





PLUMBERS GUIDE

FyreBOX Slab-Mount BAMBINO



The FyreBOX Slab Mount Bambino is a head of wall service penetration system specifically manufactured for individual trades to simplify passive fire by allowing installation of pipe and cable services before the wall construction, providing predictable site costs with the independence from other contractors schedules, and a reliable method of fire stopping.







KEY FEATURES

- Reduced separation requirements between pipes
- Allows for multiple pipes in the one penetration
- Approved for gas PEX-AL-PEX, PEXa and PEXb pipes
- Services can be installed & tested before the wall construction begins
- Suitable for apartment entry and riser shaft penetrations
- Fully tested and compliant to AS1530.4-2014
- Training and support provided
- Fire, Smoke and Acoustic seal

APPROVED SERVICES

PEX

PEXa up to 25mm
PEXb up to 25mm

PEX-AL-PEX up to 25mm

Copper

Pipes up to 50mm Insulated copper pipes

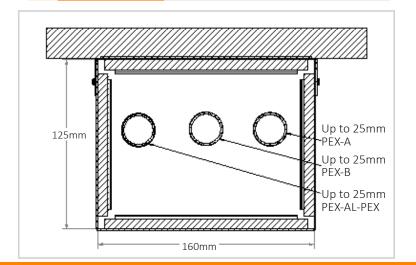




TABLE OF CONTENTS



Sect	ion	Page
WHY	′ FyreBOX for Plumbing Service Trades	4
Fyre	BOX Benefits- 30% Labour Savings	5
Syste	em Selector	6
Fire	Resistance Level	7
	60 Minute Plasterboard Stud Walls: WRAP FREE	8
	60 Minute Walsc® AAC Panel: WRAP FREE	9
	60 Minute Concrete, Masonry and Permanent Formwork Walls: WRAP FREE	10
	60 Minute IntrWall & Other Party Wall Systems	11
	60 Minute XCEM Alpha Panel walls	12
	90 Minute Walsc® AAC Panel	13
səlc	90 Minute Plasterboard Stud Walls 90 Minute Laminated Plasterboard Shaft Walls 90 Minute XCEM Alpha Panel Walls	14
FRL Tables		15
监		16
	120 Minute Plasterboard Stud Walls	17
	120 Minute Concrete, Masonry and Permanant Formwork Walls	18
	120 Minute Walsc® AAC Panels	19
	Speedpanel® Walls	20
	Trafalgar COREX Shaft Walls	21
	Maxilite Board Bulkheads & Oversized Penetrations	22
	Stage 1: Slab-Mount the FyreBOX- All Walls	23
anual	Stage 2: Wall Installation- Plasterboard and COREX	24
Man	Stage 2: Wall Installation- Walsc® and Hebel AAC Panel Wall	25
Installation Ma	Stage 2: Wall Installation- AlphaPanel	26
stalla	Stage 2: Wall Installation- Speedpanel®	27
드	Stage 3: Foam Installation- All Walls	28
	Stage 4: Wrapping- All Walls	29



TABLE OF CONTENTS



s	ection	Page
	Installation Alternatives: Riser Shaft	30
-	Installation Alternatives: Stepped slab, Wall junctions, oversized openings	31
	Installation Alternatives: FyreBOX Double Vertical	32
	Installation Alternatives: FyreBOX Double Horizontal	33
	Installation Alternatives: Stepped slab, Wall junctions, oversized openings Installation Alternatives: FyreBOX Double Vertical Installation Alternatives: FyreBOX Double Horizontal Installation Alternatives:IntRWall/Party Walls	34
4	Installation Checklist- Plasterboard	35
	Installation Checklist- Walsc® and Hebel AAC Panel Wall	36
S	ystem Range	37
	Compliance	38
	Installation Overview	39
	Plasterboard Framing Details	40
	Standard Plasterboard Walls	41
	Shaftliner Walls	42
	Hebel®/Walsc® and AAC Walls- Openings up to 400x170mm	43
10	Hebel®/Walsc® and AAC Walls- Openings greater than 400x170mm	44
wings	SpeedPanel® Walls	45
Dray	Concrete / Masonry Walls	46
Fechnical Drawings	FyreBOARD™ Maxilite	47
Tech	TWRAP™ - Services Wrap	48
	TWRAP™ - 3-Sided Wrap	49
	TWRAP™ - Stacked Vertical	50
	TWRAP™ - Services Horizontal	51
	Stepped Slab	52
	Wall Junctions	53
	Oversized Openings	54





Why FyreBOX for Plumbing Services?

In residential and commecial constructions, the plumbing trades are often the first on site to start roughing in their water and gas pipes under the slab soffit, before the fire compartment walls have been erected. This results in additional work for the plumbers who have to install pipe couplings on each side of the fire walls to remove sections of the pipes to allow the walls to be installed, and/or defects where services are left penetrating through the head tracks of the fire wall. Alternatively, plumbers must wait until the fire walls are completed before they can install their passive fire penetration systems.

The innovative Trafalgar FyreBOX Slab Mount BAMBINO (lower right) addresses these issues by providing a small footprint penetration system that can be installed before the walls are erected, allowing for the pipes and cables to be roughed in, commissioned and charged without waiting for the wall contractors.

The FyreBOX systems are tested with all common plumbing services for residential and commercial projects through one simple penetration system providing FRL's from -/60/60 (wrap free) up to -/120/120 with TWrap. The FyreBOX systems have been tested located at the head track/deflection heads in FULL SCALE wall tests to confirm their suitability in these locations.

BENEFITS

- Install pipes before the fire walls
- No need for wraps (in most walls)
- Charge, test and commission services quicker
- Less leak points
- Reduced defects
- Predictable fire stopping costs
- NCC 2022 Ready
- Thoroughly fire tested to AS1530.4-2014
- Visible and reliable compliance
- Space saving gives one penetration point per apartment
- Suitable for SOU and riser shaft penetrations
- Multi-service solution
- Maintains acoustic rating



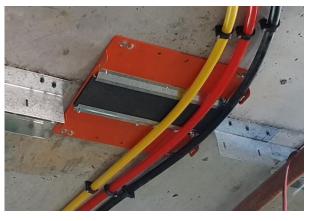
WITHOUT FYREBOX:



Traditional fire sealant and fire collar penetration systems need the fire walls to be installed first, and often comprimise the deflection head of the wall (above). Multiple PEX pipes clustered into a small space is very difficult to provide a retrofit solution (below):



WITH FYREBOX BAMBINO:











The FyreBOX Slab-Mount is a proudly Australian made passive fire penetration system used for multiple and mixed service penetrations which has been designed and tested to be built into residential/commercial apartment walls and riser shafts reducing the space required for service penetrations, providing predictable site costs and a reliable method of fire stopping.

Passive Fire Protection from Trafalgar Fire a Brand you can Trust, with 75 years of Innovation.







TAKE BACK CONTROL OF YOUR PROJECT TIMEFRAMES

Re-think the sequencing of rough in, charging, leak testing and commissioning by pre-installing the penetration systems independently of other site trades.









Benefits	Traditional sealant & wrap systems	FyreBOX BAMBINO
Penetration installed before the fire walls?	No	Yes
Services installed hard against slab soffit?	No	Yes
Multiple services in one penetration?	No	Yes
Separation between different servies?	No	Yes
Allows for future services to be added?	No	Yes
Doesnt need large fillets of selant for wrap free systems?	No	Yes
Other service trades can share the same penetration?	No	Yes
100's of cables in one penetration?	No	Yes



















For full FRL details please consult the relevant technical guide or contact Trafalgar Fire. Fire testing of Trafalgar Fire products is always ongoing.



PEX

Construction

Fire Barrier





FIRE RESISTANCE LEVEL

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.

Note: Penetrations are not required to have a Structural Adequacy rating and is usually expressed as a dash. For example, a penetration through a 2 hour load bearing wall would be written as -/120/120.

INTEGRITY

The FyreBOX Slab-Mount system will achieve the integrity performance for up to 2 hours physically stopping the direct spread of fire, however the insulation performance of the penetration will be limited to the type of wall being used and conductivity of the services in the penetration.

INSULATION (TEMPERATURE RISE)

Heat transfer via conduction (or heat rise) will occur through the conductive parts of any penetration system. To limit the heat rise through the FyreBOX Slab-Mount penetration systems, our 25mm thick TWRAP™ foil encased blanket can be wrapped around the services and metal casing of the FyreBOX to achieve up to 2 hours of insulation performance. **There are some applications that won't require any TWRAP™ to achieve the full FRL, please refer to the tables below for specific details.**





60 Minute Plasterboard Stud Walls WRAP FREE

Minimum of 13mm fire grade plasterboard on each face of steel or timber stud, of minimum 64mm thickness with a stated FRL of -/60/60



Click

		FRL - WRAP FREE		
Service Type	Serv	64mm stud*	92mm studs	
	PVC Pipes	Up to 32mm OD	-/60/30	-/60/60
		Up to 20mm	-/60/30	-/60/60
	PEX Pipes	Up to 32mm	-/60/30	-/60/60
		Up to 32mm with 19mm E-Flex insulation	-/60/30	-/60/60
Plastic Pipes		Up to 25mm	-/60/30	-/60/60
	PEX-Al-PEX pipes	Up to 32mm	-/60/-	-/60/-*
		Up to 32mm with 19mm E-Flex insulation	-/60/30	-/60/60
	DVO D	Up to 40mm	-/60/-	-/60/-*
	cPVC Pipes	40mm to 60mm	-/60/30	-/60/60
Bare Metal Pipes	Copper	Up to 50mm	-/60/-	-/60/-*
	Steel	up to 60mm	-/60/30	-/60/60
		Up to 50mm OD with PE insulation up to 20mm thick	-/60/30	-/60/30*
Metal Pipes	Copper	Up to 50mm OD with FR insulation	-/60/30	-/60/60
Insulated**		Up to 20mm OD with 38mm rockwool-type insulation	-/60/30	-/60/60
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation (or 13mm PE)	-/60/30	-/60/60
	TPS	Up to 12x 2.5mm² per bundle	-/60/30	-/60/60
Power Cables - Copper Core	Rigid or Flexible PVC Conduits	Up to 32mm OD (with any size power or comms cables up to 32mm diameter)	-/60/30	-/60/60
coppor core	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/60/30	-/60/30*
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*
	RG6 coax	Up to 3x per bundle	-/60/30	-/60/60
Communications Cables	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/60/30	-/60/60
Conduits	Rigid or Flexible PVC Con- duits	Up to 32mm OD (with any size power or comms cables up to 32mm diameter)	-/60/30	-/60/60

^{*}TWrap required on these specific services to acheieve -/60/60 FRL. Refer to FC10266 for details in specific wall types.

