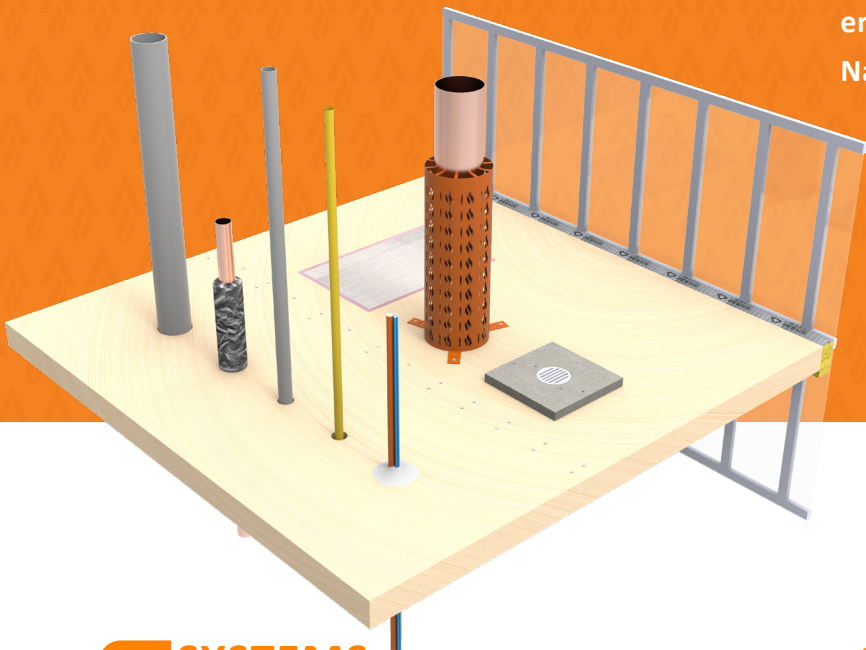


CROSS LAMINATED TIMBER (CLT) FLOORS

Service Penetrations

At Trafalgar Fire, we have a range of passive fire systems developed for Cross Laminated Timber (CLT) floor. All of our systems have been extensively fire-tested at independent fire test laboratories ensuring strict compliance with the National Construction Code.



SYSTEMS



- TWRAP**
- FyreBATT**
- FyreFLEX**
- UniGUARD**
- FyreBOXMAXI**
- BLADERUNNER**
- FyreCOLLAR CONDUIT**
- FyreCOLLAR PREMIUM RETROFIT**

APPLICATIONS



Plumbers	<ul style="list-style-type: none"> PVC Floor Waste PVC Stack Pipes Copper & Steel Pipes PEX-Al-PEX Pipes
Electricians	<ul style="list-style-type: none"> Data cables Power cables
Active Fire Professionals	<ul style="list-style-type: none"> Fire Cables Hydrant Pipes

TRADES

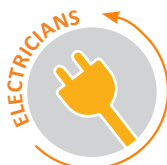


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COMPLIANCE



COMPLIANCE WITH THE NATIONAL CONSTRUCTION CODE (NCC)

Formerly known as BCA

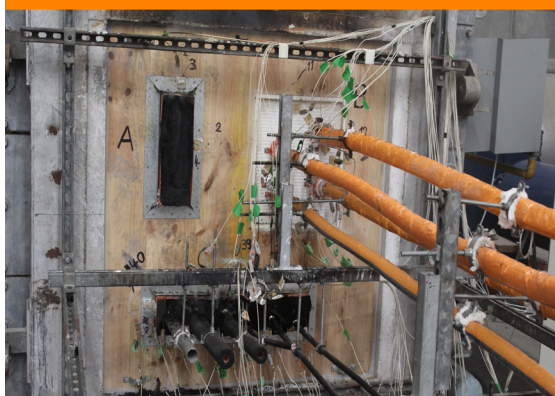
Cross Laminated Timber (CLT) floor systems are becoming more and more popular in the building industry due to their environmental sustainability, however these floors need to be fire rated in some instances, the same as any other concrete floor slab.

Ordinary concrete floor testing does not apply to these barriers, they must be specifically tested. 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 CLT systems. CLT floors can come in various thickness' and are sometimes lined with plasterboard to increase their fire resistance properties.

Fire testing to AS1530.4 is required to determine the FRL of the specific service penetration. The Trafalgar Fire systems in this document have been fire tested and approved specifically for use in CLT Floor systems, providing full compliance with the NCC.

The penetration systems presented in this manual are only approved for Timberlink NeXTimber®CLT NX-30 or Strongfloor systems, for any other floor systems contact technical@tgroup.com.au

AS1530.4 Test – Un-exposed side



AS1530.4 Test – Exposed Side (mid-test)



AS1530.4 Test – Exposed Side (After Test)



