Technical Manual

Multi-residential Internal Walls

October 2016. Version 2.0

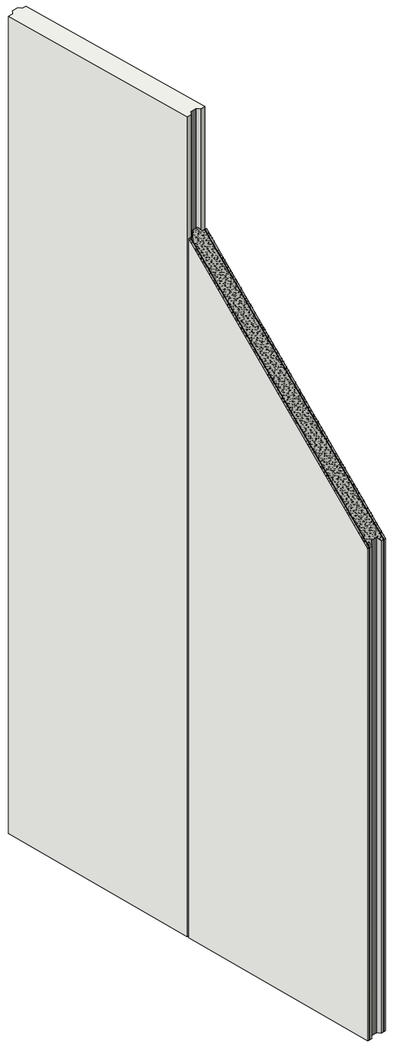
Pronto Panel™

Pronto Panel™ Technical Manual **Contents**

Pronto Panel
Introduction

Building with Pronto Panel

Pronto Panel is a non-load bearing panel system that can be used both internally and externally. Pronto Panel's durable, lightweight and simplistic nature makes it perfectly suitable for both residential and commercial projects.



FASTER. BETTER. STRONGER.

The benefits stack up

- Lightweight
- Durable
- Fast and simple installation
- Exceptionally low water permeability
- Effective acoustic insulation
- High fire resistance
- High pull-out strength
- Minimal components
- Exceptional lateral load capacity

Pronto Panel
System Information

Compliance and Quality

Compliance

Pronto Panel has been extensively tested at CSIRO, University of Newcastle and other NATA accredited laboratories. The manufacturing, testing and installation procedures have been accredited for compliance with the National Construction Code (NCC) by GlobalMark Pty Ltd for CodeMark certification.

CodeMark™ Certification

CodeMark is a building product certification scheme. The CodeMark scheme supports the use of new and innovative building products by providing a nationally and internationally accepted process for products to be assessed for compliance with the requirements of the building codes of Australia and New Zealand. The scheme provides confidence and certainty to regulatory authorities and the market through the issuing of a Certificate of Conformity.

CODEMARK™
30050

National Construction Code

Pronto Panel meets the provisions of the NCC Performance Requirements as an Alternative Solution. It has been identified for structural adequacy, fire resistance and acoustic performance. Thorough testing has been conducted to verify these requirements using registered testing authorities and expert judgment by professional engineers.

Quality

Pronto Panel is manufactured under licence by a company with full ISO 9001 accreditation. This ensures that all materials, processes, quality control and quality assurance are rigorously checked and verified.

Pronto Panel has achieved CodeMark certification, an independent accreditation to further ensure the quality and consistency of the product.

Pronto Panel has numerous quality checks, both during manufacture and before dispatch, to ensure only the highest quality product reaches the market.

Each batch of Pronto Panel can be traced and verified by its batch number to its original raw materials.

Intention

This manual is intended to be used by experienced and qualified builders, engineers and architects. No responsibility is taken for inappropriate, incomplete and incorrect use of the information in this manual.

Scope and Applications

Pronto Panel is suitable for any non-load bearing wall that requires fire and sound insulation.

Pronto Panel can be used for walls separating sole occupancy units or for walls separating sole occupancy units from a public corridor or public lobby. These walls require impact sound attenuation.

Pronto Panel installation must be carried out by qualified panel installers. No responsibility is taken for incorrect installations of Pronto Panel.

Pronto panel can be used as:

- Intertenancy Walls
- Internal Partition Walls
- Common Walls
- Service Shaft Walls
- Wet Area Walls
- External Walls

Product Range

Pronto Panel

Pronto Panel comes in various lengths.

Panel size (mm) (L x W x T)	Dimensional Tolerance (mm)	Mass (kg)	Mass Tolerance (kg)
2,700 x 610 x 60	±5	85	±5
2,850 x 610 x 60	±5	90	±5
3,000 x 610 x 60	±5	95	±5

Pronto Angle

A Pronto Angle is a 75 x 50 x 1.2mm BMT slotted galvanised angle.

Pronto Panel Adhesive

Pronto Panel Adhesive comes in 20kg bags.

Material Properties

Pronto Panel consists of a composite of lightweight aggregates bonded into a cementitious matrix. The panels are sheeted with a Calcium Silicate board. The panels have a tongue and groove on the vertical edges to interlock and to prevent the passage of noise and fire.

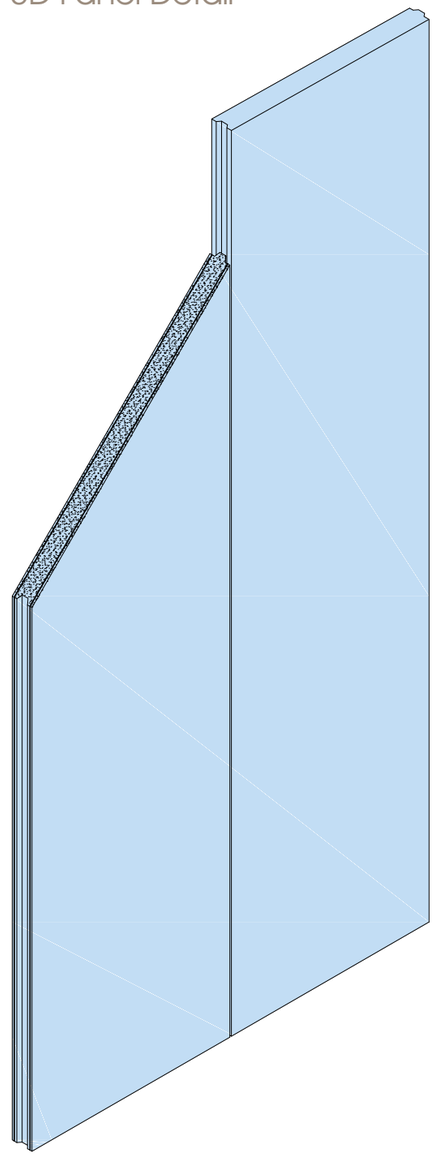
Due to its design, the panels can also be cut to size as required, without compromising its structural capacity.

