

## FyreWrap®



FyreWrap® is the leading passive fire protection solution for commercial ductwork. The lightweight Insulfrax core ensures high temperature insulation and performance. Fibreglass reinforced scrim completely encapsulates the core for additional handling strength, tear resistance and antibacterial resistance.

**Fast. Clean. Easy.**



Watch the  
Installation  
Video here



**Amended FRL's after updates  
to AS1530.4-2014**



### KEY FEATURES

- Lightweight – up to 5 times lighter than traditional fire spray
- Clean and easy installation – no mesh required
- Greenguard listed for microbial resistance
- No masking required
- Quick and efficient construction
- Simple repair – tape up or replace section
- Seismic and vibration tolerant
- FyreWrap Access Panel as part of the tested system
- Tested to AS1530.4-2014 for internal and external fire applications



### APPLICATIONS

- Supply air ducts
- Zone pressurisation ducts
- Smoke exhaust ducts
- Carpark exhaust ducts
- Kitchen exhaust ducts
- Any steel ducts that require fire separation



### TRADES



FyreWrap® is a registered Trademark of Unifrax

# TABLE OF CONTENTS

Section		Page
Overview		1
What is FyreWrap®?		3
Benefits		4
Specifications		5
Green Star / Health & Safety		6
Fire Resistance Level		7
FRL Table- Vertical & Horizontal Ducts		8-9
Installation Manual	Measuring Up	10
	Wrapping	11
	Wall Penetrations	12
	Overlap Details	13
	Fixings	14
	Typical Hanger/Trapeze Detail for External Fire Applications	15
	Installation Checklists - Duct Wrap	16-17
System Range- FyreWrap® Access Panel		18
FyreWrap® Access Panel Installation		19-20
System Range		21
FAQ		22
Specifications Tables	Table 1: Annular Gap Size	23
	Table 2: Fixing Specs	23
	Table 3: Hanger Spacings	24
	Table 4: Walls Penetrations Additional Layers of FyreWrap®	24
	Table 5: Floor Penetrations Additional Layers of FyreWrap®	25
Technical Drawings		26-46

## WHAT'S FyreWrap®?

FyreWrap® is a foil-faced, fire protection wrap/blanket designed to provide fire rating to ducts, kitchen exhausts, smoke spill systems and penetration seals. FyreWrap® is fire tested and approved for FR up to three hours in accordance with AS1530.4-2014 to meet the requirements of AS 1668.1 and the NCC for both internal and new updated external fire test method.

FyreWrap®'s core material incorporates the highly engineered, lightweight and high temperature thermal insulation material Insulfrax®. Insulfrax® is a high-temperature insulation made from calcia, magnesia and silica chemistry, designed to enhance bio-solubility.

FyreWrap®'s aluminium foil, fiberglass-reinforced scrim completely encapsulates the core and provides additional handling strength, protection from tearing and provides a high resistance to mould growth. Importantly, it also allows ease of identification of FyreWrap® in the field by building certifiers and engineers.

FyreWrap® has undergone extensive testing to ensure it meets the highest quality in terms of environmental impact and health. The material is a completely bio-soluble solution and FyreWrap® has been Greenguard listed for microbial (mould growth) resistance.

## APPLICATIONS

FyreWrap® is diverse in its application ability. FyreWrap®'s extensive library of certifications and approvals, makes FyreWrap® perfect for applications in:

- Hospitals
- Commercial buildings
- Residential properties
- Commercial accommodation
- Aged care accommodation
- Sporting event and function centres
- Commercial and industrial kitchens
- Education facilities
- Detention complexes
- External applications\*

(\*Requires extra lining. Please contact the Trafalgar Fire Technical Team for further information)



FyreWrap®

BENEFITS

FyreWrap® is the safest and most environmentally friendly method of fire rating ductwork and other services in Australia. In addition to these qualities a range of other benefits come with the use of FyreWrap®. FyreWrap® is the premium choice, far ahead of its counterparts including conventional fire spray.

The choice is clear.

FAST. CLEAN. EASY.

DO THE COMPARISON

INSTALLATION	FyreWrap	Conventional Fire Spray
Fast, clean and easy installation	✓	✗
No ventilation, temperature concerns, substrate cleaning and worker slip hazard care.	✓	✗
No water source needed on site	✓	✗
Nearby work can continue uninterrupted	✓	✗
No dust or waste in nearby drains	✓	✗
No masking for overspray	✓	✗
Off-site installation	✓	✗
Easy certification	✓	Difficult to determine thickness
SYSTEM		
Clean simple repair	✓	✗
System weight	up to 5 times lighter	Heavy
Easy to use access panels	✓	✗
Vibration/seismic tolerance	✓	✗
Antimicrobial (mould) tested	✓	✗
Design Life of 30+ years	✓	✗
Ease of identification AS1851 Maintenance of Fire Systems	✓	✗



SPECIFICATIONS

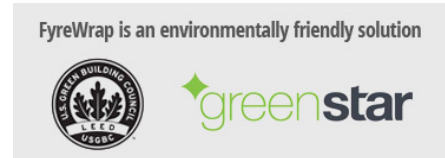


SPECIFICATIONS



Thickness	38mm	
Roll Widths	610mm	1220mm
Surface area	4.65m <sup>2</sup>	9.30m <sup>2</sup>
Roll weight	22kg	44kg
Material density	96kg/m <sup>3</sup>	
Microbial/mould resistance	GREENGUARD certified	
Bio-soluble	Yes	
Green Building Council /LEED Accreditation	Yes	
Contains Volatile Organic Compounds (VOC)	No	
R-Value (Thermal Resistance)	1.2m <sup>2</sup> .K/W	
Acoustic Rating	31dB	
Ozone depleting manufacture/ composition	No	

# GREEN ADVANTAGE



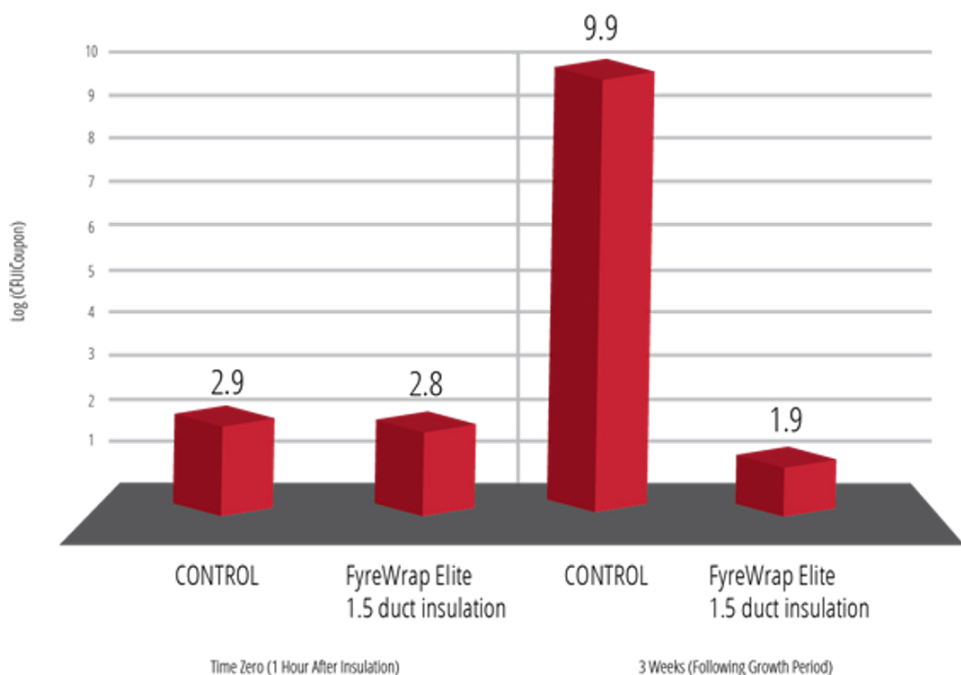
FyreWrap® is the ultimate green product. Approved by the Green Building Council and LEED (Leadership in Energy and Environment Design), FyreWrap® has received third-party verification by the world’s best practice in energy conservation, green asset management and ensuring safe and healthy building for occupants and workers. Local VOC testing has also been undertaken confirming FyreWrap® contains low VOCs (volatile organic compounds). No ODP Products are used in the composition or manufacturing of the product and no chemical blowing agents are used in the production of FyreWrap®.

# HEALTH AND SAFETY

The bio-persistence of the fibres in the core FyreWrap® product was identified after short-term exposure by inhalation in a study (No. 02G97008) by the European Ceramic Fibres Industry Association. As a result FyreWrap® was deemed bio-soluble, and is completely safe for installers and anyone handling or coming into contact with the product.

FyreWrap® has also had microbial resistance testing completed by Green Guard and Air Quality Services. FyreWrap® was supplied, without any pre-conditioning, and relevant material samples were inoculated with spores of Penicillium brevicompactum and transferred to a static control environment chamber maintained at 95% humidity and 25°C.

This makes FyreWrap® resistant to mould colonisation, and perfect for environments such as hospitals, nursing homes and restaurant kitchens in which any type of mould grouping or activity could have severe consequences. The below chart demonstrates FyreWrap®’s resistance to mould growth.



## FIRE RESISTANCE LEVEL

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

For ducting applications, AS1530.4-2014 section 9 defines **two separate** fire test methods to represent fire exposure from inside the duct OR a fire outside of the duct. Both fire test methods include a suspended duct penetrating a wall or floor to evaluate the full system performance. An FRL (Fire Resistance Level) is assigned to the tested duct and protection system based on the exposure direction (internal or external). It consists of 3 numbers, all given in minutes. Ductwork uses different FRLs based on the application, as shown below:

## FRL 120/120/120

(example)



#### Structural Adequacy

For both internal and external fire conditions, the duct and supports must maintain their size and shape allowing for the duct to maintain its intended function.

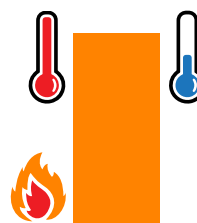


#### Integrity

**EXTERNAL FIRE:** The ability of the protected duct to prevent the passage of flames and hot gases into the duct.

**INTERNAL FIRE:** The ability of the protected duct to prevent the spread of hot gasses from escaping the duct.

Both tests include measurements at the wall or floor penetrations.



#### Insulation

**EXTERNAL FIRE:** Includes a 1- meter per second (1m/s) air flow through the duct, and temperatures are measured on the inside duct walls, the outside of the wall or floor penetration as well as the exit air stream. All locations must remain below a 180 degree temperature rise.

**INTERNAL FIRE:** Temperatures are measured at points on the outside of the duct protection material, and also on the face of the fire wall or floor next to the duct penetration. Temperatures must stay below a 180 degree rise.

#### FYREWRAp TESTED FOR EXTERNAL FIRES:



#### FYREWRAp TESTED FOR INTERNAL FIRES:



The building code, AS1530.4-2014 and AS1668.1 all have various requirements on which test method (internal, external or both) should be applied depending on the exact application. Please refer to the next page for a list of common applications and the required FyreWrap specification.

## FRL TABLES

### EXHAUST DUCTS

AS1530.4-2014 section 9 defines two separate fire test methods to represent fire exposure from inside the duct or a fire outside of the duct, and makes distinctions on which exposure method applies to which type of duct application. Exhaust ducts are categorised as having fire exposures inside the duct (internal fire), however it is important to note that AS1668.1 does also add requirements based off the application in some instances. Trafalgar have compiled a list of typical applications, their governing clauses from AS1668.1, and our interpretation of the appropriate FRL and FyreWrap requirements for the applications.



**PLEASE CONSULT WITH YOUR PROJECT SURVEYOR OR CERTIFIER TO CONFIRM THE ACCEPTABILITY OF THIS INTERPRETATION. WHERE ANY DIFFERENCES EXIST TRAFALGAR ARE HAPPY TO OFFER A SOLUTION TO MEET THE INTERPRETATION OF THE SITES CERTIFYING BODY.**

Application	Fire risk	Compliance requirement	FRL To match the FRL of the compartment e.g. 120/120/120 in a 2 hour requirement		Fire test/ assessment report
			External fire (FyreWrap layers)	Internal Fire (FyreWrap layers)	
Kitchen Exhaust Only (ductwork outside of the kitchen)	Fire inside the kitchen and/or ducting spreading to other compartments, and we need to make sure it stays inside the duct.	AS1668.1 Section 6 AS1668.1 Clause 3.4	Not required as per AS1530.4 FRL definitions (9.1b)	120/120/120 <b>(1x layer)*</b>	FCO3226
Combined kitchen and smoke exhaust system	Fire inside the kitchen and/or ducting, integrity of the smoke exhaust systems of the building.	AS1668.1 Section 6 Clause 6.2.2 AS1668.1 Section 3 Clause 3.7.2	120/120/- <b>(1x layer)</b>	120/120/120 <b>(1x layer)*</b>	FCO3226 & FC 17299
Smoke Exhaust	Fire in compartment causing smoke to rise and fill space quickly, integrity of the smoke exhaust systems of the building.	AS1668.1 Section 3.7.2	120/120/- <b>(1x layer)</b>	120/120/120 <b>(1x layer)*</b>	FCO3226 & FC 17299
Diesel pump ventilation system	Fire in duct spreading to other compartments, or hot products of combustion escaping and igniting.	AS1668.1 3.3.3 e) AS1668.1 Clause 3.4	Not required as per AS1530.4 FRL definitions (9.1b)	120/120/120 <b>(1x layer)*</b>	FCO3226 & FC 17299
Kitchen Exhaust ductwork inside the kitchen compartment	Fires inside the duct spreading to combustible materials within 300mm of the duct.	AS1668.1 section 6 Clause 6.2.3.3	Not required as per AS1530.4 FRL definitions (9.1b)	-/30/30 <b>(1x layer)</b>	FCO3226 & FC 17299
Fire Stair pressurization relief ducts	Fire & smoke passing through to fire escapes preventing safe evacuation.	AS1668.1 Clause 10.4.3	120/120/- <b>(1x layer)</b>	120/120/120 <b>(1x layer)*</b>	FCO3226 & FC 17299
Any other exhaust duct e.g.	Fire in duct spreading to other compartments, or hot products of combustion escaping and igniting.	AS1668.1 Clause 3.4	Not required as per AS1530.4 FRL definitions (9.1b)	120/120/120 <b>(1x layer)*</b>	FCO3226

\*Additional layer locally where duct passes through fire barriers

For 3 and 4 hour FRL requirements please contact Trafalgar at [technical@tgroup.com.au](mailto:technical@tgroup.com.au)

# FRL TABLES

## PRESSURISATION DUCTS

This FRL table details what the FRL requirements are for pressurisation ducts.

Under AS1530.4-2014 section 9, pressurisation ducts are categorised as having fire exposures outside the duct (external fire) however it is important to note that AS1668.1 does also have additional requirements to consider based off the application.