^{**}With or without heat trace cable.





60 Minute AAC Panels WRAP FREE

Hebel, Waslc or other AAC panels 75mm thick when used for-/60/60 applications. **Note: 30mm Maxilite board can be laminated on one side of the penetration to increase the insulation performance without the need for TWrap as shown below (WRAP FREE).**



Complete Torre		FRL - WRAP FREE	
Service Type		+ 30mm Maxilite	
	PVC Pipe	Up to 32mm OD	-/60/60
		Up to 20mm	-/60/60
	PEX Pipes	Up to 32mm	-/60/60
		Up to 32mm with 19mm E-Flex insulation	-/60/60
Plastic Pipes		Up to 25mm	-/60/60
	PEX-Al-PEX pipes	Up to 32mm	-/60/-*
		Up to 32mm with 19mm E-Flex insulation	-/60/60
		Up to 40mm	-/60/-*
	cPVC Pipes	40mm to 60mm	-/60/60
	Copper	Up to 50mm	-/60/-*
Bare Metal Pipes	Steel	up to 60mm	-/60/60
		Up to 50mm OD with PE insulation up to 20mm thick	-/60/60
	Copper	Up to 50mm OD with FR insulation	-/60/60
Metal Pipes Insulated**		Up to 20mm OD with 38mm rockwool-type insulation	-/60/60
		Up to 9.5 & 19mm with 13mm PE insulation	-/60/60
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation	-/60/60
	TPS	Up to 12x 2.5mm² per bundle	-/60/60
Power Cables -	Rigid or Flexible PVC Conduits	Up to 32mm OD (with any size power or comms cables up to 32mm diameter)	-/60/60
Copper Core	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/60/30*
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*
	RG6 coax	Up to 3x per bundle	-/60/60
Communications Cables	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/60/60
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with any size power or comms cables up to 32mm diameter)	-/60/60

^{*}TWrap required on these specific services to acheieve -/60/60 FRL. Refer to FC10266 for details in specific wall types.

^{**}With or without heat trace cable.



9



60 Minute Concrete, Masonry and Permanant Formwork Walls: Wrap Free

Walls designed as per AS3600 or AS3700 (or otherwise fire tested to achevied the required FRL with a minimum thickness as per the 90mm) including Dincel, AFS, Logicall etc.



Soffini including bilicel, At 3, Eoglean etc.				
Service Type	Se	ervice Specification	FRL (Wrap Free)	
	PVC Pipes	Up to 32mm OD	-/60/60	
	DEV Div	Up to 20mm	-/60/60	
	PEX Pipes	Up to 32mm	-/60/60	
Plastic Pipes		Up to 20mm	-/60/60	
r lastic ripes	PEX-Al-PEX pipes	Up to 25mm	-/60/60	
		Up to 32mm	-/60/-*	
	oDVC Dinos	Up to 40mm	-/60/-*	
	cPVC Pipes	40mm to 60mm	-/60/60	
D Martal D'	Copper	Up to 50mm	-/60/-*	
Bare Metal Pipes	Steel	up to 60mm	-/60/60	
		Up to 50mm OD with PE insulation up to 20mm thick	-/60/60	
	Copper	Up to 50mm OD with FR insulation	-/60/60	
Metal Pipes Insulated**		Up to 20mm OD with 38mm rockwool-type insulation	-/60/60	
	2	Up to 9.5 & 19mm with 13mm FR insulation	-/60/60	
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation	-/60/60	
	TPS	Up to 12x 2.5mm² per bundle	-/60/60	
Power Cables - Copper Core	Rigid or Flexible PVC Con- duits	Up to 32mm OD (with any size power or comms cables up to 32mm diameter)	-/60/60	
	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/60/60	
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)	-/60/60	
	RG6 coax	Up to 3x per bundle	-/60/60	
Communications Cables	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/60/60	

^{*}TWrap required on these specific services to acheieve -/60/60 FRL. Refer to FC10266 for details in specific wall types.

^{**}With or without heat trace cable.





60 Minute IntrWall & Other Party Wall Systems

FyreBOX can penetrate the core of the wall, which is laminated with at least 1x16mm fire grade plasterboard on one side (or 1x layer of 13mm on both sides of the shaftliner core).



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

^{*}If using FyreBOX without TWrap for FRL's up to -/60/30, the wall must be thickenned with 60mm Maxilite board 100mm strips on one side.

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



60 Minute XCEM Alpha Panel walls

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)



				AP FREE	FRL with TWRAP™	
Service Type	Servi	Type 1	Type 2	Both walls	Length required (mm)	
	PVC Pipes	Up to 32mm OD	-/60/30	-/60/60		300
		Up to 20mm	-/60/30	-/60/60		300
	PEX Pipes	Up to 32mm	-/60/30	-/60/60		450
		Up to 32mm with 19mm E-Flex	-/60/30	-/60/60		300
Plastic Pipes		Up to 25mm	-/60/30	-/60/60		300
	PEX-Al-PEX pipes	Up to 32mm	-/60/-	-/60/-		450
		Up to 32mm with 19mm E-Flex	-/60/30	-/60/60		300
		Up to 40mm	-/60/-	-/60/-		300
	cPVC Pipes	40mm to 60mm	-/60/30	-/60/60		300
Day Markel Divers	Copper	Up to 50mm	-/60/-	-/60/-	-/60/60	300
Bare Metal Pipes	Steel	up to 60mm	-/60/30	-/60/60		300
	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/60/30	-/60/30		300
Metal Pipes		Up to 50mm OD with FR insulation	-/60/30	-/60/60		300
Insulated*		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 -	TPS	Up to 12x 2.5mm² per bundle	-/60/30	-/60/60		300
Copper Core	AS1530.4 Appendix D1 cable set	Applies to copper core power ca- bles 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
	RG6 coax	Up to 3x per bundle	-/60/30	-/60/60		300
Communications Cables	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



90 Minute AAC Panels

Hebel, Waslc or other AAC panels 75mm thick with a stated FRL up to -/90/90. Note if this wall is used for a-/60/60 apartment entry, please refer to page 9.



Service Type		Service Specification	FRL - WRAP FREE	FRL-With 300mm TWRAP
	PVC Pipes	Up to 32mm OD	-/90/30	-/90/90
		Up to 20mm	-/90/30	-/90/90
	PEX Pipes	Up to 32mm	-/90/30	-/90/90 (450mm TWrap)
		Up to 32mm with 19mm E-Flex insulation	-/90/30	-/90/90
Plastic Pipes		Up to 20mm	-/90/30	-/90/90
		Up to 25mm	-/90/30	-/90/90
	PEX-Al-PEX pipes	Up to 32mm	-/90/0	-/90/90 (450mm TWrap)
		Up to 32mm with 19mm E-Flex insulation	-/90/30	-/90/90
	cPVC Pipes	Up to 40mm	-/90/0	-/90/90
	CPVC Pipes	40mm to 60mm	-/90/30	-/90/90
Para Matal Dinas	Copper	Up to 50mm	-/90/0	-/90/90
Bare Metal Pipes	Steel	up to 60mm	-/90/30	-/90/90
	Copper Pair coil	Up to 50mm OD with PE insulation up to 20mm thick	-/90/30	-/90/90
		Up to 50mm OD with FR insulation	-/90/30	-/90/90
Metal Pipes Insulated*		Up to 20mm OD with 38mm rockwool-type insulation	-/90/30	-/90/90
		Up to 9.5 & 19mm with 13mm PE insulation	-/90/30	-/90/90
	r all coll	Up to 9.5 & 19mm with 20mm FR insulation	-/90/30	-/90/90
	TPS	Up to 12x 2.5mm² per bundle	-/90/30	-/90/90
Power Cables - Copper Core	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/90/30	-/90/90
	Rigid or Flexible PVC Conduits	Up to 32mm OD (with any size power or comms cables up to 32mm diameter)	-/90/30	-/90/90
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	-/90/90
	RG6 coax	Up to 3x per bundle	-/90/30	-/90/90
Communications Cables	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/90/30	-/90/90

^{*}With or without heat trace cable





90 Minute Plasterboard **Stud Walls**

Minimum of 16mm fire grade plasterboard on each face of a steel or timber stud of minimum 64mm thickness, with a stated FRL of -/90/90.



