



### FyreSHIELD™ PLUS

**For Plasterboard Ceilings** 



FyreSHIELD™ PLUS is a proudly Australian Made and Owned Access Panel system which has been designed and tested to be built into plasterboard ceilings.

With improved fire and acoustic performance while maintaining the signature Trafalgar Fire quality, FyreSHIELD™ is the only Access Panel worth specifying and installing!









#### **KEY FEATURES**

- Fully fire tested -/120/120 FRL's plus 60min RISF in accordance with AS1530.4:2014
- Range of stock sizes with custom sizes available
- No additional fire stopping needed, just sealant for installation
- Australian made quality
- Fully concealed hinges
- Budget lock as standard
- Option for Screw-Fixed



#### **APPLICATIONS**

#### Plasterboard Ceilings:

- 2 and 3 layer ceilings with RISF
- 2-way rated ceilings
- Steel or timber framed ceilings

Refer to the FyreSHIELD  $^{\text{TM}}$  for walls Technical Manual for information on installation and approvals in shafts and partitions.



#### **TRADES**













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#### SYSTEM OVERVIEW

#### WHAT IS FYRESHIELD™ PLUS?

Access Panels have always been an important part of Trafalgar Group, and we are proud to present the next innovation of our FyreSHIELD<sup>TM</sup> systems with full RISF. Approvals for plasterboard ceiling systems are few and far between across the market, but the FyreSHIELD<sup>TM</sup> PLUS system provides an easy option for direct compliance.

Innovative and patented advancements have made it possible to achieve simple and compliant fire ratings for concealed-hinge fire rated Access Panels like never before. No cladding, no need for historical test data − just clever, hinged, as-tested design. Manufactured in South Granville using high-quality Australian sourced materials wherever possible, and most importantly, fire tested to AS1530.4:2014, FyreSHIELD™ PLUS makes fire rated access simple and compliant.

#### **APPLICATIONS**

FyreSHIELD™ comes in a few varieties, however this manual simply covers plasterboard ceiling installations of the FyreSHIELD™ PLUS for up to 2 hour plasterboard ceilings with 60 minute Resistance to the Incipient Spread of Fire (RISF).

Refer to the FyreSHIELD™ Wall Technical Manual for the partition and shaft wall applications, including:

- Hebel®
- Speedpanel®
- Pronto Panel
- Plasterboard
- Concrete/Masonry

## FyreSHIELD PLUS







#### **FYRESHIELD SELECTOR**

	Shafts	Walls	Ceilings
FyreSHIELD Hinged door	<b>✓</b>	×	×
FyreSHIELD Screw fixed door	*	<b>√</b>	×
FyreSHIELD-PLUS Hinged door	×	<b>√</b>	<b>√</b>
FyreSHIELD-PLUS Screw fixed door	×	×	<b>√</b>
FRL upto:	(-/120/30)	(-/120/120)	(-/120/120) + 60min RISF

<sup>\*</sup>Contact the Trafalgar Team to discuss if required for this application





## **COMPLIANCE**FyreSHIELD™ PLUS



#### **COMPLIANCE WITH THE NATIONAL CONSTRUCTION CODE (NCC)**

Formerly known as BCA

FyreSHIELD™ has been tested extensively to AS1530.4:2014 and approved in accordance with AS4072.1:2005 for a range of barrier types and applications. Changes to Access Panel requirements now require both the frame and door leaf to achieve insulation performance.

The top side of the floor cavity must not exceed a **maximum temperature rise of more than 180°C** or an average rise of 140°C during the test.

Fire rated floor/ceiling systems also have an additional requirement to measure temperatures inside the ceiling cavity, called Resistance to the Incipient Spread of Fire (or RISF). Where Access Panels are required in these ceilings, an Access Panel must also achieve the required level of RISF rating PLUS the standard FRL as above. See over page for more details.

Improvements in the materials and designs for the FyreSHIELD™ range ensure compliance can be achieved without any additional materials, and that the key requirements for the Access Panels can be easily inspected after installation.

As with all passive fire installations, the fire stopping system used must be installed as per the manufacturer's instructions and test/assessment reports otherwise the end result will not be compliant. Please refer to each individual system manual for specific installation instructions which reflect how the systems have been tested and approved.