**PLEASE CONSULT WITH YOUR PROJECT SURVEYOR OR CERTIFIER TO CONFIRM THE ACCEPTABILITY OF THIS INTERPRETATION. WHERE ANY DIFFERENCES EXIST TRAFALGAR ARE HAPPY TO OFFER A SOLUTION TO MEET THE INTERPRETATION OF THE SITES CERTIFYING BODY.**

Application	Fire Risk	Compliance Requirement	FRL To match the FRL of the compartment e.g. 120/120/120 in a 2 hour requirement		Fire Test/ Assessment Report
			External fire (FyreWrap layers)	Internal Fire (FyreWrap layers)	
Stair or fire escape pressurisation ducts	Fire & smoke passing through to fire escapes preventing safe evacuation.	NCC2019-C3.9 NC2022-C4D10  AS1668.1 section 10	120/120/60 <b>(2x layers)</b>	Not required as per AS1530.4 FRL definitions (9.1a)	FC 17299
Fire Stair pressurization relief ducts	Fire & smoke passing through to fire escapes preventing safe evacuation.	AS1668.1 Clause 10.4.3	120/120/- <b>(1x layer)</b>	120/120/120 <b>(1x layer)*</b>	FC03226 & FC 17299
Any other ducts that blow air to pressurize a compartment	Fire & smoke passing through fire compartments via the ducting system where fire dampers are not installed or permitted to be used.	AS1668.1 Clause 3.4	120/120/120 <b>(3x layers)</b>	Not required as per AS1530.4 FRL definitions (9.1a)	FC 17299

\*Additional layer locally where duct passes through fire barriers  
For 3 and 4 hour FRL requirements please contact Trafalgar at technical@tgroup.com.au

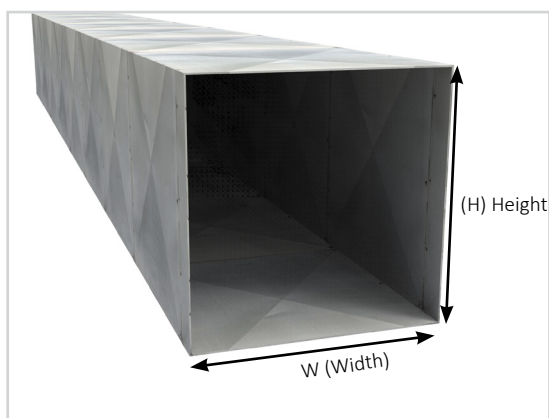


## INSTALLATION

## MEASURING UP

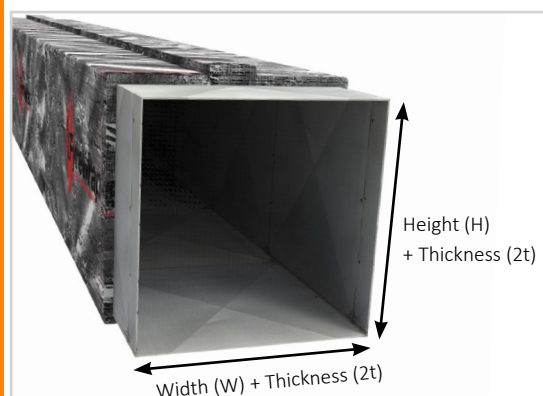
*FyreWrap® may be installed with zero clearance to surrounding combustibles at any location of the wrap in crowded environments. To minimise waste FyreWrap® should be measured accurately and applied tautly.*

### MEASURE



Measure the outside dimensions of the duct, then add the thickness of the FyreWrap® (38mm) to each of the four sides. Add an additional 100mm for the longitudinal overlap, then a small allowance for margin of error.

### CALCULATE



Example: Length to cut in L in millimeters:

$$L = 2 \times (W+2t) + 2 \times (H+2t) + 100 + 100$$

*Alternative method for estimating the cut length  $L = \text{duct perimeter} + 400\text{mm}$*

### CUT



Unroll the FyreWrap® to the full length, and gently shake from end to end to allow the wrap to uncompress from storage. Measure the cut length with the FyreWrap® taut, and cut the required length using a sharp blade.

### SEAL



Immediately after the FyreWrap® is cut, any exposed edges should be sealed with an aluminium reinforced foil tape to prevent damage to the infill material.



## INSTALLATION

## WRAPPING

*FyreWrap® may be installed with three different fixing methods dependent on the size of the duct*

### WRAP



Wrap the FyreWrap® around the perimeter of the duct with a 100mm overlap where FyreWrap® meets itself (longitudinal overlap). NOTE where additional layers are used, the first layer does not need an overlap. Place the next length of FyreWrap® with a 100mm overlap adjacent to the previous wrapped length of FyreWrap® (circumferential joint). All overlaps/joints must be taped down with reinforced Aluminium tape.

### DUCTS LESS THAN 600MM X 600MM



For ducts less than 600mm x 600mm, a 12mm wide and 0.4 thick steel banding is used to permanently support the FyreWrap® around the duct. The steel banding is placed 40mm from the edge of the FyreWrap® blanket, over the overlaps and one additional band between the overlaps at 265mm centres. (see fixings table [page 14](#))

### DUCTS 600MM X 600MM TO 1200MM X 1200MM



For ducts greater than 600mm x 600mm but less than 1200mm x 1200mm, the banding system is used in conjunction with either pre-welded pins or cup head style pins along the bottom of the duct. Self adhesive pins must not be used. Pins should be installed at 200mm centres. (see fixtures table [page 14](#))

### DUCTS OVER 1200MM X 1200MM

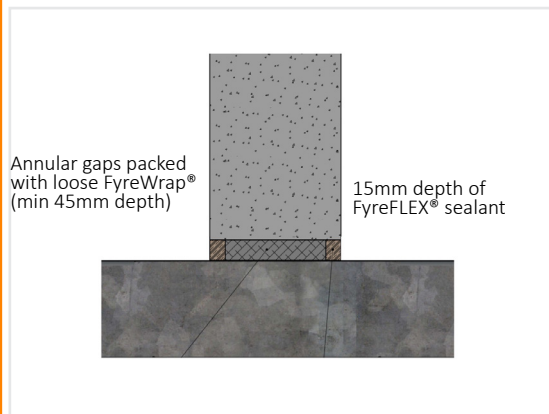


For ducts greater than 1200mm x 1200mm, either pre-welded pins or cup head style pins over all four sides of the duct must be used. Self adhesive pins must not be used. Pins should be installed at 200mm centres. (see fixtures table [page 14](#))

## INSTALLATION

## WALL PENETRATIONS

### ANNULAR GAPS



Ensure that the annular gaps are within the approved range based on your size of duct. Refer to table 1 on page 23 for specifics. Pack the annular gaps with loose FyreWrap® infill material, and seal with FyreFLEX® sealant.

### STEEL ANGLE



Install a steel angle to secure the duct to the wall/floor. Table 1 on page 23 lists the appropriate size steel angle based on the size of the duct.

**IMPORTANT:** Allow for at least 200mm of clearance between ducts and any other service penetration

### FYREBOARD MAXILITE® STRIPS



Install strips of FyreBOARD Maxilite® over the steel angle, lining the perimeter of the duct. Table 1 on page 23 shows the correct size FyreBOARD Maxilite® strips to use based on the size of duct.



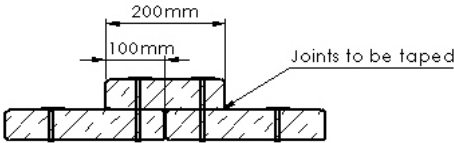
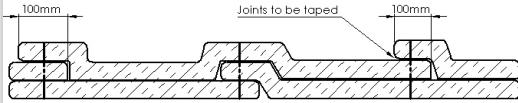
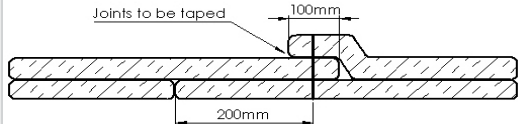
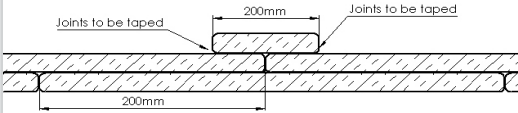
### WRAP - ADDITIONAL LAYERS



Wrap the duct with 2x layers of FyreWrap® for a distance detailed in table 4 on page 24. Floor penetrations may require a third layer of FyreWrap® depending on the size of the duct. Floor distances detailed in Table 5 on [page 25](#)

## INSTALLATION

## OVERLAP DETAILS

	Configuration	Drawing	Description
1 layer of FyreWrap®	Telescopic Overlap (most common)		Wrap the next segment of FyreWrap® over the edge of the previous segment with a 100mm overlap. All joints are to be taped with FyreWrap® premium tape.
	Checkerboard Overlap		Both edges of one segment overlap their respective adjacent segments. The overlap joints in alternate layers of duct wrap will resemble a checkerboard pattern once complete. This method is ideal when repairs are to be made to segments. All joints are to be taped with FyreWrap® premium tape.
	Butt-joint with Overstrip		Two adjacent segments are butt-jointed at their edges and a 200mm wide cover strip centred at the butt-joint. This allows for a 100mm overlap over each edge segment. Cover strips are to be made using FyreWrap® 1.5 material. All joints are to be taped with FyreWrap® premium tape.
2 layer of FyreWrap®	Double-Layer Telescopic Overlap		Both layers of FyreWrap® are wrapped using the telescopic method as on the previous page. Ensure there is a 100mm overlap in both layers. All joints are to be taped with FyreWrap® premium tape.
	Butt Joint with Telescopic Overlap		The first layer is butt-jointed at its edges and the second layer to be wrapped over the first layer using the telescopic overlap method with a 100mm overlap. All joints are to be taped with FyreWrap® premium tape.
	Butt-joint with cover strip		Both layers of FyreWrap® are butt-jointed at their edges. The layers are staggered to ensure a minimum 200mm overlap over each butt-joint of the first layer. The butt-joints on the second layer are covered with a 200mm wide strip. Cover strips are made using FyreWrap® Elite 1.5 material. All joints are to be taped with FyreWrap® premium tape.

## INSTALLATION

## FIXINGS

## FIXING METHOD

Duct section (mm)	Steel Banding Only	Steel banding and Pins*	Pins Only (all sides)
Small less than 600 x 600mm	✓	✓	✓
Medium up to 1200 x 1200 mm		✓	✓
Large over 1200 x 1200mm			✓

\* Pins must be installed on the bottom side of horizontal ducts or one long side for vertical ducts.

## FIXINGS

Component	Type	Min Size		Centres Max
Band crimps	Steel	25mm long		-
Bands	Steel	12mm wide x 0.4mm thick		40mm from edges max 265mm centres
Bands	Stainless Steel	12mm wide x 0.4mm thick		40mm from edges max 265mm centres
Pre-welded pins	Steel	Pin Dia 2.7mm	Pin Length 1st Layer - 25mm 2nd Layer - 50mm 3rd Layer - 75mm	Grid of 200mm centres
Cup-head pins	Steel	Pin Dia 2.7mm	Pin Length 1st Layer - 25mm 2nd Layer - 50mm 3rd Layer - 75mm	Grid of 200mm centres
FyreWrap® Premium Reinforced Tape	Reinforced Aluminum	50mm wide		Taped over cut edges of FyreWrap®



## TYPICAL HANGER/TRAPEZE DETAIL FOR EXTERNAL FIRE APPLICATIONS

- Due to FyreWrap® being an extremely light weight product, one of the huge benefits of using it, is that the rod-hangers and trapeze are **not required to be wrapped** in FyreWrap®.
- Both our internal and external fire reports allow for the use of the **standard hanger/support spacings under AS4254.2-2012**, with one additional hanger located within 600mm of any fire-rated wall penetrations.
- The table below outlines typical duct sizes, thickness and trapeze spacings together with minimum support requirements.
- Please contact Trafalgar Fire Technical Team if you need a copy of these report or your duct arrangements differ from the table below.

Specifications for the fabrication of ducting and duct suspension systems for FyreWrap®						
Rectangular/Square Ducts			Unprotected Suspension System Specification			
Duct Height (mm)	Duct Width (mm)	Min. Material Thickness (mm)	Max. Trapeze Spacing (mm)	Mild Steel Trapeze Angle (mm)	Min. Threaded Rod Diameter	Centres Max
1200	1200	1.0*	1520	40 x 40 x 3	10**	N/A
1600	1600	1.0*	1200	50 x 50 x 5	10**	N/A
			1520	50 x 50 x 6	12**	
600	2800	1.0*	1200	50 x 50 x 5	10**	N/A
			1520	50 x 50 x 6	12**	
2400	2400	1.0*	1200	50 x 50 x 5	12**	1***
3200	3200	1.0*	1200	50 x 50 x 5	12**	2***
3600	4800	1.0*	1200	50 x 50 x 5	16**	2***
Circular Duct			Unprotected Suspension System Specification			
Duct Diameter (mm)		Min. Material Thickness (mm)	Max. Trapeze Spacing (mm)	Mild Steel Trapeze Angle (mm)	Min. Threaded Rod Diameter	Centres Max
1200		1.0*	1200	40 x 40 x 3	10**	N/A

This specification is to be read in conjunction with the relevant detailed drawings.

Fixings and angles specified are the minimum requirements.

\*Ducts shall be constructed in accordance with requirements of AS4254.

\*\*Threaded rod diameters must not exceed the allowable stress level of 10MPa or 10N/mm<sup>2</sup>

\*\*\*Addition of internal tie rods required for each 1600mm width of duct to a maximum width of 4800mm.

# INSTALLATION CHECKLIST

This document is a checklist that can be used to ensure that the FyreWrap® Elite 1.5 duct protection system has been installed correctly and should not be used as an installation manual. For full installation instructions please refer to the Technical Manual and installation videos available at [tfire.com.au](http://tfire.com.au) or at the following links:

[TECHNICAL MANUAL](#)

[TRAFALGAR TV](#)

FyreWrap® Label/Identifier No. \_\_\_\_\_

Installer Name: \_\_\_\_\_

Company: \_\_\_\_\_

Site: \_\_\_\_\_

Floor/Level: \_\_\_\_\_ FRL \_\_\_\_\_

## DUCT CONSTRUCTION AND PREPARATION WORK

Before being wrapped, ensure that the duct is constructed in accordance with AS4254.2 specifications, for a pressure class of at least 500.

		Satisfactory	Action Required
1	The hanger rod size shall be in accordance with AS 4254.2-2012 as appropriate for Pressure Class 500		
2	Hanger spacings shall be in accordance with AS 4254.2-2012 as appropriate for Pressure Class 500		
3	Duct BMT, stiffeners, jointing etc shall be in accordance with AS 4254.2-2012 as appropriate for Pressure Class 500		
4	If access is required, the duct should be fitted with non-fire rated duct access panels before FyreWrap® and FyreWrap® Access Panel are fitted		
5	Ensure that separate duct penetrations through fire barriers are at least 200mm apart (allow enough room for FyreBOARD Maxilite® strips, see below)		

## FIRE BARRIER PENETRATIONS

If the duct passes through a fire rated wall of floor, it is important to maintain the FRL of the actual barrier, as well as the FRL of the duct system. Fire testing to AS1530.4-2014 shows that temperatures around these duct penetrations are typically higher than the rest of the duct, and will require additional layers of FyreWrap® as follows.

