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TRAFALGAR FIRE

XCEM

AUSTRALIAN MADE AND OWNED · CodeMark Australia 30131 · Quality Management - ISO 9001 Global-Mark.com.au®
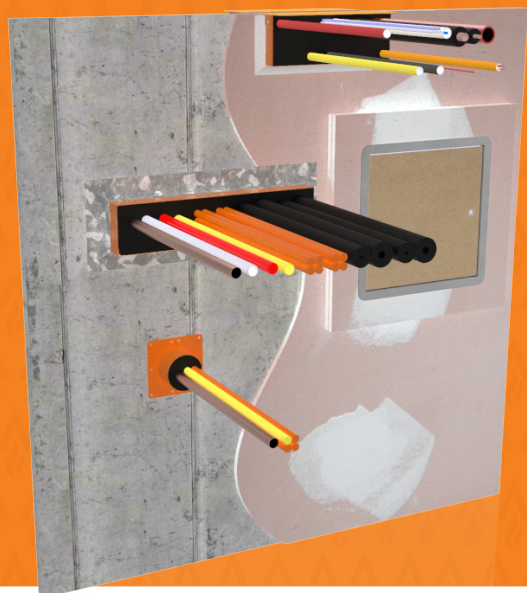
ALPHAPANEL®

Alpha Panel walls are becoming popular in the Australian building industry due to the reduction in overall wall thickness, speed of construction and fire-resistant properties. This manual lists the tested passive fire penetration systems currently available to maintain the fire resistance level (FRL) of service penetrations through Alpha Panel wall systems.

NCC 2022 READY

BIM MODELS NOW AVAILABLE

PRODUCTS

SuperSTOPPER

FyreBOX MINI

FyreBOX MAXI

FyreBOX SLAB-MOUNT

FyreSHIELD PLUS

APPLICATIONS

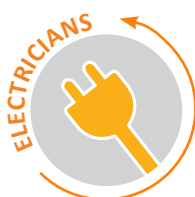|	
Electricians	Power Cables Data cables PVC Conduits
HVAC&R	Insulated pipes
Plumbers	Copper and Steel pipes PEX pipes PEX-AL-PEX pipes PVC pipes
Fire Professionals	Steel and CPVC Sprinkler pipes Fire Cables

TRADES

ELECTRICIANS

PLUMBERS

PASSIVE FIRE PROFESSIONALS

HVAC&R

TRAFALGAR FIRE

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ALPHAPANEL® SYSTEMS

NCC 2022 READY

COMPLIANCE WITH THE NATIONAL CONSTRUCTION CODE (NCC)

Formerly known as BCA

XCEM's ALPHAPANEL® wall systems are becoming very popular in the Australian building industry due to the reduction in overall wall thickness, speed of construction and their acoustic and of course their fire-resistant properties.

Trafalgar Fire is committed to innovation within the passive fire industry and as such have been developing new products and re-testing existing technologies, specifically designed to maintain the fire resistance level (FRL) of service penetrations through ALPHAPANEL® wall systems.

ALPHAPANEL® is a proprietary panel system with a thin 35mm core and various configurations of studs and plasterboard facings for different fire and acoustic requirements. AS1530.4 does not include and permissible variations that apply to penetrations in these walls, which means that service penetrations and access panels must be evaluated specifically in ALPHAPANEL® systems to determine the FRL.

The Trafalgar Fire systems in this document have been fire tested or assessed to AS1530.4-2014 and are approved specifically for use in ALPHAPANEL® wall systems, providing full compliance with the NCC.

ALPHAPANEL®

XCEM

PENETRATIONS AND ACCESS
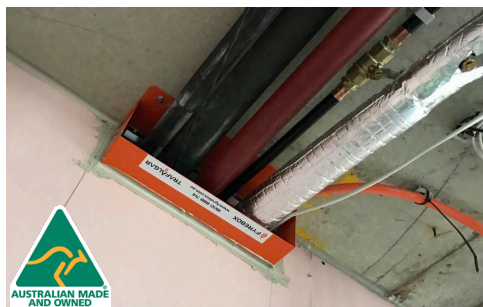
NCC 2022 READY

PENETRATION SYSTEMS FOR ALPHAPANEL WALLS

Trafalgar are proud to bring our Australian made range of FyreBOX's to the ALPHAPANEL wall systems which are approved in various types of wall configurations with mixed and multiple services, such as:

- Apartment and corridor walls (-/60/60 applications)

- Riser shaft walls (-/60/60 up to-/120/120 applications)

- Basement walls (up to-/120/120)

Please review the following pages that detail the specific FRL's that can be acheived in the various wall configurations when using the FyreBOX Slab Mount, FyreBOX Maxi and FyreBOX Mini peneteration systems. For a full list of installation instructions CLICK HERE
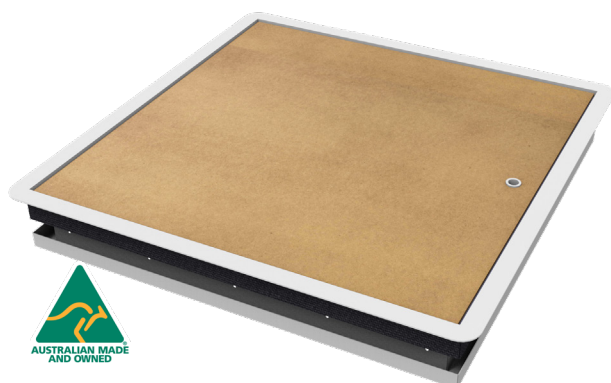

FyreBOX SLAB-MOUNT

FyreBOX MAXI

SuperSTOPPER

ACCESS PANELS FOR ALPHAPANEL WALLS

Trafalgar are proud to bring our Australian made range of FyreSHIELD access panels to the ALPHAPANEL wall systems to provide access into shafts and other locations of the building for annual inspection and maintenance including:

- Riser shaft walls (up to-/120/30 applications with the FyreSHIELD Panels)

- Other walls (up to-/120/60 with the FyreSHIELD PLUS and with FyreSHIELD Screw Fixed)

Please review the following pages that detail the specific FRL's that can be acheived in the various wall configurations and sizes when using the FyreSHIELD access panels. For a full list of installation instructions CLICK HERE
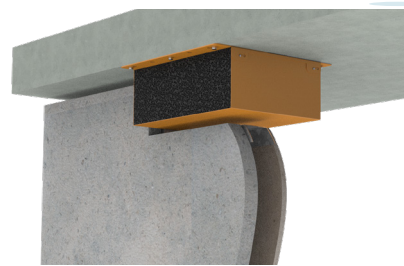

FyreSHIELD

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FYREBOX SLAB-MOUNT & 60 MINUTE XCEM ALPHA PANELWALLS

Type 1 - 35mm Alpha Panel, framed with stud and lined on the other face with 13mm fire grade plasterboard (88mm minimum thickness)

Type 2 - 35mm Alpha Panel, framed with stud on both sides, lined on both faces with 13mm fire grade plasterboard (200mm minimum thickness)