Service Type	Serv	ice Specification	FRL (Wrap Free)	FRL with TWRAP™	TWRAP™ Length required (mm)
	PVC Pipes	Up to 32mm OD	-/90/60		300
		Up to 20mm	-/90/60		300
	PEX Pipes	Up to 32mm	-/90/60		450
		Up to 32mm with 19mm E-Flex insulation	-/90/60		300
Plastic Pipes		Up to 25mm	-/90/60		300
	PEX-Al-PEX pipes	Up to 32mm	-/90/-		450
		Up to 32mm with 19mm E-Flex insulation	-/90/30		300
	DI (C.D.	Up to 40mm	-/90/-		300
	cPVC Pipes	40mm to 60mm	-/90/60		300
	Copper	Up to 50mm	-/90/-		300#
Bare Metal Pipes	Steel	up to 60mm	-/90/30	-/90/90	300#
		Up to 50mm OD with PE insulation up to 20mm thick	-/90/30		300
Metal Pipes	Copper	Up to 50mm OD with FR insulation	-/90/30		300
Insulated*		Up to 20mm OD with 38mm rockwool-type insulation	-/90/30		300
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation (or 13mm PE)	-/90/30		300
	TPS	Up to 12x 2.5mm² per bundle	-/90/30		300
Power Cables - Copper Core	AS1530.4 Appendix D1 cable set	Applies to copper core power ca- bles and cable trays up to 1000mm wide	-/90/30		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)	-/90/30		300
	RG6 coax	Up to 3x per bundle	-/90/30		300
Communications Cables	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/90/30		300
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	-/90/60		300

^{*}Heat trace cables may be installed underneath thermal lagging through a FyreBOX penetration #With 300mm of loose TWrap infill packed around any cable tray services within the wrap.





90 Minute Laminated Plasterboard **Shaft Walls**

Minimum of 3x fire grade plasterboard on one side of a steel stud with a stated FRL of 90 or 120 minutes. FyreBOX penetration thicknenned with 60mm Maxilite in 100mm strips on one side of the penetration.





Son ice Tune	Service Specification		Plasterboard outside minimum 64mm stud (FRL wrap Free)		FRL with	TWrap Length
Service Type			3x13mm plaster	3x16mm plaster	TWRAP	required (mm)
	PVC Conduits	Up to 32mm OD	-/90/30	-/120/30		300
		Up to 20mm	-/90/30	-/120/30		300
	PEX Pipes	Up to 32mm	-/90/30	-/120/30		450
	·	Up to 32mm with 19mm E-Flex insulation	-/90/30	Not approved		300 (- /90/90 only)
Plastic Pipes		Up to 25mm	-/90/30	-/120/30		450
	PEX-Al-PEX pipes	Up to 32mm	-/90/-	-/120/30		450
		Up to 32mm with 19mm E-Flex insulation	-/90/30	Not approved		300 (-/ 90/90 only)
	aDVC Din an	Up to 40mm	-/90/-	-/120/-	-/120/120 (Limited to the FRL of the wall)	300
	cPVC Pipes	40mm to 60mm	-/90/30	-/120/30		300
Bare Metal Pipes	Copper	Up to 50mm	-/90/-	-/120/-		300
bare Wetar Fipes	Steel	up to 60mm	-/90/30	-/120/30		300
	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/90/30	-/120/30		300
Metal Pipes		Up to 50mm OD with FR insulation	-/90/30	-/120/30		300
Insulated**		Up to 20mm OD with 38mm rockwool- type insulation	-/90/30	-/120/30		300
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation (or 13mm PE)	-/90/30	-/120/30		300
Power Cables -	TPS	Up to 12x 2.5mm² per bundle	-/90/30	-/120/30		300
Copper Core	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/90/30	-/120/30		600**
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	-/120/30		300
C	RG6 coax	Up to 3x per bundle	-/90/30	-/120/30		300
Communications Cables	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/90/30	-/120/30		450
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	-/90/30	-/120/30		300

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

^{**}Loose TWrap infill installed onto cable trays for at least 300mm underneath TWrap





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.



			1. 15 15 15	CHOSE CAN STREET SEE SOM		
			FRL (Wrap Free)**		FRL with TWRAP™	
Service Type	Service Specification		Type 3	Type 4	Both walls	Length required (mm)
	PVC Conduits	Up to 32mm OD	-/90/60	-/90/30		450
		Up to 20mm	-/90/60	-/90/30		450
	PEX Pipes	Up to 32mm	-/90/60	-/90/30		450
		Up to 32mm with 19mm E-Flex	-/90/60	-/90/30		450
Plastic Pipes		Up to 25mm	-/90/60	-/90/30		450
	PEX-Al-PEX pipes	Up to 32mm	-/90/-	-/90/-		450
		Up to 32mm with 19mm E-Flex insulation	-/90/30	-/90/30		450
	DIVC Div	Up to 40mm	-/90/-	-/90/-		450
	cPVC Pipes	40mm to 60mm	-/90/60	-/90/30		450
	Copper	Up to 50mm	-/90/-	-/90/30	-/90/90	450
Bare Metal Pipes	Steel	up to 60mm	-/90/30	-/90/30		450
	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/90/30	-/90/30		450
Metal Pipes		Up to 50mm OD with FR insulation	-/90/30	-/90/30		450
Insulated*		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
	TPS	Up to 12x 2.5mm² per bundle	-/90/30	-/90/30		450
Power Cables - Copper Core	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
Commenciachicus	RG6 coax	Up to 3x per bundle	-/90/30	-/90/30		450
Communications Cables	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.





120 Minute Plasterboard Stud Walls

Minimum of 2x13mm fire grade plasterboard on each face of steel or timber stud, of minimum 64mm thickness with a stated FRL of -120/120.



Service Type	Service Specification		FRL (Wrap Free)	FRL with TWRAP™ (all studs)	TWRAP™ Length required (mm)
	PVC Pipes	Up to 32mm OD	-/120/60		300
	DEV Dings	Up to 20mm	-/120/60		300
	PEX Pipes	Up to 32mm	-/120/60		450
Plastic Pipes	PEX-Al-PEX pipes	Up to 20mm	-/120/60		300
	1 EX-AI-1 EX pipes	Up to 32mm	-/120/-		450
	cPVC Pipes	Up to 40mm	-/120/-		300
	CFVC Pipes	40mm to 60mm	-/120/60		300
Bare Metal Pipes	Copper	Up to 50mm	-/120/-		300
bare wetai ripes	Steel	up to 60mm	-/120/60		300
		Up to 50mm OD with PE insulation up to 20mm thick	-/120/60		300
Metal Pipes	Copper	Up to 50mm OD with FR insulation	-/120/60	-/120/120	300
Insulated*		Up to 20mm OD with 38mm rockwool-type insulation	-/120/60		300
	Pair coil	Up to 9.5 & 19mm with 20mm FR insulation (or 13mm PE)	-/120/60		300
Power Cables -	TPS	Up to 12x 2.5mm² per bundle	-/120/60		300
Copper Core	AS1530.4 Appendix D1 cable set	Applies to copper core power ca- bles and cable trays up to 1000mm wide	-/120/60		600**
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)	-/120/30		300
Communications	RG6 coax	Up to 3x per bundle	-/120/60		300
Cables	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/120/60		450**
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	-/120/60		300

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

^{**}Loose TWrap infill installed onto cable trays for at least 300mm underneath TWrap



Contents2



120 Minute Concrete, Masonry and Permanant Formwork Walls

Walls designed as per AS3600 or AS3700 (or otherwise fire tested to achevied the required FRL with a minimum thickness as per the 90mm) including Dincel, AFS, Logicall etc.



ness as per the 90	Omm) including Dincel	, AFS, Logicall etc.			
Service Type	Se	FRL (Wrap Free)	FRL with TWRAP™ (all studs)	TWRAP™ Length required (mm)	
	PVC Pipes	Up to 32mm OD	-/120/60		300
	DEV Din os	Up to 20mm	-/120/60		300
	PEX Pipes	Up to 32mm	-/120/60		450
Plastic Pipes		Up to 20mm	-/120/60		300
riustie ripes	PEX-Al-PEX pipes	Up to 25mm	-/120/60		450
		Up to 32mm	-/120/0		450
	DI (C.D.)	Up to 40mm	-/120/0		300
	cPVC Pipes	40mm to 60mm	-/120/60		300
Paya Matal Pinas	Copper	Up to 50mm	-/120/0		300
Bare Metal Pipes	Steel	up to 60mm	-/120/60	-/120/120	300
	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/120/60		300
		Up to 50mm OD with FR insulation	-/120/60		300
Metal Pipes Insulated*		Up to 20mm OD with 38mm rockwool- type insulation	-/120/60		300
	Pair coil	Up to 9.5 & 19mm with 13mm FR insulation	-/120/60		300
		Up to 9.5 & 19mm with 20mm FR insulation	-/120/60		300
Power Cables -	TPS	Up to 12x 2.5mm² per bundle	-/120/60		300
Copper Core	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/120/60		600#
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)	-/120/30		300
Commenter	RG6 coax	Up to 3x per bundle	-/120/60		300
Communications Cables	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/120/60		450#
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	-/120/60		300

^{*}With or without heat trace cable.

#With 300mm of loose TWrap infill packed around any cable tray services within the wrap.





120 Minute AAC Panels

Hebel, Waslc or other AAC panels 75mm thick with a stated FRL up to -/120/120.





Service Type		Service Specification	FRL (Wrap Free)	FRL with TWRAP™	TWRAP™ Length required (mm)
	PVC pipes	Up to 32mm OD	-/120/30		300
	DEV Div.	Up to 20mm	-/120/30		300
	PEX Pipes	Up to 32mm	-/120/30		450
Plastic Pipes		Up to 20mm	-/120/30		300
Flastic Fipes	PEX-Al-PEX pipes	Up to 25mm	-/120/30		450
		Up to 32mm	-/120/0		450
	DVC Div.	Up to 40mm	-/120/0		300
	cPVC Pipes	Up to 60mm	-/120/30		300
Pave Metal Dines	Copper	Up to 50mm	-/120/0		300
Bare Metal Pipes	Steel	up to 60mm	-/120/30	-/120/120	300
	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/120/30		300
		Up to 50mm OD with FR insulation	-/120/30		300
Metal Pipes Insulated*		Up to 20mm OD with 38mm rockwool-type insulation	-/120/30		300
	Pair coil	Up to 9.5 & 19mm with 13mm FR insulation	-/120/30		300
		Up to 9.5 & 19mm with 20mm FR insulation	-/120/30		300
Power Cables -	TPS	Up to 12x 2.5mm² per bundle	-/120/30		300
Copper Core	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide	-/120/30		600#
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)	-/120/30		300
	RG6 coax	Up to 3x per bundle	-/120/30		300
Communications Cables	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/120/30		450#
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	-/120/60		300

^{*}With or without heat trace cable

#With 300mm of loose TWrap infill packed around the services within the wrap.