		Satisfactory	Action Required
1	Are the wall penetrations prepared in accordance with the wall manufactures requirements? <ul style="list-style-type: none"> <li>Plasterboard wall apertures require stud framing and lined with strips of plasterboard</li> <li>AAC wall apertures may need additional stiffening angles to the perimeter</li> <li>Speedpanel wall apertures need a U-channel installed around their perimeter</li> </ul>		
2	Are the wall and floor penetrations the correct size to be within the maximum annular gap for the FyreWrap® penetration system? Refer to <a href="#">page 23</a> of the technical manual for annular gap sizes based off the duct size		
3	Were the annular gaps packed with loose FyreWrap®, and sealed with FyreFLEX® Sealant?		
4	Were the correct size steel angles fitted around the duct on both sides of the wall? Fixed using appropriate fixings to the wall, and steel screws or rivets to the duct?		
5	Have the FyreBOARD Maxilite® strips been installed over the steel angles with screw fixings as appropriate for the fire barrier, on both sides of the wall?		
6	Has FyreFLEX® Sealant been applied to the perimeter of the FyreBOARD Maxilite® strips and fire barrier interface with a 20x20mm fillet?		
7	Has FyreFLEX® Sealant been applied to the perimeter of the FyreBOARD Maxilite® strips and duct interface with a 20x20mm fillet?		
8	Have multiple layers of FyreWrap® been installed locally to the wall penetration on both sides of the wall (or just the top side of a floor)? Refer to the Technical Manual requirements		



# INSTALLATION CHECKLIST

FyreWrap® Label/Identifier No.

Installer Name:

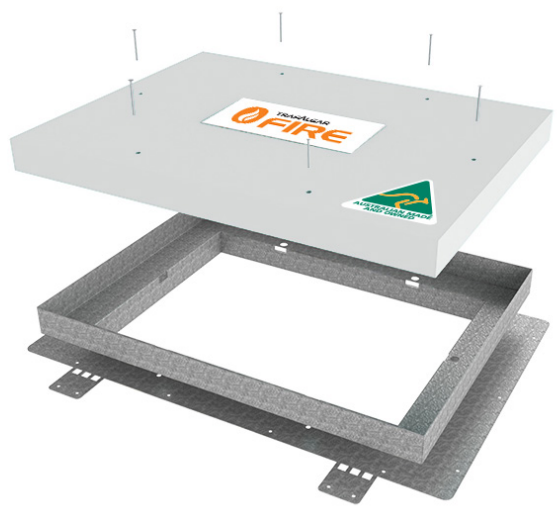
Company:

Site:

Floor/Level:  FRL

GENERAL WRAPPING The following table details the general requirements for wrapping the FyreWrap® away from the fire barrier penetrations.		Satisfactory	Action Required
1	Have all cut sections of FyreWrap® been taped over with reinforced aluminium tape?		
2	Has the FyreWrap® been installed with 100mm overlap around the duct?		
3	Have adjacent sections of the FyreWrap® been installed with 100mm overlap (or a butt joint with a 200mm coverstrip)? Refer to <a href="#">page 13</a> of the Technical Manual for approved overlap configurations.		
4	Have all overlaps been taped with reinforced aluminium tape?		
5	If steel straps have been used for ducts under 600x600: - Is the steel banding placed 40mm from the ends of the FyreWrap® blanket, and/or over the overlaps, with additional straps between the overlaps at 265mm centres?		
6	Are the steel straps at least 12mm wide 0.4mm thick?		
7	If steel straps have been used for ducts under 1200x1200: - Same requirements as above, plus the underside pinned at 200mm grid centres (to prevent sag)?		
8	If pins are used instead of straps (for any size duct): - Have they been installed at 200mm grid centres? - Including overlaps		
9	If pins are used, are the pins minimum 2.7mm dia cup head or pre-welded pins, at the correct length for the thickness of FyreWrap®?		
10	Any damaged or torn sections of FyreWrap® repaired: - Cosmetic rips in the foil scrim taped over with foil tape - For damaged core material, replace or wrapped over with a cover piece		
ACCESS PANELS		Satisfactory	Action Required
1	Has a standard (non-fire rated) duct access panel been fitted first?		
2	Have the correct steel rivet or self tapping screws been used to fix the FyreWrap® Access Panel over the existing duct access panel at 150mm centres?		
3	Are there at least 2x layers of FyreWrap® installed around the FyreWrap® Access Panel frame, for at least 100mm?		
4	Has FyreFLEX® Sealant been applied to the exposed steel frame of the FyreWrap® Access Panel?		

SYSTEM RANGE  
ACCESS PANEL



FYREWRAF® ACCESS PANELS (FWAP)

- Are a patented system designed for use on ducts protected by the innovative FyreWrap® system.
- Provide fire rating on ducts and allow access for the purpose of inspection,service, repair or replacement of internal equipment such as filters, volume control devices, dampers and fans.
- Patented design includes a number of features and benefits to ensure complete flexibility and ease of installation.
- Are simply installed by fitting directly over the existing ‘non-rated duct access panel’ and fixed to the duct using rivets through a series of pre-drilled holes.
- Provide additional flexibility on site as they can be either pre-installed or easily retro-fitted.
- Include patented, bendable fastening tabs for slimline ducts to allow access without the need for a full box encasement.



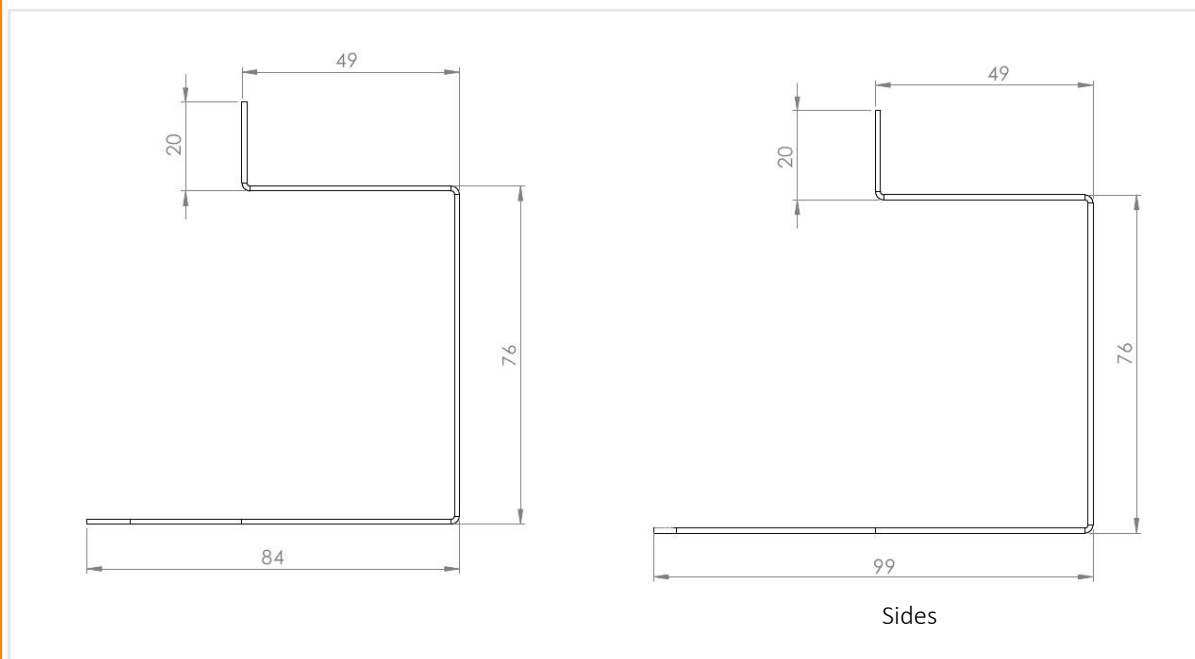
Item Number	Size	To Suit	FyreWrap® System
FW-AP-2L-AP0	708mm x 558mm	AP0	2 Layer
FW-AP-2L-AP1	558mm x 433mm	AP1	2 Layer
FW-AP-2L-AP2	433mm x 301mm	AP2	2 Layer
FW-AP-2L-AP3	304mm x 214mm	AP3	2 Layer
FW-AP-2L-CUSTOM	Custom Up to 708mm x 558mm	Custom	2 Layer

## INSTALLATION

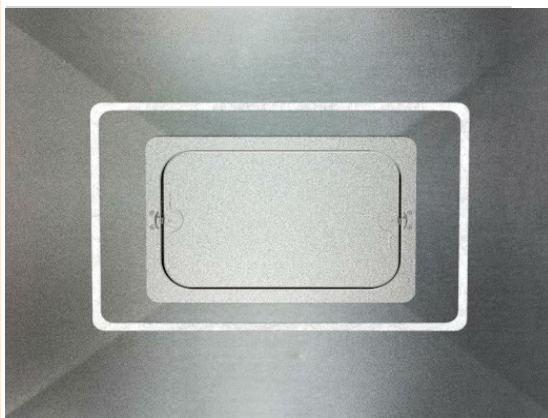
## FyreWrap® ACCESS PANELS



### PROFILE DETAIL



### PREPARE



Apply FyreFLEX® Sealant around the perimeter of the duct access panel to form a 'gasket' where the FyreWrap® Access Panel will sit.



### FIX



Using the preformed holes in the FyreWrap® Access Panel frame, drill and fix (using steel rivets or self-tapping screws only) the frame to the ductwork.

- \* Fixings are required at maximum 150mm spacing.
- \* If required for low profile ductwork, the top and bottom fold-over tabs can be folded over and fixed through the top/bottom side of the ducting.

## INSTALLATION

### FyreWrap® ACCESS PANELS

#### FyreWrap® FIRST LAYER



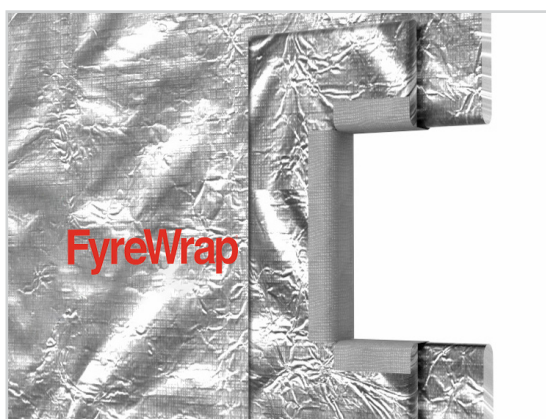
Install FyreWrap® Elite 1.5 according to FyreWrap® installation instructions, ensuring that the material fits snugly into the provided recess in the FWAP frame on all sides.

#### FyreWrap® SECOND LAYER



Install a second layer of FyreWrap® Elite 1.5, 100mm wide on all sides of the FyreWrap® Access Panel, fixing as per the standard FyreWrap® Elite 1.5 installation requirements (steel strapping or welded pins at 200mm centres).

#### TAPE EDGES



Tape the edges of both layers of FyreWrap® Elite 1.5 together.

#### FINISH



Finish the installation with a fillet of FyreFLEX® Sealant to the perimeter of the FyreWrap® Access Panel, ensuring that none of the metal frame remains exposed.

# SYSTEM RANGE



- Lightweight fireproofing
- Fast, clean and easy to install
- Bio-soluble insulation material
- Up to 3 hour fire rating in accordance with AS1530.4-2014 for internal and external fire.



Item Number	Size	Thick	Qty	Pallet Qty
FyreWrap® Elite 610	610mm wide x 7620mm long	38mm	1 roll	12 rolls
FyreWrap® Elite 1220	1220mm wide x 7620mm long	38mm	1 roll	6 rolls

# SYSTEM COMPONENTS

- This kit contains one of each item below.



Kit	Item Number	QTY
FyreWrap® Kit	FyreWrap® Premium Reinforced Tape 96mm x 50m Roll	1
	FyreWrap® Crimper	1
	FyreWrap® Tensioner	1
	Steel Banding Roll 12.7mm x 250m	1
	Snap on Seals 13mm (box of 1000)	1
	Dispenser	1



## FAQ

**Q Do I need to wrap the duct support hangers and trapeze?**

**A** FyreWrap® is a lightweight system so in most cases there is no need. Refer to page 15 for more information.

**Q How many layers of FyreWrap® do I need to get an FRL of 120/120/120 (2-hours)?**

**A** One layer will achieve the 2 hour FRL, however additional layers are required where the duct passes through fire rated walls and floor systems.

**Q Why would you use FyreWrap® instead of a spray system?**

**A** FyreWrap® is faster to install, much cleaner on site so there is less cleaning and masking off, and easier for other trades to work side by side. Certification is also easier as there is no need to check thicknesses like a spray system plus there are FyreWrap® Access Panels (FWAP's) for easy and compliant access into the duct for future maintenance.

**Q Why do I need additional layers of FyreWrap® where the duct passes through a fire rated wall?**

**A** You need to maintain the FRL of the wall, as well as the duct system to prevent spread of fire from one to the other and visa versa. The wall interface is subject to the most intense conditions during a fire, so additional layers of wrap and strips of FyreBOARD Maxilite® are needed to keep the temperatures down and maintain the fire rating.

**Q Can I use FyreWrap® on PVC ducting?**

**A** No, FyreWrap® is approved for use on steel ducting only which must comply with the duct construction AS4254.2 for pressure class 500.

**Q Can I use FyreWrap® on a steel exhaust flue from a fire pump?**

**A** Yes, FyreWrap®'s core material is suitable for temperatures up to 1200°C peak (and at least 1000°C constant temperature) although it is recommended that the foil scrim is removed from the 'hot' side to prevent smoldering of the foil.

**Q Where can I purchase the appropriate equipment and pins required to stud weld the FyreWrap ?**

**A** The equipment and pins can be purchased from KCD Studwelding <https://www.kcdstudwelding.com.au/>

**Q Can I wrap two ducts together?**

**A** No, the ducts must be wrapped separately, and where they penetrate a fire barrier must be separated by at least 200mm in separate penetrations.

**Q Can I wrap fan enclosures?**

**A** Yes, FyreWrap is good solution to wrap fan enclosures and other ducts that are subject to vibrations

**Q How do I finish FyreWrap against an external wall or roof?**

**A** If the external wall or roof does not have an FRL, then all that is needed is a simple waterproofing seal to protect the FyreWrap from any weather exposure.

## SOCIAL MEDIA



Linked 

 YouTube



## FIRE BARRIER & DUCT PENTRATION SPECIFICATION TABLES

### TABLE 1: ANNULAR GAP SIZE

Duct size (mm)	Annular Gap Size	Steel L-angle specifications	FyreBOARD Maxilite® Specifications
Up to 600mm	10-30mm	75 x 75 x 1.6mm	100mm width, 60mm thickness
600-1600mm	20-40mm	75 x 75 x 1.6mm	100mm width, 60mm thickness
1600-2600mm	40-60mm	125 x 100 x 2mm	150mm width, 60mm thickness
2600-3600mm	60-80mm	125 x 100 x 2mm	150mm width, 60mm thickness

### TABLE 2: FIXING SPECS

Wall Type	Fixing Location	Fixing Type Required	Fixing Spec	Maximum Centres
All	Angle to duct	Steel rivets	5mm dia. x 10mm length	200mm
Plasterboard	Angle to wall	Plasterboard screws	8g x 50mm	200mm
	FyreBOARD Maxilite® to wall		8g x 100mm	
Concrete/ Masonry	Angle to wall	Min. M6 masonry anchors. Length to suit min. 30mm embedment	M6 x 30mm	400mm
	FyreBOARD Maxilite® to wall		M6 x 120mm	
AAC Wall/Hebel	Angle to wall	Type 17 bugle/hex head screws	14g x 50mm	200mm
	FyreBOARD Maxilite® to wall		14g x 100mm	
Speedpanel	Angle to wall	Self-drilling screws	10g x 30mm	200mm
	FyreBOARD Maxilite® to wall		10g x 100mm	

TABLE 3: HANGER SPACINGS

Direction of Exposure	Hanger Spacings and Requirements
Internal Exposure Only	For ducts exposed to fire from inside only, duct construction shall be in accordance with AS4252.2-2012 Pressure Class 500. Variation to hanger rod size, hanger spacing, support, duct BMT, stiffeners or jointing shall be in accordance with AS4254.2-2012 as appropriate for Pressure Class 500.
External or exposure in both directions	

For external exposure, hangers are to be spaced to ensure a maximum of 10MPa stress in all supports unless otherwise stated. An acceptable safety factor should be included in any calculations.