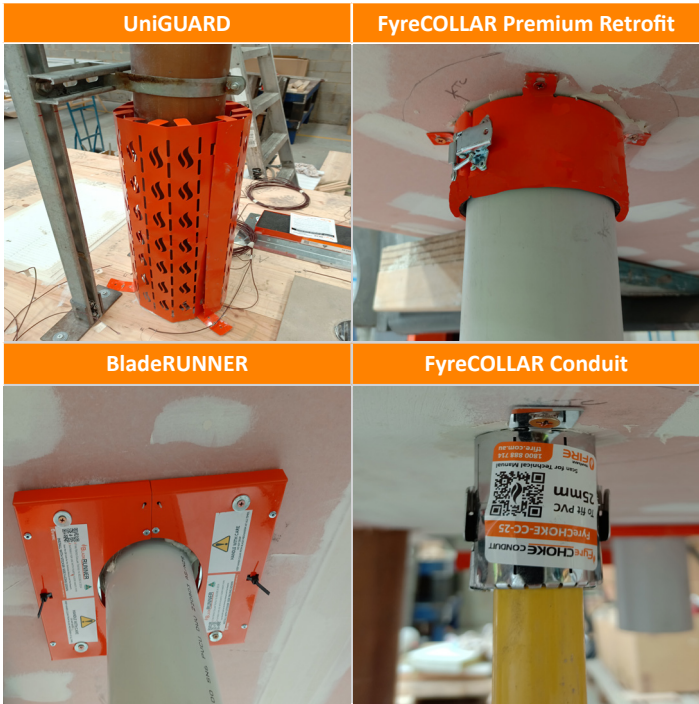
PLUMBING PENETRATIONS

90MM THICK CLT WITH 16MM PLASTERBOARD
LAMINATED TO THE UNDERSIDE

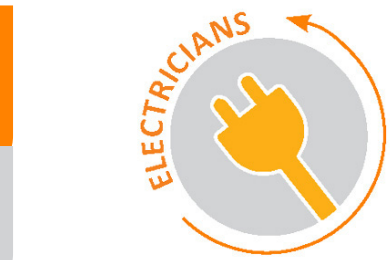


Application	Specification	System*	FRL	Test Report
Metal Pipes	Copper or Steel up to 150mm	UniGUARD & FyreFLEX Sealant	-/120/90	FRT 220246
	Copper or Steel up to 50mm	FyreFLEX Sealant & TWrap	-/120/90	
Plastic Pipes	100mm PVC Stack pipe	FyreCOLLAR Premium Retrofit Collar & FyreFLEX Sealant	-/120/120	
	40mm PVC Stack pipe	FyreCOLLAR Conduit & FyreFLEX Sealant	-/120/90	
	100mm PVC Floor Waste Pipe	BladeRUNNER & FyreFLEX Sealant	-/120/-	
	25mm PEX-Al-PEX Pipes	FyreCOLLAR Conduit & FyreFLEX Sealant	-/120/60	

*Drawings and technical specifications at end of manual



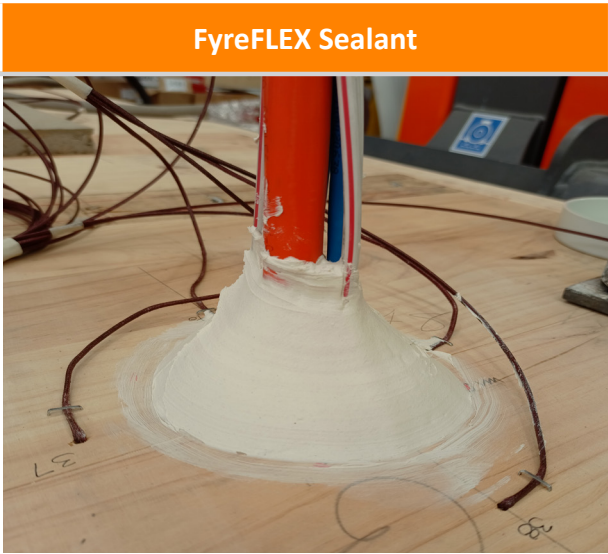
ELECTRICAL PENETRATIONS



90MM THICK CLT WITH 16MM PLASTERBOARD
LAMINATED TO THE UNDERSIDE

Application	Specification	System*	FRL	Test Report
Electrical Cables	Bundles containing up to: <ul style="list-style-type: none">1 x 16mm2 3C+E power cable3 x CAT6 Cables2 x 2.5mm2 2C+E TPS Cables	FyreFlex Sealant	-/120/60	FRT 220246

*Drawings and technical specifications at end of manual



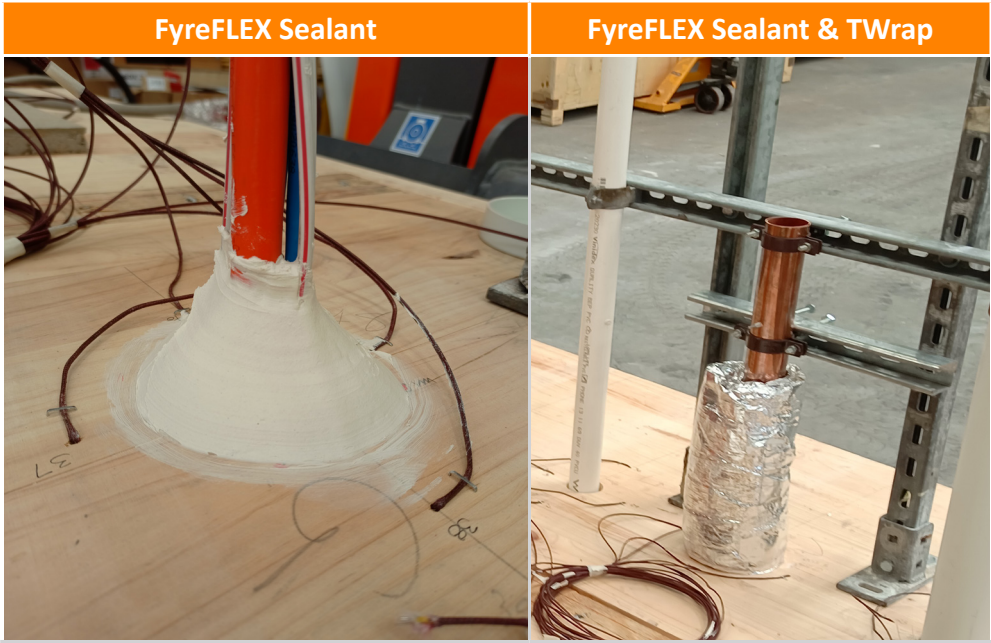
ACTIVE FIRE
PENETRATIONS

90MM THICK CLT WITH 16MM PLASTERBOARD
LAMINATED TO THE UNDERSIDE



Application	Specification	System*	FRL	Test Report
Hydrant Pipes	Copper or steel pipes up to 150mm	UniGUARD & FyreFLEX Sealant	-/120/90	FRT 220246
	Copper or Steel pipes up to 50mm	FyreFLEX Sealant & TWrap	-/120/90	
Fire Cables	Bundles of up to 2 x 2.5mm2 2C+E TPS Cables	FyreFLEX Sealant	-/120/60	