Pronto Panel Material Properties

Properties	Value
Working Density	52kg/m^2
Dry Density	770kg/m^3
Water Absorption	<5 %
*R-Value	0.253m^2 K/W

*The panel is tested in accordance with the Australian and New Zealand Standard AS/NZS 4859.1

3D Panel Detail

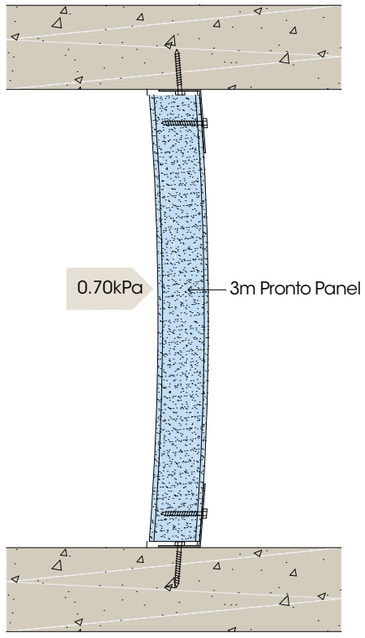


Structural Properties

Pronto Panel has undergone extensive testing.

1. Ultimate Design Load

When correctly installed, a 3m long Pronto Panel will resist an internal pressure of 0.70kPa.



Ultimate Design Pressure in One-Way Bending

Length (mm)	Ultimate Design Load (kPa)
2,700	0.86
2,850	0.77
3,000	0.70

2. Fixtures

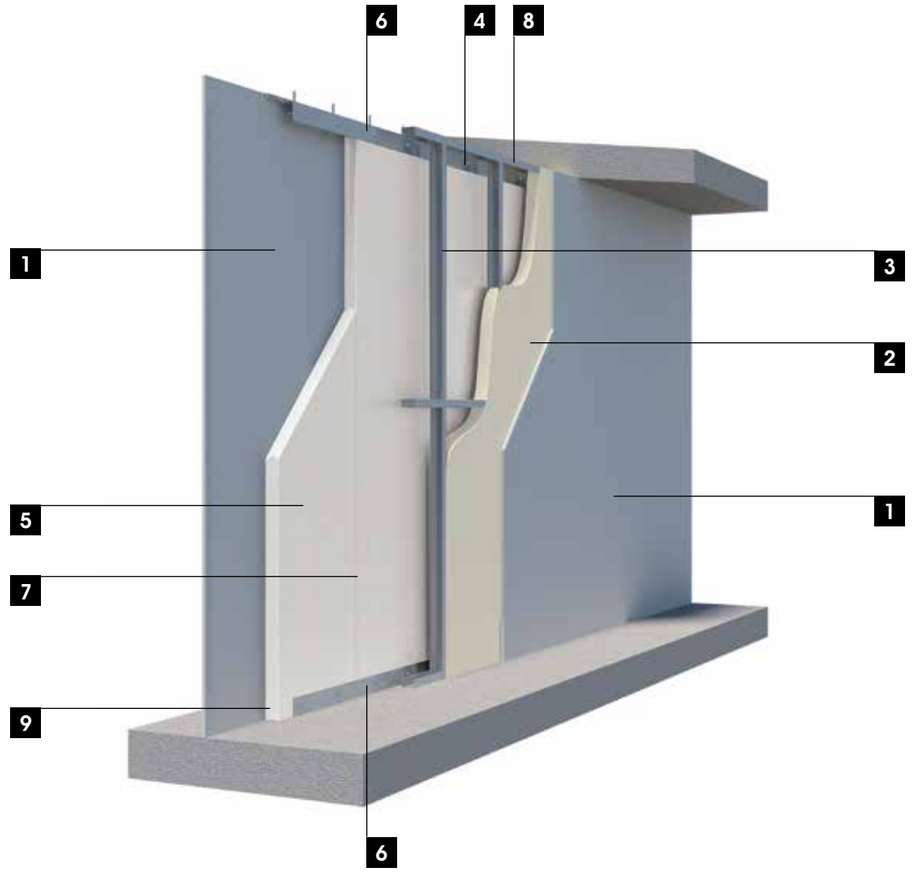
When correctly installed, 8g screws embedded 50mm into the Pronto Panel would have a capacity to hold 120kg of weight per screw.

3. Thermal Properties

Pronto Panel's R value is 0.253m^2.K/W with no plasterboard or other linings.

Pronto Panel Systems

System Components



1. 13mm STANDARD PLASTERBOARD SCREW FIXED AT 600 CENTRES
2. 75mm thick, 11kg/m^3 POLYESTER INSULATION
3. 64mm STEEL STUD AT 600 CENTRES
4. CAVITY (35mm)
5. PRONTO PANEL
6. 75 x 50 x 1.2mm BMT SLOTTED ANGLES WITH 14-10 x 50mm HEX HEAD TYPE 17 SCREWS
7. PRONTO PANEL ADHESIVE JOINT
8. 20mm GAP BETWEEN PANEL AND SOFFIT WITH 4 HOUR FIRE RATED SEALANT AND FIRE RATED BACKING ROD
9. NO ADHESIVE BETWEEN PANEL AND ANGLE

Application	Component	Fire	Sound (R_w+C_{tr})	Reports	Wall Thickness
Inter-tenancy Wall / Common Wall	60mm Pronto Panel	-/120/120	50	CSIRO test report FSV1677 Acoustic report 5518-1B Rev D*	185mm

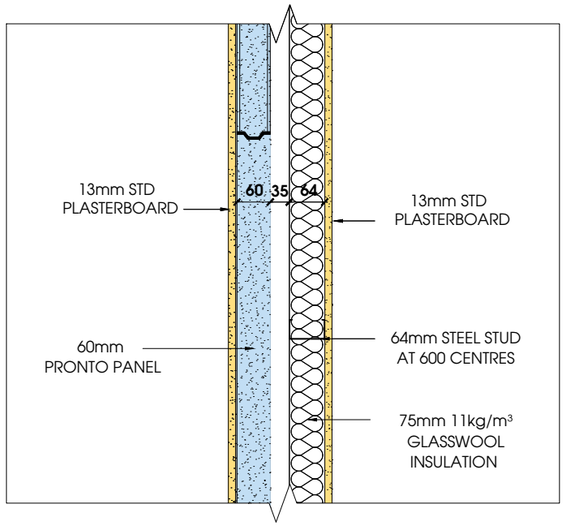
* Sound Reduction Index according to ISO 140-3 (laboratory measurement). Testing was conducted in accordance with ISO 140-4 and ISO 140-3. The tests were conducted by Day Design and the ratings are calculated in accordance with ISO 717-1.

System Details

The details in the following sections show the common junctions of the Pronto Panel walls with other building elements, such as concrete floors and soffits, and intersections of walls. Refer to installation section for specification of components labelled in the details.