Additional layers of FyreWrap® required at penetrations through fire-rated walls may require additional supports at 600mm from fire barrier to allow for the extra weight of material.

Additional supports may be required locally near access panels (as detailed on drawing 20 of the FyreWrap® Install Details drawing package). These are not factored into the spacing calculations.

TABLE 4: WALL PENETRATION ADDITIONAL LAYERS OF FYREWAP®

Duct Size		Length of second layer from fire barrier	
Duct Width	Duct Height	FRL 60/60/60	FRL 120/120/120
600mm or less	600mm or less	1350mm	1800mm
600-1200mm	600mm or less	1600mm	2150mm
600-1200mm	600-1200mm	1900mm	2600mm
1200-2400mm	1200-2400mm	2500mm	3450mm
2400-3600mm	2400-3600mm	2700mm	3750mm

Please note—The lengths listed above are summaries from Assessment Report FCO 3226. A more thorough breakdown of the required lengths for other duct sizes can be found in this FCO 3226.

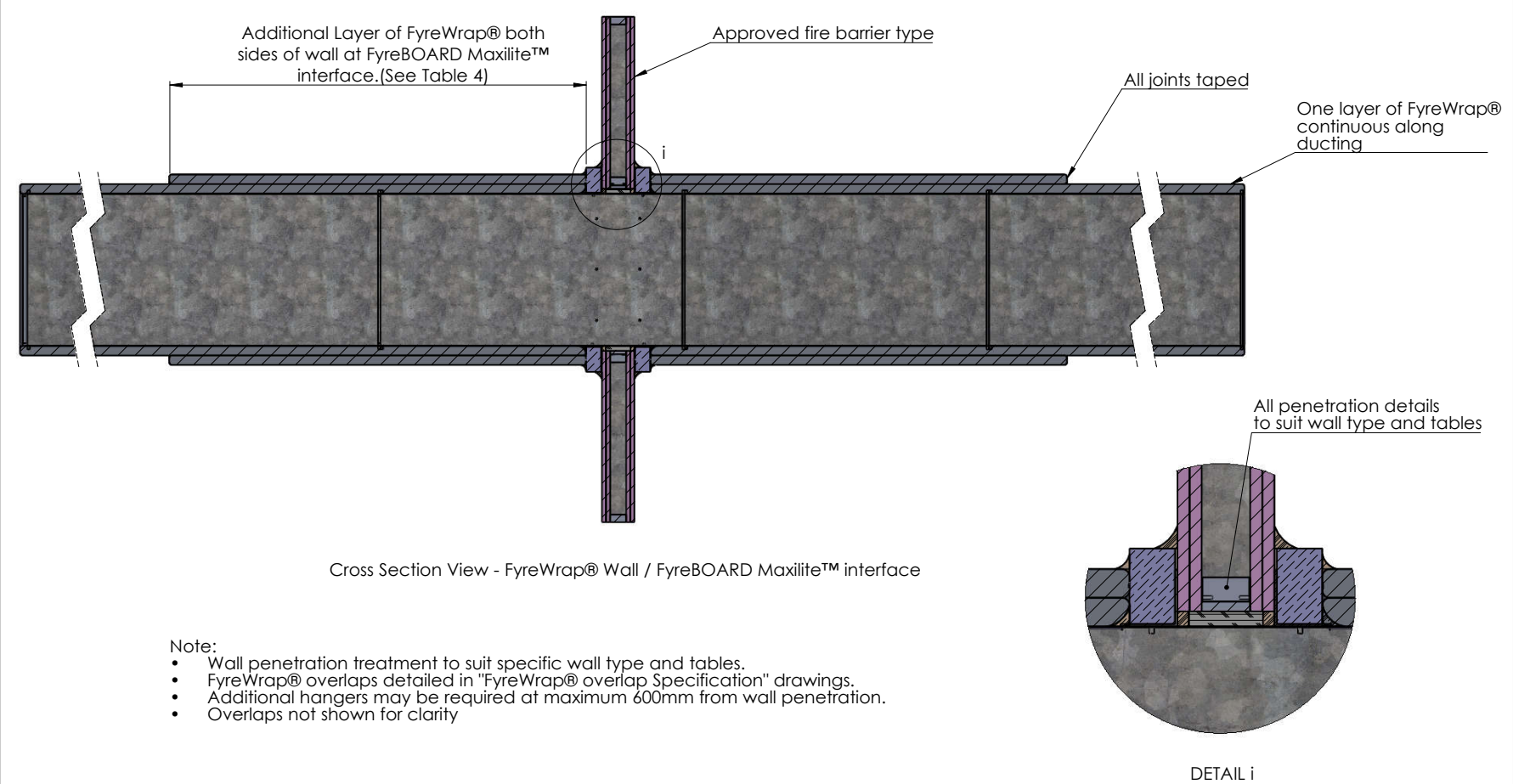
TABLE 5: FLOOR PENETRATION  
ADDITIONAL LAYERS OF  
FYREWAP®


Duct Size		FRL 120/120/120		FRL 180/180/180	
Duct Width	Duct Height	Length of Second Layer	Length of Third Layer	Length of Second Layer	Length of Third Layer
Up to 600mm	Up to 600mm	2000mm	Not needed	2150mm	1100mm
600-1200mm	Up to 600mm	2550mm	1250mm	2700mm	1400mm
600-1200mm	600-1200mm	3100mm	1500mm	3200mm	1600mm
1200-2400mm	1200-2400mm	4200mm	1950mm	4600mm	2300mm
Up to 3600mm	Up to 3600mm	5200mm	2200mm	5400mm	2500mm

Please note—The lengths listed above are summaries from Assessment Report FCO 3226 for internal fire applications. A more thorough breakdown of the required lengths for other duct sizes can be found in FCO 3226.

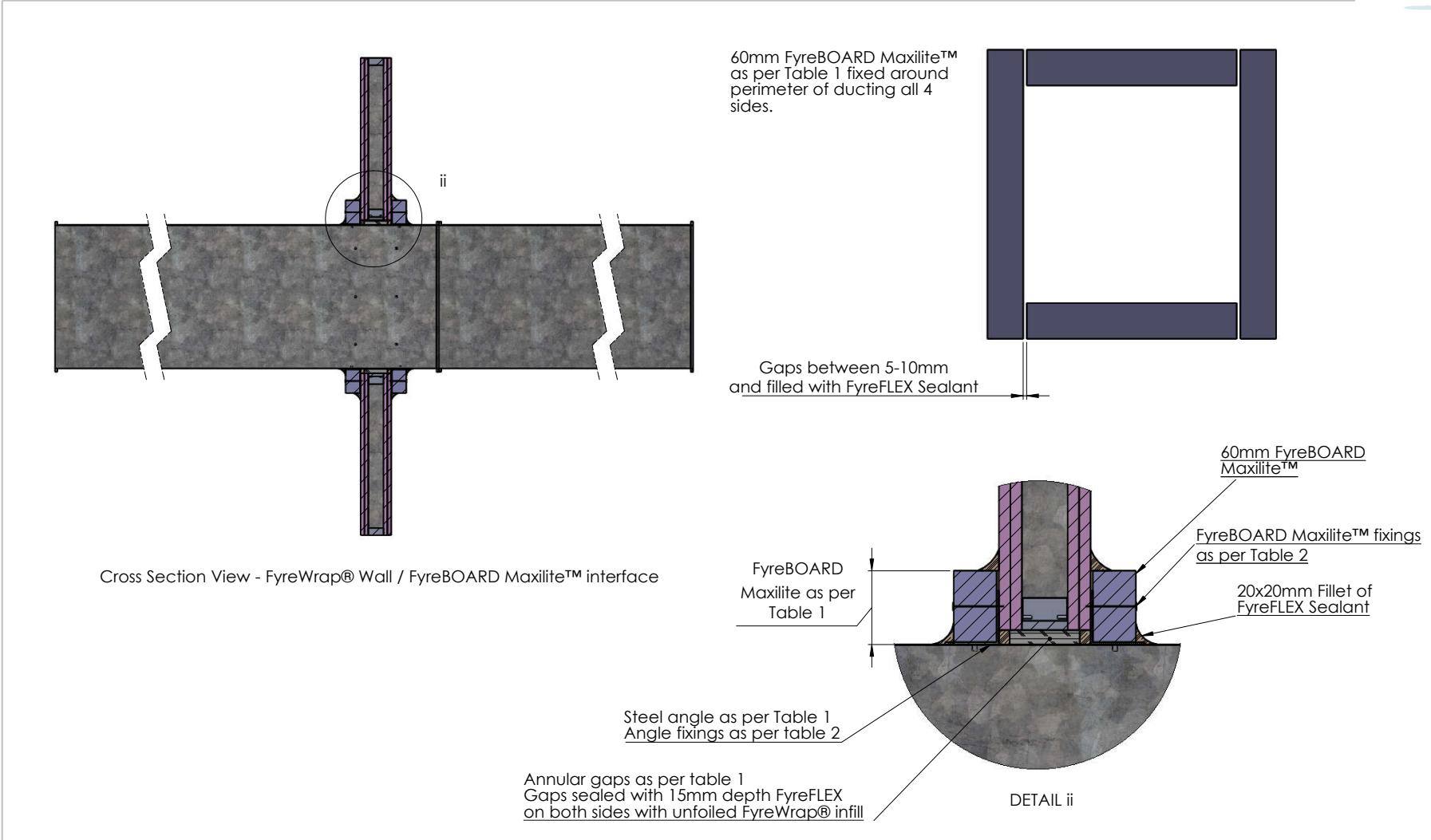



# General Installation



<b>Drawing Name:</b> Install details - General				<b>Test Standard:</b> AS1530.4:2014	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> FyreWrap® Install Details				<b>Fire resistance level:</b> 120/120/120	<b>Drawn By:</b> IH	<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> 			
<b>Drawing No. :</b> 1	<b>Sheet:</b> 1 of 26	<b>Date:</b> 9/12/2016	<b>Scale:</b>	<b>Based on Report No.:</b> FCO 3226	<b>Checked By:</b> CT				
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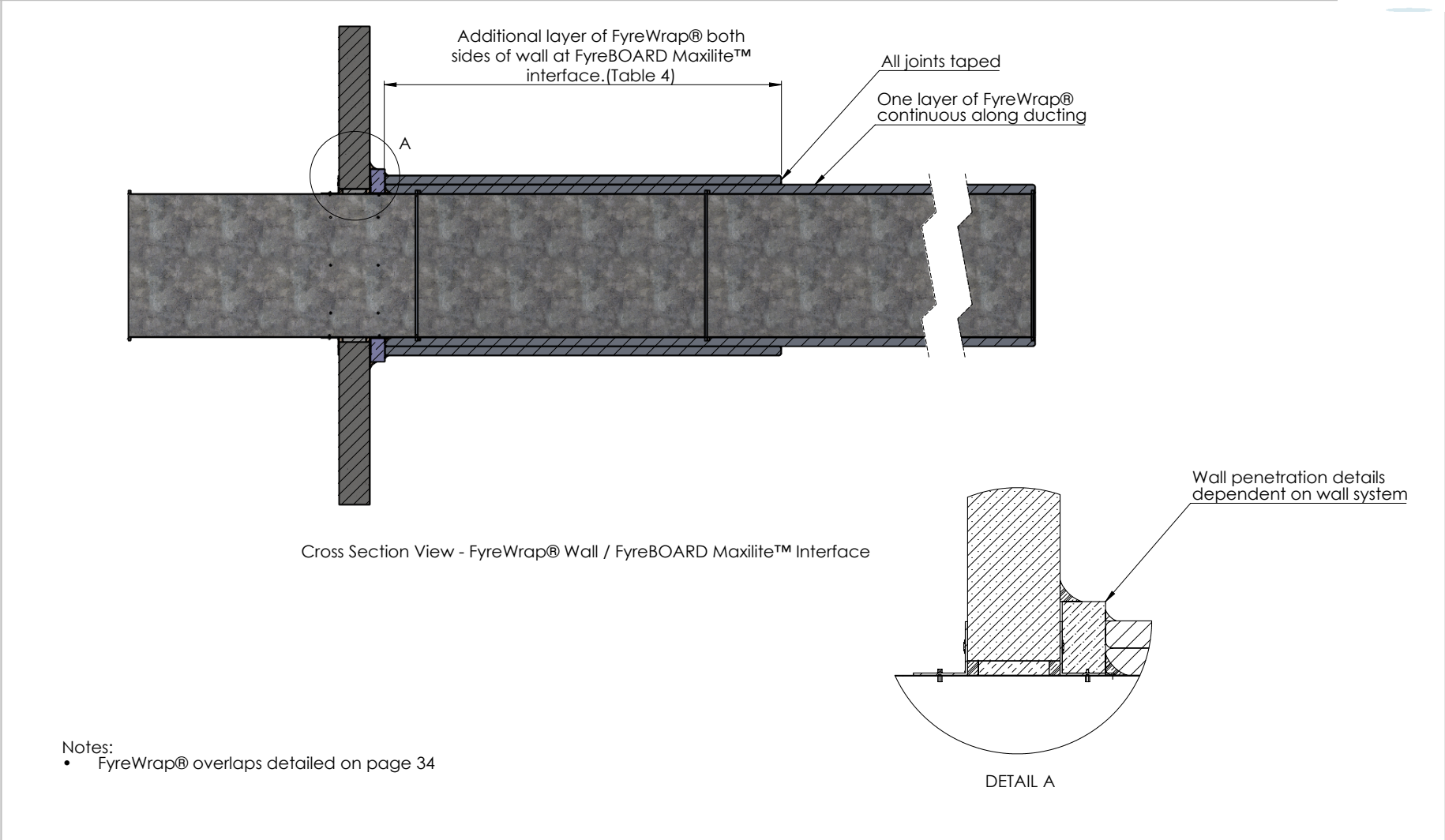
# General Penetration Details