Service Type	Service Specification		FRL - WRAP FREE		FRL with TWRAP™	
			Type 1	Type 2	Both walls	Length required (mm)
Plastic Pipes	PVC Pipes	Up to 32mm OD	-/60/30	**-/60/60**	-/60/60	300
	PEX Pipes	Up to 20mm	-/60/30	**-/60/60**		300
		Up to 32mm	-/60/30	**-/60/60**		450
		Up to 32mm with 19mm E-Flex insulation	-/60/30	**-/60/60**		300
	PEX-Al-PEX pipes	Up to 25mm	-/60/30	**-/60/60**		300
		Up to 32mm	-/60/-	-/60/-		450
		Up to 32mm with 19mm E-Flex insulation	-/60/30	**-/60/60**		300
	cPVC Pipes	Up to 40mm	-/60/-	-/60/-		300
		40mm to 60mm	-/60/30	**-/60/60**		300
Bare Metal Pipes	Copper	Up to 50mm	-/60/-	-/60/-		300
	Steel	up to 60mm	-/60/30	**-/60/60**		300
Metal Pipes Insulated*	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/60/30	-/60/30		300
		Up to 50mm OD with FR insulation	-/60/30	**-/60/60**		300
		Up to 20mm OD with 38mm rockwool-type insulation	-/60/30	**-/60/60**		300
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation (or 13mm PE)	-/60/30	**-/60/60**		300
Power Cables - Copper Core	TPS	Up to 12x 2.5mm² per bundle	-/60/30	**-/60/60**		300
	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/60/30	-/60/30		300
Power Cables Aluminium Core	Single Core cables	Bundles of up to 3 x 240mm², 4 x 120mm² and 9 x 70mm² per bundle (16x cables total)	-/60/30	-/60/30		300
Communications Cables	RG6 coax	Up to 3x per bundle	-/60/30	**-/60/60**		300
	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/60/30	**-/60/60**		300
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	-/60/30	**-/60/60**		300

*Heat trace cables may be installed underneath thermal lagging through a FyreBOX penetration

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FYREBOX SLAB-MOUNT & 90 MINUTE XCEM ALPHAPANEL WALLS

Type 3 - 35mm Alpha Panel, framed with stud and lined on the other face with 16mm fire grade plasterboard (91mm minimum thickness).

Type 4 - 35mm Alpha Panel laminated with 16mm fire grade plasterboard.

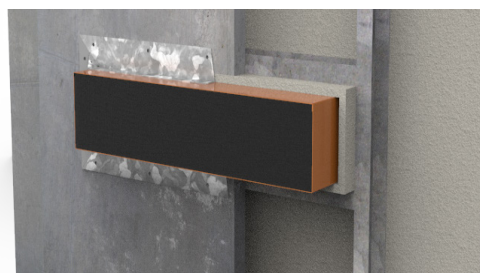| Service Type	Service Specification		FRL (WRAP FREE)**		FRL with TWRAP™	
			Type 3	Type 4	Both walls	Length required (mm)
Plastic Pipes	PVC Conduits	Up to 32mm OD	**-/90/60**	-/90/30		450
	PEX Pipes	Up to 20mm	**-/90/60**	-/90/30		450
		Up to 32mm	**-/90/60**	-/90/30		450
		Up to 32mm with 19mm E-Flex insulation	**-/90/60**	-/90/30		450
	PEX-Al-PEX pipes	Up to 25mm	**-/90/60**	-/90/30		450
		Up to 32mm	-/90/-	-/90/-		450
		Up to 32mm with 19mm E-Flex insulation	-/90/30	-/90/30		450
	cPVC Pipes	Up to 40mm	-/90/-	-/90/-		450
		40mm to 60mm	**-/90/60**	-/90/30		450
Bare Metal Pipes	Copper	Up to 50mm	-/90/-	-/90/30		450
	Steel	up to 60mm	-/90/30	-/90/30	**-/90/90**	450
Metal Pipes Insulated*	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/90/30	-/90/30		450
		Up to 50mm OD with FR insulation	-/90/30	-/90/30		450
		Up to 20mm OD with 38mm rockwool-type insulation	-/90/30	-/90/30		450
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation (or 13mm PE)	-/90/30	-/90/30		450
Power Cables - Copper Core	TPS	Up to 12x 2.5mm² per bundle	-/90/30	-/90/30		450
	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/90/30	-/90/30		450
Power Cables Aluminium Core	Single Core cables	Bundles of up to 3 x 240mm², 4 x 120mm² and 9 x 70mm² per bundle (16x cables total)	-/90/30	-/90/30		450
Communications Cables	RG6 coax	Up to 3x per bundle	-/90/30	-/90/30		450
	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/90/30	-/90/30		450
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	**-/90/60**	-/90/30		450

*Heat trace cables may be installed underneath thermal lagging through a FyreBOX penetration
**Wrap free FRL's require a patch of 60mm Maxilite board 100mm strips on one side of the wall.

FYREBOX MAXI / MINI 60 MINUTE XCEM ALPHAPANEL WALLS

Type 1 - 35mm Alpha Panel, framed with stud and lined on the other face with 13mm plasterboard (88mm minimum thickness) shown on the right.

Type 2 - 35mm Alpha Panel, framed with stud on both sides, lined on both faces with 13mm plasterboard (200mm minimum thickness) not shown.
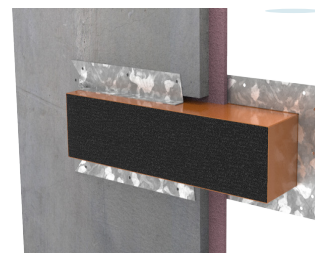
Service Type	Service Specification		FRL - WRAP FREE		FRL with TWRAP™	
			Type 1	Type 2	Both walls	Length required (mm)
Plastic Pipes	PVC Pipes	Up to 32mm OD	-/60/30	**-/60/60**	-/60/60	300
	PEX Pipes	Up to 20mm	-/60/30	**-/60/60**		300
		Up to 32mm	-/60/30	**-/60/60**		450
		Up to 32mm with 19mm E-Flex insulation	-/60/30	**-/60/60**		300
	PEX-Al-PEX pipes	Up to 25mm	-/60/30	**-/60/60**		300
		Up to 32mm	-/60/-	-/60/-		450
		Up to 32mm with 19mm E-Flex insulation	-/60/30	**-/60/60**		300
	cPVC Pipes	Up to 40mm	-/60/-	-/60/-		300
		40mm to 60mm	-/60/30	**-/60/60**		300
Bare Metal Pipes	Copper	Up to 50mm	-/60/-	-/60/-		300
	Steel	up to 60mm	-/60/30	**-/60/60**		300
Metal Pipes Insulated*	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/60/30	-/60/30		300
		Up to 50mm OD with FR insulation	-/60/30	**-/60/60**		300
		Up to 20mm OD with 38mm rockwool-type insulation	-/60/30	**-/60/60**		300
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation (or 13mm PE)	-/60/30	**-/60/60**		300
Power Cables - Copper Core	TPS	Up to 12x 2.5mm^2 per bundle	-/60/30	**-/60/60**		300
	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/60/30	-/60/30		300
Power Cables Aluminium Core	Single Core cables	Bundles of up to 3 x 240mm^2, 4 x 120mm^2 and 9 x 70mm^2 per bundle (16x cables total)	-/60/30	-/60/30		300
Communications Cables	RG6 coax	Up to 3x per bundle	-/60/30	**-/60/60**		300
	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/60/30	**-/60/60**		300
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	-/60/30	**-/60/60**		300

*Heat trace cables may be installed underneath thermal lagging through a FyreBOX penetration

FYREBOX MAXI & MINI 90 MINUTE XCEM ALPHAPANEL WALLS

Type 3 - 35mm Alpha Panel, framed with stud and lined on the other face with 16mm fire grade plasterboard (91mm minimum thickness).

Type 4 - 35mm Alpha Panel laminated with 16mm fire grade plasterboard, shown on the right.