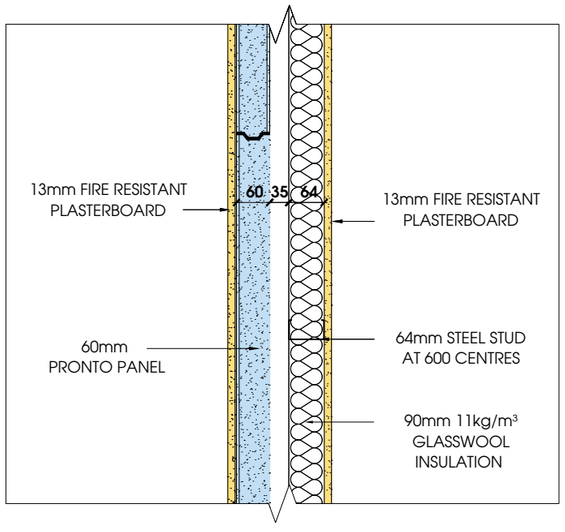
1. Intertenancy Walls

NCC REQUIREMENTS
FRL -/60/60
ACOUSTIC (Rw+Ctr) 50



INTERTENANCY WALL 1 PLAN

FRL	-/120/120
ACOUSTIC (Rw+Ctr)	50
WALL THICKNESS	185mm



INTERTENANCY WALL 2 PLAN

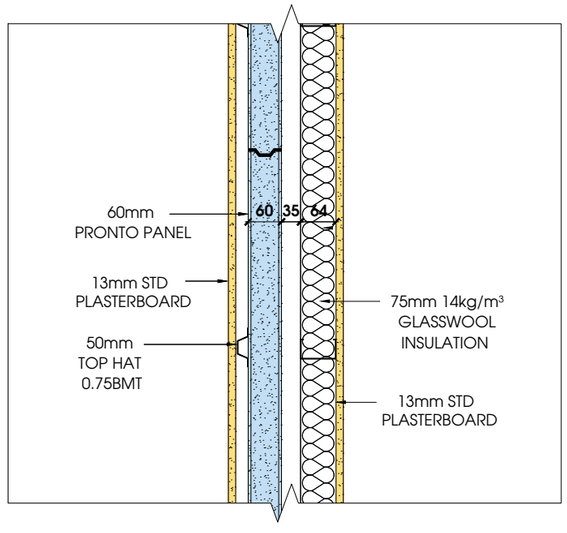
FRL	-/120/120
ACOUSTIC (Rw+Ctr)	55
WALL THICKNESS	185mm