*Drawings and technical specifications at end of manual

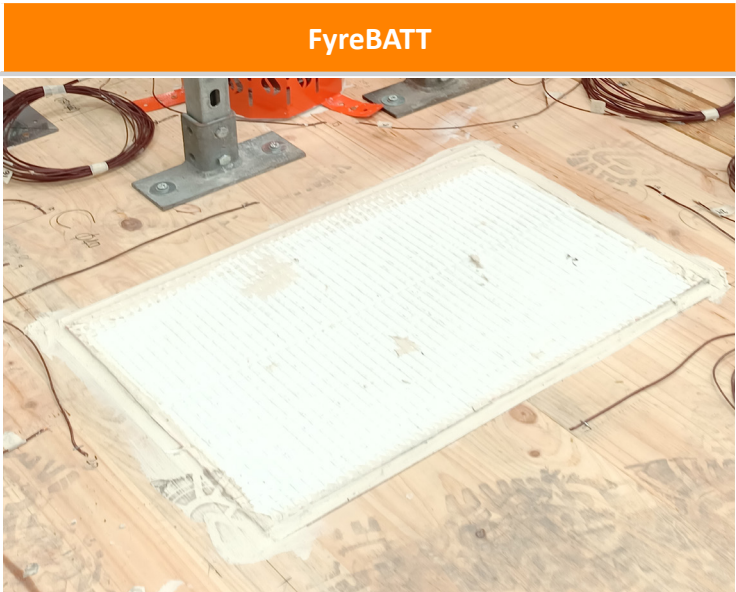


BLANK OPENINGS

90MM THICK CLT WITH 16MM PLASTERBOARD
LAMINATED TO THE UNDERSIDE

Application	Specification	System*	FRL	Test Report
No Services	Blank openings up to 368 x 568mm lined with 16mm FR plasterboard	FyreBATT & FyreFLEX Sealant	-/120/120	FRT 220246

*Drawings and technical specifications at end of manual



STRONGFLOOR SYSTEM

90MM THICK GLUE-LAMINATED TIMBER (GLT) SLAB WITH MINIMUM 120MM THICK STEEL PROFILE AND 65MM THICK CONCRETE TOP COVER - LINED WITH 16MM PLASTERBOARD



Application	Specification	System	FRL	Assessment Report
Electrical cables	Bundles containing up to: <ul style="list-style-type: none">1x 16mm² 3C+E cables3x CAT6 cables2x 2.5mm² 2C+E cables	FyreFLEX Sealant & TWrap	-/120/120	FAS 210390 R2.1
Plastic pipes	50mm PVC floor waste pipe with 90° elbow	BladeRUNNER & FyreFLEX Sealant	-/120/120	
	100mm PVC floor waste pipe	BladeRUNNER & FyreFLEX Sealant	-/120/120	
	20-25mm PEX-A pipe	FyreCOLLAR Conduit & FyreFLEX Sealant with 300mm TWrap on the unexposed side	-/120/120	
Blank opening	Blank openings up to 368x568mm	FyreBATT & FyreFLEX Sealant	-/120/120	
Mixed services	Mixed services installed in openings up to 368x568mm	FyreBATT & FyreFLEX Sealant¹	Up to -/120/120	
	145x370mm opening	FyreBOX Maxi 350 & TWrap²		

1. Any double layer FyreBatt approvals in floors can also be applied to double layer FyreBatt installed in Strongfloor systems.
2. Contact Trafalgar for more information about which services are approved and how much TWrap is necessary.

SIDERISE CAVITY BARRIERS



SIDERISE® CWFS

Siderise® CWFS is a foiled stone wool cavity barrier system engineered specifically to handle building movement whilst maintaining the fire, smoke and acoustic seals. Siderise® CWFS systems utilise a unique method of manufacture that provides a well identifiable, ready to use product that is resilient in lateral compression. The factory-manufactured material facilitates fast, clean and easy installation, ensuring a requisite tight fit and enhances fire, smoke and sound integrity. Systems have been fire tested and approved to AS1530 Part 4 as well as European fire test method for an FRL of-/120/120 and can accommodate void widths up to 600mm wide. Additional AS1530.4 fire testing has been conducted for CLT construction achieving an FRL of-/60/60.



The primary function of Siderise® CWFS system is to maintain continuity of fire and smoke resistance by sealing the void between compartment floors and walls and the external curtain wall. The systems have been subjected to independent movement testing conducted prior to fire testing to ensure they can cater for thermal expansion and structural movement as required by NCC Clause C2.6. The systems also have independent acoustic testing to provide an Rw25 rating, assisting with sound containment requirements.

Application	CWFS Specification	FRL	Test Report
Friction Fit (With brackets at 600mm centers. No continous angle/ flashing required)	120mm thick	-/60/60	438106/R

Refer to the [Siderise® CWFS technical Manual](#) for additional information and installation, otherwise contact technical@tgroup.com.au for assistance.



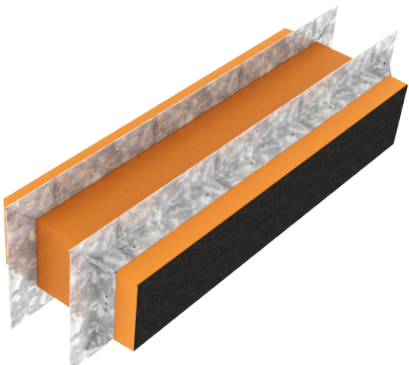
Siderise® CWFS is made via a unique manufacturing process from pre-compressed stone wool lamella strips and foil facings



CWFS is supplied as pre-cut strips that suit the measured void size or a single sheet for cutting on site.

RELATED SYSTEMS

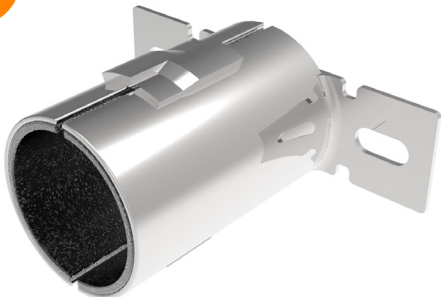
FyreBOX MAXI
& FyreFLANGE



Item Number	Description	Dimensions
FYREBOX-MAXI-350	350 x 125 x 250mm	
FYREBOX-MAXI-550	550 x 125 x 250mm	
FYREBOX-MAXI-650	650 x 125 x 250mm	
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	

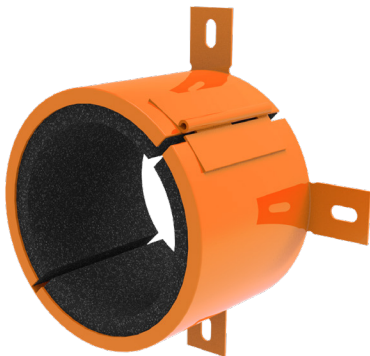
RELATED SYSTEMS

FyreCOLLAR CONDUIT



Item Number	Collar Size	To Suit Nominal Service Size	Inner Diameter	Outer Diameter	Height	Min Order Qty
FyreCOLLAR-CC-25	25mm	25mm	26mm	36mm	50mm	1
FyreCOLLAR-CC-32	32mm	32mm	33mm	44mm	50mm	1
FyreCOLLAR-CC-40	40mm	40mm	43mm	48mm	50mm	1