#### **TEST AND ASSESSMENT REPORTS**

FyreSHIELD™ Access Panels (including FyreSHIELD™ PLUS)- FAS200221- covers wall and ceiling approvals

Compliance will only be achieved when the installation on site mirrors the approved system and all elements are correct. Please refer to the barrier system manuals and reports as well as the FyreSHIELD™ system to ensure all aspects are correct.





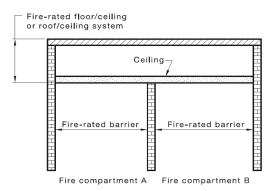


## **COMPLIANCE**FyreSHIELD™ PLUS



#### RESISTANCE TO THE INCIPIENT SPREAD OF FIRE (RISF)

Ceiling systems are subject to another requirement under AS1530.4 called the resistance to the incipient spread of fire (RISF) which is included to make sure fires do not spread within the ceiling cavities. Where the insulation value of a ceiling Access Panel FRL is calculated based on the average temperature across the face of the floor above, the RISF is based on the highest individual temperature reading inside the ceiling cavity. This requirement does not apply to wall and floor systems.



Resistance to the Incipient Spread of Fire rating required for this floor ceiling system.

To maintain a RISF rating, the maximum temperature measured during a test must remain below 250°C inside the cavity and on the Access Panel. An important factor to achieving this rating is the size of the cavity present in a floor ceiling system.

A larger cavity will keep testing temperatures lower for longer. This is because the addition air gap present assists in cooling the building elements. As such it is considered that testing of this nature should only be applied to floor/ceiling systems of equal or larger cavity sizes that what was tested. Because of this, the FyreSHIELD™ PLUS system has been tested with the smallest cavity size that would practically be present on site (300mm).

Note: NCC requires RISF rating for all floor/ceiling applications.

#### OTHER MANUFACTURERS CLAIM IT – WE TEST IT. DO THE COMPARISON

System	OFIRE	Other Brands
Fire tested to AS1530.4:2014	$\checkmark$	?
Fire tested up to 600x600mm size (barrier dependent)	$\checkmark$	?
Fire tested concealed hinged or screw fixed ceiling Access Panels	$\checkmark$	?
As-tested for full insullation	$\checkmark$	?
Confirmed acoustic performance (Rw32 + CTr26)	$\checkmark$	?
Certified Australian Made & Owned	✓	3
No additional cladding required	$\checkmark$	3
Fire tested with full RISF	$\checkmark$	?







## SPECIFICATIONS FyreSHIELD™ PLUS





#### **SPECIFICATIONS**

Fire rating	Suitable for use in 1 and 2-hour plasterboard ceiling systems with up to 60min RISF (Refer to the <u>FyreSHIELD<sup>TM</sup> Wall Technical Manual</u> for other applications)
Door Panel	Trafalgar Fire's paintable panel incorporating FyreBOARD Maxilite™ with patented RAKBAK fire and acoustic upgrade
Cut-Out Size	Our panels are sized to suit the nominal opening size (Eg.: 600 x 600mm panel is supplied 595 x 595mm)
Flanged Edge (Architrave/Picture Frame/Feathered Edge) Wet Wall (Set Bead/Concealed Frame) for plastering	
Hinge	Fully concealed hinges or screw fixed
Lock	Budget square key lock as standard. Nightlatch and screw fixed options available as a custom order.
Also Available	Trafalgar Fire can custom manufacture to meet your specifications. Trafalgar Access also supply a comprehensive range of metal, acoustic, customwood, security and speciality Access Panels. www.taccess.com.au





## FIRE RESISTANCE LEVEL FyreSHIELD™ PLUS

#### FIRE RATING – HOW IS FIRE PERFORMANCE MEASURED?

An FRL (fire resistance level) is a handy way of summarising the performance of a building element. It consists of 3 numbers, all given in minutes:





#### Structural Adequacy

The ability of the building element to support the weight of adjacent building elements.

ie: a brick wall supporting a concrete floor slab above.



#### Integrity

The ability of an element to prevent the passage of flames and hot gasses.

ie: a plasterboard wall remaining intact and not allowing holes to form.



#### Insulation

The ability of an element to resist heat transfer from the exposed face to the unexposed face.

ie: a bundle of cables remaining below a set temperature limit on the unexposed side of the wall penetration system.