<b>Drawing Name:</b> Penetration details - General				<b>Test Standard:</b> AS1530.4:2014	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> FyreWrap® Install Details				<b>Fire resistance level:</b> 120/120/120	<b>Drawn By:</b> IH	<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> 			
<b>Drawing No. :</b> 2	<b>Sheet:</b> 2 of 26	<b>Date:</b> 9/12/2016	<b>Scale:</b>	<b>Based on Report No.:</b> FCO 3226	<b>Checked By:</b> CT				
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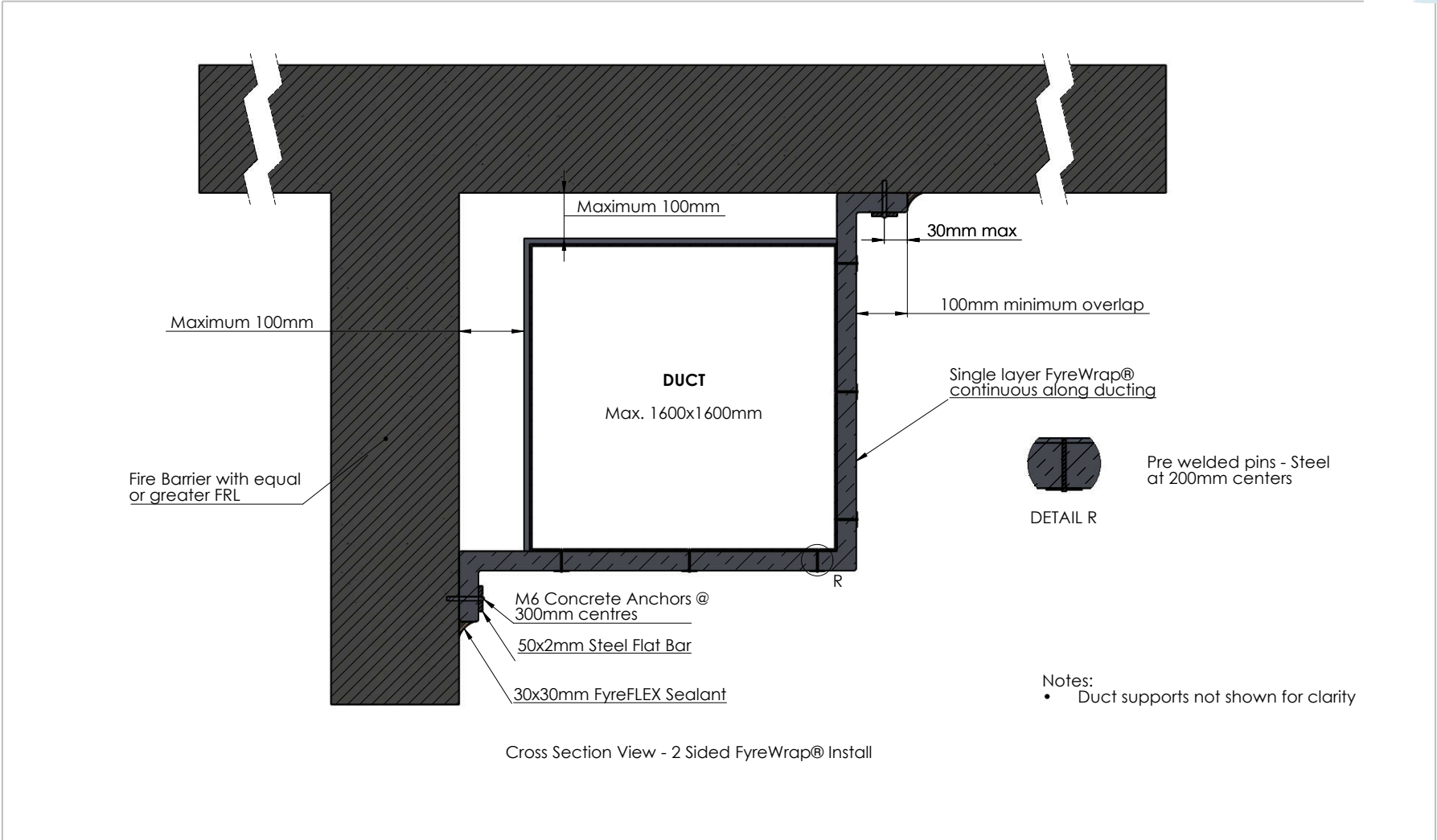
One Sided Wall Penetration




<b>Drawing Name:</b> One sided wall penetration				<b>Test Standard:</b> AS1530.4:2014	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> FyreWrap® - One sided duct penetration				<b>Fire resistance level:</b>	<b>Drawn By:</b> JH	<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> 			
<b>Drawing No. :</b> 1	<b>Sheet:</b> 1 of 1	<b>Date:</b> 12/10/2020	<b>Scale:</b>	<b>Based on Report No.:</b>	<b>Checked By:</b> CT				
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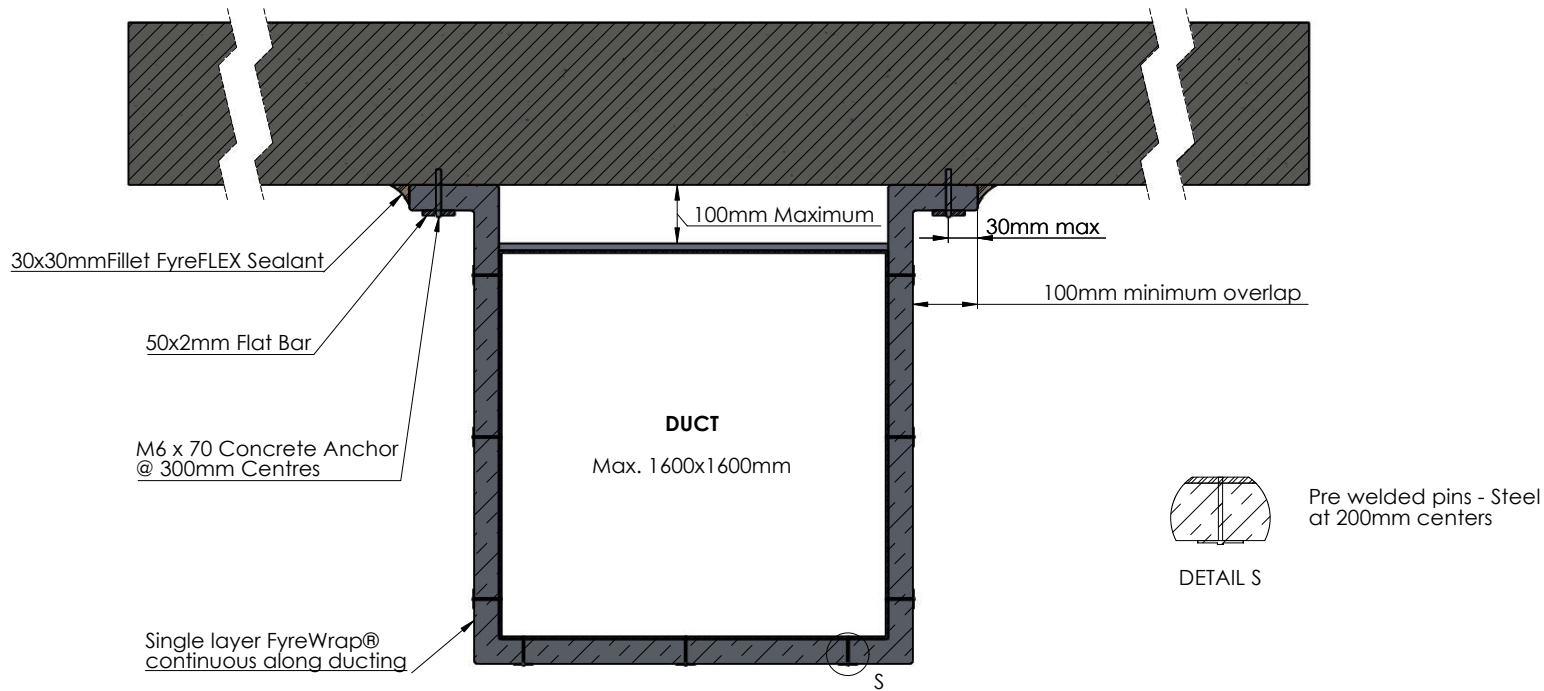
Two Sided Detail



<b>Drawing Name:</b> FyreWrap® 2 Sided Detail				<b>Test Standard:</b> AS1530.4:2014	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> FyreWrap® Install Details				<b>Fire resistance level:</b> 120/120/120	<b>Drawn By:</b> IH				<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> 
<b>Drawing No. :</b> 23	<b>Sheet:</b> 23 of 26	<b>Date:</b> 9/12/2016	<b>Scale:</b>	<b>Based on Report No.:</b> FCO 3226	<b>Checked By:</b> CT	<input type="checkbox"/> STANDARD DRAWING			


Three Sided Detail

Click here to go back to Contents

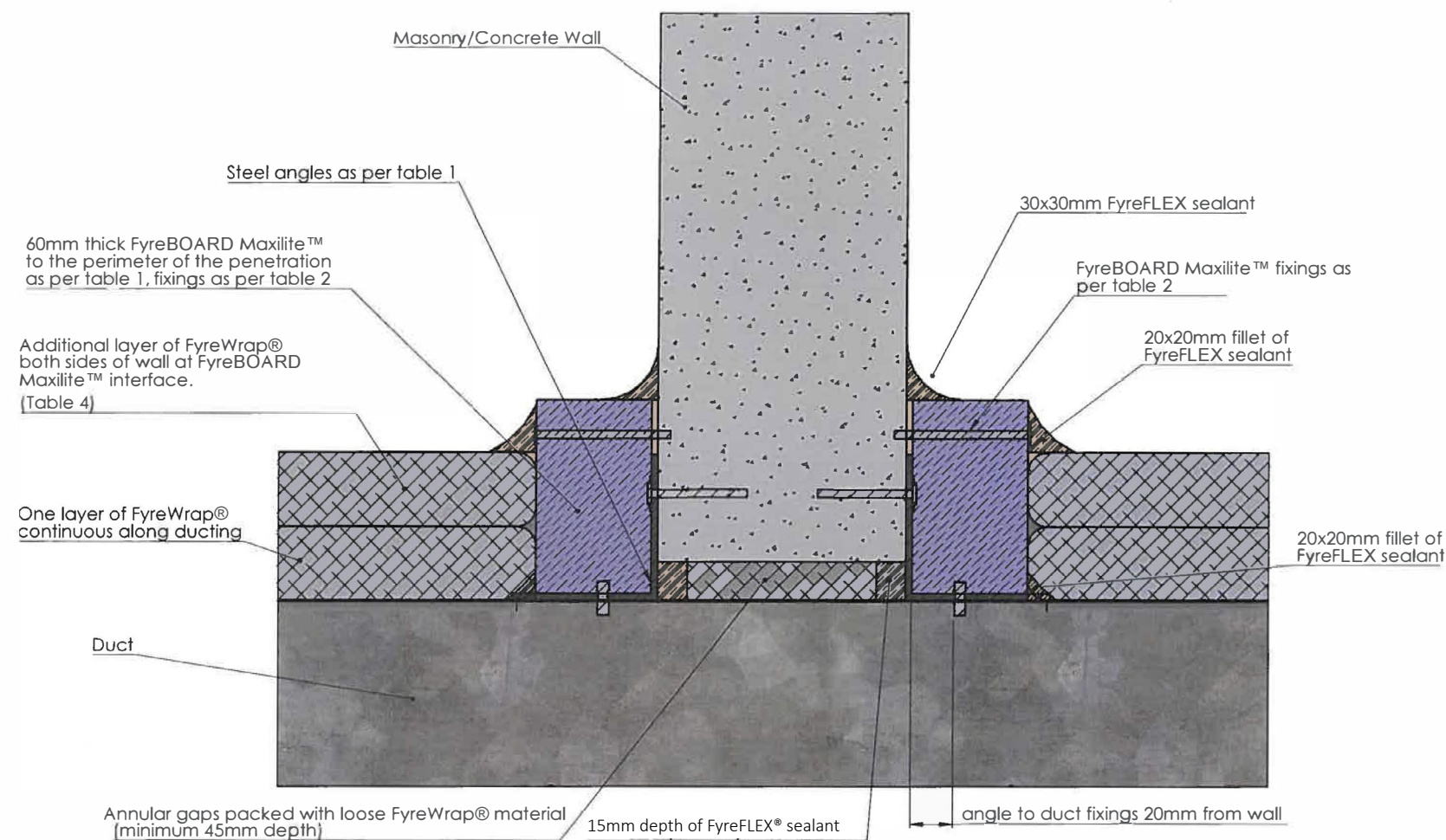


Cross Section View - 3 Sided FyreWrap® Install

- Notes:
- Duct supports not shown for clarity

<b>Drawing Name:</b> FyreWrap® 3 Sided Detail				<b>Test Standard:</b> AS1530.4:2014	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> FyreWrap® Install Details				<b>Fire resistance level:</b> 120/120/120	<b>Drawn By:</b> IH				<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> 
<b>Drawing No. :</b> 24	<b>Sheet:</b> 24 of 26	<b>Date:</b> 9/12/2016	<b>Scale:</b>	<b>Based on Report No.:</b> FCO 3226	<b>Checked By:</b> CT	<input type="checkbox"/> <b>STANDARD DRAWING</b> <input type="checkbox"/> <b>PROJECT DRAWING</b>			

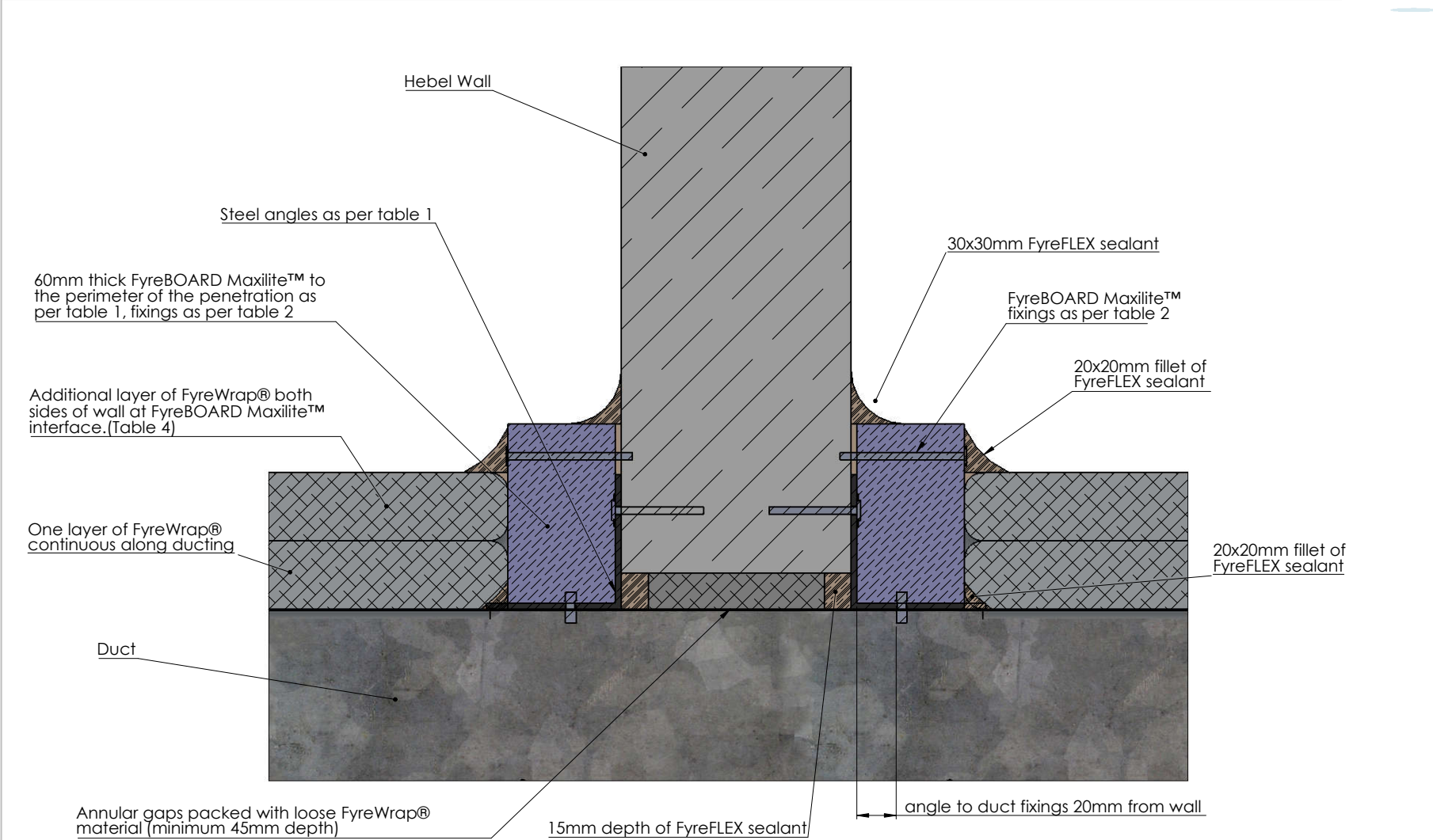
## Masonry Walls

[Click here to go back to Contents](#)
**Drawing Name:** 1. Masonry wall penetration**Project Title:** Wall penetration dwgs**Drawing No. :**  
1**Sheet:**  
1 of 4**Date:**  
9/12/2016**Scale:****Test Standard:**  
AS1530.4:2014**Fire resistance level:**  
120/120/120**Based on Report No.:**  
FCO 3226**Codes:****Drawn By:**  
JH**Checked By:**  
CT**Revision:****Date:****No.:** **NOTICE:**

NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)

**STANDARD DRAWING**  
**PROJECT DRAWING**

Hebel and Walsc AAC Panel Walls



<b>Drawing Name:</b> 2. Hebel wall penetration				<b>Test Standard:</b> AS1530.4:2014	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> Wall penetration details				<b>Fire resistance level:</b> 120/120/120	<b>Drawn By:</b> JH	<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small>			
<b>Drawing No. :</b> 2	<b>Sheet:</b> 2 of 4	<b>Date:</b> 9/12/2016	<b>Scale:</b>	<b>Based on Report No.:</b> FCO 3226	<b>Checked By:</b> CT	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING			



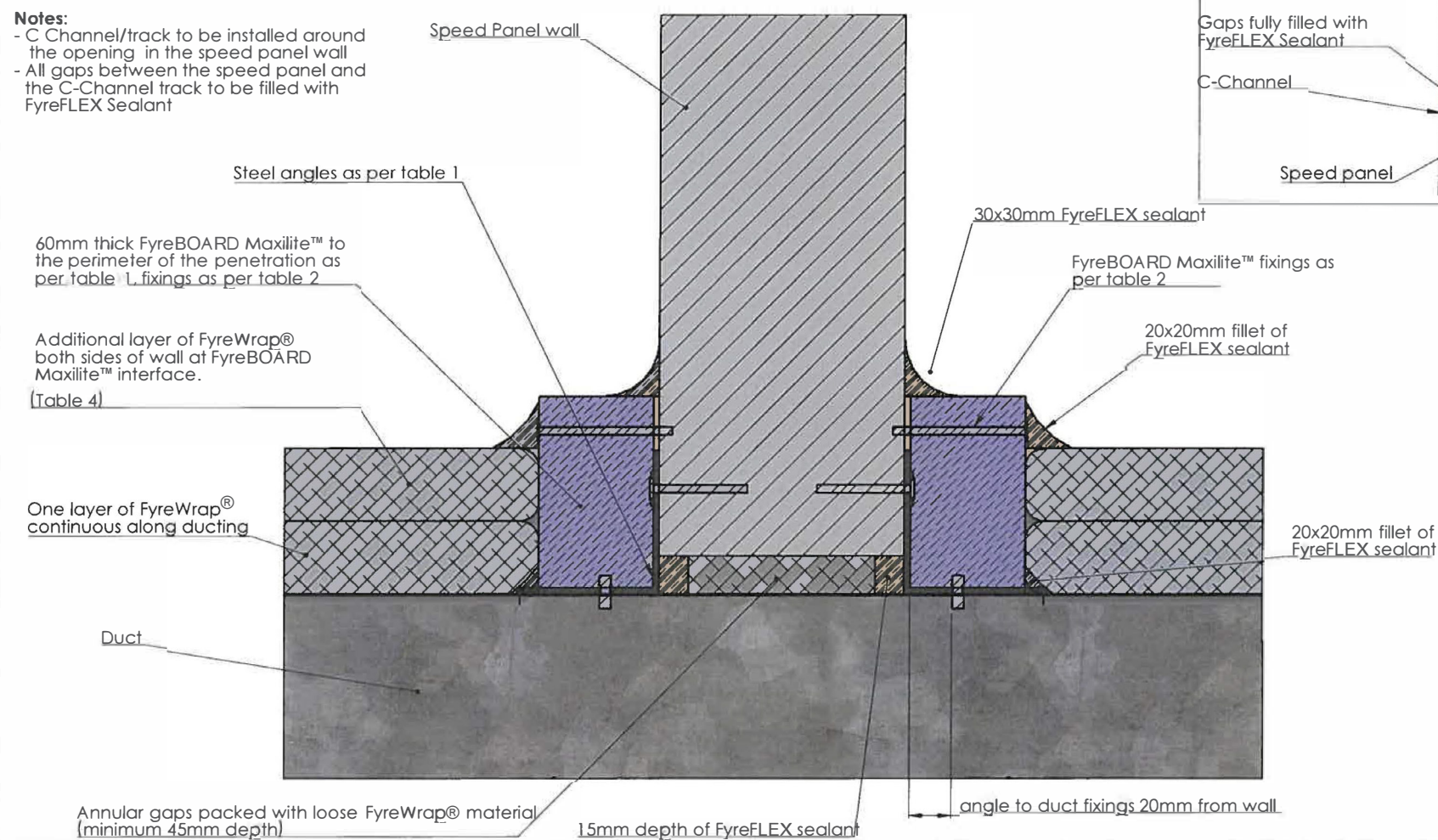


## Speedpanel Walls

Click  
here to go back to  
Contents

**Notes:**

- C Channel/track to be installed around the opening in the speed panel wall
- All gaps between the speed panel and the C-Channel track to be filled with FyreFLEX Sealant

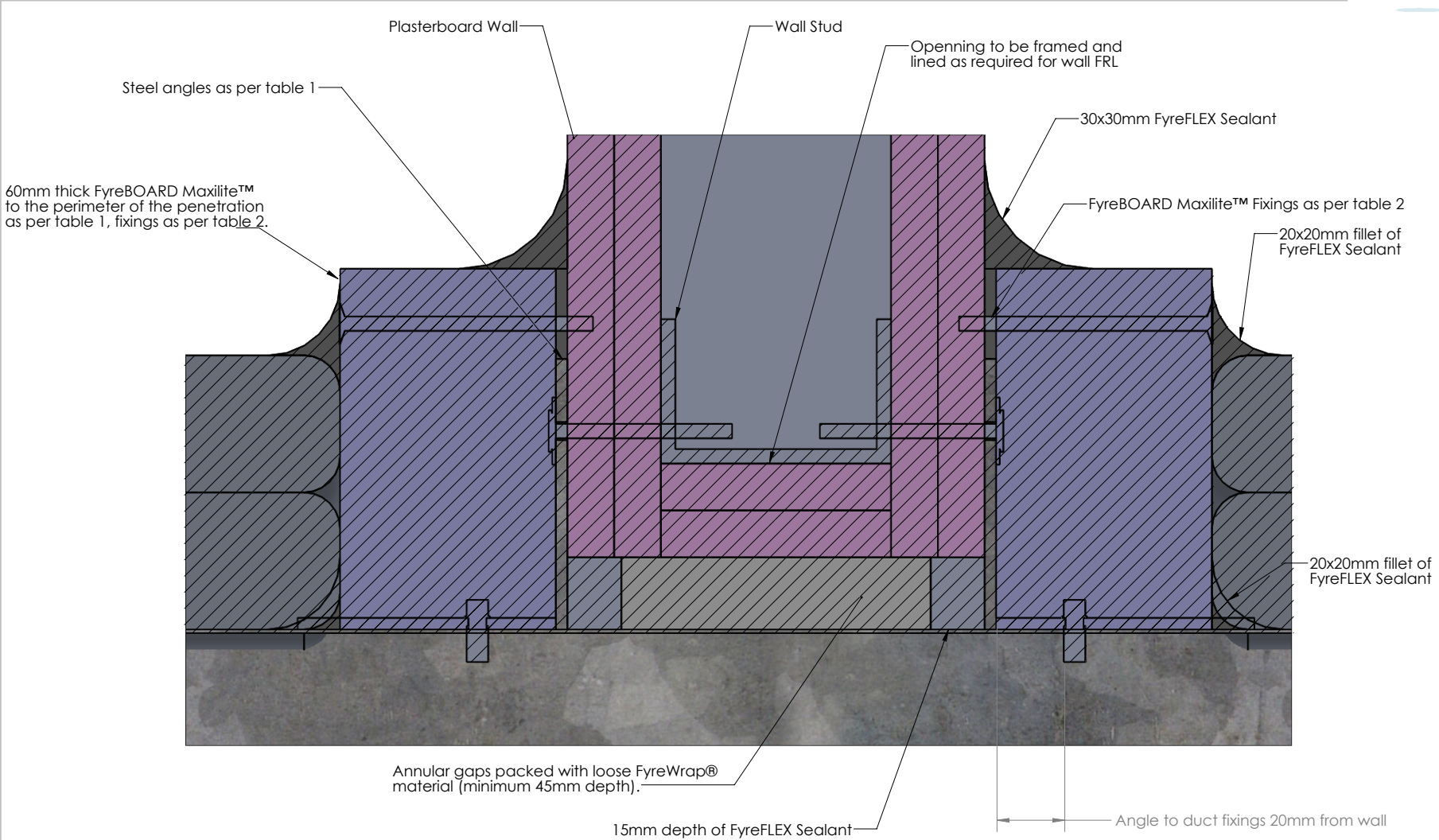
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3**Sheet:**  
3 of 4**Date:**  
9/12/2016**Scale:****Test Standard:**  
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120/120/120**Based on Report No.:**  
FCO 3226**Codes:****Revision:****Date:****No.:** NOTICE:**Drawn By:**  
JH**Checked By:**  
CT**STANDARD DRAWING**  
PROJECT DRAWING

NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)



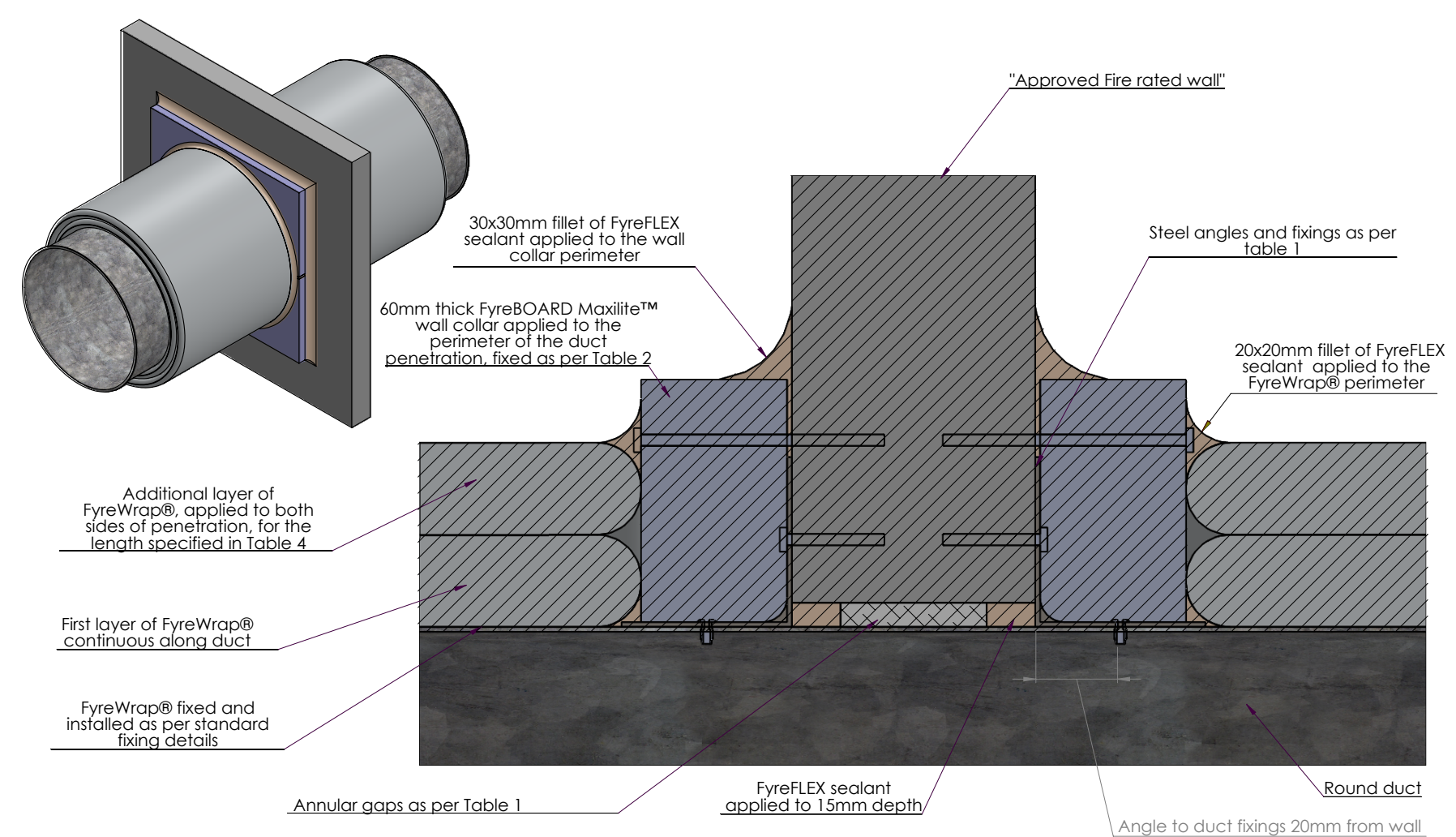


# Plasterboard Walls



<b>Drawing Name:</b> 4. Plasterboard penetration				<b>Test Standard:</b> AS1530.4	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> Duct Penetration through wall				<b>Fire resistance level:</b>	<b>Drawn By:</b> SM				NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)
<b>Drawing No. :</b> 1	<b>Sheet:</b> 1 of 1	<b>Date:</b> 12/10/2020	<b>Scale:</b> NTS	<b>Based on Report No.:</b>	<b>Checked By:</b> JH	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING			<b>TRAFALGAR FIRE</b>