Speedpanel® Walls

Speedpanel walls of thickness ranging from 51mm (-/60/60), 64mm (-/90/90) and 78mm (-/120/120).

Note 51mm and 64mm Speedpanel walls required additional patch of 30mm Maxilite board on one side of the wall.



Service Type	PVC pipes	ervice Specification Up to 32mm OD	51mm Speedpanel + 30mm Maxilite	64mm Speedpanel + 30mm	78mm Speedpanel	TWrap Length required
	PVC pipes	Un to 32mm OD	IVIAXIIILE	Maxilite	Speeupanei	(mm)
		ορ το σεπιπι ου				300
		Up to 20mm				300
	PEX Pipes	Up to 32mm				450
		Up to 32mm with 19mm E-Flex**				450
Plastic Pipes		Up to 20mm				300
PE	EX-AL-PEX pipes	Up to 32mm				450
		Up to 32mm with 19mm E-Flex**				450
	aDVC Dinas	Up to 40mm				300
	cPVC Pipes	Up to 60mm				300
Para Matal Dinas	Copper	Up to 50mm				300
Bare Metal Pipes	Steel	up to 60mm				300
		Up to 50mm OD with PE insulation up to 20mm thick		-/90/90		300
	Copper Pair coil	Up to 50mm OD with FR insulation	-/60/60		-/120/120	300
Metal Pipes Insulated#		Up to 20mm OD with 38mm rockwool-type insulation				300
		Up to 9.5 & 19mm with 13mm PE insulation				300
		Up to 9.5 & 19mm with 20mm FR insulation				300
Power Cables -	TPS	Up to 12x 2.5mm² per bundle				300
Copper Core AS	S1530.4 Appen- lix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide				600*
Power Cables Aluminium Core	Single Core cables	Bundles of up to 3 x 240mm², 4 x 120mm² and 9 x 70mm² per bun- dle (16x cables total)				300
	RG6 coax	Up to 3x per bundle				300
	S1530.4 Appen- lix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide				450*
CONGUITS	igid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)				300

^{*300}mm loose TWrap infill underneath Twrap

#With or without heat trace cable

For specific service based FRL's without using TWrap, refer to report FC10266



^{**} Maximum FRL-/90/90

Contents>



Trafalgar COREX Shaft Walls

2x laminated Corex boards fixed to one side of a 64mm steel stud. FRL of the wall is related to thickness of the Corex facings as shown in the table. Click here for the Corex Shaft Wall technical Manual.



Comice Time	Service Specification		Corex I & FyreB	TWrap Length		
Service Type			2x15mm	2x20mm	2x25mm	required (mm)
	PVC Pipes	Up to 32mm OD				450
		Up to 20mm				450
	PEX Pipes	Up to 32mm				450
		Up to 32mm with 19mm E-Flex insulation				450
Plastic Pipes		Up to 20mm				450
riastic ripes		Up to 25mm				450
	PEX-Al-PEX pipes	Up to 32mm				450
		Up to 32mm with 19mm E-Flex insulation			-/120/120	450
	aDVC Diagra	Up to 40mm				450
	cPVC Pipes	40mm to 60mm				450
Dave Metal Dines	Copper	Up to 50mm				450
Bare Metal Pipes	Steel	up to 60mm	-/60/60	-/90/90		450
		Up to 50mm OD with PE insulation up to 20mm thick				450
	Copper	Up to 50mm OD with FR insulation				450
Metal Pipes Insulated**		Up to 20mm OD with 38mm rockwool- type insulation				450
	Pair coil	Up to 9.5 & 19mm with 13mm PE insulation				450
		Up to 9.5 & 19mm with 20mm FR insulation				450
	TPS	Up to 12x 2.5mm² per bundle				450
Power Cables - Copper Core	AS1530.4 Appendix D1 cable set	Applies to copper core power cables and cable trays up to 1000mm wide				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)				450
	RG6 coax	Up to 3x per bundle				450
Communications Cables	AS1530.4 Appendix D2 cable set				450	
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)				450

 $For Corex\ walls, the\ wall\ must\ be\ thickened\ on\ one\ side\ with\ 100mm\ wide\ Maxilite,\ 60mm\ thick\ around\ the\ penetration.$

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



^{*}For specific service based FRL's without using TWrap, refer to report FC10266.

Contents>



Maxilite Board Bulkheads and Oversized Penetrations

Maxilite FyreBOARD is commonly used to construct fire rated bulkheads or to seal oversized apertures cut into fire walls. Minimum thickness required 60mm. <u>Click here for the Maxilite technical manuals.</u>



Service Type	Service Specification		FRL (Wrap Free)	FRL with TWRAP™ (all studs)	TWRAP™ Length required (mm)
	PVC Pipes	Up to 32mm OD	-/120/30		300
	DEV Diago	Up to 20mm	-/120/30		300
	PEX Pipes	Up to 32mm	-/120/30		450
pl +: p:		Up to 20mm	-/120/30		300
Plastic Pipes	PEX-Al-PEX pipes	Up to 25mm	-/120/30		450
		Up to 32mm	-/120/0		450
	-DVC Din	Up to 40mm	-/120/0		300
	cPVC Pipes	40mm to 60mm	-/120/30		300
Dava Matal Dinas	Copper	Up to 50mm	-/120/0	-/120/120	300
Bare Metal Pipes	Steel	up to 60mm	-/120/30		300
	Copper	Up to 50mm OD with PE insulation up to 20mm thick	-/120/30		300
		Up to 50mm OD with FR insulation	-/120/30		300
Metal Pipes Insulated*		Up to 20mm OD with 38mm rockwool-type insulation	-/120/30		300
	Pair coil	Up to 9.5 & 19mm with 13mm FR insulation	-/120/30		300
		Up to 9.5 & 19mm with 20mm FR insulation	-/120/30		300
Davies California	TPS	Up to 12x 2.5mm² per bundle	-/120/30		300
Power Cables - Copper Core	AS1530.4 Appendix D1 cable set	Applies to copper core power ca- bles and cable trays up to 1000mm wide	-/120/30		600#
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)	-/120/30		300
	RG6 coax	Up to 3x per bundle	-/120/30		300
Communications Cables	AS1530.4 Appendix D2 cable set	Applies to copper core comms cables, including cable trays up to 1000mm wide	-/120/30		450#
Conduits	Rigid or Flexible PVC Conduits	Up to 32mm OD (with or without cables)	-/120/30		300

^{*}With or without heat trace cable

 $\hbox{$\#$With 300mm of loose TWrap infill packed around the services within the wrap.}$







INSTALLATION STAGE 1:

Slab-Mount the FyreBOX

ALL WALLS





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



Fix the top section of the FyreBOX to the floor slab using **M6 masonry anchors, 4mmx20mm** 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).







INSTALLATION STAGE 2: WALL INSTALLATION

PLASTERBOARD AND COREX





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



the wall's stud framing 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.

There is no need to line the opening around a FyreBOX with plasterboard for 60 minute applications.

Corex Walls require the opening to be lined with the same thickness of Corex board as is used to build the wall.



Plasterboard is applied around the FyreBOX Slab-Mount, forming annular gaps maximum 20mm. For Corex walls, the wall must be thickened on one side with 100mm wide Maxilite, 60mm thick around the penetration.



FINISHING

Complete the installation by following the Stages 3-4 steps outlined on pages 28-29

Click to Watch







INSTALLATION STAGE 2: WALL INSTALLATION

AAC PANEL WALL



Install the Hebel® wall's fixing angles on either side of the FyreBOX



Install the Hebel® wall panel as per the supplier's instructions, ensuring the annular gaps between the FyreBOX and wall opening are within 5-20mm.

Please note: FyreBOARD Maxilite® collar is not needed if you are planning to use the 3 – sided TWRAP $^{\text{m}}$ detail which covers the casing of the FyreBOX for 90-minute insulation ratings – refer to table on page 13.





Construct a FyreBOARD Maxilite® wall collar, on one side of the penetration, by fixing 30mm thick x 100mm wide FyreBOARD Maxilite® strips around the three exposed sides of the FyreBOX. Fix FyreBOARD Maxilite® with 10g x 60mm plasterboard screws at 150mm centres and make certain that FyreBOARD Maxilite® is fixed flush with the wall opening (Trafalgar Fire strongly recommends this step is undertaken by a Trafalgar approved FyreBOX Certification Partner).









INSTALLATION STAGE 2: WALL INSTALLATION

ALPHA PANEL



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.



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.



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 12 (60 mins) and page 16 (90mins).



Complete the installation by following the Stages 3-4 steps outlined on

pages 28-29







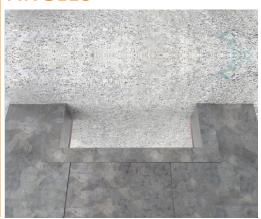


INSTALLATION STAGE 2: WALL INSTALLATION

SPEEDPANEL®



ANGLES



Install the Speedpanel® C-Channel to the full perimeter of the FyreBOX ensuring the annular gaps between the FyreBOX and wall opening are within 5-20mm.

Install FR plasterboard to one side of the wall as per Speedpanel® installation specifications.





