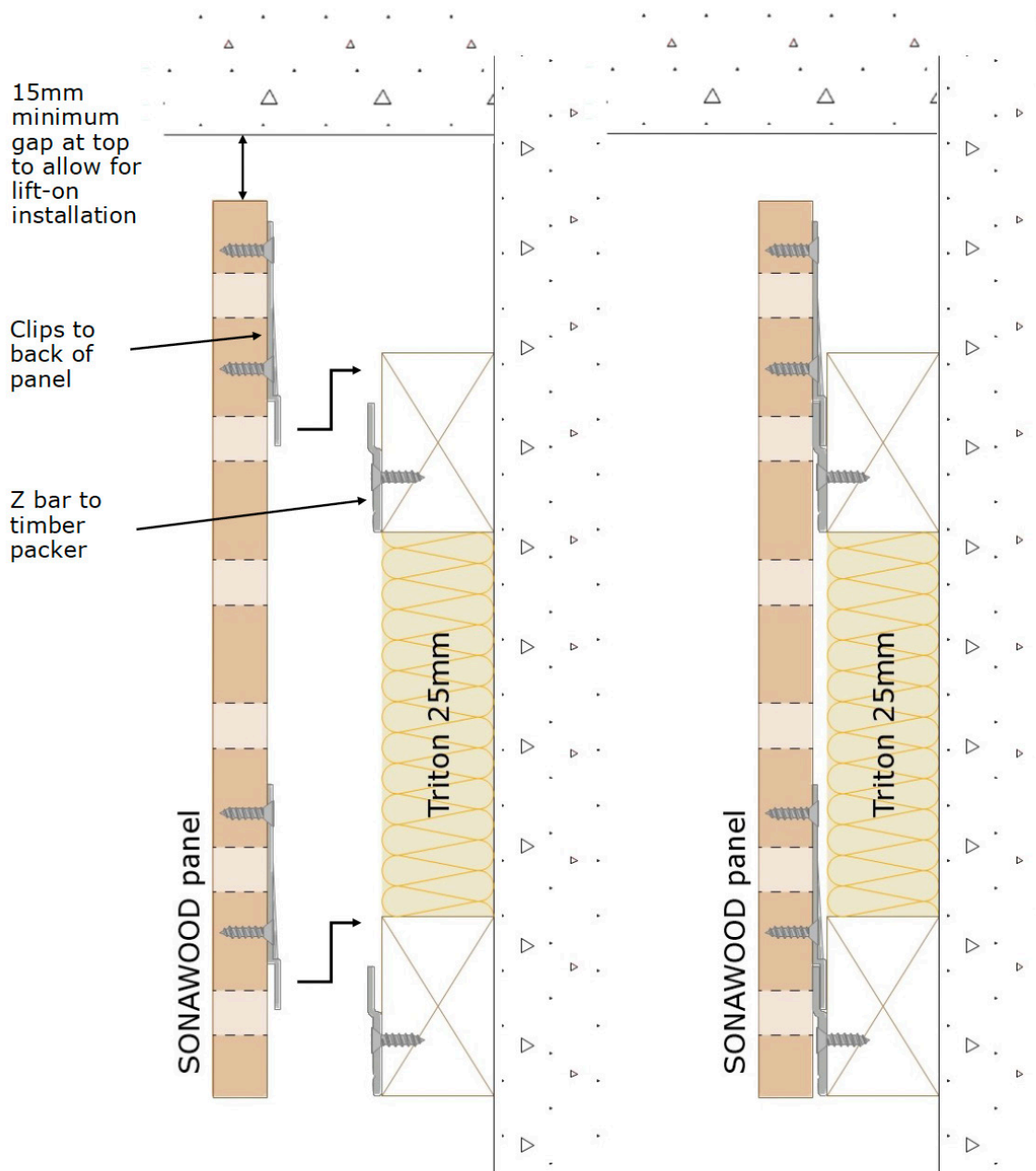
5.0 Demountable Fixing Options—Walls only



Secret fix with split rail and clips

This method is suitable for wall mounting where there is a need to demount panels. The Z bar split rail is screwed to the timber packers and clips screwed to the back of the Sonawood panels.

The timber packers allow for the inclusion of Triton acoustic panels behind the Sonawood panel for additional acoustic absorption.



Asona Ltd.
Office and Factory
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Bridge, Auckland 2022
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Contact
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7.0 Tools



Sonawood panels can be altered using conventional wood panel tools such as screw guns, circular saws, hole saws. Take care to protect the front visual surface when using any tools

Asona Ltd.
Office and Factory
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Bridge, Auckland 2022
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Contact
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asona