Penetrations and Access Panels are not required to have a Structural Adequacy rating and is usually expressed as a dash. For example, a penetration through a 4-hour load bearing wall would be written as -/240/240.

#### INTEGRITY

The FyreSHIELD™ PLUS system will achieve integrity performance for up to 2 hours physically stopping the direct spread of fire.

#### **INSULATION (TEMPERATURE RISE)**

To prevent the spread of fire via heat transfer, the unexposed face of the floor-ceiling system must remain under a maximum temperature rise of 180°C, and under an average temperature rise of 140°C.

#### RESISTANCE TO THE INCIPIENT SPREAD OF FIRE (RISF)

To measure performance inside the floor-ceiling cavity space, the test method in AS1530.4 places thermocouples within the ceiling cavity located across the Access Panel and ceiling membrane. The temperatures of the Access Panel and cavity must remain below 250°C.

Refer to the compliance page 4.







#### **PLASTERBOARD CEILINGS**

#### FyreSHIELD™ PLUS APPROVED CEILING CONSTRUCTION



Construction Aspect	Minimum Construction Specification	FRL
	2x 13mm FR plasterboard	-/60/60 with 45min RISF
	1 x 13mm & 1 x 16mm FR Plasterboard	-/60/60 with 60min RISF
Sheeting	2 x 16mm FR Plasterboard	-/60/60 with 60min RISF
	3 x 16mm FR Plasterboard	-/120/120 with 60min RISF
	2-way rated ceilings, refer to	o FRL Table on <u>Page 9</u>
	FyreSHIELD Plus (Hinged)	Up to-/120/120 with 60 mins RISF
Approved Access Panel	FyreSHIELD Plus (Screw-Fixed)	Up to-/120/120 with 60 mins RISF

Other Construction Aspects	Minimum Construction Specification
Ceiling Framing	Steel or timber
Ceiling cavity	Min 300mm high
Aditional Supports	50x50x.9mm steel angles used to frame and line oprning for steel framed ceilings. Timber Joints to all 4 sides for timber framed ceilings.
Aperature lining	1 x 16mm FR grade plasterboard to the perimeter
Fixings (Access Panel frame to support angles)	Min 8g x 65mm Bugle Head Screws through all available fixing holes

Note: Screw fixed access panel also available for the same FRL. Refer to drawings and installation steps on the following pages.







#### **FRL TABLES**

#### **Two-Way Fire Rated Ceilings**



Construction Aspect	Minimum Construction Specification	FRL
	2 x 13mm FR plasterboard on the underside of the ceiling construction	-/60/60
Chartin -	1 x 13mm & 1 x 16mm FR Plasterboard on the underside of the ceiling construction	-/60/60
Sheeting	2 x 16mm FR plasterboard on the underside of the ceiling construction	-/60/60
	3 x 16mm FR Plasterboard	-/120/120
Annual Annual Daniel	FyreSHIELD Plus (Hinged)	Up to-/120/120 with 60 mins RISF
Approved Access Panel	FyreSHIELD Plus (Screw-Fixed)	Up to-/120/120 with 60 mins RISF

Other Construction Aspects	Minimum Construction Specification
Ceiling Framing	Steel or timber
Ceiling cavity	Min 300mm high
Aditional Supports	50x50x0.9mm steel angles used to frame and line opening for steel framed ceilings. Timber Joints to all 4 sides for timber framed ceilings.
Aperature lining	1 x 16mm FR Plasterboard to the perimeter
Fixings (Access Panel frame to support angles)	Min 8g x 65mm Bugle Head Screws through all available fixing holes

Note: For 2-way FRL's the ceiling must be installed below a concrete or AAC floor system.





#### **INSTALLATION**

#### **ALL CEILINGS**



Frame the ceiling per plasterboard manufacturers instruction with an appropriate size opening framed out for the FyreSHIELD  $^{\text{TM}}$  PLUS.

### STEP 2(A) - ADDITIONAL FRAMING- STEEL FRAMES



 $50 \times 50 \times 0.9$  steel angle is required on the perimeter around the penetration to add additional support for the panel. This assists with fixing the frame of the Access Panel into the ceiling construction.

For 2-way rated ceiling constructions, additional plastering is required in the cavity of the ceiling. Please refer to the drawing on page 16.