Service Type	Service Specification		FRL (WRAP FREE)**		FRL with TWRAP™	
			Type 3	Type 4	Both walls	Length required (mm)
Plastic Pipes	PVC Conduits	Up to 32mm OD	**-/90/60**	-/90/30		450
	PEX Pipes	Up to 20mm	**-/90/60**	-/90/30		450
		Up to 32mm	**-/90/60**	-/90/30		450
		Up to 32mm with 19mm E-Flex insulation	**-/90/60**	-/90/30		450
	PEX-Al-PEX pipes	Up to 25mm	**-/90/60**	-/90/30		450
		Up to 32mm	-/90/-	-/90/-		450
		Up to 32mm with 19mm E-Flex insulation	-/90/30	-/90/30		450
	cPVC Pipes	Up to 40mm	-/90/-	-/90/-		450
		40mm to 60mm	**-/90/60**	-/90/30		450
Bare Metal Pipes	Copper	Up to 50mm	-/90/-	-/90/30		450
	Steel	up to 60mm	-/90/30	-/90/30		450
Metal Pipes Insulated*	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/90/30	-/90/30	-/90/90	450
		Up to 50mm OD with FR insulation	-/90/30	-/90/30		450
		Up to 20mm OD with 38mm rockwool-type insulation	-/90/30	-/90/30		450
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation (or 13mm PE)	-/90/30	-/90/30		450
Power Cables - Copper Core	TPS	Up to 12x 2.5mm² per bundle	-/90/30	-/90/30		450
	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/90/30	-/90/30		450
Power Cables Aluminium Core	Single Core cables	Bundles of up to 3 x 240mm², 4 x 120mm² and 9 x 70mm² per bundle (16x cables total)	-/90/30	-/90/30		450
Communications Cables	RG6 coax	Up to 3x per bundle	-/90/30	-/90/30		450
	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/90/30	-/90/30		450
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	**-/90/60**	-/90/30		450

*Heat trace cables may be installed underneath thermal lagging through a FyreBOX penetration
**Wrap free FRL's require a patch of 60mm Maxilite board 100mm strips on one side of the wall.

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SUPER STOPPER & 60 MINUTE XCEM ALPHAPANEL WALLS

Type 1 - 35mm Alpha Panel, framed with stud and lined on the other face with 13mm plasterboard (88mm minimum thickness) shown on the right.

Type 2 - 35mm Alpha Panel, framed with stud on both sides, lined on both faces with 13mm plasterboard (200mm minimum thickness) not shown.

Service Type	Service Specification		FRL - WRAP FREE		FRL with TWRAP™	
			Type 1	Type 2	Both walls	Length required (mm)
Plastic Pipes	PVC Pipes	Up to 32mm OD	-/60/30	**-/60/60**	-/60/60	300
	PEX Pipes	Up to 20mm	-/60/30	**-/60/60**		300
		Up to 32mm	-/60/30	**-/60/60**		450
		Up to 32mm with 19mm E-Flex insulation	-/60/30	**-/60/60**		300
	PEX-Al-PEX pipes	Up to 25mm	-/60/30	**-/60/60**		300
		Up to 32mm	-/60/-	-/60/-		450
		Up to 32mm with 19mm E-Flex insulation	-/60/30	**-/60/60**		300
	cPVC Pipes	Up to 40mm	-/60/-	-/60/-		300
		40mm to 60mm	-/60/30	**-/60/60**		300
Bare Metal Pipes	Copper	Up to 50mm	-/60/-	-/60/-		300
	Steel	up to 60mm	-/60/30	**-/60/60**		300
Metal Pipes Insulated*	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/60/30	-/60/30		300
		Up to 50mm OD with FR insulation	-/60/30	**-/60/60**		300
		Up to 20mm OD with 38mm rockwool-type insulation	-/60/30	**-/60/60**		300
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation (or 13mm PE)	-/60/30	**-/60/60**		300
Power Cables - Copper Core	TPS	Up to 12x 2.5mm² per bundle	-/60/30	**-/60/60**		300
	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/60/30	-/60/30		300
Power Cables Aluminium Core	Single Core cables	Bundles of up to 3 x 240mm², 4 x 120mm² and 9 x 70mm² per bundle (16x cables total)	-/60/30	-/60/30		300
Communications Cables	RG6 coax	Up to 3x per bundle	-/60/30	**-/60/60**		300
	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/60/30	**-/60/60**		300
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	-/60/30	**-/60/60**		300

*Heat trace cables may be installed underneath thermal lagging through a FyreBOX penetration

SUPER STOPPER & 90 MINUTE XCEM ALPHA PANEL WALLS

Type 3 - 35mm Alpha Panel, framed with stud and lined on the other face with 16mm fire grade plasterboard (91mm minimum thickness).

Type 4 - 35mm Alpha Panel laminated with 16mm fire grade plasterboard, shown on the right.

Service Type	Service Specification		FRL (WRAP FREE)**		FRL with TWRAP™	
			Type 3	Type 4	Both walls	Length required (mm)
Plastic Pipes	PVC Conduits	Up to 32mm OD	**-/90/60**	-/90/30	-/90/90	450
	PEX Pipes	Up to 20mm	**-/90/60**	-/90/30		450
		Up to 32mm	**-/90/60**	-/90/30		450
		Up to 32mm with 19mm E-Flex insulation	**-/90/60**	-/90/30		450
	PEX-Al-PEX pipes	Up to 25mm	**-/90/60**	-/90/30		450
		Up to 32mm	-/90/-	-/90/-		450
		Up to 32mm with 19mm E-Flex insulation	-/90/30	-/90/30		450
	cPVC Pipes	Up to 40mm	-/90/-	-/90/-		450
		40mm to 60mm	**-/90/60**	-/90/30		450
Bare Metal Pipes	Copper	Up to 50mm	-/90/-	-/90/30		450
	Steel	up to 60mm	-/90/30	-/90/30		450
Metal Pipes Insulated*	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/90/30	-/90/30		450
		Up to 50mm OD with FR insulation	-/90/30	-/90/30		450
		Up to 20mm OD with 38mm rockwool-type insulation	-/90/30	-/90/30		450
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation (or 13mm PE)	-/90/30	-/90/30		450
Power Cables - Copper Core	TPS	Up to 12x 2.5mm² per bundle	-/90/30	-/90/30		450
	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/90/30	-/90/30		450
Power Cables Aluminium Core	Single Core cables	Bundles of up to 3 x 240mm², 4 x 120mm² and 9 x 70mm² per bundle (16x cables total)	-/90/30	-/90/30		450
Communications Cables	RG6 coax	Up to 3x per bundle	-/90/30	-/90/30		450
	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/90/30	-/90/30		450
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	**-/90/60**	-/90/30		450

*Heat trace cables may be installed underneath thermal lagging through a FyreBOX penetration
**Wrap free FRL's require a patch of 60mm Maxilite board 100mm strips on one side of the wall.

FIRE-RATED ACCESS PANELS

Where higher FRL's are required, the FyreSHIELD PLUS can achieve 60 minutes insulation as a hinged option. For a full 2 hour FRL, the screw fixed FyreSHIELD will achieve the required ratings as detailed below.

Wall Type	Barrier Specification	Maximum Size	FRL		
			Shafts FyreSHIELD™ (hinged)	Walls FyreSHIELD™ PLUS (hinged)	Walls FyreSHIELD™ Screw Fixed
AlphaPanel	35mm AlphaPanel + 16mm FR plasterboard	600 x 600mm	-/90/30	-/90/60	-/90/90
	35mm Alphapanel + 40mm Top hat + 16mm FR plaster-board		-/90/30	-/90/60	-/90/90
	35mm AlphaPanel + 20mm Cavity + 35mm AlphaPanel		-/120/30	-/120/60	-/120/120
	35mm AlphaPanel + 50mm Cavity + 35mm AlphaPanel		-/120/30	-/120/60	-/120/120

All installations required additional stud framing and plasterboard to line and thicknen the aperture within the wall prior to fitting the access panel. Please refer to the FyreSHIELD technical manuals for specific installation drawings and instructions.

INSTALLATION
FYREBOX SLAB-MOUNT

MARK
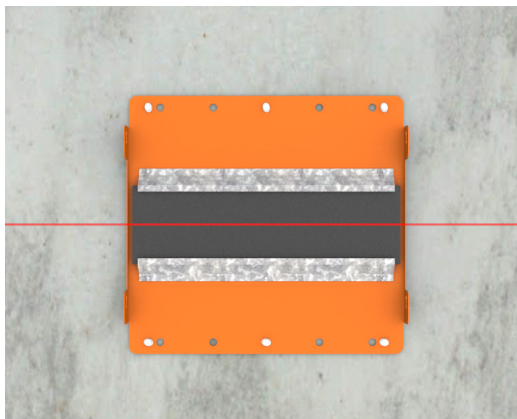
Mark the location where the wall is to be constructed and position the FyreBOX Slab-Mount in the desired penetration position.