FyreCOLLAR PREMIUM RETROFIT



Item Number	Collar Size	To Suit Nominal Service Size	Inner Diameter	Outer Diameter	Height	Min Order Qty
FyreCOLLAR-PHRC-50	50mm	50mm	58mm	72mm	62mm	1
FyreCOLLAR-PHRC-65	65mm	65mm	72mm	90mm	62mm	1
FyreCOLLAR-PHRC-80	80mm	80mm	85mm	102mm	62mm	1
FyreCOLLAR-PHRC-100	100mm	100mm	115mm	133mm	62mm	1
FyreCOLLAR-PHRC-130	130mm	100mm Elbow/socket	130mm	155mm	62mm	1
FyreCOLLAR-PHRC-150	150mm	150mm	160mm	200mm	62mm	1

RELATED SYSTEMS



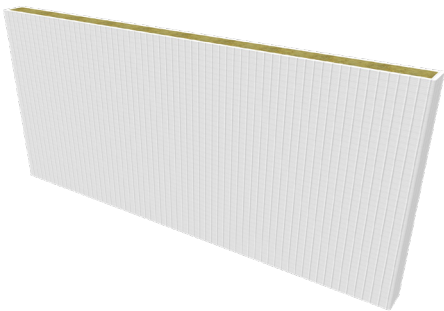
Item number	Description	Min Order Qty	Pallet Qty
FyreFLEX 300W FyreFLEX 300G	FyreFLEX® Sealant Cartridge 300ml White or Grey	1	1920
FyreFLEX 600W FyreFLEX 600G	FyreFLEX® Sealant Sausage 600ml White or Grey	1	1040
FyreFLEX 10W FyreFLEX 10G	FyreFLEX® Sealant Pail 10L Grey	1	64



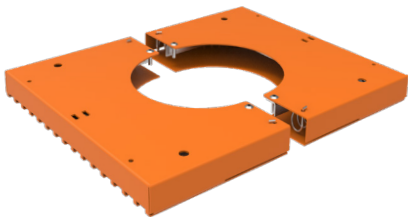
Item Number	Description	Min Order Qty	Pallet QTY
TWRAP 300*	300mm wide, 25mm thick blanket	7620mm long roll	24
TWRAP 450*	450mm wide, 25mm thick blanket	7620mm long roll	12
TWRAP 600*	600mm wide, 25mm thick blanket	7620mm long roll	12
Tape	Foil tape, 95mm wide, 50m roll	1	N/A
Cable Tie SS 12 x 521	4.6mm wide x 521mm long	25	N/A
Cable Tie SS 12 x 910	4.6mm wide x 910mm long	25	N/A

* FyreWrap® can be substituted for TWRAP™

RELATED SYSTEMS

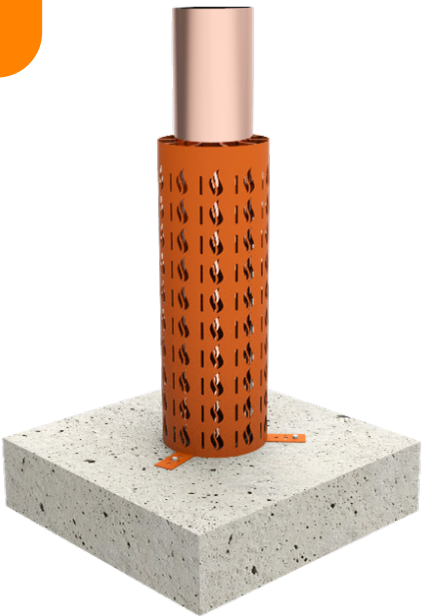


Item Number	Description	Min Order Qty	Pallet QTY
FyreBATT 60mm	Coated mineral fibre Batt 60x600x1200	1	50
Pigtail Screw-50mm	Pigtail Screw for single layer FyreBATT systems	1	N/A
Pigtail Screw-90mm	Pigtail Screw for double layer FyreBATT systems	1	N/A

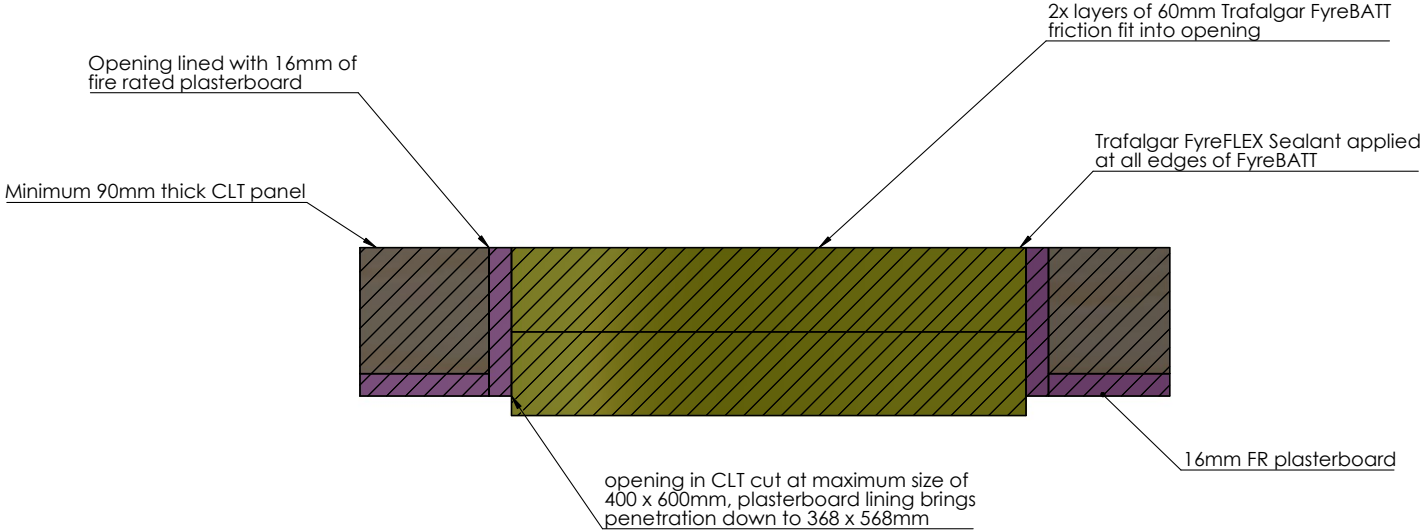



Item Number	Description	Min Order Qty	Box QTY
FWR-B100	BLADERUNNER retrofit floor waste collar- to suit 100mm pipes	1x	10x units
FWR-B50	BLADERUNNER retrofit floor waste collar- to suit 50mm pipes	1x	10x units