Install the Speedpanel® wall panel as per the supplier's instructions, ensuring the annular gaps between the FyreBOX and wall opening are within





Complete the installation by following the Stages 3-4 steps outlined on pages 28-29

For Speedpanel® walls less than 78mm construct a FyreBOARD Maxilite® wall collar, on one side of the penetration, by fixing 30mm thick x 100mm wide FyreBOARD Maxilite® strips around the three exposed sides of the FyreBOX. Fix

FyreBOARD Maxilite® with 10g x 60mm plasterboard screws at 150mm centres and make certain that FyreBOARD Maxilite® is fixed flush with the wall opening (Trafalgar Fire strongly recommends this step is undertaken by a Trafalgar Fire approved FyreBOX Certification Partner).









INSTALLATION STAGE 3: FOAM INSTALLATION

ALL WALLS

Confirm that the installation up to this point has been done in accordance with the requirements for each wall type to ensure compliance.



Fill all annular gaps between the FyreBOX and wall opening with FyreFLEX® Sealant to a depth of 20mm and finish with a 30x30mm fillet on each side of the penetratio (fillet not needed if penetration is wrapped with TWrap).



Retrieve the foam end plugs and cut a horizontal slit allowing you to open the foam. Cut out a rough profile of the services so that the foam can be fit snugly around them. Slide the foam over/around the services and into the FyreBOX

Please note: 30x30mm FyreFLEX® fillet is not needed if you are planning to use the 3 – sided TWRAPTM detail as shown on page 29.







Plug any visible gaps in the end plugs with left over foam off cuts or FyreFLEX® Sealant. Note: It is recommended that after the foam is installed, a photograph should be taken for site records to demonstrate a compliant foam installation.









INSTALLATION STAGE 4: WRAPPING

ALL WALLS

If TWRAP $^{\text{m}}$ is required for the services to achieve the insulation rating as described in the tables on pages8-22, install as follows.

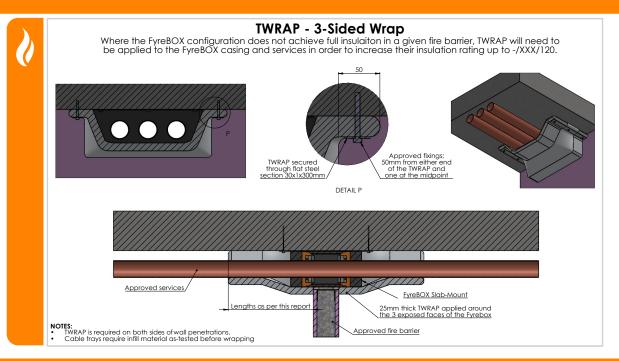
WRAP- SERVICES ONLY

In some instances, it is appropriate to For a 60 minutes insulation, simply wrap TWRAP™ around the required (or all services), ensuring each end overlaps itself by 50mm, and butt it up against the FyreBOX's foam end plugs. Secure the TWRAP™ in three locations with reinforced aluminium tape or stainless-steel cable ties around the entire circumference. Contact_technical@tgroup.com.au_to see if this is appropriate on your site.



For 90 or greater minutes insulation, simply wrap TWRAP™ around the services and FyreBOX casing, flaring the edges out against the underside of the slab. These edges should overlap the slab by at least 50mm and be held in place by 30x1x300mm flat steel tabs. Refer to install drawing below.

Some instances don't need any TWrap at all, check the FRL tables or contact technical@taroup.com.au to confirm.



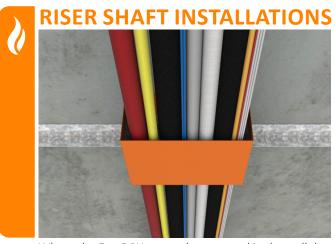




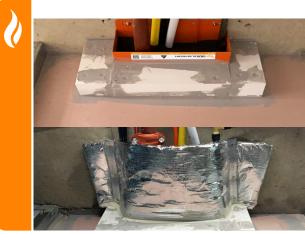




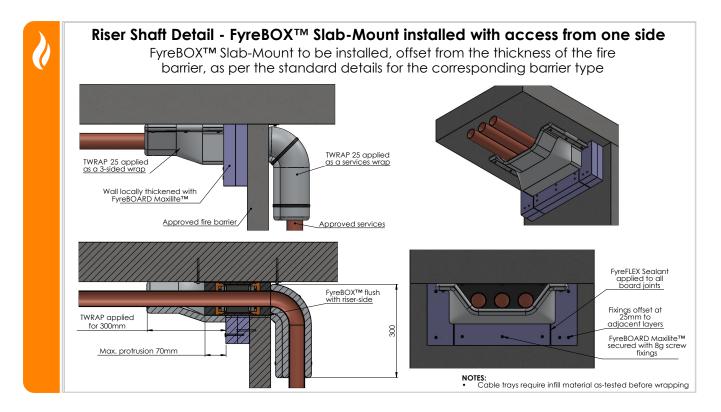
RISER SHAFT



Where the FyreBOX cannot be centered in the wall due to narrow risers or slab edges being nearby.



The FyreBOX can be installed offset to the wall using strips of FyreBOARD Maxilite® to locally thicken the penetration.











STEPPED SLAB, WALL JUNCTIONS & OVERSIZED OPENINGS

Stepped Slabs

FyreBOARD Maxilite can be used to pack out the gap to the FyreBOX Slab-Mount.

Suitable for steps up to 60mm, with min

FyreBOX Slab-Mount to the concrete

through the Maxilite Board. Refer to page

100mm long fixings used to secure the

52 for Technical Drawing.

Where a step up in the slab is present,



Oversized Openings

For openings cut too large, up to 60mm FyreBOARD Maxilite can be used to pack out the opening and reduce the annular gap. This can also be done on he sides of the FyreBOX to reduce the width of the penetration. Refer to page 53 for Technical Drawing.



Wall Junctions

For FyreBOX Slab-Mount systems installed against adjacent barriers, FyreFLEX Sealant is applied to the perimeter (20mm depth) of the box so daylight cant be seen through, and TWrap can be installed 2-sided to the soffit and the wall. **Refer to page**54 for Technical Drawing.

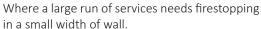




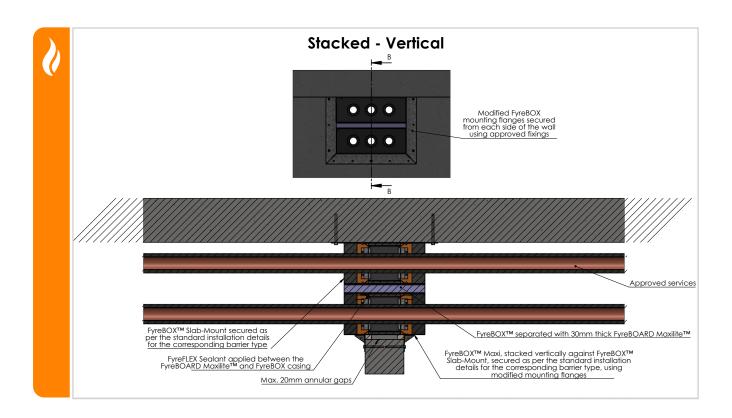
FYREBOX DOUBLE VERTICAL

FYREBOX DOUBLE VERTICAL

















FYREBOX DOUBLE HORIZONTAL

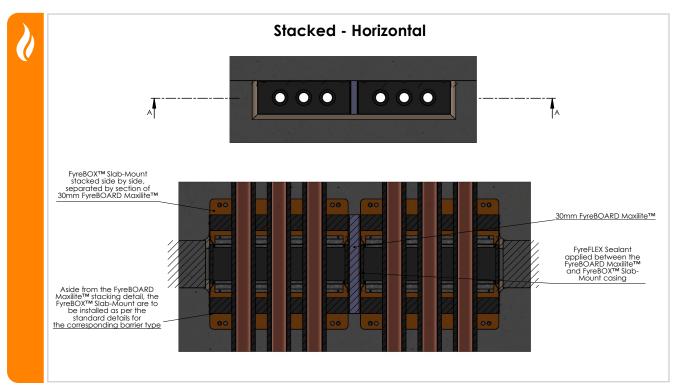
DOUBLE HORIZONTAL



For where large amounts of services exit a riser shaft wall.



Double vertical FyreBOX installed above a doorway to allow for the provision of large amounts of services in a small space.











INTRWALL / PARTY WALLS

If TWRAP $^{\text{m}}$ is required for the services to achieve the insulation rating as described in the tables on pages 6-15, install as follows.

STANDARD FYREBOX INSTAL



FyreBOX top plate, body and approved services all installed as standard to the soffit, with foam end plugs installed around the services.

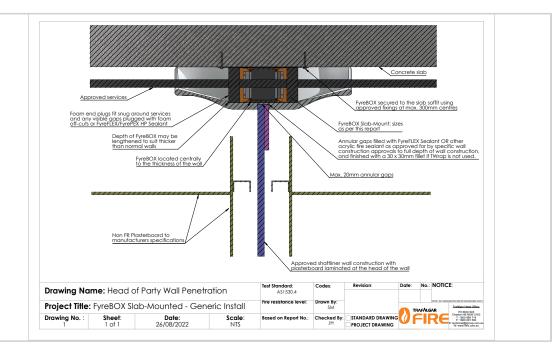
INSTALL WALL



Install the wall as per the manufacturer's instruction.

0

FINISH



If the wall does not already require it, install a layer of FR plasterboard at the head of the wall.

Install the FyreFLEX Sealant to the full depth of the plasterboard & TWrap to the required length.