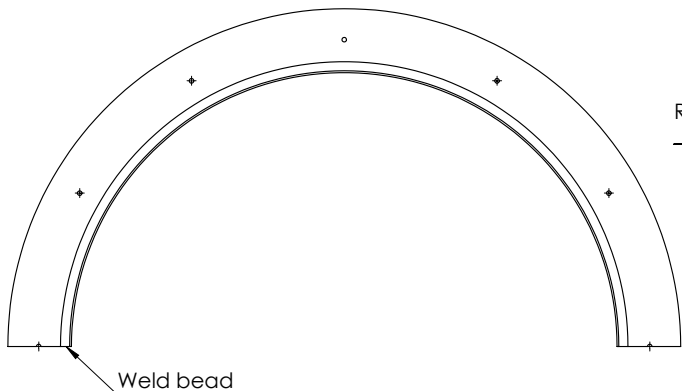
# Round Duct Penetration



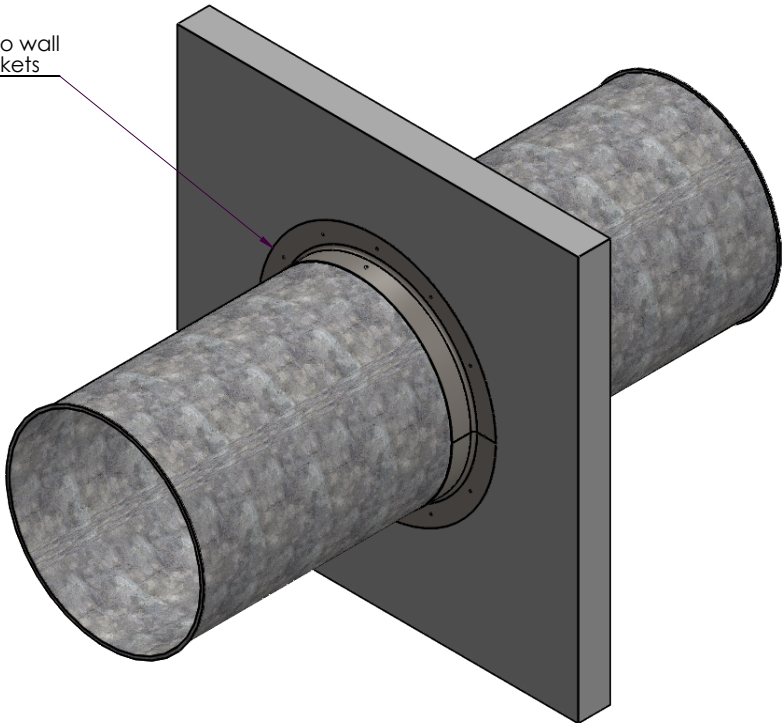
<b>Drawing Name:</b> Installation Instructions				<b>Test Standard:</b> AS1530.4	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> Round Duct Penetration				<b>Fire resistance level:</b>	<b>Drawn By:</b> RB				NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)
<b>Drawing No. :</b> 1	<b>Sheet:</b> 1 of 2	<b>Date:</b> 12/10/2020	<b>Scale:</b> NTS	<b>Based on Report No.:</b>	<b>Checked By:</b> JH	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING			

Round Duct Steel Angles


Click here to go back to Contents



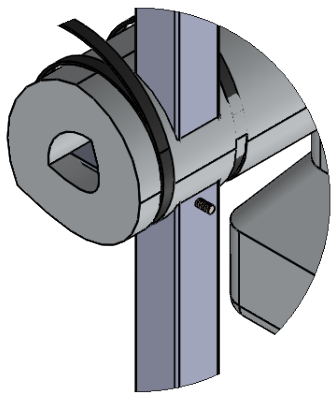
Round duct mounted to wall with steel angle brackets



NOTE:  
Duct must comply with AS4254.2 PC500

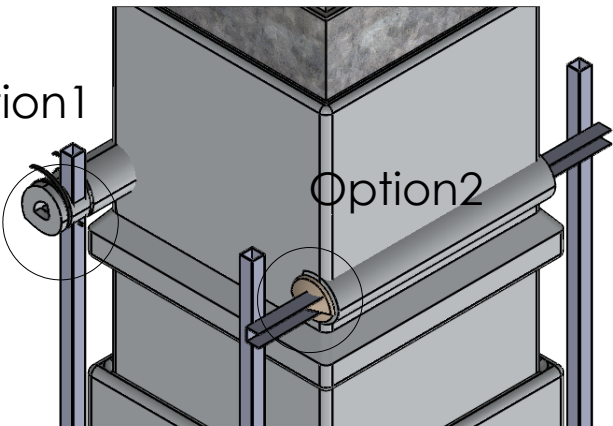
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Project Title: Round Duct Penetration				Fire resistance level:	Drawn By: RB	<div>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES [mm]</div> <div></div>			
Drawing No. : 2	Sheet: 2 of 2	Date: 12/10/2020	Scale: NTS	Based on Report No.:	Checked By: JH				
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Support Interface Details

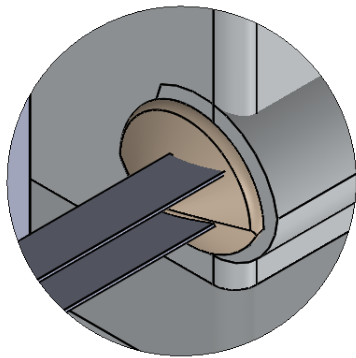


Option 1:  
Finished with one layer of FyreWrap® for 200mm length from the duct

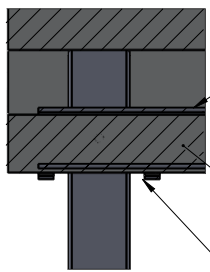
Option 1



Option 2



Option 2:  
Unistrut filled with unfoiled FyreWrap® (as shown in section below) then covered with a nominal 30x30mm fillet of FyreFLEX sealant

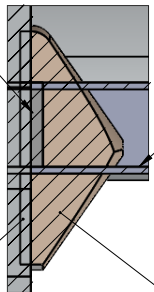


Unistrut

Single layer of FyreWrap®

12x0.4mm stainless steel band secured at each end of the support wrap


Unfoiled FyreWrap® filled to a nominal depth of 20mm



Unistrut

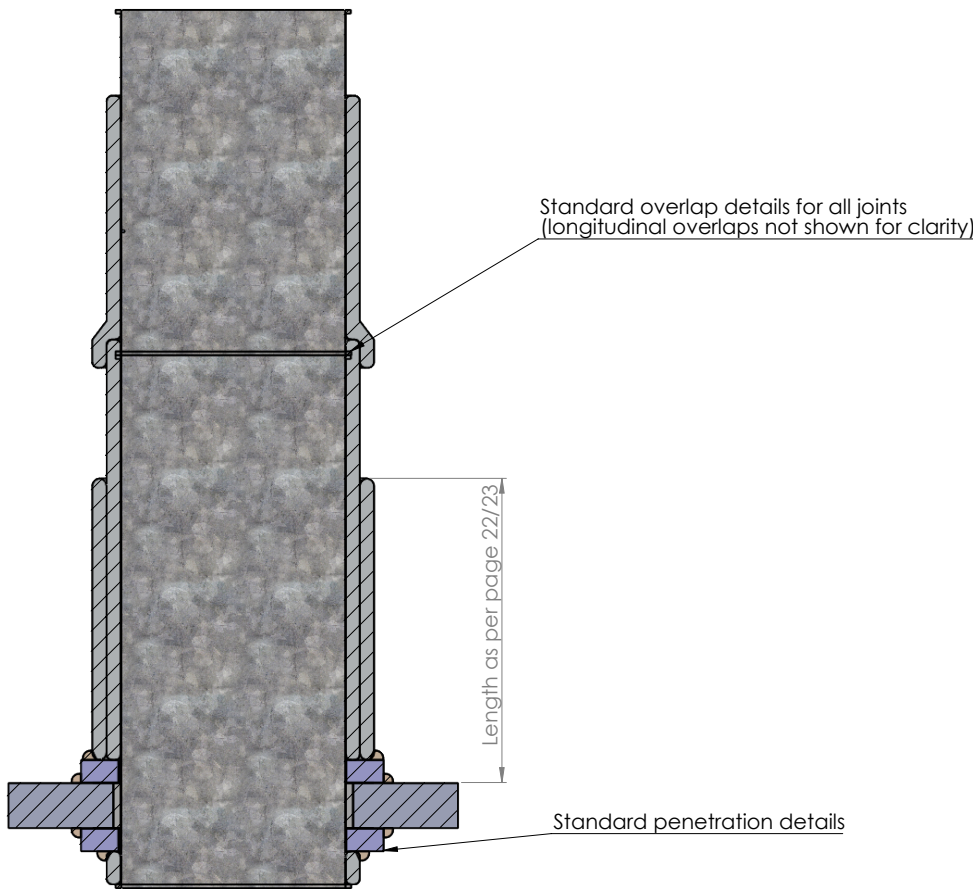
FyreFLEX sealant applied to all gaps, finished with 30x30mm fillet

FyreWrap® covering duct


<b>Drawing Name:</b> FyreWrap®/Support Interface				<b>Test Standard:</b> AS1530.4-2014	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> FyreWrap® installation details				<b>Fire resistance level:</b>	<b>Drawn By:</b> JC				<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> 
<b>Drawing No. :</b> 1	<b>Sheet:</b> 1 of 3	<b>Date:</b> 12/10/2020	<b>Scale:</b> NTS	<b>Based on Report No.:</b>	<b>Checked By:</b> CT	<input type="checkbox"/> STANDARD DRAWING			
						<input type="checkbox"/> PROJECT DRAWING			

Floor Penetrations - Ducts up to 600 x 600mm

Click here to go back to Contents

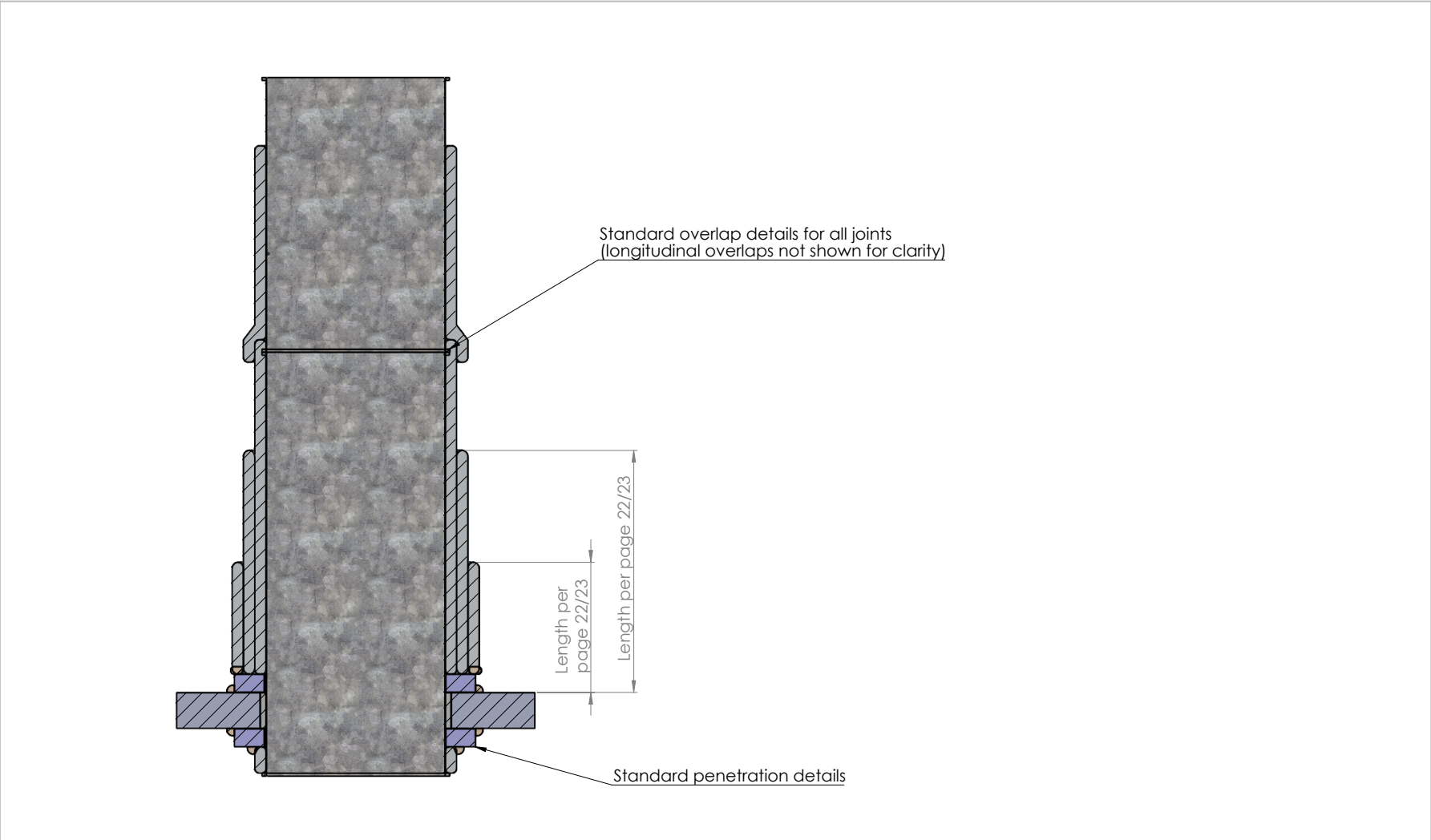


Note: A third layer of FyreWrap® is required for 180/180/180 FRL's

Drawing Name: Ducts up to 600x600				Test Standard: AS1530.4-2014	Codes:	Revision:	Date:	No.:	NOTICE:
Project Title: Floor Penetration Details				Fire resistance level:	Drawn By: JC	<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> 			
Drawing No. : 2	Sheet: 2 of 3	Date: 12/10/2020	Scale: NTS	Based on Report No.:	Checked By: CT				
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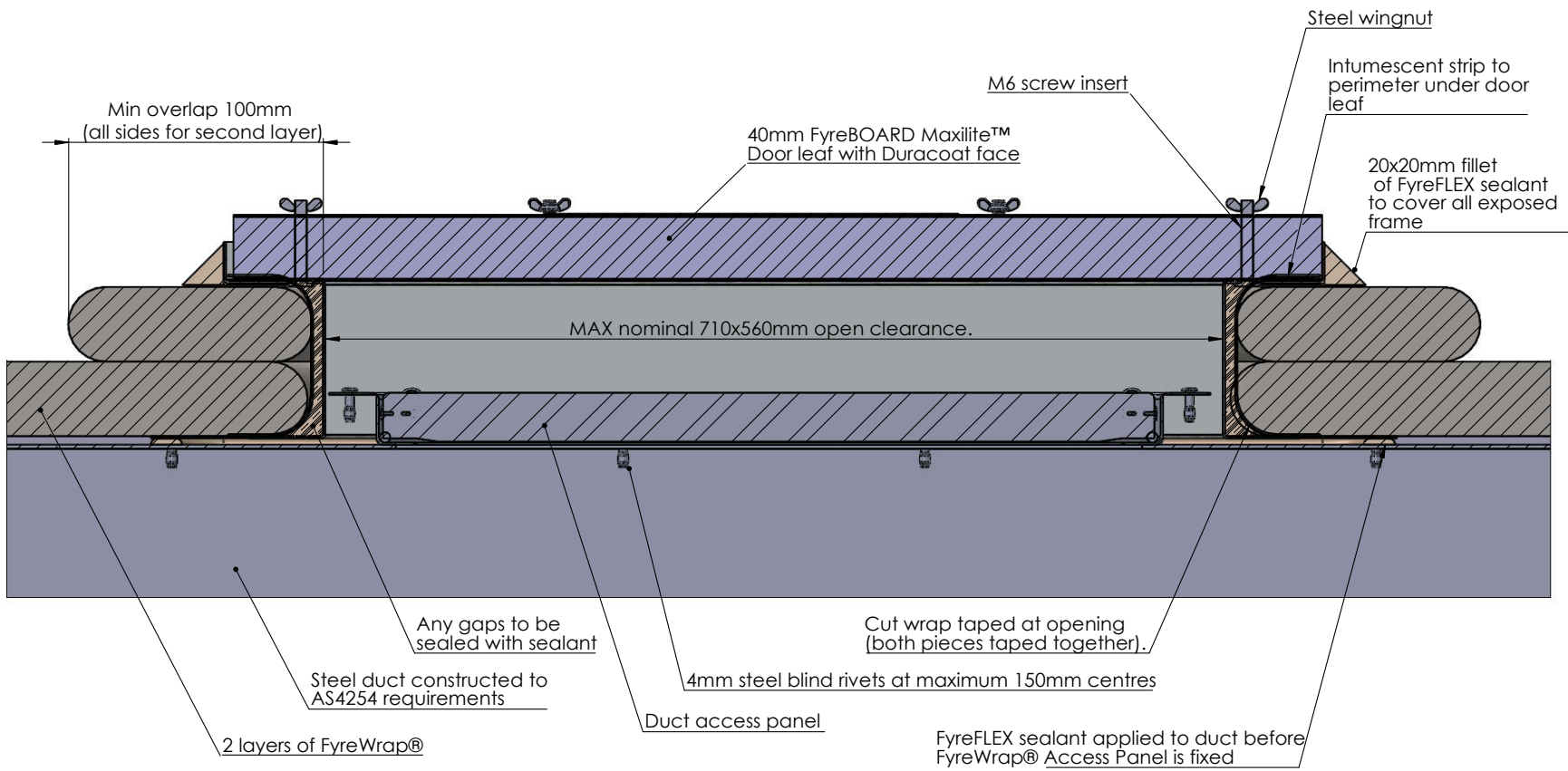
Floor Penetrations - Ducts over 600 x 600mm