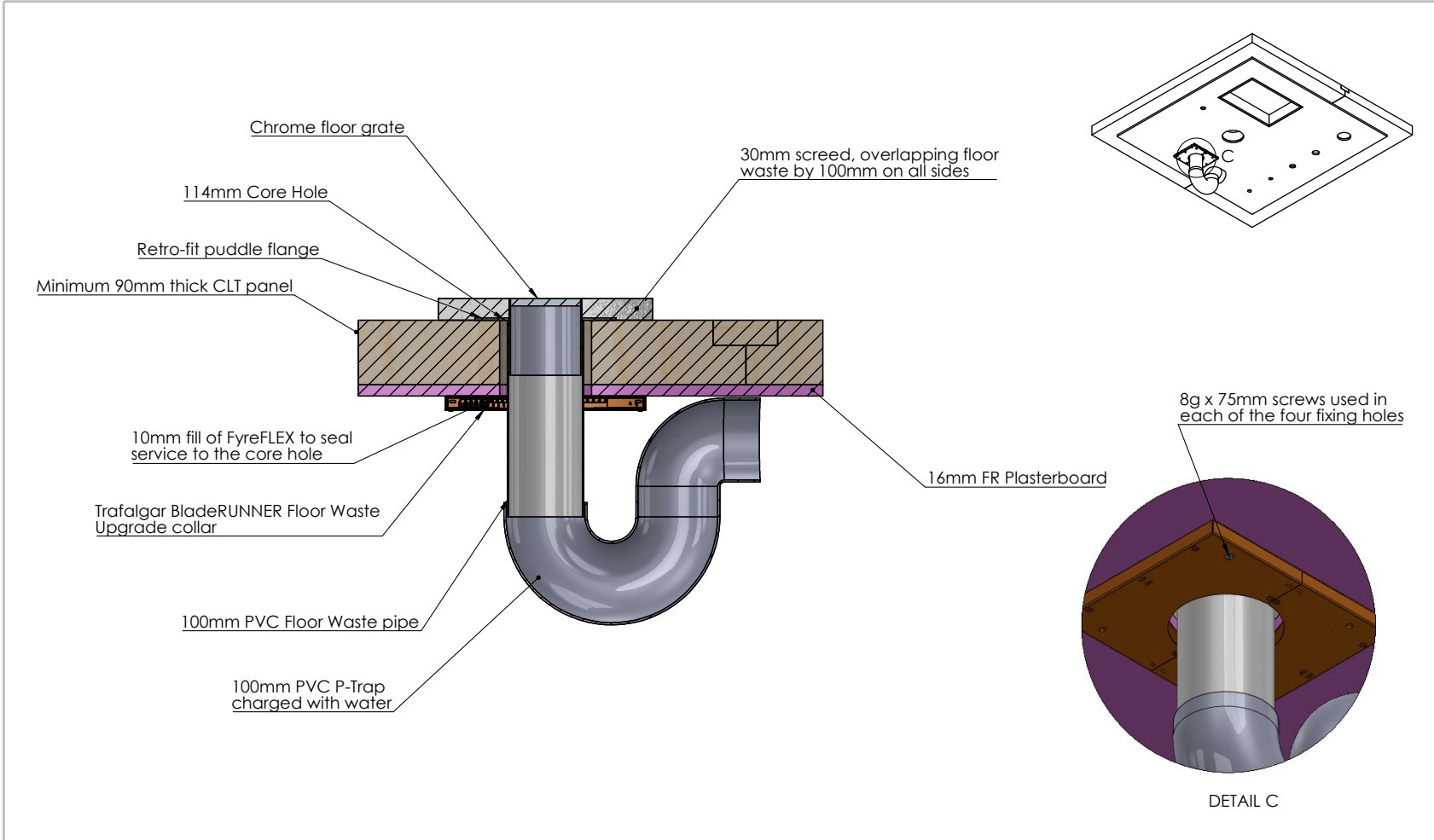
RELATED SYSTEMS




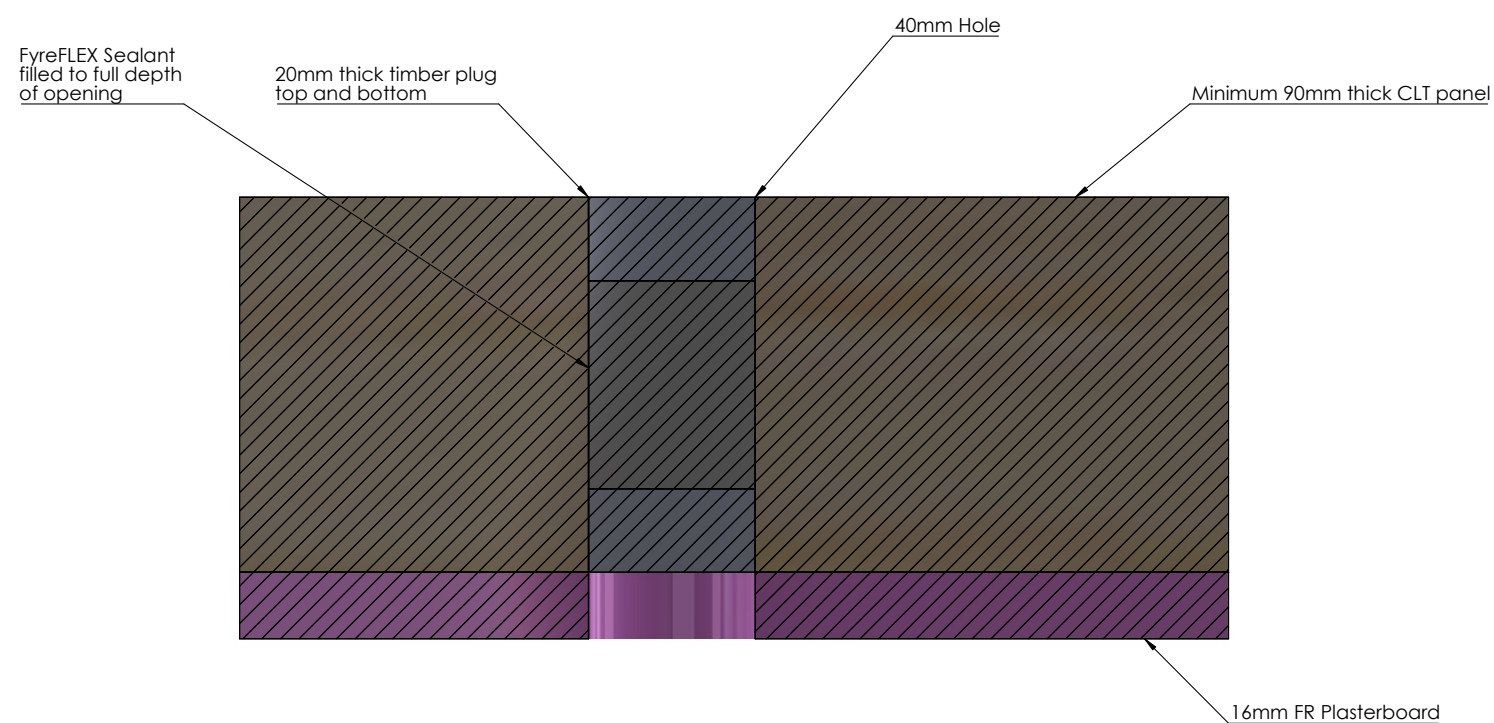
Item Number	Description	Min Order Qty
UniGUARD150	600 x 690 x 0.6mm Powder Coated Orange	1