# STEP 2(B) - ADDITIONAL FRAMING- TIMBER FRAMES

Timber joists required on all four sides to add additional support for the panel. This assists with fixing the frame of the access panel into the ceiling construction.

#### **STEP 3 - LINE AND SHEET**



Line the opening with a single layer of FR 16mm thick plasterboard and sheet the ceiling to the minimum specification specified on page 8.

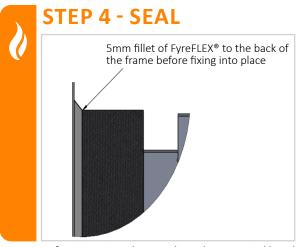






#### **INSTALLATION**

#### **ALL CEILINGS**



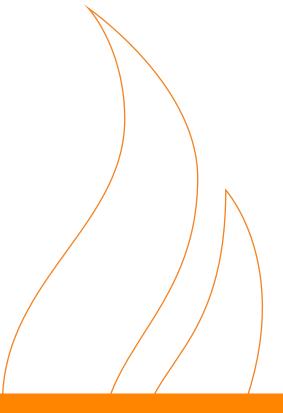
Before inserting the panel, apply a nominal bead of FyreFLEX® Sealant to the back of the flanges to provide a fire, smoke and acoustic seal.



Fix the panel into the frame using min 8g x 65mm bugle head screws at 150mm centers.



Complete the installation sticker in the FyreSHIELD  $^{\text{TM}}$  PLUS.





## Frame Type FLANGED EDGE (FEATHERED EDGE)

Picture Frame







me detail	Panel install
	(TLM Shown)

CLICKABLE	STANDARD STOCK					
Model	Panel FE (MDF Panel + picture frame primed white)	Lock Option	Item Number	Dimensions	Frame Profile 87mm	
		Hinged Door- Budget Lock (as standard)	FYRESHIELD-Plus-300-FE	300 x 300mm	✓	
<mark>√FyreSHIELD</mark> PLUS	5	Hinged Door Kaba Nightlatch (optional)  Screw Fixed	FYRESHIELD-Plus-400-FE	400 x 400mm	✓	
			FYRESHIELD-Plus-450-FE	450 x 450mm	✓	
		Lockwood 001	FYRESHIELD-Plus-600-FE	600 x 600mm	✓	
		Deadlatch (optional)	FYRESHIELD-Plus-CUSTOM-FE	Any size up to 600 x 600mm and Nightlatch also available	✓	

Note: Suitable for 1 and 2 hour fire rated ceilings, with fire attack from both directions. Also suitable for shaft walls and partitions.

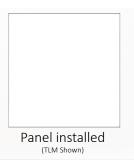




## Frame Type WET WALL (SET BEAD)

Concealed Frame







CLICKABLE	CLICKABLE CODES STANDARD STOCK					
Model	Panel WW (MDF Panel + picture frame primed white)	SIANDAK Lock Option	Item Number	Dimensions	Frame Profile 87mm	
	pictare name primed trinter,	Hinged Door- Budget Lock (as standard)	FYRESHIELD-Plus-300-WW	300 x 300mm	√	
<sup>0</sup> Fyre <b>SHIELD</b> PLUS		Hinged Door- Kaba Nightlatch (optional)  Screw Fixed	FYRESHIELD-Plus-400-WW	400 x 400mm	✓	
			FYRESHIELD-Plus-450-WW	450 x 450mm	✓	
		Lockwood 001 Deadlatch	FYRESHIELD-Plus-600-WW	600 x 600mm	✓	
		(optional)	FYRESHIELD-Plus-CUSTOM-WW	Any size up to 600 x 600mm and Nightlatch also available	✓	

Note: Suitable for 1 and 2 hour fire rated ceilings, with fire attack from both directions. Also suitable for shaft walls and partitions.