Pronto Panel Technical Manual

System Details

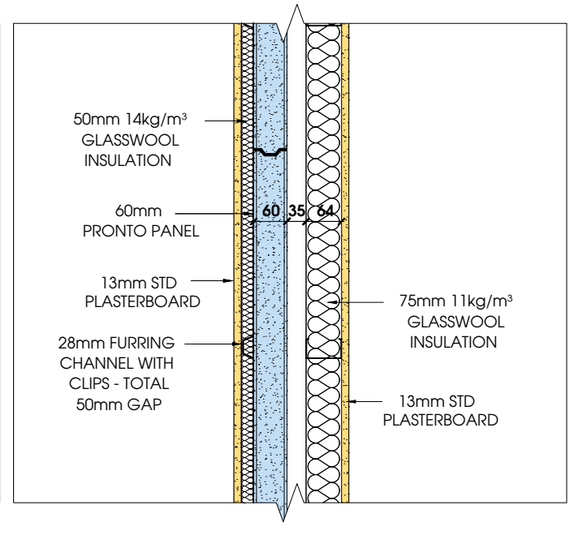
1. Intertenancy Walls

NCC REQUIREMENTS
FRL -/60/60
ACOUSTIC (Rw+Ctr) 50



INTERTENANCY WALL 3 PLAN

FRL	-/120/120
ACOUSTIC (Rw+Ctr)	51
WALL THICKNESS	235mm

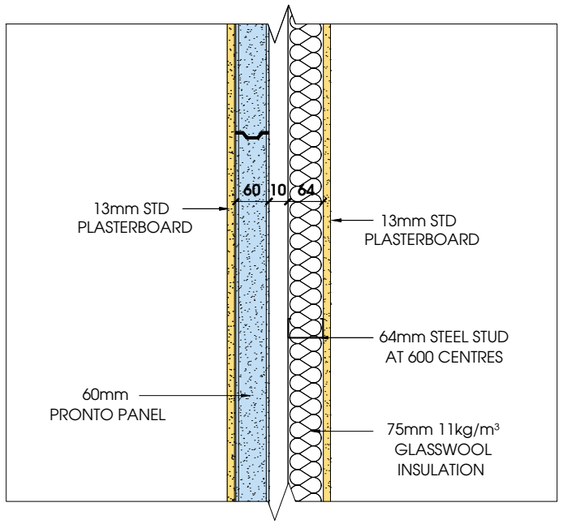


INTERTENANCY WALL 4 PLAN

FRL	-/120/120
ACOUSTIC (Rw+Ctr)	50
WALL THICKNESS	235mm

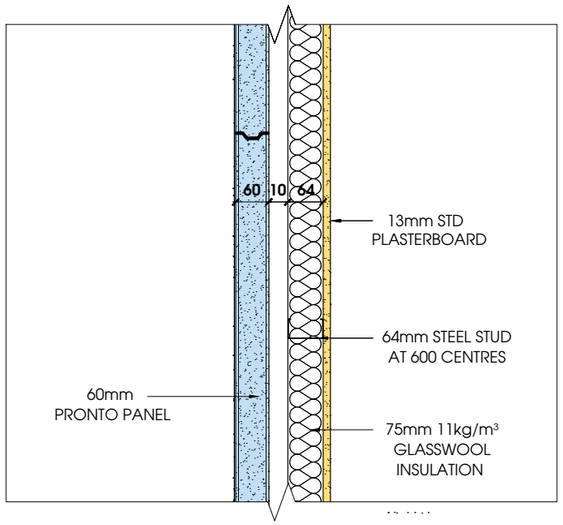
2. Corridor Walls

NCC REQUIREMENTS
FRL -/60/60
ACOUSTIC (Rw) 50



CORRIDOR 1 PLAN

FRL	-/120/120
ACOUSTIC (Rw)	55
WALL THICKNESS	160mm

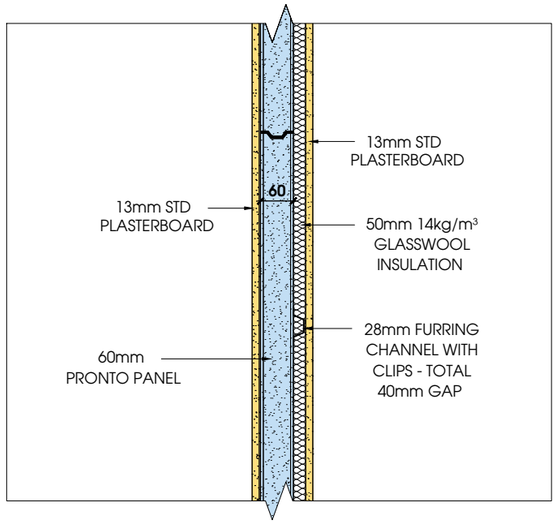


CORRIDOR 2 PLAN

FRL	-/90/90
ACOUSTIC (Rw)	53
WALL THICKNESS	147mm

2. Corridor Walls

NCC REQUIREMENTS
FRL -/60/60
ACOUSTIC (Rw) 50

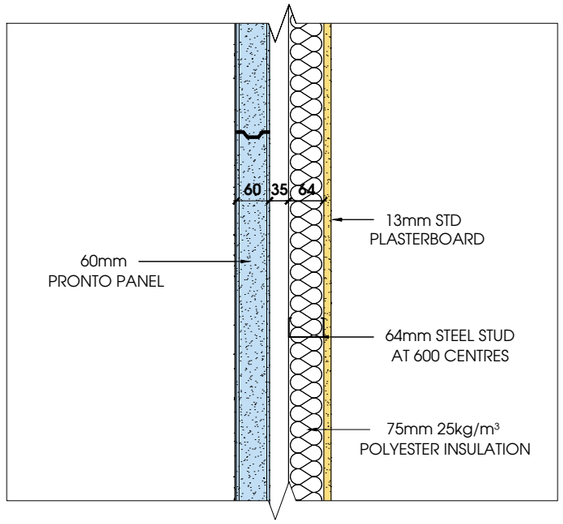


CORRIDOR 3 PLAN

FRL	-/60/60
ACOUSTIC (Rw)	50
WALL THICKNESS	126mm

3. SOU to Plant Room

NCC REQUIREMENTS
FRL -/60/60