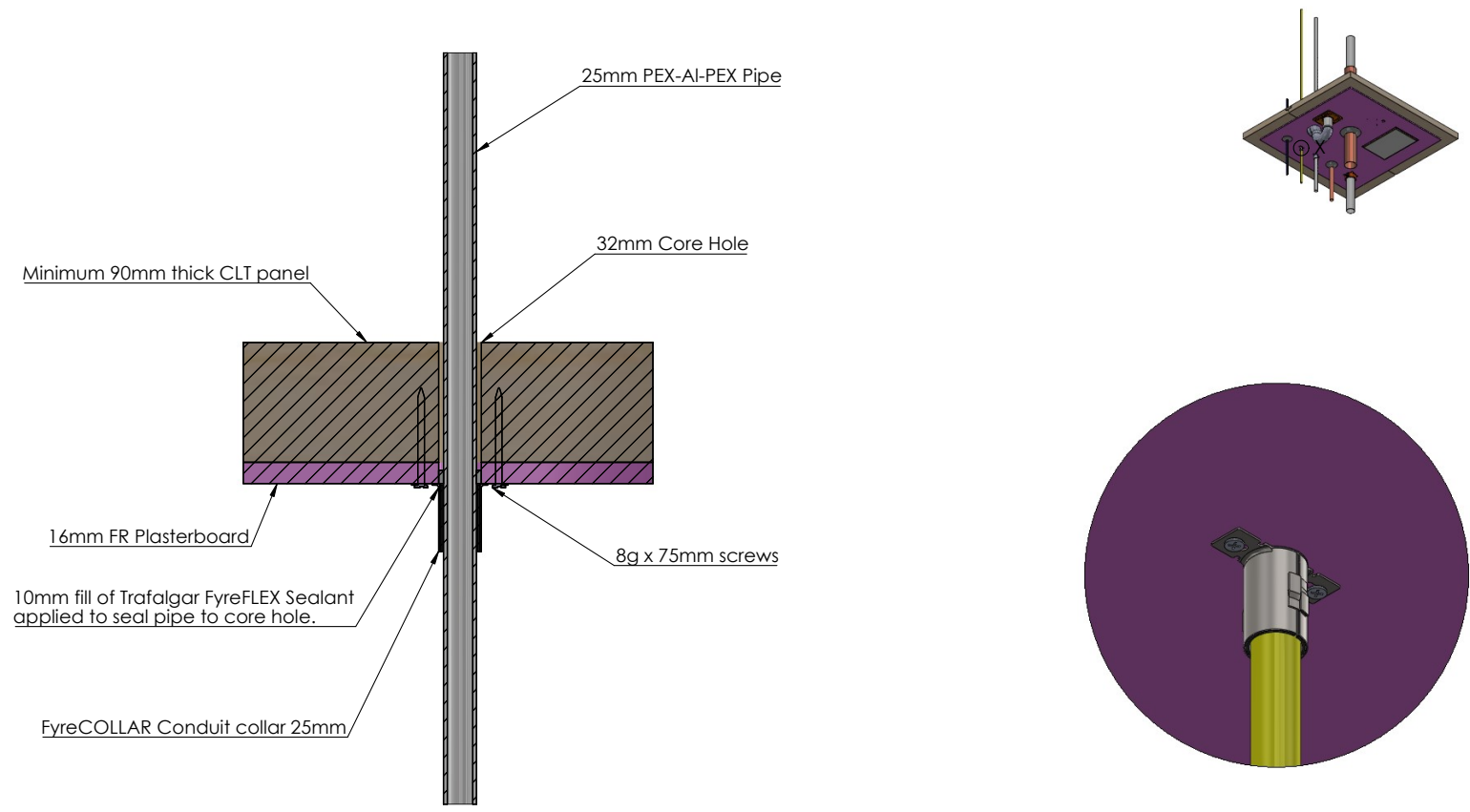
Drawing Name: Blank Openings				Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE:
Project Title: CLT Floor Penetrations				Fire resistance level:	Drawn By: SM				<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm).</small>
Drawing No. : 1	Sheet: 1 of 8	Date: 12/01/2023	Scale: NTS	Based on Report No.:	Checked By: JH	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING	 <div>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</div>		