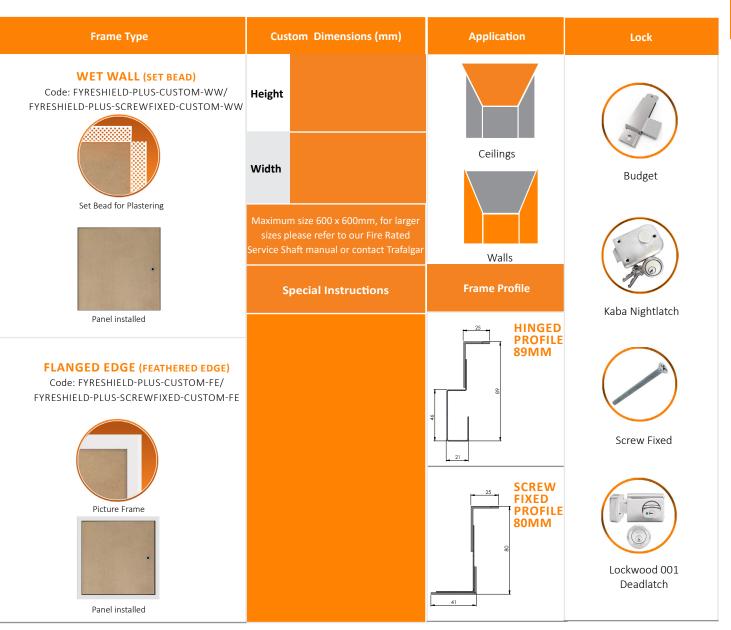






#### **CUSTOM ORDER FORM**

Please complete this form for each size panel required. All panels will be manufactured 5mm smaller than the opening size in wall or ceiling to a tolerance of +/-2mm. For Shafts refer to please refer to the <a href="FyreSHIELD Manual">FyreSHIELD Manual</a>



#### **CUSTOMER DETAILS**

Please complete this form for each size panel you require and submit for quotation to sales@tgroup.com.au

By accepting this custom product quote, you are agreeing to the manufacture of a custom product which is subject to **Trafalgar's Terms and Conditions.** 

Contact Name

Contact Name

Quantity | Date

E-mail | Phone

Signature







#### **FAQ**

#### **Q** What is different between the previous FRC/FRW and FyreSHIELD™ range?

A FyreSHIELD™ incorporates polymeric flange to ensure the frame will maintain the maximum temperature rise requirements in accordance with AS1530.4:2014. Previous systems required additional architraves for full insulation performance whereas the FyreSHIELD™ is a "complete" system.

#### **Q** Do I need to buy other products?

A No, the FyreSHIELD™ systems are bundled with a cartridge of FyreFLEX® sealant for your convenience and to ensure compliance of the system when installed. No additional cladding is required for FyreSHIELD™.

#### Q I need a two-way fire-rated Access Panel – can I use FyreSHIELD™?

A In a wall construction, FyreSHIELD has been tested in both directions. For Ceiling constructions there is no-defined test method for exposure on the top side, however despite this the FyreSHIELD Plus has been assessed for a 2-way rating in a ceiling.

#### Q Can I install the FyreSHIELD™ PLUS in a wall as well or is a different panel required?

A Yes! Refer the FyreSHIELD™ for walls technical manual for details.

#### **Q** What is the difference between the FyreSHIELD™ and the FyreSHIELD™ PLUS?

A The standard FyreSHIELD™ is used for wall installations only. The FyreSHIELD™ PLUS includes the patented RAKBACK to improve both fire and acoustic performance. These innovations allow Trafalgar to sell a hinged fire-rated Access Panel that can achieve the full insulation performance required by the NCC.

#### Q Do I need to add a door closer and a door tag?

A No, Access Panels are not considered fire doors under the NCC, and AS1905.1 does not apply.