INSTALLATION CHECKLIST

PLASTERBOARD

FyreBOX Label/Identifier No.	
Installer Name:	
Company:	
Site:	
Floor/Level:	FRL

Ins	stallation Checklist	Satisfactory	Action Required
1	Is the FyreBOX located centrally to the thickness of the wall?		
2	Are correct fixings (M6 masonry Anchors, 4mm gas or powder actuated anchors, or any other steel anchor of equal pull out rating) used to fix the top side of FyreBOX onto the floor slab?		
3	Are there 2 fixings per side, or maximum gap between the anchors at 300mm?		
4	Does the size of the wall opening allow for annular gap between the opening and FyreBOX within 5 to 20 mm?		
5	Are the services running through the FyreBOX as per the approved services list on the technical manual?		
6	Is the stud framing around the perimeter of the box installed as per the wall manufacturer's instructions?		
7	Is the sealant applied to correct depth of 20 mm on each side with a (fillet size of approximately 30x30mm) Note: If 3-sided wrap is used, fillet not required		
8	Is the foam snugly fit around the services and any visible gaps covered with foam off-cuts or FyreFLEX® sealant?		
Se	rvices only wrap (if applicable)		
1	Does the TWRAP™ wrap around the services and overlaps itself by 50mm?		
2	Is the TWRAP™ butted against the FyreBOX foam and end plugs?		
3	Is the TWRAP™ secured in three locations with reinforced aluminium tape or stainless-steel cable ties around the entire circumference?		
3-9	sided wrap (if applicable)		
1	Does the TWRAP™ cover the services including the FyreBOX and flaring at least 50mm at edges and against the slab?		
2	Is the correct steel tab (30x1x300mm) used to hold the TWRAP™ in place on both sides of the FyreBOX?		
3	Are correct fixings M6 masonry Anchors used to fix the steel tab and TWRAP™ onto the floor slab, 3x per side?		
4	Is the TWRAP™ butted up against the wall, around the box?		
For	a full list of installation instructions, refer to the installation pages 23-34 of this EvreBOX Sla	nh-Mount Technical i	Manual

 $For \ a \ full \ list \ of \ installation \ instructions, \ refer \ to \ the \ installation \ \underline{pages \ 23-34} \ of \ this \ FyreBOX \ Slab-Mount \ Technical \ Manual.$







INSTALLATION CHECKLIST

AAC PANEL WALL

FyreBOX Label/Identifier No.	
Installer Name:	
Company:	
Site:	
Floor/Level:	FRL

In	stallation Checklist	Satisfactory	Action Required
1	Is the FyreBOX located centrally to the thickness of the wall?		
2	Are correct fixings (M6 masonry Anchors, 4mm gas or powder actuated anchors, or any other steel anchor of equal pull out rating) used to fix the top side of FyreBOX onto the Floor slab?		
3	Are there 2 fixings per side, or maximum gap between the anchors at 300mm?		
4	Does the size of the wall opening allow for annular gap between the opening and FyreBOX within 5 to 20 mm?		
5	Are the services running through the FyreBOX as per the approved services list on the technical manual?		
6	Are the Hebel® wall's head track angles installed as per the wall manufacturer's instructions on both sides?		
7	Is the sealant applied to correct depth of 20 mm on each side with a (fillet size of approximately 30x30mm) Note: If 3-sided wrap is used, fillet not required		
8	Is the foam snugly fit around the services and any visible gaps covered with foam off-cuts or FyreFLEX® sealant?		
Se	rvices only wrap (if applicable)		
1	Is the FyreBOARD Maxilite® wall collar constructed correctly? (One side of the penetration using three 30mm thick x 100 mm FyreBOARD Maxilite® strips) *(FyreBOARD Maxilite® collar not needed if planning to use 3-sided TWRAP™)		
2	Are the boards fixed using 10gx60mm plasterboard screws at 150mm centres and flush with the wall opening?		
3	Is the resulting gap sealed with FyreFLEX® Sealant (full depth and fillet size of 30x30mm)?		
4	Does the TWRAP™ wrap around the services and overlaps itself by 50mm? (TWRAP™ only needs to be applied on conductive services)		
5	Is the TWRAP™ butted against the FyreBOX foam and end plugs?		
6	Is the TWRAP™ secured in three locations with reinforced aluminium tape or stainless-steel cable ties around the entire circumference?		
3-	sided wrap (if applicable)		
1	Does the TWRAP™ cover the services including the FyreBOX and flaring at least 50mm at edges and against the slab?		
2	Is the correct steel tab (30x1x300mm) used to hold the TWRAP™ in place on both sides of the FyreBOX?		
3	Are correct fixings M6 masonry Anchors used to fix the steel tab and TWRAP™ onto the Floor slab, 3x per side?		
4	Is the TWRAP™ butted up against the wall, around the box?		
Г.	a full list of installation instructions, refer to the installation pages 23-34 of this EvreBOX Sla		

For a full list of installation instructions, refer to the installation pages 23-34 of this FyreBOX Slab-Mount Technical Manual.







SYSTEM RANGE





FureBOX SLAB-MOUNT

CLICKABLE CODES Item Number	Description	Dimensions
FYREBOX-SM-BAMBINO	160 x125 x 250mm	_⊤ ⁰ Fur∈BOXSLAB-MOUNT
FYREBOX-SM-350	350 x 125 x 250mm	J GIEDOX SCAB-WOOM I
FYREBOX-SM-550	550 x 125 x 250mm	125mm
FYREBOX-SM-650	650 x 125 x 250mm	250mm 160-700mm (model dependent)
FYREBOX-SM-Custom	Any size from 100 up to 1250 x 125 x 250mm	(model depend

SYSTEM COMPONENTS

CLICKABLE CODES 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	-







COMPLIANCE



COMPLIANCE WITH THE NATIONAL CONSTRUCTION CODE (NCC)

Formerly known as BCA

Under the NCC requirements, a multiple service transit system for service penetrations should be fire tested in every configuration that it is intended for use in, both completely empty (blank seal), partially full and completely full of services so that the product many be installed with as many or as little services as required on site. It is important to fire test in all the different walls types and with different configurations, quantities and types of services which is a time consuming (and expensive) exercise.

Trafalgar Fire FyreBOX systems have been fire tested extensively to AS1530.4-2014 and approved in accordance with Section 4 AS4072.1 as required by Schedule 5 of the NCC. This includes over 200 hours of accredited furnace time and 30 plus individual test reports to cover the full range of service and wall configurations that allow us to comfortably stand behind our multiple SYSTEM approvals.

These configurations include but are not limited to:

- Service fill ratio: Empty (blank seal), half full and completely full of services
- Barrier types: Various types of plasterboard, concrete, Blockwork, Hebel®, Walsc®, Speedpanel®, Pronto panel,
 FyreBOARD Maxilite®, concrete floors, plasterboard ceilings, corex walls etc
- Services: Bare and insulated metal pipes, cable trays and cable bundles, aluminium cables, PVC pipes & conduits, PEX and PEX-AL-PEX pipes, cPVC pipes etc
- Configurations: Blank seal (empty), full of services, double stacked, side by side etc
- Insulation performance: Tested both wrapped and unwrapped with TWRAP™ to ensure the system works in both configurations
- Penetration sizes: 150 x 125, 350x125, 550x125, 1100x125
- FyreBOX Variants: Slab-Mount, Slab-Mount Bambino, Cast-in, Maxi & Mini (retrofit)

When choosing a multiple service transit penetration system like FyreBOX, it is important to check that all aspects of your system have been fire tested and are fit for purpose.

Compliance will only be achieved when the installation on site mirrors the tested system.

TEST AND ASSESSMENT REPORTS

The above-mentioned fire testing reports have all been conveniently summarised into **BRANZ** assessment report **FC10266** (available on www.tfire.com.au) which neatly tabulates the approved services in a range of fire barriers, for all FyreBOX variants and applications, and covers only minor variations to the tested systems, thereby providing trouble free certification according to NCC.

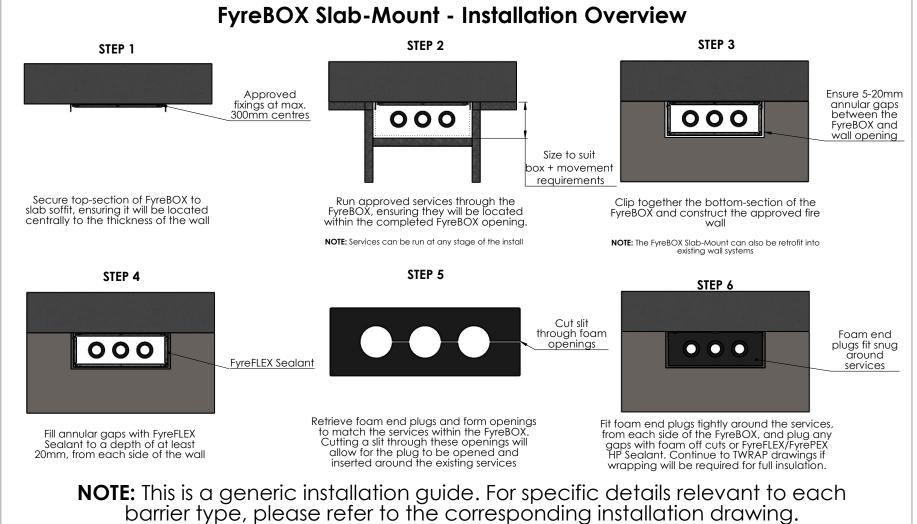
Importantly, every aspect of the assessment report are backed up by the fire test data and the individual fire test reports are available on request for certification purposes.