ACOUSTIC (Rw+Ctr) 50

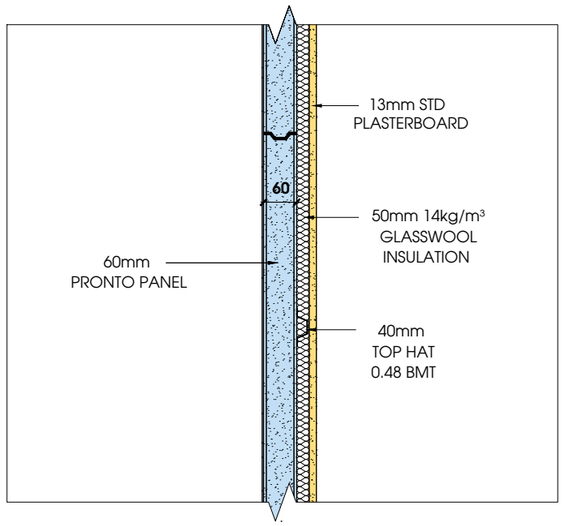


SOU TO PLANT ROOM PLAN

FRL	-/90/90
ACOUSTIC (Rw+Ctr)	52
WALL THICKNESS	172mm

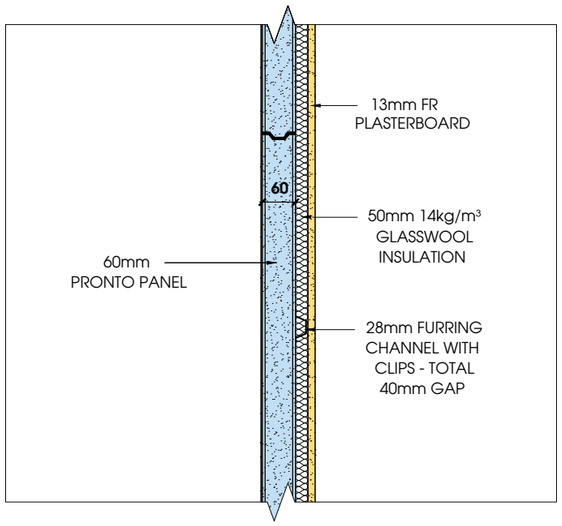
4. Service Shaft Walls

NCC REQUIREMENTS
FRL -/60/60 OR -/90/90
ACOUSTIC (Rw+Ctr) 40



SERVICE SHAFT WALL 1 PLAN

FRL	-/60/60
ACOUSTIC (Rw+Ctr)	41
WALL THICKNESS	113mm

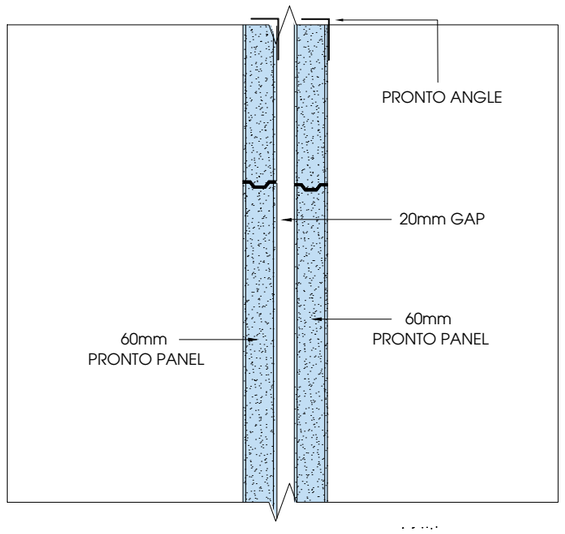


SERVICE SHAFT WALL 2 PLAN

FRL	-/90/90
ACOUSTIC (Rw+Ctr)	40
WALL THICKNESS	113mm

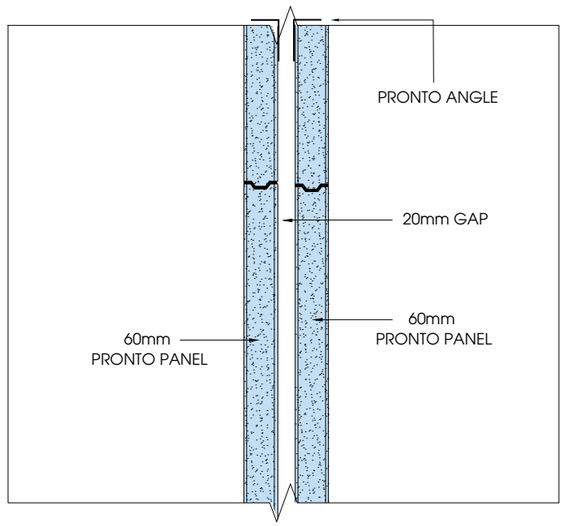
4. Service Shaft Walls

NCC REQUIREMENTS
FRL -/60/60 OR -/90/90
ACOUSTIC (Rw+Ctr) 40



SERVICE SHAFT WALL 3 PLAN

FRL	-/90/90
ACOUSTIC (Rw+Ctr)	42
WALL THICKNESS	140mm

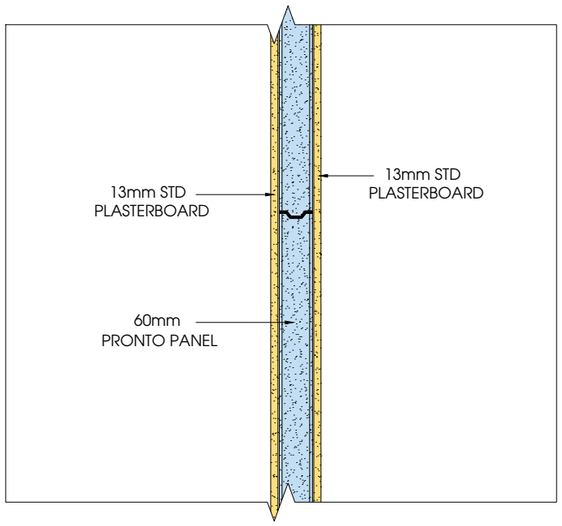


SERVICE SHAFT WALL 4 PLAN

FRL	-/120/120
ACOUSTIC (Rw+Ctr)	42
WALL THICKNESS	140mm

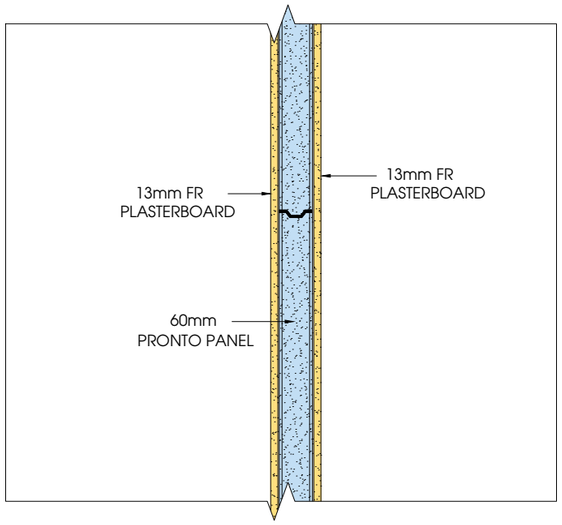
5. Internal Partition Walls