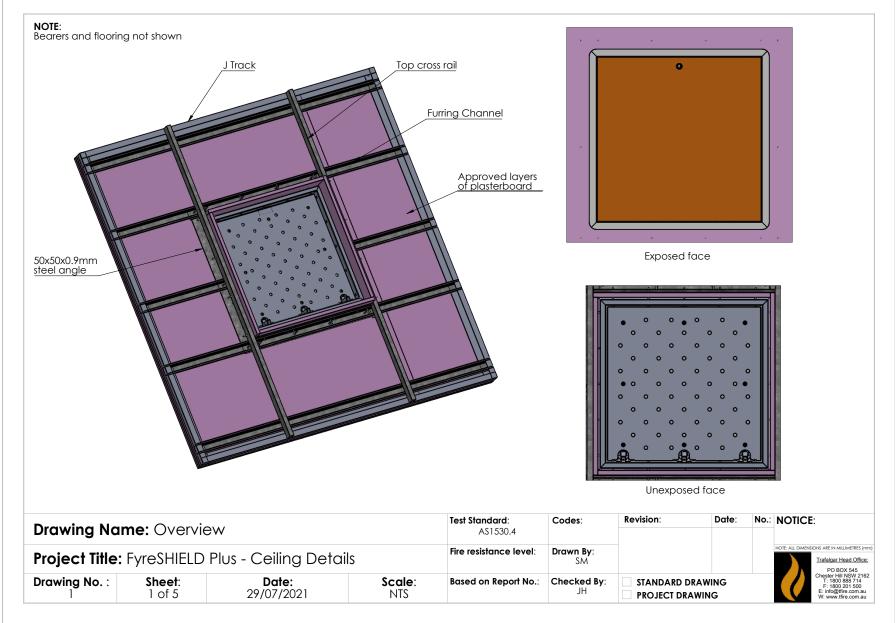
#### **SOCIAL MEDIA**





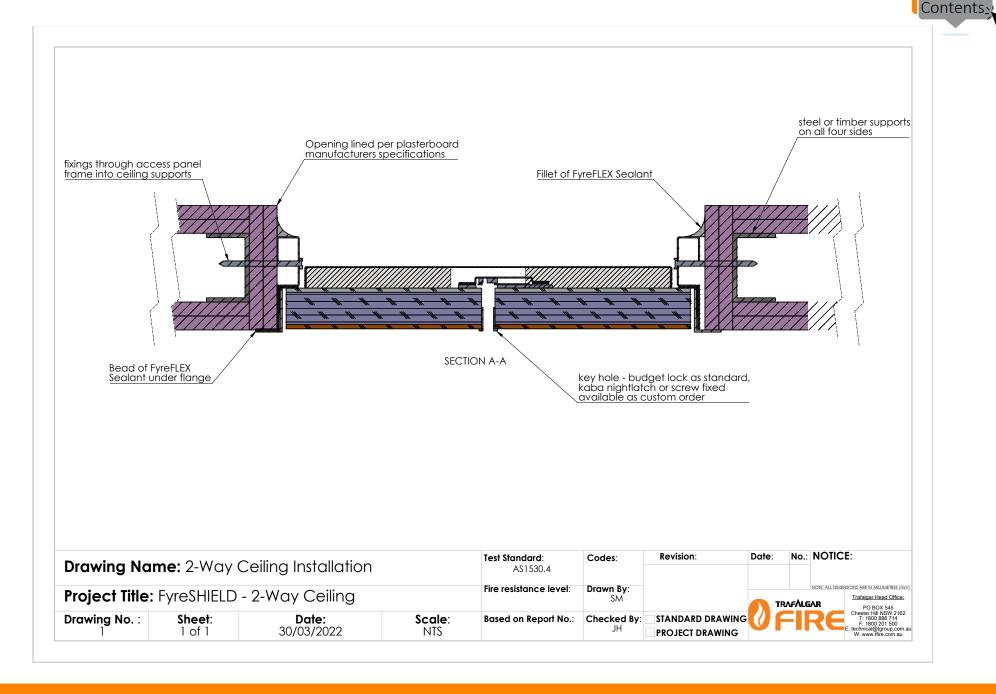