Ensure that the FyreBOX will be located centrally to the thickness of the wall.

SEPARATE

Separate the bottom section of the FyreBOX, and the foam end plugs, which are to be put in a safe location for later use.

FIX

Fix the top section of the FyreBOX to the floor slab using **M6 masonry anchors, 4mm gas or powder actuated anchors** or any other **all-steel anchor** of equal pull out rating through the pre-formed mounting holes at two per side, or 300mm centres.

SERVICES

Install services through the FyreBOX as required, ensuring all are approved for use. Please refer to the FRL tables for a list of all approved services (NB extra services can be installed at any stage of the FyreBOX installation).

Click to Watch
Installation Video

INSTALLATION: FYREBOX SLAB-MOUNT

CLOSE

Retrieve the bottom section of the FyreBOX and fit around the services, to the secured top section, confirming that all fixing tabs are properly locked into place.

FRAME

Install the wall's stud framing around the perimeter of the FyreBOX and fix the plasterboard as per the wall manufacturers instruction, ensuring the annular gaps between the FyreBOX and wall openings are within 5-20mm and allow for deflection as required.

Framing only required for AlphaPanel walls that are sheeted with plasterboard on one or both sides, however even walls with just AlphaPanel require plasterboard lining, refer to the drawings at the end of the manual for specifics.

Click to Watch
Installation Video

PLASTER

The opening is lined with FR plasterboard to assist with he performance of the FyreBOX Slab Mount system. Some Alpha Panel Walls need to be thickened with Maxilite. Depending on applications and FRL required, refer to the approvals on **page 5** (60 mins) and **page 6** (90mins).

INSTALLATION: FYREBOX MAXI

Please note: When cutting a hole in any wall for a FyreBOX, allow for a 5-20mm gap between the box and the edge of the hole.

CONCRETE/MASONRY OPENING

In a concrete wall, simply cut/form the appropriately sized hole for the FyreBOX Maxi.
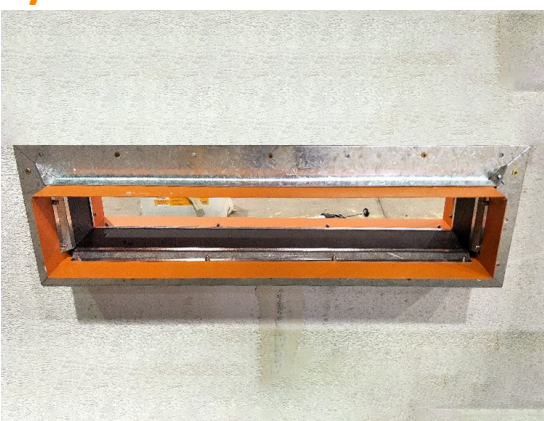

Fill FyreFLEX® sealant to 20mm depth, on both sides of the wall for walls that have stud cavities like plasterboard and Alpha Panel walls.

NOTE: Solid walls like Hebel®, Speedpanel, Corex, and some Alpha Panel walls should be filled to the full depth of the wall panel(s).
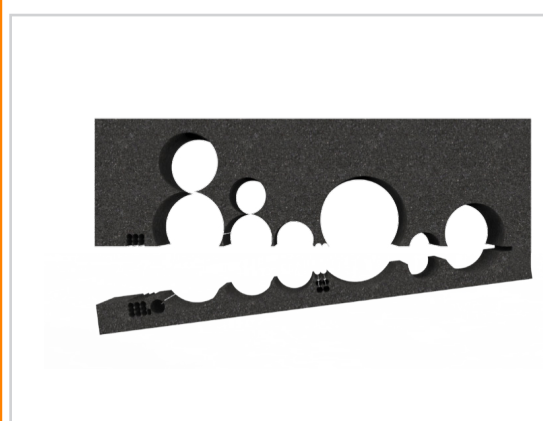
FyreFLANGE

Fit the FyreFLANGE mounting flange firmly up against the wall. Fix using every second fixing hole with recommended fixings. Flanges to be installed on both sides of the wall.

NOTE: For walls there is no need to screw fix the the FyreFLANGE to the FyreBOX. The system is friction fit.

FOAM

Cut a slit through the FyreBOX foam plug inserts and notch out holes to suit the services that are installed.

Fill any gaps with foam off-cuts or FyreFLEX® Sealant.

INSTALLATION: FYREBOX MAXI

FINISHING

The foam fit should be snug, such that no daylight can be seen through the FyreBOX once installed to both sides of the wall.
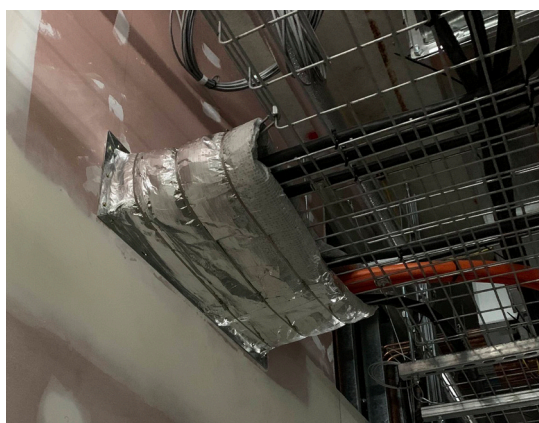
TWRAP™

Where required, wrap the services with the correct length of TWRAP (as per FRL tables listed in the above pages).

NOTE: Cable trays require loose TWRAP infill material to pack out gaps before wrapping.

TWRAP™ AND LABELLING

The TWRAP should overlap itself around the pipe by 50mm, if two strips are required to meet the appropriate length, then where the second length meets the first, a 50mm overlap is required. TWRAP is secured to the service used steel cable ties, 50mm from each end and 150mm centres in-between.
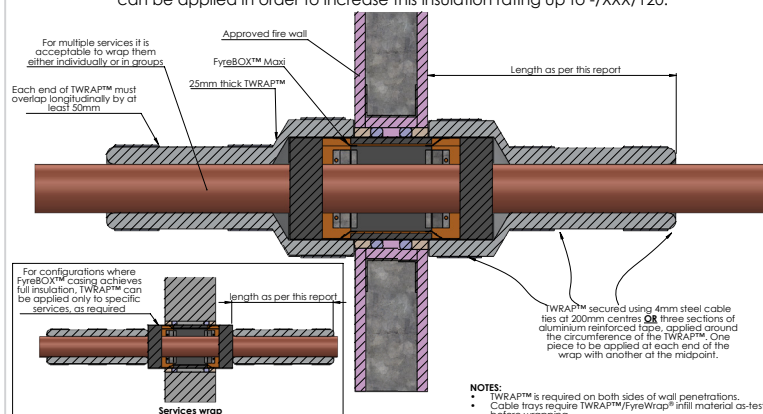
It is general good practice to take photographs and label all completed penetration works to add to the site's documentation for future inspections. AS4072 includes some recommendations and templates for penetration register stickers.

Please note:

TWRAP may be substituted with FyreWrap® Elite (38mm) blanket

TWRAP™ (Standard Details) - Fire Rated Walls

Where the FyreBOX™ and/or services do not achieve full insulation, TWRAP™ can be applied in order to increase this insulation rating up to -/XXX/120.

For multiple services it is acceptable to wrap them either individually or in groups

Approved fire wall

FyreBOX™ Maxi

25mm thick TWRAP™

Each end of TWRAP™ must overlap longitudinally by at least 50mm

Length as per this report

For configurations where FyreBOX™ casing achieves full insulation, TWRAP™ can be applied only to specific services, as required

length as per this report

TWRAP™ secured using 4mm steel cable ties at 200mm centres **OR** three sections of aluminium reinforced tape, applied around the circumference of the TWRAP™. One piece to be applied at each end of the wrap with another at the midpoint.