Drawing Name: PVC Floor Waste				Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE:
Project Title: CLT Floor Penetrations				Fire resistance level:	Drawn By: SM	<div>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</div> <div><div>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</div></div>			
Drawing No. : 2	Sheet: 2 of 8	Date: 12/01/2023	Scale: NTS	Based on Report No.:	Checked By: JH				
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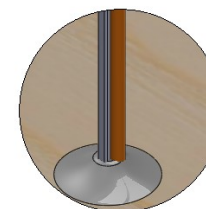
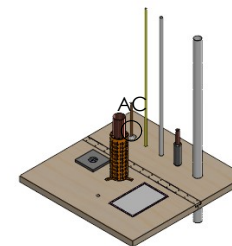
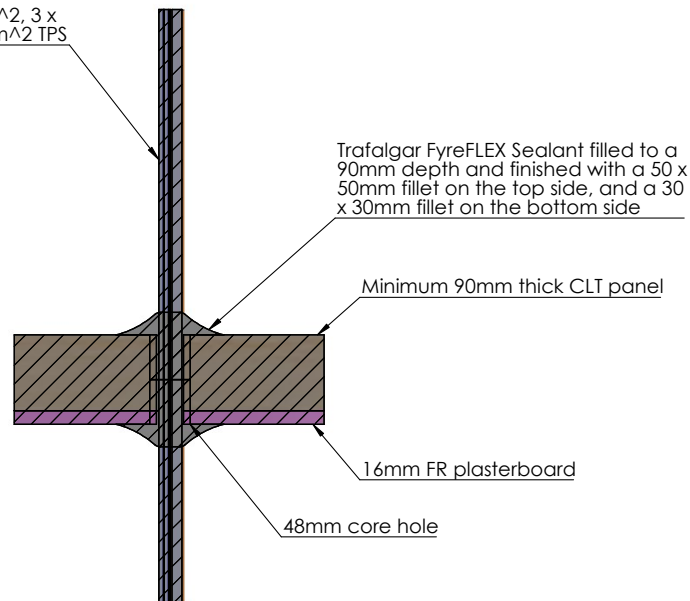
Drawing Name: Core Hole Timber Plug				Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE: <small>(NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm))</small>	
Project Title: CLT Floor Penetrations				Fire resistance level:	Drawn By: SM					
Drawing No. : 3	Sheet: 3 of 8	Date: 12/01/2023	Scale: NTS	Based on Report No.:	Checked By: JH	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING	 <div>Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.tfire.com.au</div>			




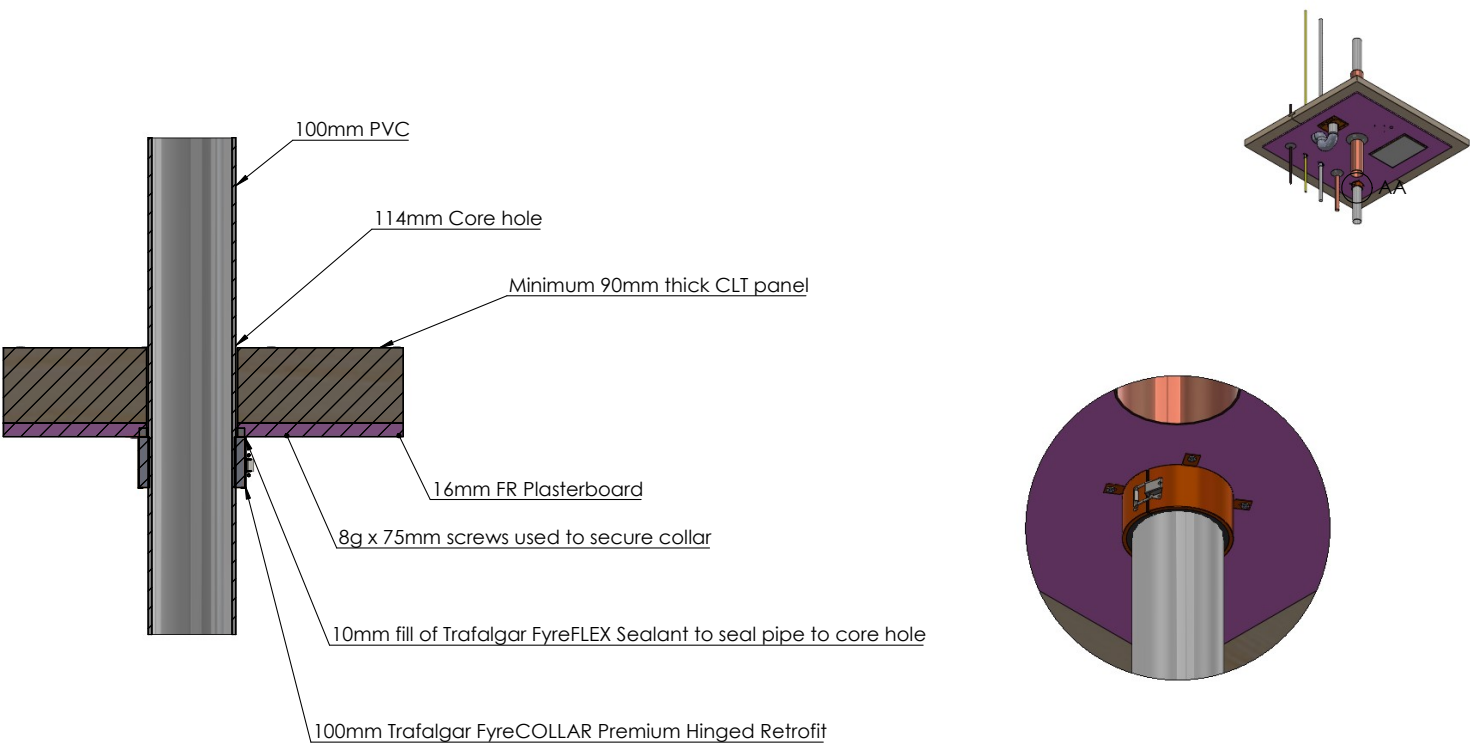
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Project Title: CLT Floor Penetrations				Fire resistance level:	Drawn By: SM				
Drawing No. : 4	Sheet: 4 of 8	Date: 12/01/2023	Scale: NTS	Based on Report No.:	Checked By: JH	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING	<div><div>TRAFALGAR FIRE</div><div><small>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</small></div></div>		