Drawing Name: Installation Overview				Test Standard: Codes:	Codes:	Revision:	Date:	No.: NC	NOTICE:
prawing No	ime: installati	ion Overview	VIEW AS1530.4						
Project Title: FyreBOX Slab-Mount - Generic Install			Fire resistance level:	Drawn By: JC				NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)	
Drawing No.:	Sheet : 2 of 19	Date: 27/05/2020	Scale: NTS	Based on Report No.:	Checked By:	STANDARD DRAWING PROJECT DRAWING			WFIRE



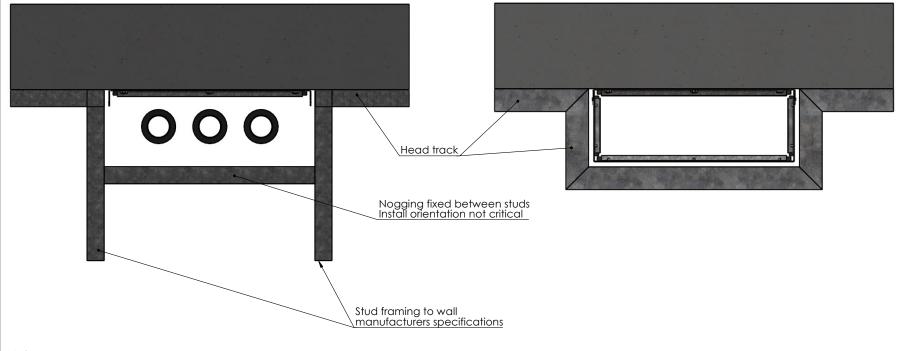




Plasterboard framing details

Option A - Full-width nogging between studs Recommeded for areas above fire doors

Option B - Head track contoured around opening Recommended for penetrations remote from fire doors



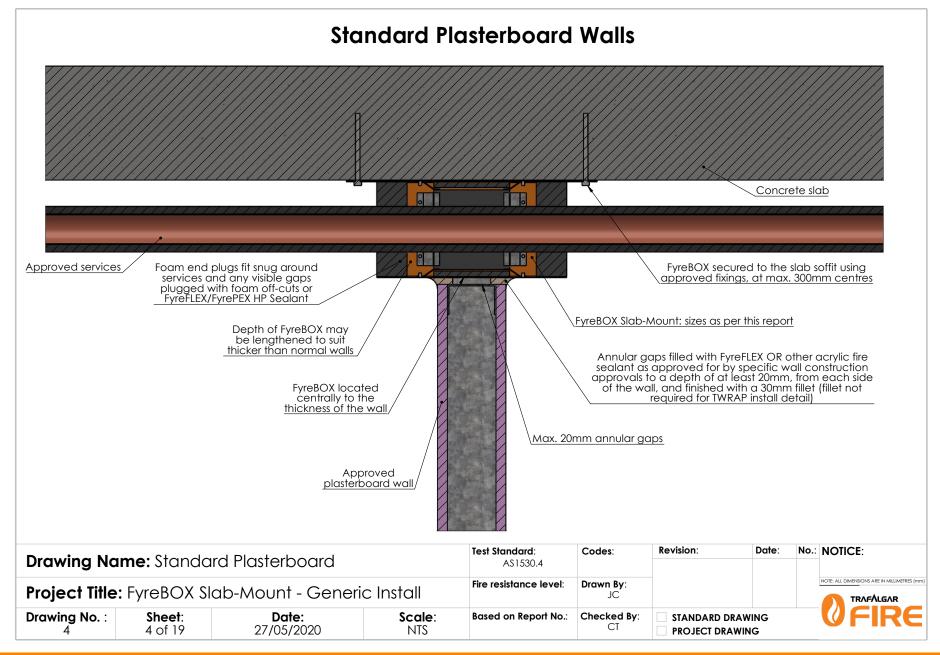
- Both options are as-tested
- Both options have been tested without the opening being lined with plasterboard When located above fire doors, option A is the recommended installation detail Openings are to allow sufficient clearance for building movement

Drawing Na	ime: Plaster t	framing details		Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE:	
Project Title	: FyreBOX Slo	ab-Mount - Generi	c Install	Fire resistance level:	Drawn By:	_			NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm) TRAFÁLGAR	
Drawing No.:	Sheet : 3 of 19	Date: 27/05/2020	Scale: NTS	Based on Report No.:	Checked By:	STANDARD DRAW			WFIRE	





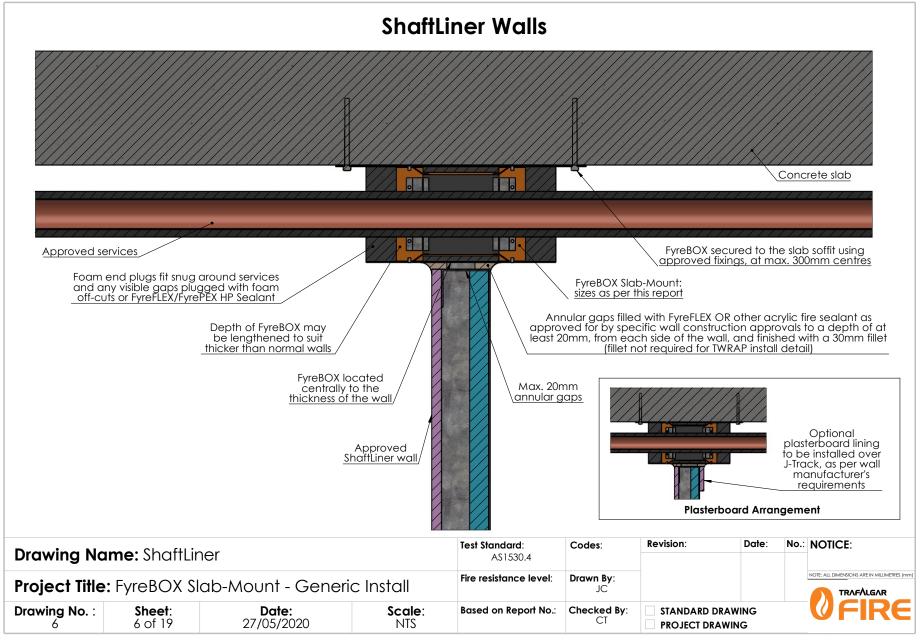










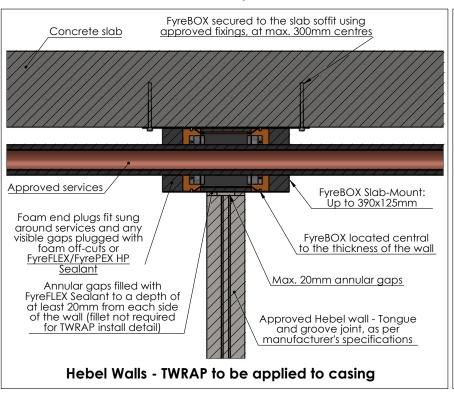


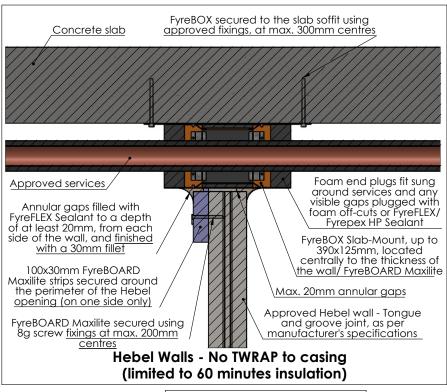






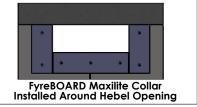
Hebel/Walsc AAC Walls - Openings up to 400x170mm





Opening formed centrally over a tongue and groove joint or centrally to the full panel to manufacturers specifications

Hebel Opening



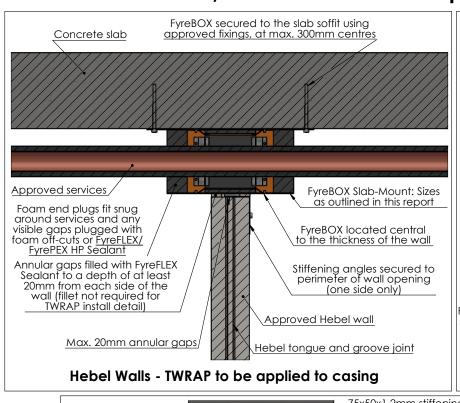
Drawing No	ı me: Hebel/V	Valsc - Small Opei	Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE:	
Project Title: FyreBOX Slab-Mount - Generic Install				Fire resistance level:	Drawn By:			[1	NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm) TRAFÁLGAR
Drawing No. :	Sheet : 7 of 19	Date: 27/05/2020	Scale: NTS	Based on Report No.:	Checked By:	STANDARD DRA			WFIRE