Services wrap

NOTES:
- TWRAP™ is required on both sides of wall penetrations.
- Cable trays require TWRAP™/FyreWrap® infill material as-tested before wrapping

INSTALLATION:
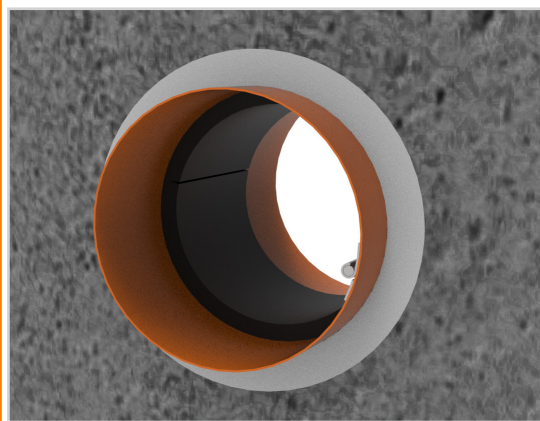## SUPERSTOPPER®

CUT HOLE

Cut a hole in the barrier allowing for an appropriate annular gap (5-20mm between the edge of the hole and the walls of the SuperSTOPPER®). Example: for a 100mm SuperSTOPPER®-R, cut a maximum hole 140mm diameter.

Note SuperSTOPPER®'s do not require openings to be framed with stud or lined with plasterboard.

INSERT AND SEAL

Insert the SuperSTOPPER®into the hole, and centre it to the wall or floor. NOTE: if barrier is too thick, contact Trafalgar Fire for alternative installations.

Seal the annular gap around the FyreBOX with FyreFLEX® Sealant to 20mm depth, on both sides of the wall.

Please note: The SuperSTOPPER®can be installed before or after the services are in place, the hinged design allows for the box to be retro fit around services, or services can be run once the box is in place.

FLANGES
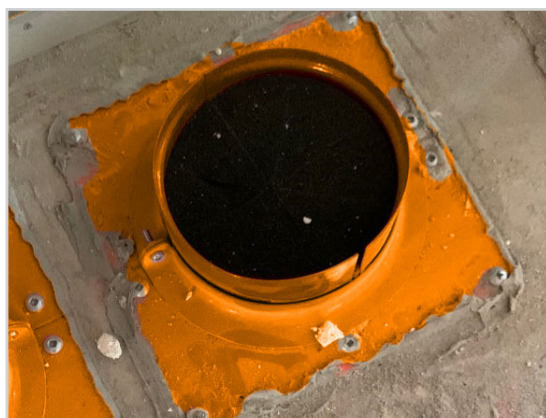
Install the steel mounting flange to both sides of the wall, or just the **top side** of a concrete floor. When fitting the orange flanges, use the fixings to suit the wall or floor type, using 2x fixings per flange.

FOAM

Cut a slit through the FyreBOX foam plug inserts and notch out holes to suit the services that are installed, then fit the foam in the box around the services. Foam is needed on both sides of a wall, but only the **top side** of a concrete slab penetration.

The fit should be snug, fill any gaps with intumescent (black) foam off-cuts, or FyreFLEX® Sealant.

Click to Watch Installation Video

Click
here to go back to
Contents

INSTALLATION: SUPERSTOPPER®

TWRAP

Where required, wrap the services with the appropriate length of TWRAP (per FRL tables above). The TWRAP should overlap itself around the pipe by 50mm, if two strips are required to meet the appropriate length, then where the second length meets the first, a 50mm overlap is required.

TWRAP is secured to the service using steel cable ties, 50mm from each end and 150mm centres in-between.

LABELLING

Document the penetration. It is general good practice to take photographs and label all completed penetration works to add to the site's documentation for future inspections. AS4072 includes some recommendations and templates for penetration register stickers.

If you need penetration stickers, we offer them at Trafalgar. Click here.

FIXINGS
Alphapanel

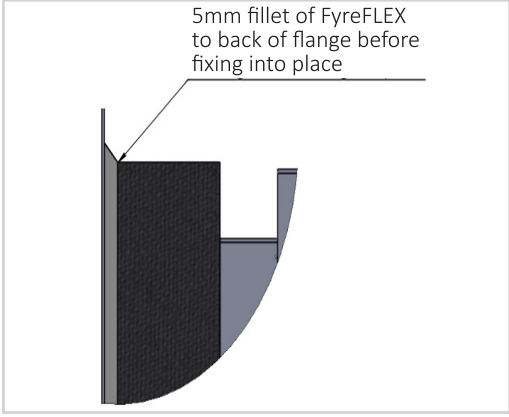M6x50mm masonry anchors

INSTALLATION: FYRESHIELD

ALPHAPANEL®

For Speedpanel® only, line the opening with C-Track per manufacturers instructions. For both AlphaPanel® and Speedpanel® the wall must be locally thickened with plasterboard for 100mm around the penetration as per drawings at the end of this manual.

For a FyreSHIELD™ listed as 600 x 600mm, the frame size is 595 x 595mm.
600 x 600mm represents the ideal cut out size for the barrier it is being installed into.

STEP 2 - SEAL

5mm fillet of FyreFLEX to back of flange before fixing into place

Before inserting the FyreSHIELD™ into the opening, apply a nominal bead of FyreFLEX® sealant to the back of the flanges to provide a fire, smoke and acoustic seal.
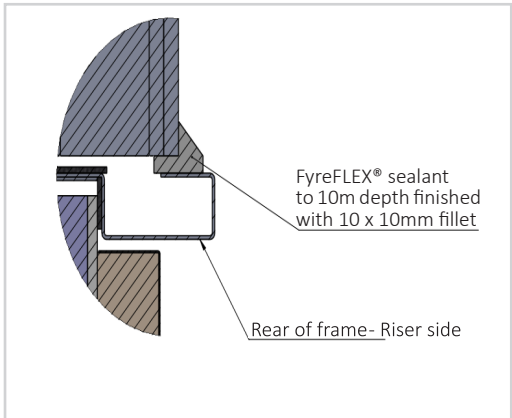
STEP 3 - FIX

Fix the panel into the frame using appropriate fixings for the barrier. Refer to the fixing table below for fixing details.

Alphapanel	Minimum fixings specification	Spacings
Fixings	11x50 Bugle Head Tek Screw	200mm

INSTALLATION: FYRESHIELD

STEP 4 - FINISH

FyreFLEX® sealant to 10m depth finished with 10 x 10mm fillet

Rear of frame- Riser side

FyreFLEX® sealant must now be applied to the rear of the panel in a 10 x 10mm fillet to seal the frame to the barrier. Refer to the drawings at the end of the manual for details.

STEP 5 - STICKER

Complete the installation sticker on the FyreSHIELD™.

FyreSHIELD

Scan the QR Code for more information including technical manuals and installation instructions.