NCC REQUIREMENTS
FRL – NONE
ACOUSTIC (Rw+Ctr) – NONE



INTERNAL PARTITION WALL 1 PLAN

FRL	-/90/90
ACOUSTIC (Rw)	39
WALL THICKNESS	86mm



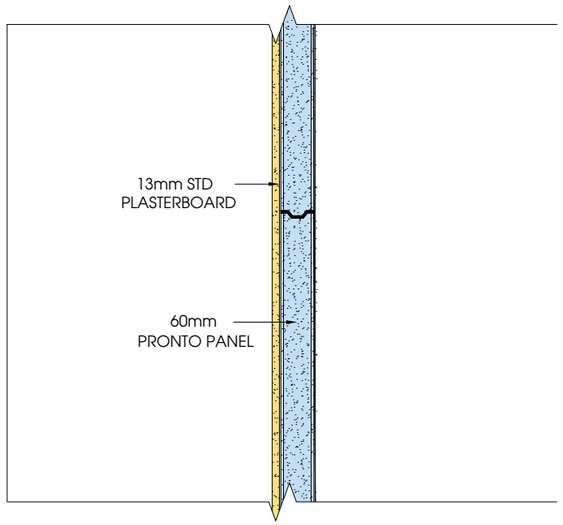
INTERNAL PARTITION WALL 2 PLAN

FRL	-/120/120
ACOUSTIC (Rw)	39
WALL THICKNESS	86mm

Pronto Panel Technical Manual
System Details

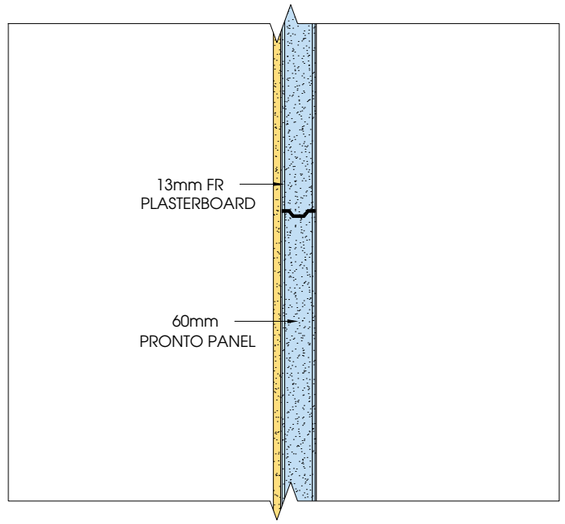
5. Internal Partition Walls

NCC REQUIREMENTS
FRL – NONE
ACOUSTIC (Rw+Ctr) – NONE



INTERNAL PARTITION WALL 3 PLAN

FRL	-/60/60
ACOUSTIC (Rw)	35
WALL THICKNESS	73mm

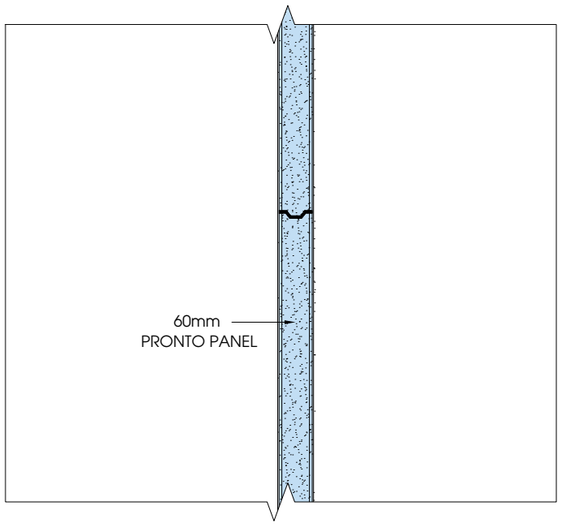


INTERNAL PARTITION WALL 4 PLAN

FRL	-/90/90
ACOUSTIC (Rw)	38
WALL THICKNESS	73mm

5. Internal Partition Walls

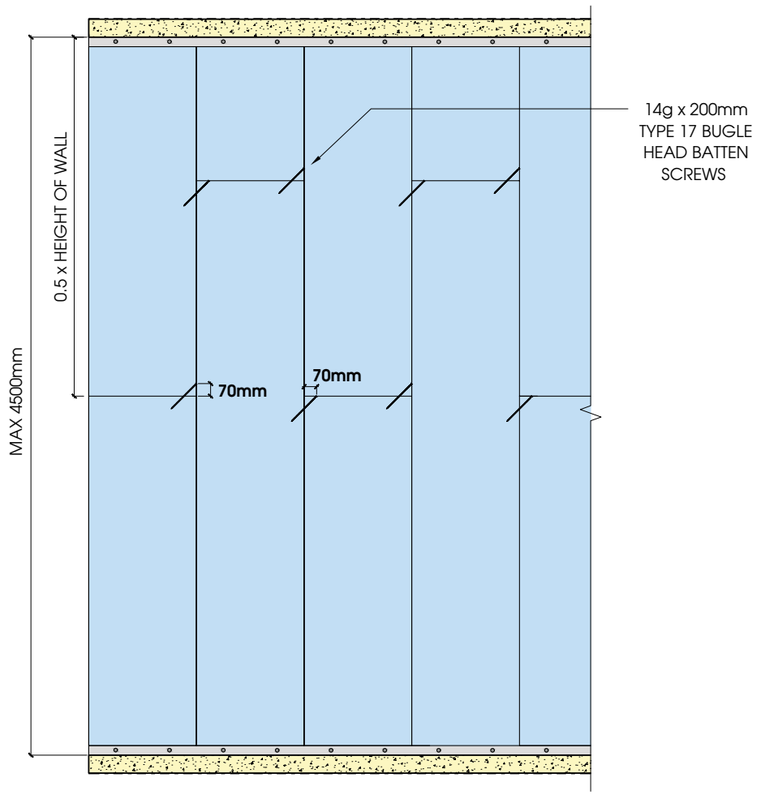
NCC REQUIREMENTS
FRL – NONE
ACOUSTIC (Rw+Ctr) – NONE



INTERNAL PARTITION WALL 5 PLAN

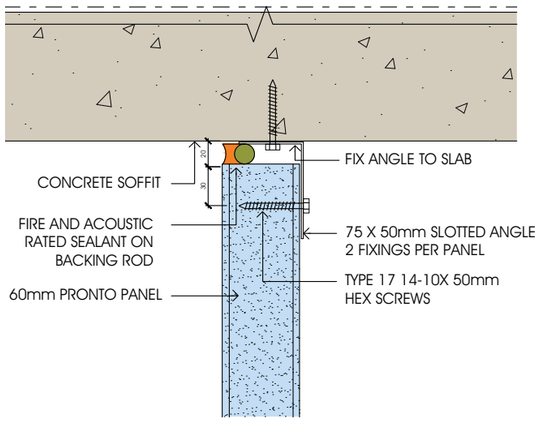
FRL	-/60/60
ACOUSTIC (Rw)	35
WALL THICKNESS	60mm