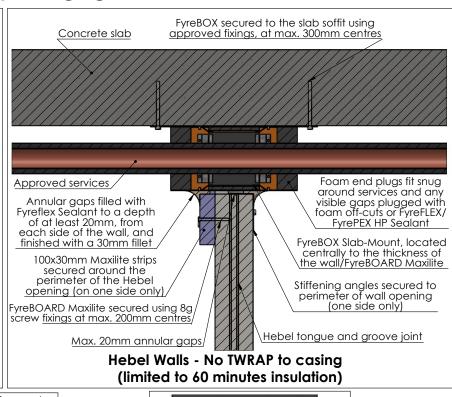


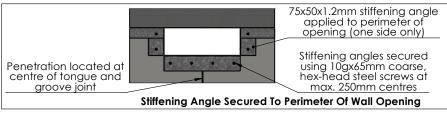


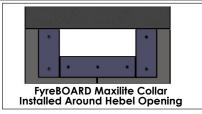


Hebel/Walsc AAC Walls - Openings greater than 400x170mm







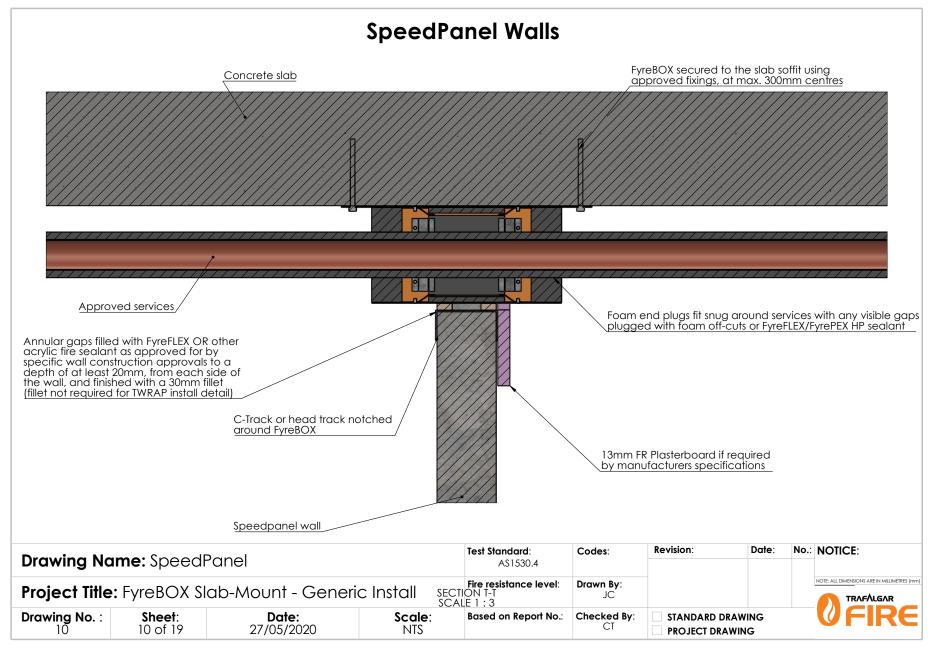


Drawing Name: Hebel/Walsc - Large Openings				Test Standard: AS1530.4	Codes: Revision:	Revision:	Date:	No.: NOTICE:		
Project Title: FyreBOX Slab-Mount - Generic Install				Fire resistance level:	Drawn By: JC			NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (m.		
Drawing No. :	Sheet :	Date: 27/05/2020	Scale:	Based on Report No.:	Checked By:	STANDARD DRAW		WFIRE		





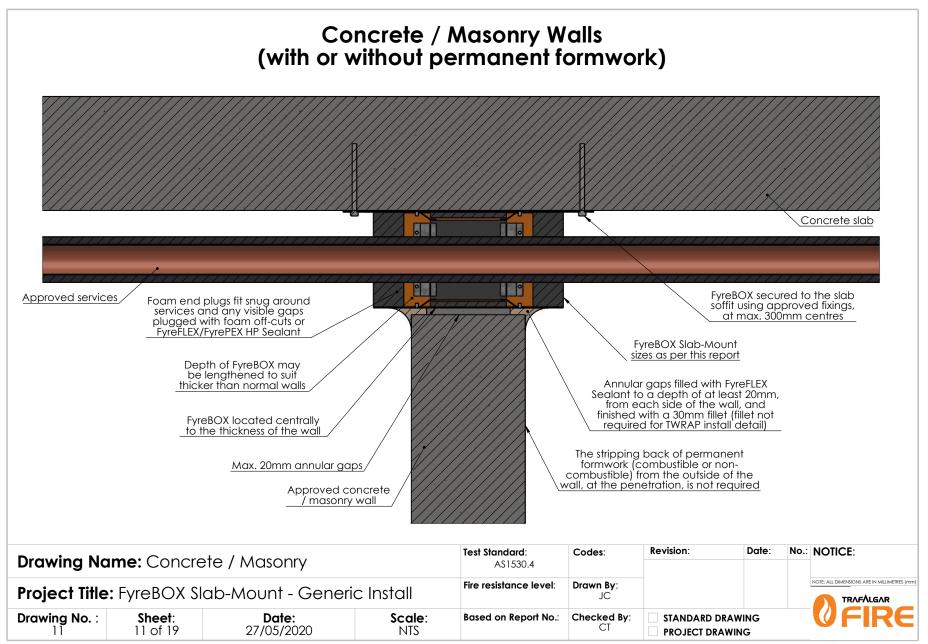








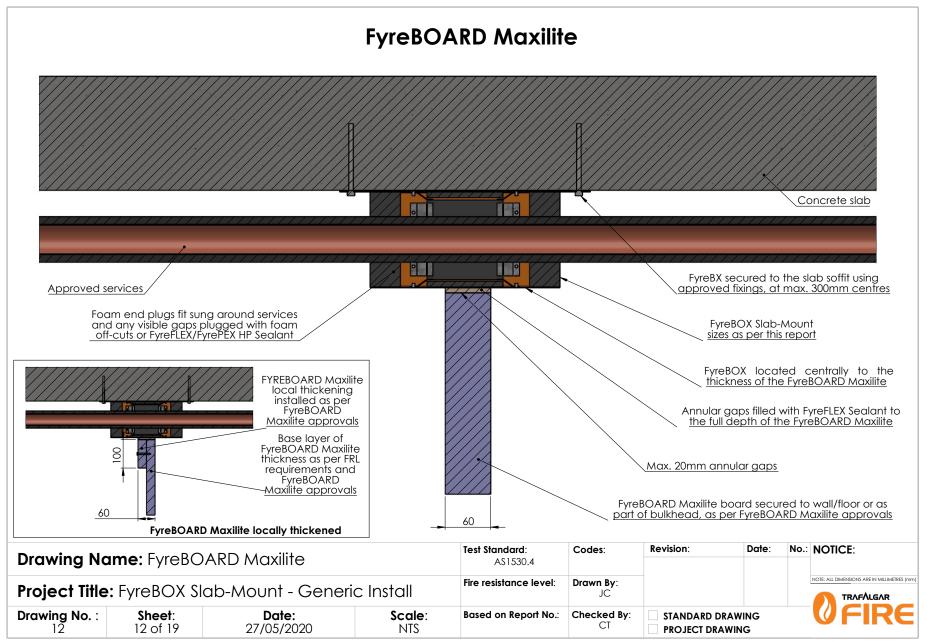












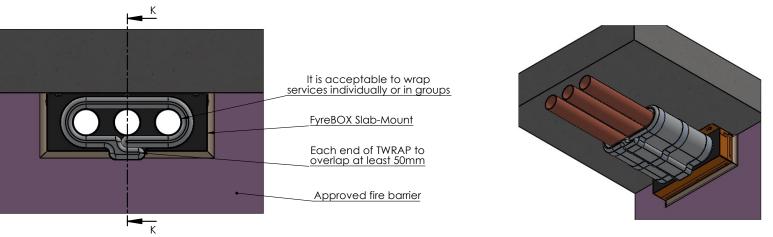


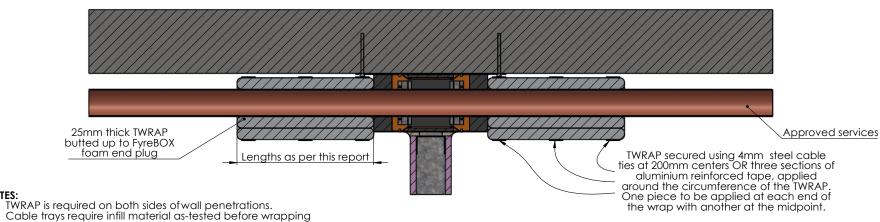




TWRAP - Services Wrap

Where the FyreBOX configuration doesn't achieve full insulation in a given fire barrier, TWRAP can be applied to individual or groups of services in order to increase their insulation rating up to -/XXX/120, as required.





Drawing Name: TWRAP - Services Wrap

Test Standard:
AS1530.4

Codes:
Revision:
Date:
No.:
NOTICE:

NOTE ALL DIMPOSIONS ARE IN MILLIMETES (PARK)
TRAFALGAR

 Drawing No. :
 Sheet:
 Date:
 Scale:
 Based on Report No.:

 13
 13 of 19
 27/05/2020
 NTS





NOTES:

Checked By:

STANDARD DRAWING

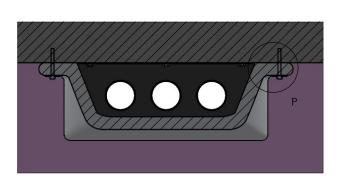
PROJECT DRAWING

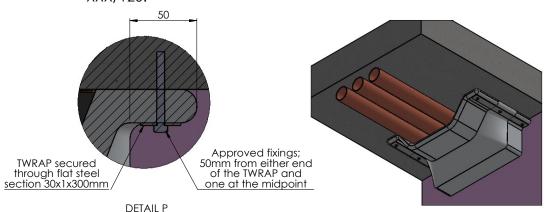


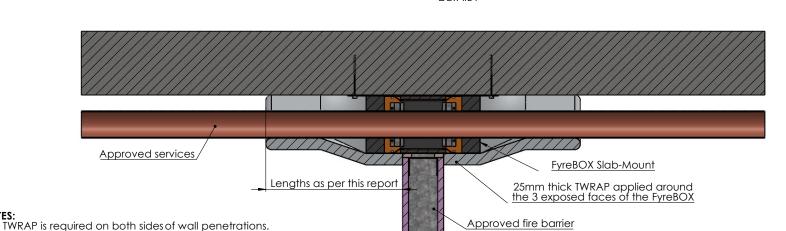


TWRAP - 3-Sided Wrap

Where the FyreBOX configuration does not achieve full insulation in a given fire barrier, TWRAP will need to be applied to the FyreBOX casing and services in order to increase their insulation rating up to -/ XXX/120.







Cable trays require infill material as-tested before wrapping

Test Standard: Codes: Revision: Date: No.: NOTICE: **Drawing Name:** TWRAP - 3-Sided Wrap AS1530.4 NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm. Fire resistance level: Drawn By: Project Title: FyreBOX Slab-Mount - Generic Install Drawing No. : Sheet: Date: Scale: Based on Report No.: Checked By: STANDARD DRAWING 27/05/2020 14 of 19 NTS PROJECT DRAWING