FRL:

Hinged		Screw- Fixed
Walls: ☐ -/120/60		
☐ -/90/60		Ceilings: ☐
☐ -/60/60		
Ceilings: ☐ Up to -/120/120 with 60 mins RISF		Up to -/120/120 with 60 mins RISF

AUSTRALIAN MADE AND OWNED

Refer to fire test report available on tfire.com.au

Batch: _____

Size: _____

Installed By: _____

Install Date: _____

Site Ref #: _____

FIRE   tfire.com.au | 1800 888 714

FYREBOX MINI SYSTEMS

SuperSTOPPER & FyreFLANGE

Type	Item Number	Dimensions W x H x D or Diam	Dimensions
SuperSTOPPER®	SUPERSTOPPER-C-50	50 x 250mm	
	SUPERSTOPPER-C-100	100 x 250mm	
	SUPERSTOPPER-C-150	150 x 250mm	

CLICK TO LEARN MORE

250mm

50-150mm model dependent

SuperSTOPPER®SYSTEMS COMPONENTS

Item Number	Description	Min Order Qty	Pallet Qty
FLANGE-R-50mm	to suit SUPERSTOPPER-C-50	part of assembly	Learn More
FLANGE-R-100mm	to suit SUPERSTOPPER-C-100	part of assembly	Learn More
FLANGE-R-150mm	to suit SUPERSTOPPER-C-150	part of assembly	Learn More
FYREFLEX 300W/G	300ml White/Grey Cartridge	1	1920
FYREFLEX 600W/G	600ml White/Grey Sausage	1	1040
TWRAP 300	300mm wide, 25mm thick blanket	7620mm long roll	24
TWRAP 450	450mm wide, 25mm thick blanket	7620mm long roll	12
TWRAP 600	600mm wide, 25mm thick blanket	7620mm long roll	12

180124

FyreBOX MINI

	Type	Item Number	Dimensions W x H x D or Diam	Dimensions
	Square	FYREBOX-MS-65	65 x 65 x 250mm	
		FYREBOX-MS-100	100 x 100 x 250mm	
		FYREBOX-MINI-FLANGES-S-100mm	to suit FYREBOX-MS-100	

250mm
65-100mm
model dependent
65-100mm

FyreBOX MINI SYSTEMS COMPONENTS
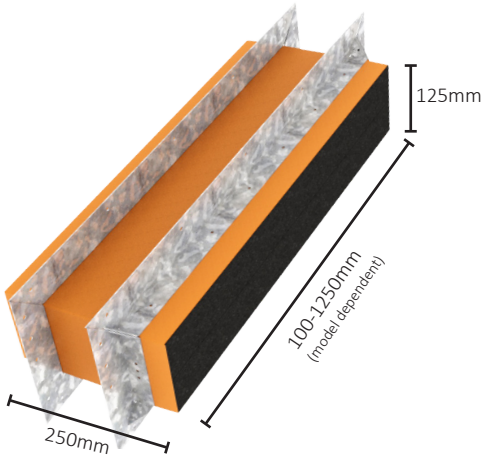
Item Number	Description	Min Order Qty	Pallet Qty
FYREFLEX 300W/G	300ml White/Grey Cartridge	20	1440
FYREFLEX 600W/G	600ml White/Grey Sausage	18	810
TWRAP 300	300mm wide, 25mm thick blanket	7620mm long roll	24
TWRAP 450	450mm wide, 25mm thick blanket	7620mm long roll	12
TWRAP 600	600mm wide, 25mm thick blanket	7620mm long roll	12

FYREBOX MAXI SYSTEMS
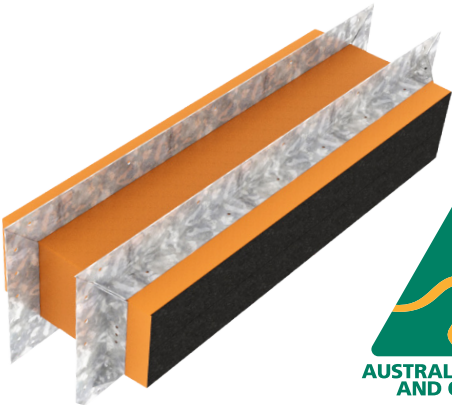
Fyre BOX MAXI
& FyreFLANGE

AUSTRALIAN MADE
AND OWNED

CLICK
TO LEARN
MORE

Item Number	Description	Dimensions
FYREBOX-MAXI-350	350 x 125 x 250mm	
FYREBOX-MAXI-FLANGES-350mm	to suit FYREBOX-MAXI-350	
FYREBOX-MAXI-550	550 x 125 x 250mm	
FYREBOX-MAXI-FLANGES-550mm	to suit FYREBOX-MAXI-550	
FYREBOX-MAXI-650	650 x 125 x 250mm	
FYREBOX-MAXI-FLANGES-650mm	to suit FYREBOX-MAXI-650	
FYREBOX-MAXI-750	750 x 125 x 250mm	
FYREBOX-MAXI-1100	1100 x 125 x 250mm	
FYREBOX-MAXI-Custom	Any depth X 125 X Any length up to 1250mm	

125mm

100-1250mm
(model dependent)

250mm

FyreBOX MAXI SYSTEMS COMPONENTS
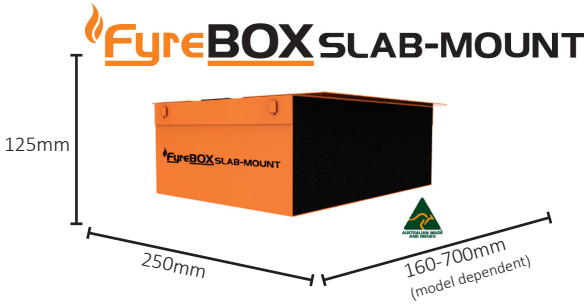
Item Number	Description	Min Order Qty	Pallet Qty
FYREFLEX 300W/G	300ml White/Grey Cartridge	20	1440
FYREFLEX 600W/G	600ml White/Grey Sausage	18	810
TWRAP 300	300mm wide, 25mm thick blanket	7620mm long roll	24
TWRAP 450	450mm wide, 25mm thick blanket	7620mm long roll	12
TWRAP 600	600mm wide, 25mm thick blanket	7620mm long roll	12

FYREBOX SLAB-MOUNT SYSTEMS

AUSTRALIAN MADE AND OWNED

Item Number	Description	Dimensions
FYREBOX-SM-BAMBINO	160 x125 x 250mm	
FYREBOX-SM-350	350 x 125 x 250mm	
FYREBOX-SM-550	550 x 125 x 250mm	
FYREBOX-SM-650	650 x 125 x 250mm	
FYREBOX-SM-Custom	Any size from 100 up to 1250 x 125 x 250mm	

125mm
250mm
160-700mm (model dependent)

FYREBOX SLAB-MOUNT SYSTEMS COMPONENTS

Item Number	Description	Min Order Qty
TWRAP- 300 x 810mm	300 x 810 x 25mm Pre Cut Strip	1
TWRAP- 300 x 1010mm	300 x 1010 x 25mm Pre Cut Strip	1
TWRAP Roll- 300mm	300 x7620 x 25mm Full Roll	1
Maxilite Strips FYREBOX SM 350	1 Strip at 580 x 100 x 30mm 2 Strips at 145 x 100 x 30mm	-

Frame Type
FLANGED EDGE
(FEATHERED EDGE)
Picture Frame

Architrave / Picture Frame

Frame detail

Panel installed
(TLM Shown)

AUSTRALIAN MADE AND OWNED

STANDARD STOCK

Model	Panel FE (MDF Panel + picture frame primed white)	Lock Option	Item Number	Dimensions	Frame Profile 87mm
FyreSHIELD		Hinged Door- Budget Lock (as standard)	FYRESHIELD-Plus-300-FE	300 x 300mm	✔
			FYRESHIELD-Plus-400-FE	400 x 400mm	✔
		Hinged Door Kaba Nightlatch (optional)	FYRESHIELD-Plus-450-FE	450 x 450mm	✔
			FYRESHIELD-Plus-600-FE	600 x 600mm	✔
		Screw Fixed	FYRESHIELD-Plus-CUSTOM-FE	Any size up to 600 x 600mm and Kaba Nightlatch also available	✔

CLICK TO LEARN MORE

Note: Suitable for 1 and 2 hour fire rated ceilings, with fire attack from both directions. Also suitable for shaft walls and partitions.
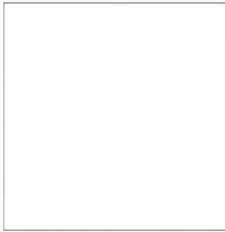
180124

Frame Type
WET WALL
(SET BEAD)
Concealed Frame

Set Bead for Plastering

Frame detail

Panel installed
(TLM Shown)

AUSTRALIAN MADE AND OWNED
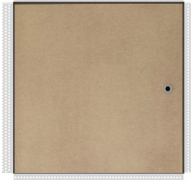
CLICK TO LEARN MORE

STANDARD STOCK

Model	Panel WW (MDF Panel + picture frame primed white)	Lock Option	Item Number	Dimensions	Frame Profile 87mm
FyreSHIELD		Hinged Door- Budget Lock (as standard)	FYRESHIELD-Plus-300-WW	300 x 300mm	✔
			FYRESHIELD-Plus-400-WW	400 x 400mm	✔
		Hinged Door- Kaba Nightlatch (optional)	FYRESHIELD-Plus-450-WW	450 x 450mm	✔
			FYRESHIELD-Plus-600-WW	600 x 600mm	✔
		Screw Fixed	FYRESHIELD-Plus-CUSTOM-WW	Any size up to 600 x 600mm and Kaba 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.