6. Joining Pronto Panels

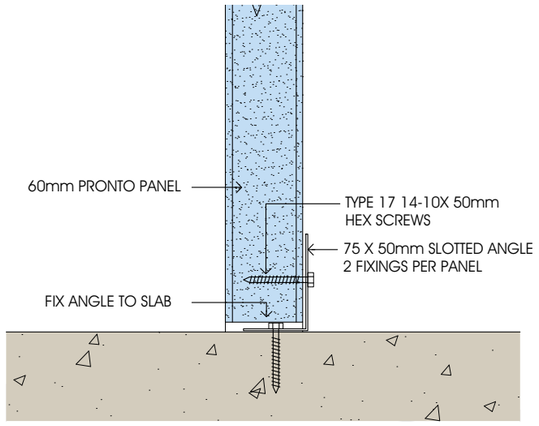


PANEL TO PANEL CONNECTION ELEVATION

7. Details for Top and Base of Wall

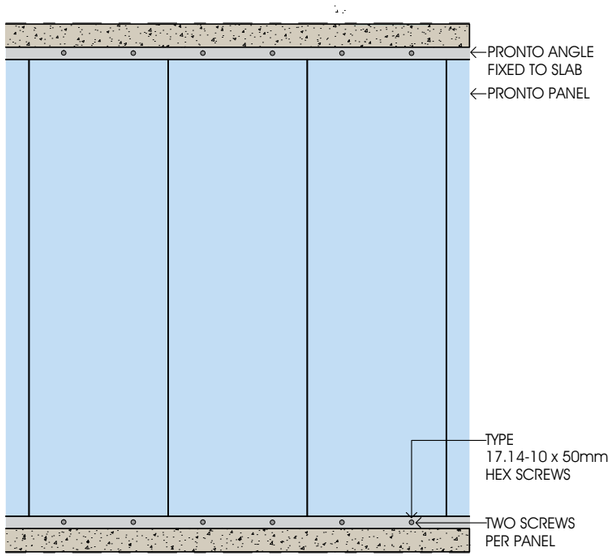


Wall Top Section



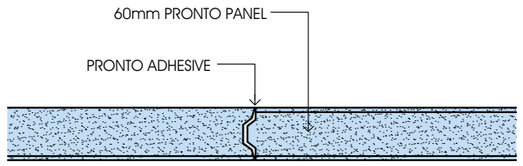
Wall Base Section

8. Pronto Panel to Angle



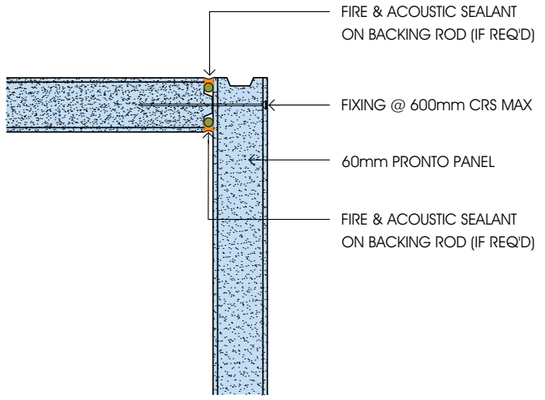
Pronto Panel To Angle Elevation

9. Panel to Panel Joint



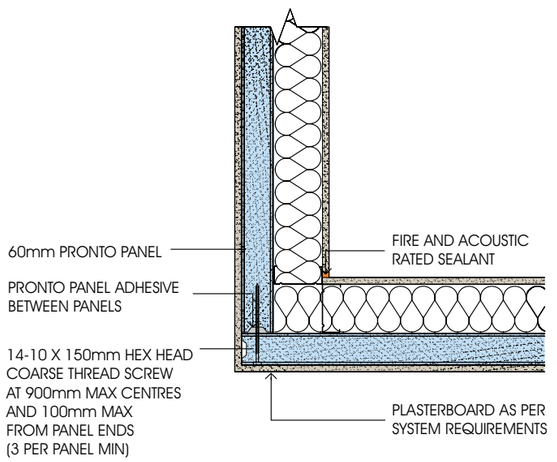
Panel to Panel Joint Section

10. Corner Joint

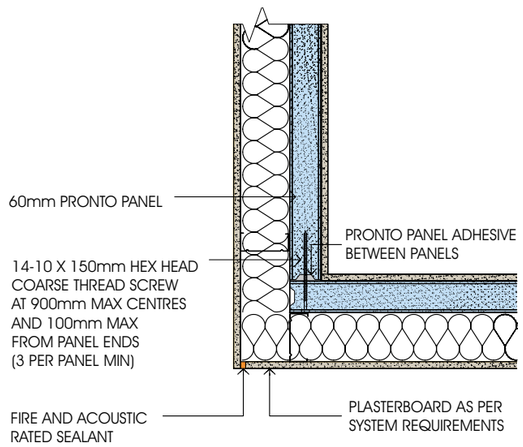


Corner Joint Section

11. Corner Details

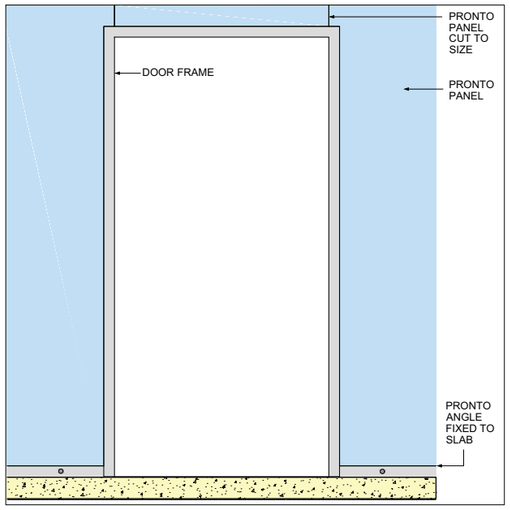


Internal Corner Detail Section

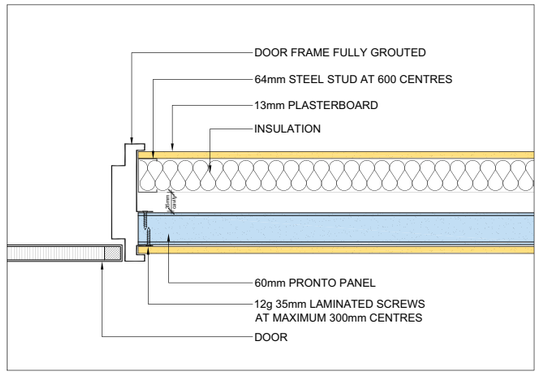


External Corner Detail Section

12. Door Details

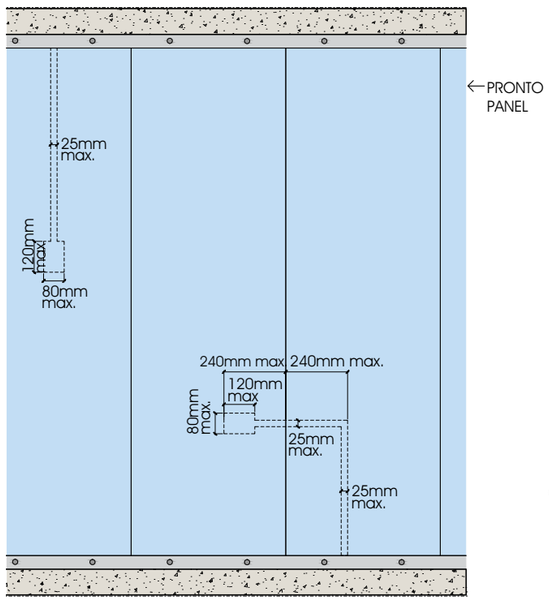


Door Elevation

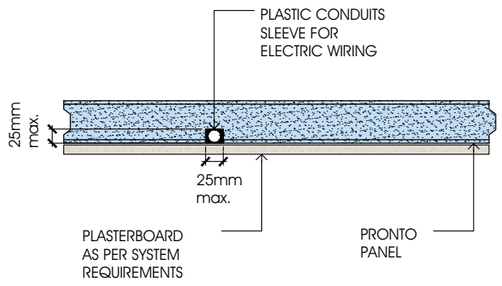


Door Detail Section

13. Chasing Details

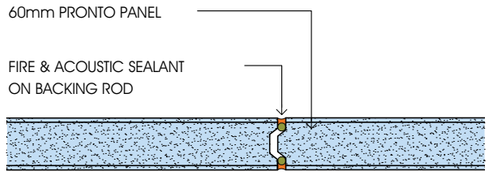


Chasing Elevation



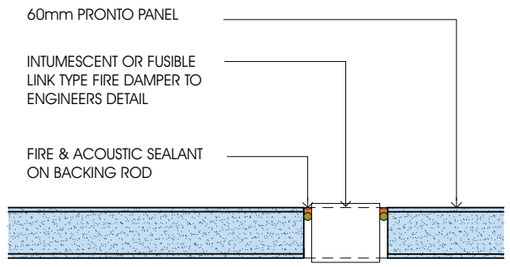
Chasing Detail Section

14. Control Joint



Control joint Section
If specified by an architect

15. Fire Damper Details



Fire Damper Detail Section

Pronto Panel
Installation Details

Installation

Delivery on Site

Pronto Panels are wrapped and strapped on pallets for delivery to site. Each pallet, containing 12 panels, is loaded by forklift onto trucks for delivery.

Pronto Panel can be unloaded either by forklift or a boom crane. The panels must be stored on site in areas where they will not be immersed in pooled water and clear of possible damage that could be caused by site movement and construction. The packs of Pronto Panels come wrapped with plastic sheeting and should remain covered during site storage.

Pronto Panel Adhesive bags are plastic wrapped and packaged on a pallet and must be stored in dry conditions. Shelf-life of Pronto Panel Adhesive is 12 months.

Pronto Panel Safety

1. **Panel Content**
   Pronto Panel contains no toxic or volatile components. While the product contains polystyrene aggregates, they are coated with sufficient cement based matrix that they do not burn or emit dangerous volatile compounds in a fire situation.

2. **Cutting/Drilling**
   Cutting or drilling of the panels will liberate dust which must be controlled by suitable means. A suitable saw is a Makita 5057KB 1400W 185mm (7-1/4") Fibre Cement Dustless Circular Saw. It should be attached to an appropriate dust extraction system for minimal dust generation whilst cutting.

3. **Pronto Panel Adhesive**
   The Pronto Panel Adhesive contains both cement powder and fine sand. This may constitute a hazard during use. Suitable respiratory protection, eye protection and hand protection must be worn when using this product.

4. **Safe Handling of Pronto Panel**
   Pronto Panel weighs between 85 and 95kg, depending on length. We recommend the use of a cradle trolley to transport the panels from the pallet to the worksite. If a Pronto cradle trolley is not available the panels may be transported flat on a pallet jack or similar.

The panels do not have to be completely lifted into place for installation. The panels are to be placed with the base on the floor and the top end raised to meet the slotted angle. This reduces the load to be lifted and allows two operators to rotate the panels into position.

Safety Data Sheets for these products are available from the Pronto Panel website **www.prontopanel.com.au** or by contacting **13 PANELS (13 726 357)**

Please see the installation section for full details of installation.

1. System Components

Pronto Panel
Pronto Panel comes in various lengths.