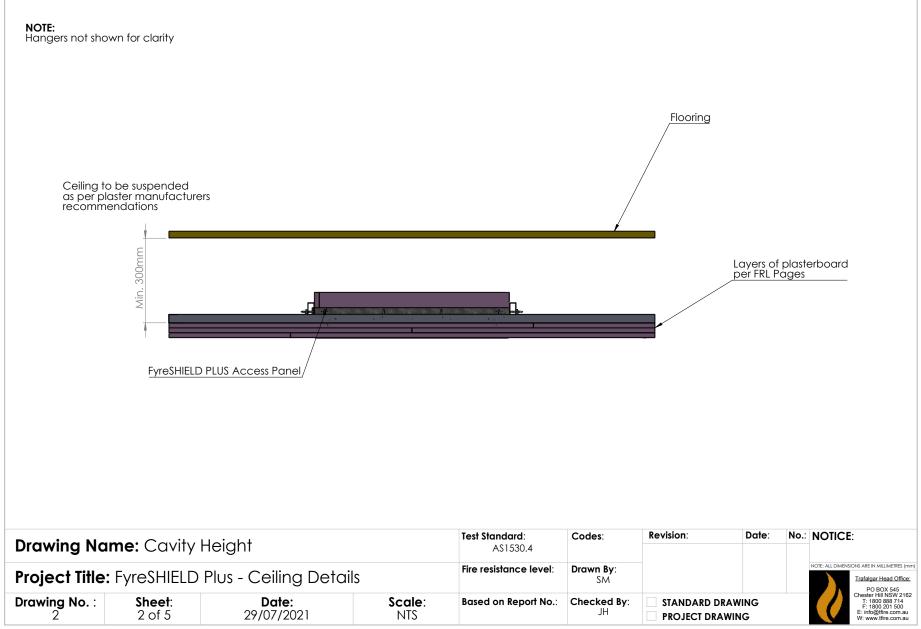


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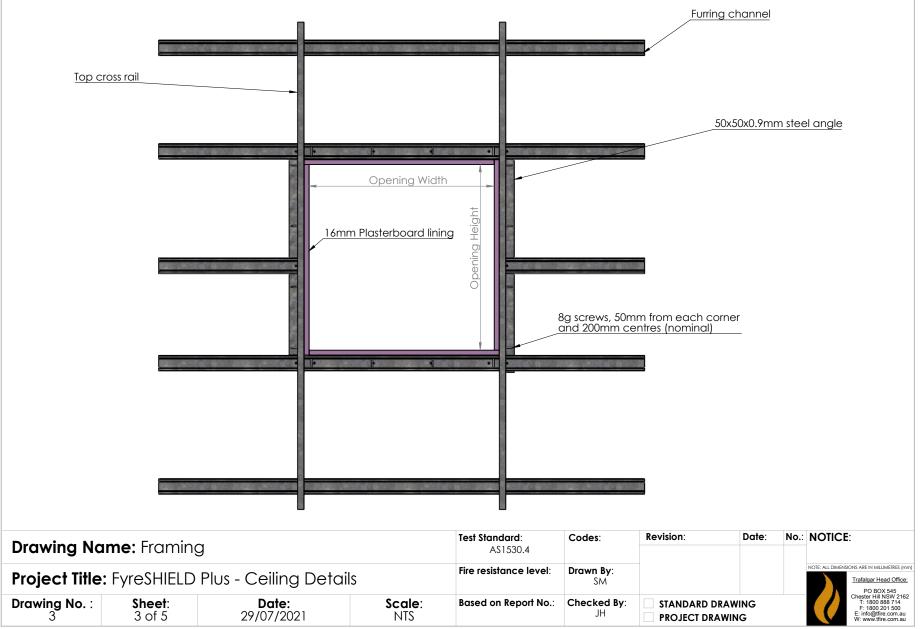