Alpha Panel intertenancy wall configurations 1 & 2, Corridor wall types 1 & 2, or Service Riser (Habitable) wall systems

Foam end plugs fit snug around services and any visible gaps plugged with offcuts of foam or FyreFLEX/FyrePEX sealants

Annular gaps sealed with FyreFLEX Sealant OR other acrylic fire sealant as approved by specifc wall construction approvals to a depth of at least 13mm, from each side of the wall, and finished with a 30mm fillet (fillet not required when TWrap system is installed insatllation)

Max 20mm annular gaps

35mm Alpha Panel

Minimum thickness as per Alpha Panel approvals

Concrete Slab

FyreBOX located centrally to the thickness of the wall

FyreBOX Slab Mount sizes as per this report

Aperture framed with stud and lined with the same thickness (and layers) of fire grade plasterboard used on the face of the wall

Plasterboard (Fire rated or non-fire rated as per Alpha Panel wall system requirements)

Steel stud

Drawing Name: Alphapanel intertenancy or corridor			**Test Standard:** AS1530.4	**Codes:**	**Revision:**	**Date:**	**No.:**	**NOTICE:**
Project Title: FyreBOX Slab Mount - Alphapanel			**Fire resistance level:**	**Drawn By:** JH				NOTE: ALL DIMENSIONS ARE IN MILLIMETRES [mm]
Drawing No. : 1	**Sheet:** 1 of 4	**Date:** 11/21/2022	**Scale:** NTS	**Based on Report No.:**	**Checked By:** CT	☐ **STANDARD DRAWING** ☐ **PROJECT DRAWING**		Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@tgroup.com.au W: www.tfire.com.au

Alpha Panel intertenancy wall configurations 3 & 5 Corridor wall type 3, or load bearing type 9 wall systems

Foam end plugs fit snug around services and any visible gaps plugged with offcuts of foam or FyreFLEX/FyrePEX sealants

Annular gaps sealed with FyreFLEX Sealant OR other acrylic fire sealant as approved by specifc wall construction approvals to a depth of at least 13mm, from each side of the wall, and finished with a 30mm fillet (fillet not required when TWrap system is installed insatllation)

Max 20mm annular gaps

35mm Alpha Panel

Concrete Slab

FyreBOX located centrally to the thickness of the wall

FyreBOX Slab Mount sizes as per this report

Aperture framed with stud and lined with the fire grade plasterboard. 1x layer for 60 and 90 minute applications. 2x layers for 120 minute applications.

35mm Alpha Panel

Minimum thickness as per Alpha Panel approvals

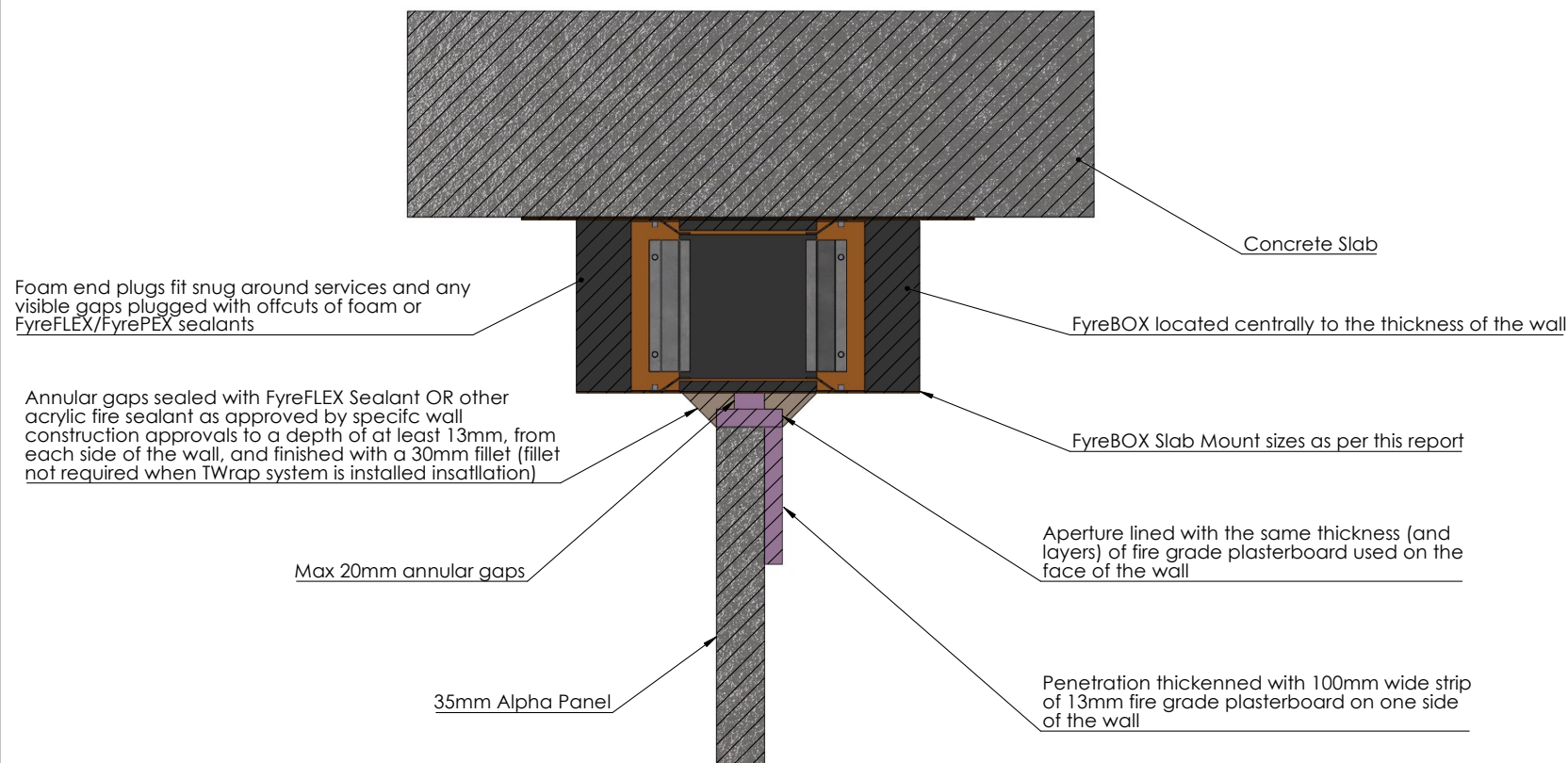| **Drawing Name:** Alphapanel intertenancy or corridor				**Test Standard:** AS1530.4	**Codes:**	**Revision:**		**Date:**	**No.:**	**NOTICE:**
Project Title: FyreBOX Slab Mount - Alphapanel				**Fire resistance level:**	**Drawn By:** JH					NOTE: ALL DIMENSIONS ARE IN MILLIMETRES [mm]
Drawing No. : 2	**Sheet:** 2 of 4	**Date:** 11/21/2022	**Scale:** NTS	**Based on Report No.:**	**Checked By:** CT	☐ STANDARD DRAWING ☐ PROJECT DRAWING				Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@tgroup.com.au W: www.tfire.com.au