Length (mm)	Weight (kg)
2,700	85
2,850	90
3,000	95

Pronto Angle

Pronto Angles are to be used for both head and base connections in all Pronto Panel Wall Systems. They are for positioning and restraining the top and bottom of the panels. The panels are to be fixed to the angles with metal mechanical fasteners.

Pronto Panel Adhesive

Pronto Panel Adhesive (supplied in 20kg bags) is used to fill in the cavity between adjacent Pronto Panels.

2. Fixings

Pronto Panel to Pronto Angle Fixings

Use 14-10 x 50mm hex head type 17 screws or equivalent to fix the Pronto Panel onto the Pronto Angles.

Pronto Panel to Pronto Panel in Corner Details

Use 14-10 x 150mm hex head type 17 screws or equivalent to fix Pronto Panel to Pronto Panel.

Plasterboard to Pronto Panel Fixings

Use 14-10 X 50mm bugle head coarse threaded screws or equivalent to fix plasterboard to Pronto Panel.

3. Tools Required for Installation of the Pronto Panel System

- Chalklines for marking out wall element locations
- Electric drill mixer (recommended)
- Mixing buckets
- Trowel
- Grinder/steel cutting saw
- Electric screw gun
- Sealant gun and fire resistant acrylic sealant
- Davco Tile and Grout Cleaner
- Metal mechanical fasteners
- Electric power saw with diamond blade

4. Installer

Pronto Panel installation must be carried out by qualified panel installers.

No responsibility is taken for incorrect installations of Pronto Panel.

5. Installation Procedures

Step 1:
Fixing steel angles to soffit and concrete slab

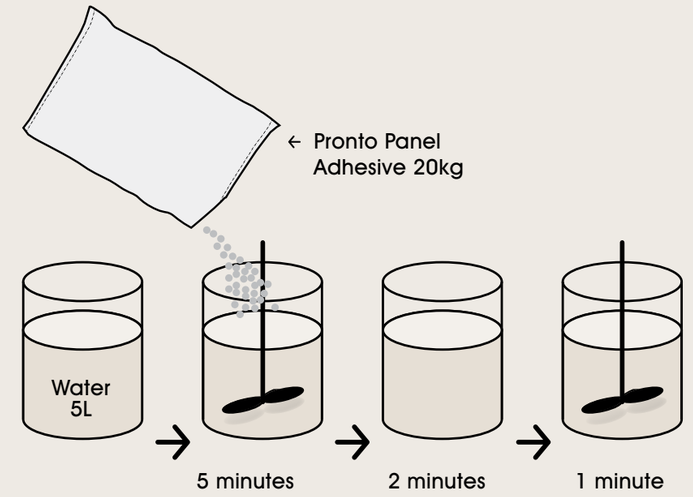
Pronto Panel installation requires fixing Pronto Angles to soffit and concrete slab. The steel angle should be connected to the soffit and concrete slab using mechanical fasteners at 600mm centres.

The mechanical fasteners must achieve a design strength of greater than 0.77kN when fixed at 600mm centres.

Step 2:
Mixing Pronto Panel Adhesive

The Pronto Panel Adhesive is a two-part thin bed adhesive mix. For the best results the use of an electric drill mixer (900W electric drill, Festo or the like) is recommended.

Typical adhesive coverage rate is 40m²/20kg bag. Follow the steps below for mixing of the adhesive:



Slowly add the contents of the 20kg bag of adhesive to 5 litres of water while stirring continuously. Continue stirring until the consistency is smooth. Leave mixture for 2 minutes to allow for hydration before mixing again for another minute. The adhesive has a pot life of 2 hours at 25°C.

CAUTION: For handling of adhesives, personal protection such as safety glasses to AS1337 and chemical gloves must be worn. P1 or P2 dust musk is also recommended. Please refer to the SDS for more details.

Installation

Step 3: Lifting Pronto Panel into position

With a cradle trolley, lift the panels into position.

Step 4: Fixing Pronto Panel to Pronto Angle

To fix the Pronto Panel to the steel angle, use 14-10 x 50mm hex head type 17 screws. The screws should be nominally 300 centres. At least 4 screws should be inserted per panel, 2 at the top and 2 at the bottom.

Step 5: Fixing position

These screws should be placed at the bottom of the slot in the ceiling angle and at the top of the slot in the floor angle to allow the expansion of the panel in the event of a fire.

Step 6: Gap between panel and concrete soffit

A gap of 20mm must be left clear at the top of the panel to allow for expansion in the event of fire. The gap should be filled with backing rod and fire resistant acrylic sealant if required.

Step 7: Adhesive to Panel

When Pronto Panel is in place, apply Pronto Panel Adhesive into the groove of the panel.

Step 8: Panel to Panel Connection

Position the second panel into place. Screw the second panel to steel angle.

Installation

Step 9: Smooth out Adhesive

Once the Pronto Panels are placed in position and connected, a trowel can be used to smooth out and scrape off any excess adhesives from the joints. This ensures good acoustic insulation and fire resistance.

Step 10: Fire Sealing

Where fire resistance is required, backing rod and fire resistant acrylic sealant must be installed at the top of the panel to ensure good acoustic insulation and fire resistance.

Step 11: Door Frame

A steel door frame is recommended and the installation of the door frame should be coordinated to allow for solidly filling the space between the frame and Pronto Panel. Above the door way, the panel needs to be cut to size.

Step 12: Services penetrationg Pronto Panel

Pronto Panel can accommodate a 600 x 600mm penetration for a fire damper. The gap between the fire damper and the wall is to be treated in accordance with fire damper manufacturer's recommendations.

Fire collars are to be used when installing uPVC and HDPE pipes through fire rated walls. The gap between the fire collar and the wall is to be treated in accordance with fire collar manufacturer's recommendations.

Firerated sealants are to be used to treat small service penetrations through Pronto Panel walls.

Step 13: Fire Doors

When installed into Pronto Panel walls systems, fire rated door frames must be fully grouted.

Step 14: Control Joints

Control joints should be placed at points of stress concentration. Examples of these locations are listed below:

- At changes in height or thickness of wall
- Near door and window openings
- Near corners and intersecting walls

Control joints must be filled with appropriate sealant and backing rod.

See system details on control joints.

Warranty

Our tradition, experience and financial strength have made Brickworks Building Products the first choice for many architects, builders and designers. Brickworks Building Products continued commitment to quality and innovation ensures that our products will remain the benchmark for excellence for many years to come. Pronto Panel has a warranty of 15 years as per Brickworks Building Products' Warranty.

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of **15 years**

We are Brickworks

Brickworks Building Products is one of Australia's largest and most diverse building material manufacturers. Under the Brickworks Building Products umbrella are some of Australia's best known building materials brands. Our products include bricks, pavers, masonry blocks, retaining wall systems, precast concrete panels, concrete and terracotta roof tiles, timber products and specialised façade systems.

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The product images shown in this brochure give a general indication of the actual colour for your preliminary selection.
We recommend that all customers see actual product samples at a selection centre prior to making final selections.