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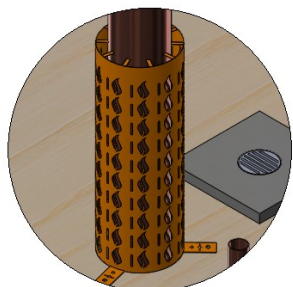
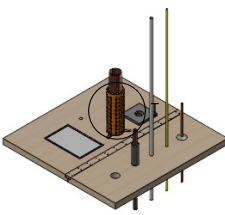
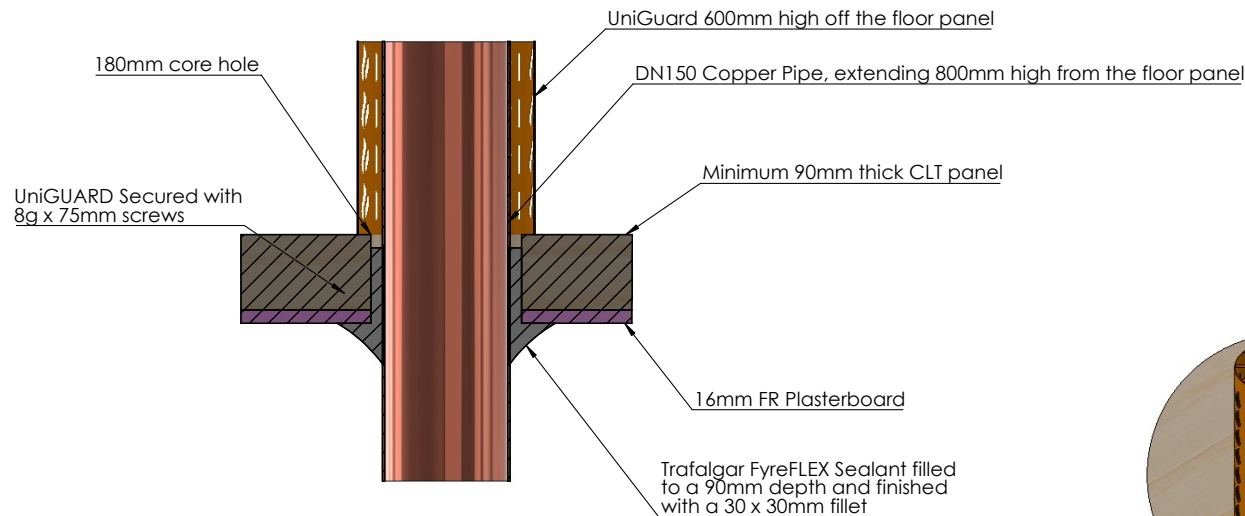
1 x 20.4mm OD 3C+E 16mm², 3 x CAT6, 2 x 10mm 2C+E 2.5mm² TPS




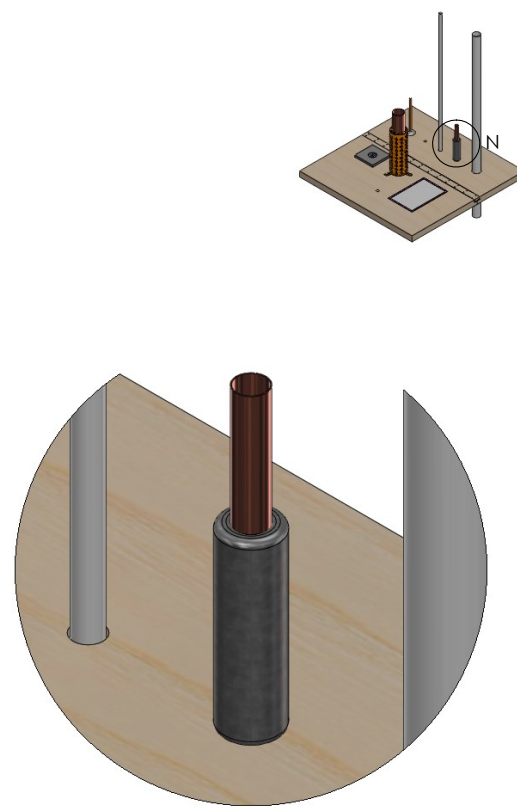
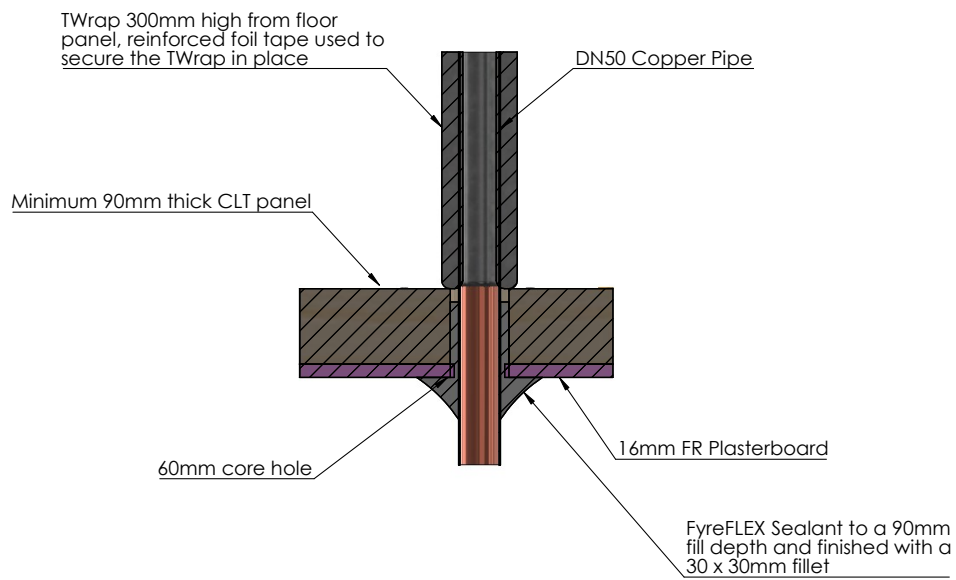
Drawing Name: Cable Bundle Penetration				Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE:
Project Title: CLT Floor Penetrations				Fire resistance level:	Drawn By: SM	<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm).</small>  Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.tfire.com.au			
Drawing No. : 5	Sheet: 5 of 8	Date: 12/01/2023	Scale: NTS	Based on Report No.:	Checked By: JH				
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Drawing Name: PVC Stack Pipe				Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE:
Project Title: CLT Floor Penetrations				Fire resistance level:	Drawn By: SM				<small>(NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm).)</small> <div><div></div><div>Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.tfire.com.au</div></div>
Drawing No. : 6	Sheet: 6 of 8	Date: 12/01/2023	Scale: NTS	Based on Report No.:	Checked By: JH	<input type="checkbox"/> STANDARD DRAWING			
						<input type="checkbox"/> PROJECT DRAWING			



Drawing Name: Large Metal Pipe Penetration				Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE:
Project Title: CLT Floor Penetrations				Fire resistance level:	Drawn By: SM	<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small>  Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.tfire.com.au			
Drawing No. : 7	Sheet: 7 of 8	Date: 12/01/2023	Scale: NTS	Based on Report No.:	Checked By: JH				
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Drawing Name: Small Metal Pipe Penetration				Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE:
Project Title: CLT Floor Penetrations				Fire resistance level:	Drawn By: SM				<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small>
Drawing No. : 8	Sheet: 8 of 8	Date: 12/01/2023	Scale: NTS	Based on Report No.:	Checked By: JH	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING	<div><div>TRAFALGAR FIRE</div></div> <div>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</div>		