Alpha Panel intertenancy type 4 wall systems

Foam end plugs fit snug around services and any visible gaps plugged with offcuts of foam or FyreFLEX/FyrePEX sealants

Annular gaps sealed with FyreFLEX Sealant OR other acrylic fire sealant as approved by specifc wall construction approvals to a depth of at least 13mm, from each side of the wall, and finished with a 30mm fillet (fillet not required when TWrap system is installed insatllation)

Max 20mm annular gaps

Plasterboard (Fire rated or non-fire rated as per Alpha Panel wall system requirements)

35mm Alpha Panel

Minimum thickness as per Alpha Panel approvals

Concrete Slab

FyreBOX located centrally to the thickness of the wall

FyreBOX Slab Mount sizes as per this report

Aperture framed with stud and lined with the same thickness (and layers) of fire grade plasterboard used on the face of the wall

Plasterboard (Fire rated or non-fire rated as per Alpha Panel wall system requirements)

Drawing Name: Alphapanel intertenancy or corridor	**Test Standard:** AS1530.4	**Codes:**	**Revision:**	**Date:**	**No.:**	**NOTICE:**
Project Title: FyreBOX Slab Mount - Alphapanel	**Fire resistance level:**	**Drawn By:** JH				NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)
Drawing No. : 3	**Sheet:** 3 of 4	**Date:** 11/21/2022	**Scale:** NTS	**Based on Report No.:**	**Checked By:** CT	☐ STANDARD DRAWING ☐ PROJECT DRAWING

Alpha Panel service riser (non-habitable) wall type 1

Foam end plugs fit snug around services and any visible gaps plugged with offcuts of foam or FyreFLEX/FyrePEX sealants

Annular gaps sealed with FyreFLEX Sealant OR other acrylic fire sealant as approved by specifc wall construction approvals to a depth of at least 13mm, from each side of the wall, and finished with a 30mm fillet (fillet not required when TWrap system is installed insatllation)

Max 20mm annular gaps

35mm Alpha Panel

Concrete Slab

FyreBOX located centrally to the thickness of the wall

FyreBOX Slab Mount sizes as per this report

Aperture lined with the same thickness (and layers) of fire grade plasterboard used on the face of the wall

Penetration thickenned with 100mm wide strip of 13mm fire grade plasterboard on one side of the wall

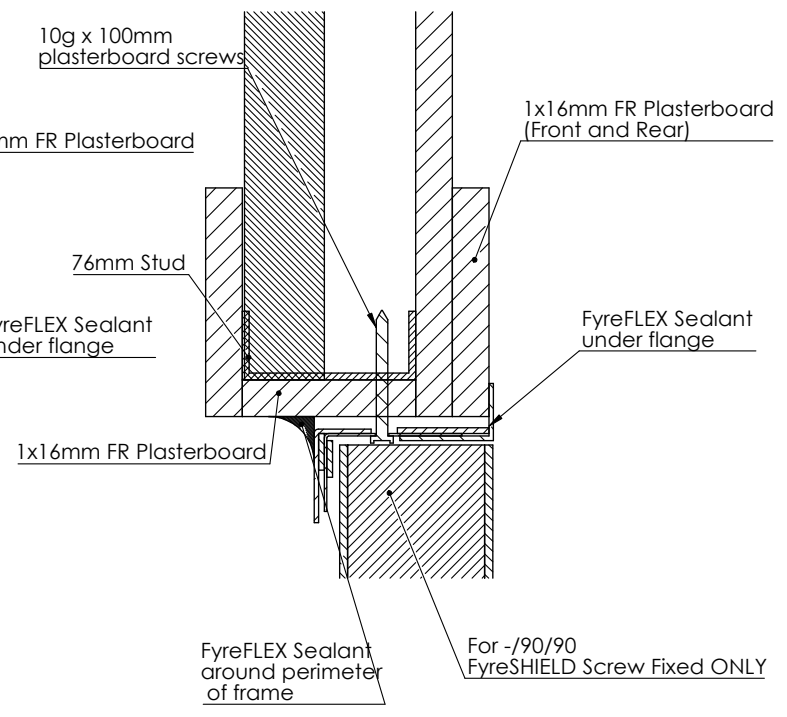| **Drawing Name:** Alphapanel intertenancy or corridor				**Test Standard:** AS1530.4	**Codes:**	**Revision:**		**Date:**	**No.:**	**NOTICE:**
Project Title: FyreBOX Slab Mount - Alphapanel				**Fire resistance level:**	**Drawn By:** JH					NOTE: ALL DIMENSIONS ARE IN MILLIMETRES [mm]
Drawing No. : 4	**Sheet:** 4 of 4	**Date:** 11/21/2022	**Scale:** NTS	**Based on Report No.:**	**Checked By:** CT	☐ STANDARD DRAWING ☐ PROJECT DRAWING				Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@tgroup.com.au W: www.tfire.com.au

51mm AlphaPanel

2x16mm FR Plasterboard

M6 x 50mm Masonry Anchors

FyreFLEX Sealant under flange

FyreFLEX Sealant around perimeter of frame

91mm AlphaPanel

10g x 100mm plasterboard screws

76mm Stud

1x16mm FR Plasterboard

1x16mm FR Plasterboard

FyreFLEX Sealant under flange

FyreFLEX Sealant around perimeter of frame

91mm AlphaPanel
(FyreSHIELD Screw Fixed)

10g x 100mm plasterboard screws

1x16mm FR Plasterboard (Front and Rear)

76mm Stud

FyreFLEX Sealant under flange

1x16mm FR Plasterboard

FyreFLEX Sealant around perimeter of frame

For -/90/90 FyreSHIELD Screw Fixed ONLY

Drawing Name: FyreSHIELD in AlphaPanel				**Test Standard:** AS1530.4	**Codes:**	**Revision:**	**Date:**	**No.:**	**NOTICE:**
Project Title: XCEM				**Fire resistance level:**	**Drawn By:** DP				NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)
Drawing No. : 1	**Sheet:** 1 of 1	**Date:** 26/04/2023	**Scale:** NTS	**Based on Report No.:**	**Checked By:** JH	☐ STANDARD DRAWING ☐ PROJECT DRAWING			

90mm AlphaPanel

10g x100mm
plasterboard screw

1x16mm FR Plasterboard
(Front and Rear)

2x16mm
FR Plasterboard

FyreFLEX Sealant
under flange

FyreFLEX Sealant around
perimeter of frame

FyreSHIELD Hinged

90mm AlphaPanel

10g x100mm
plasterboard screw

2x16mm FR
Plasterboard
(Rear ONLY)

FyreFLEX Sealant
under flange

2x16mm
FR Plasterboard

FyreFLEX Sealant around
perimeter of frame

FyreSHIELD Screw
Fixed

120mm AlphaPanel

10g x100mm
plasterboard screw

2x16mm
FR Plasterboard

FyreFLEX Sealant
under flange

FyreFLEX Sealant around
perimeter of frame

FyreSHIELD Hinged
OR Screw Fixed

Drawing Name: Installation Guide Cont.				**Test Standard**: AS1530.4	**Codes**:	**Revision**:		**Date**:	**No.**:	**NOTICE**:
Project Title: XCEM				**Fire resistance level**:	**Drawn By**: DP					NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)
Drawing No. : 3	**Sheet**: 3 of 3	**Date**: 26/04/2023	**Scale**: NTS	**Based on Report No.**:	**Checked By**: JH	☐ **STANDARD DRAWING** ☐ **PROJECT DRAWING**				Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@tgroup.com.au W: www.tfire.com.au