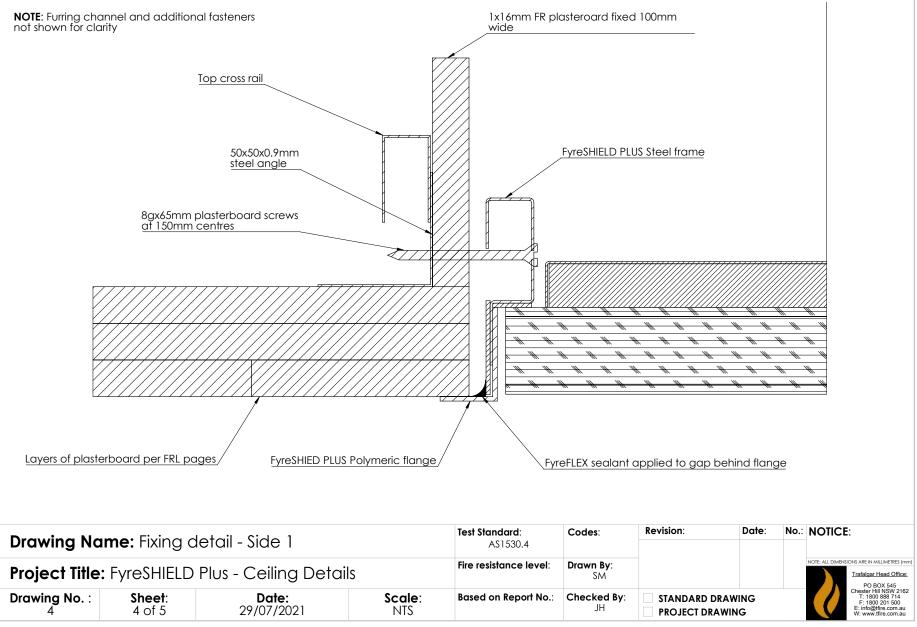






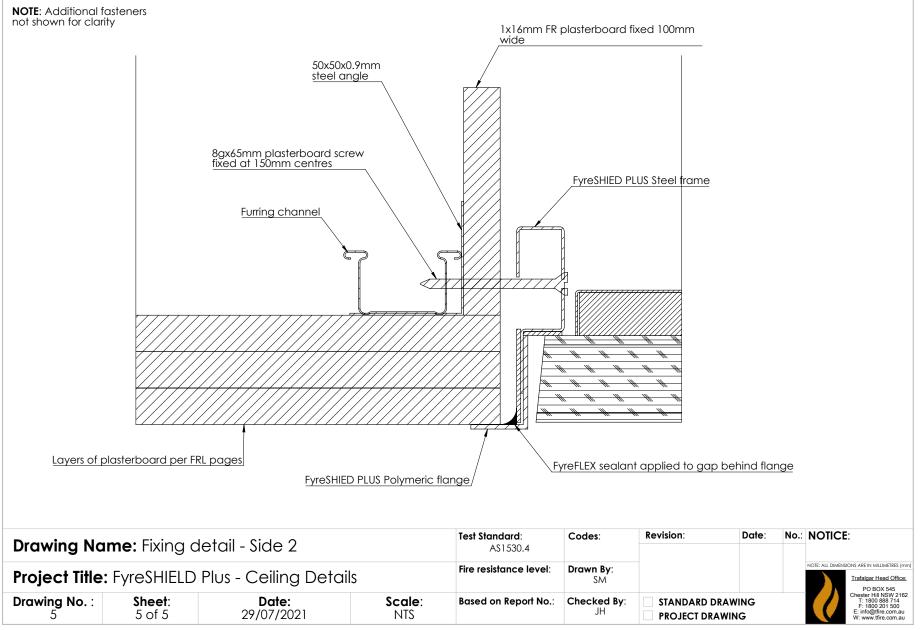








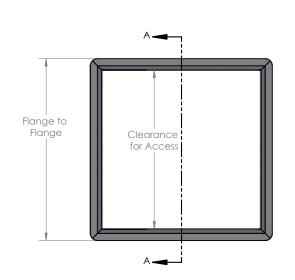


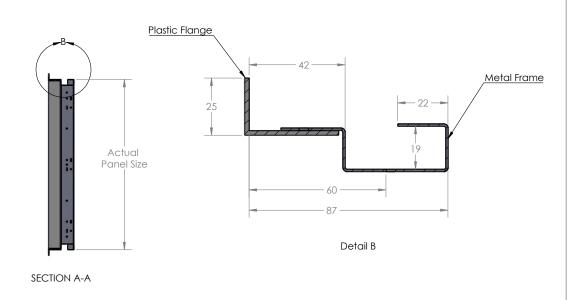




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Opening in wall/ceiling	Actual Panel size	Depth	Flange to Flange	Clearance opening for access
600 x 600	595 x 595	87mm	635 x 635	555 x 555
550 x 550	545 x 545	87mm	585 x 585	505 x 505
450 x 450	445 x 445	87mm	485 x 485	405 x 405
400 x 400	395 x 395	87mm	435 x 435	455 x 455
300 x 300	295 x 295	87mm	335 x 335	255 x 255

Drawing Name: FyreSHIELD Range				Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE:
Project Title: FyreSHIELD - Clear Openings				Fire resistance level:	<b>Drawn By</b> : RK		NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm).  Trafalgar Head Office: PO BOX 545		
Drawing No. :	<b>Sheet</b> : 1 of 1	<b>Date:</b> 29/07/2021	Scale: NTS	Based on Report No.:	Checked By:	STANDARD DRAWING	<b>V</b> f	=11	Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@tgroup.com.au W: www.tfire.com.au