<b>Drawing Name:</b> Ducts above 600x600				<b>Test Standard:</b> AS1530.4-2014	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> Floor Penetration Details				<b>Fire resistance level:</b>	<b>Drawn By:</b> JC				<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small>
<b>Drawing No. :</b> 3	<b>Sheet:</b> 3 of 3	<b>Date:</b> 12/10/2020	<b>Scale:</b> NTS	<b>Based on Report No.:</b>	<b>Checked By:</b> CT	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING			

FyreWrap® Access Panel Details

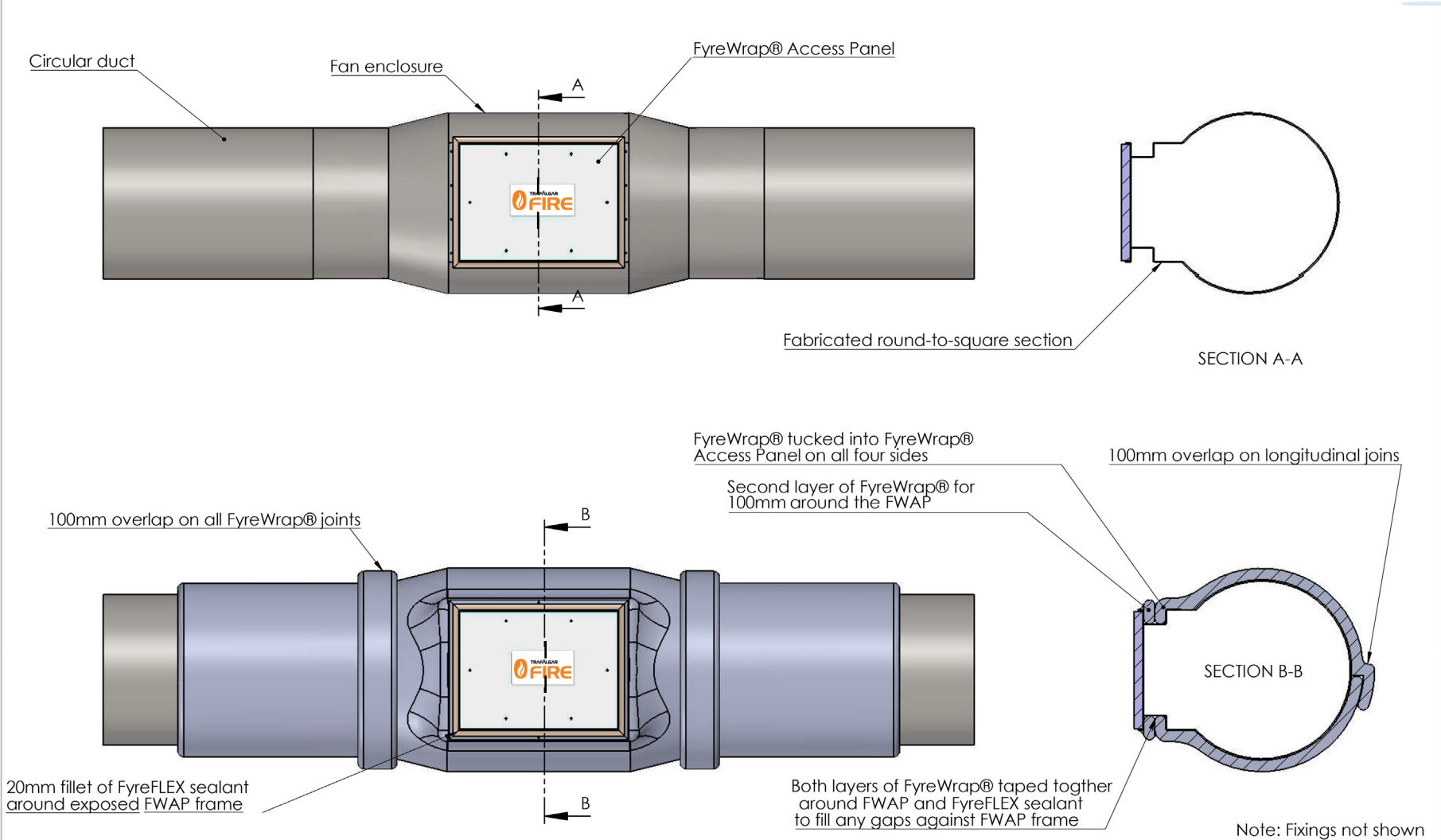
Click here to go back to Contents




NOTE: Maximum FyreWrap® Access Panel size: Nominal 710x560mm open clearance

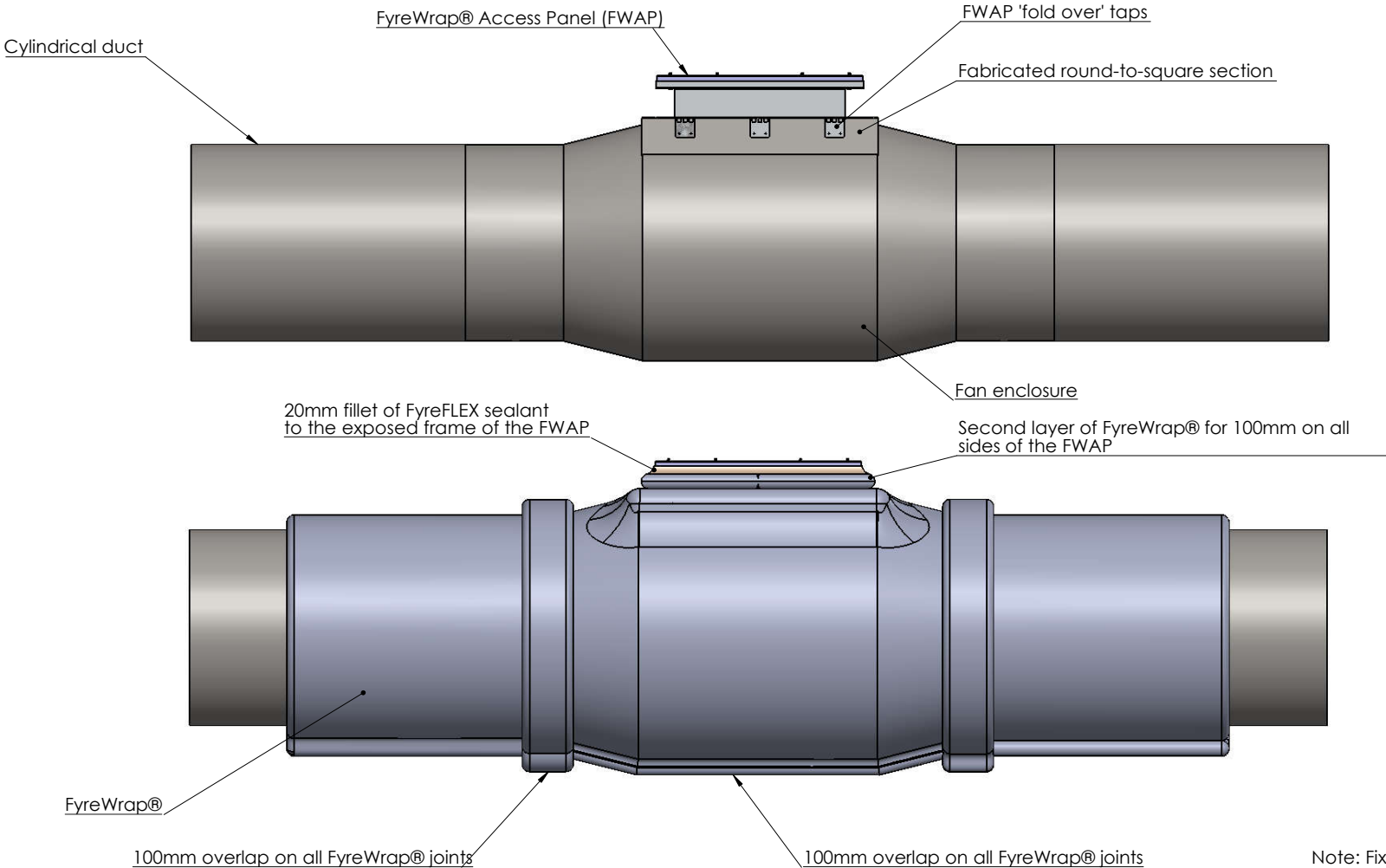
<b>Drawing Name:</b> 2. FWAP MKII				<b>Test Standard:</b> AS1530.4 - 2014	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> FyreWrap® Install Details				<b>Fire resistance level:</b> 120/120/120	<b>Drawn By:</b> JH	<div>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</div> <div></div>			
<b>Drawing No. :</b> 21	<b>Sheet:</b> 21 of 26	<b>Date:</b> 16/11/2016	<b>Scale:</b>	<b>Based on Report No.:</b> FCO 3226	<b>Checked By:</b> CT				

# FyreWrap® Access Panel Fan Enclosure - Front View




<b>Drawing Name:</b> FWAP - fan enclosure front view				<b>Test Standard:</b> AS1530.4	<b>Codes:</b>	<b>Revision:</b> Issued for Install	<b>Date:</b> 13/12/2016	<b>No.:</b> 1	<b>NOTICE:</b>  <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small>
<b>Project Title:</b> FyreWrap® for fan enclosures				<b>Fire resistance level:</b>	<b>Drawn By:</b> JH				
<b>Drawing No. :</b> 2	<b>Sheet:</b> 2 of 2	<b>Date:</b> 13/12/2016	<b>Scale:</b>	<b>Based on Report No.:</b>	<b>Checked By:</b> CT	<input checked="" type="checkbox"/> <b>STANDARD DRAWING</b> <input type="checkbox"/> <b>PROJECT DRAWING</b>			

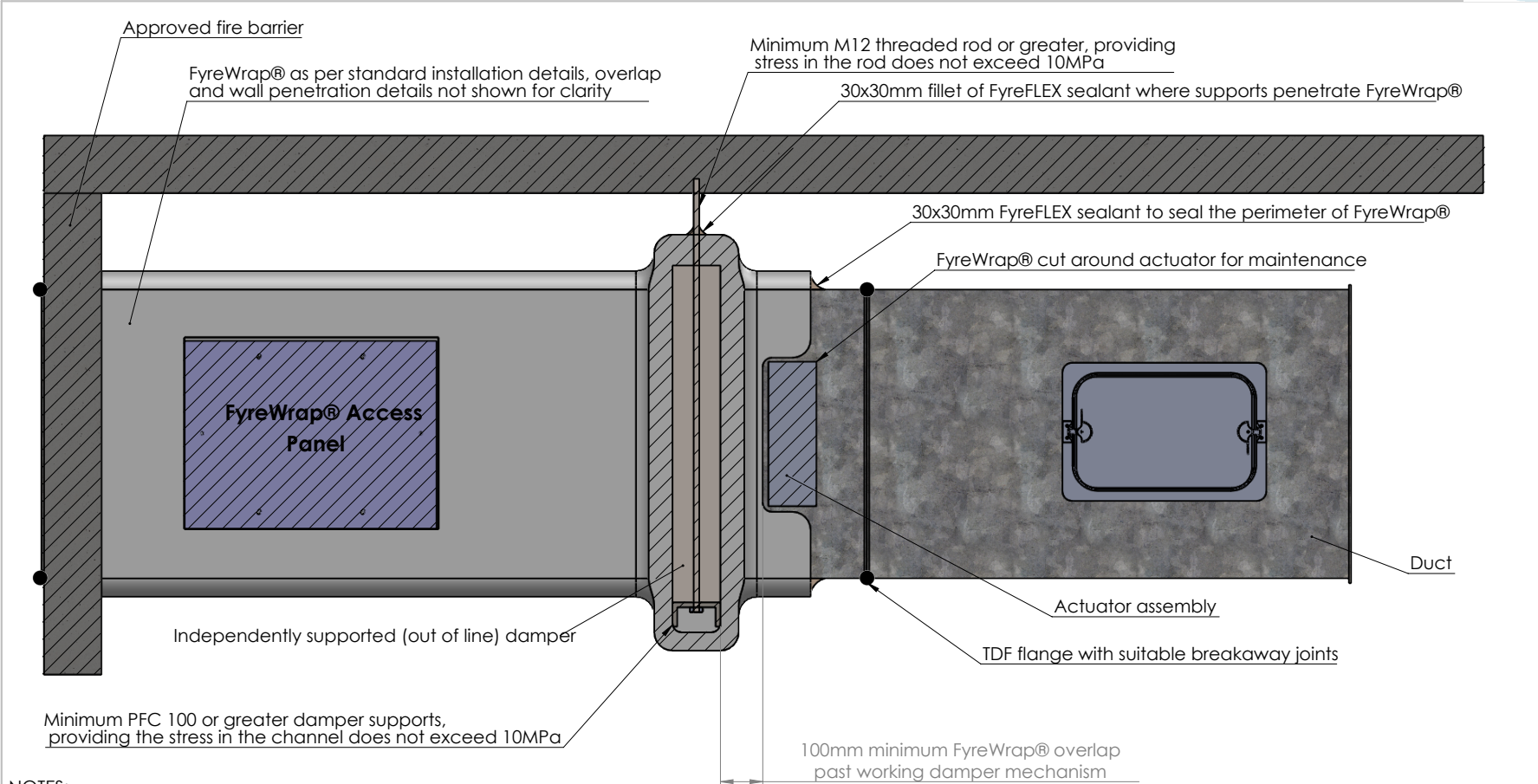
FyreWrap® Access Panel Fan Enclosure - Side View




Note: Fixings not shown

<b>Drawing Name:</b> FWAP - fan enclosure side view				<b>Test Standard:</b> AS1530.4	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b> 13/12/2016	<b>No.:</b> 1	<b>NOTICE:</b> <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> 
<b>Project Title:</b> FyreWrap® for fan enclosures				<b>Fire resistance level:</b>	<b>Drawn By:</b> JH				
<b>Drawing No. :</b> 1	<b>Sheet:</b> 1 of 2	<b>Date:</b> 13/12/2016	<b>Scale:</b>	<b>Based on Report No.:</b>	<b>Checked By:</b> CT	<input checked="" type="checkbox"/> <b>STANDARD DRAWING</b> <input type="checkbox"/> <b>PROJECT DRAWING</b>			

Out of Line Damper

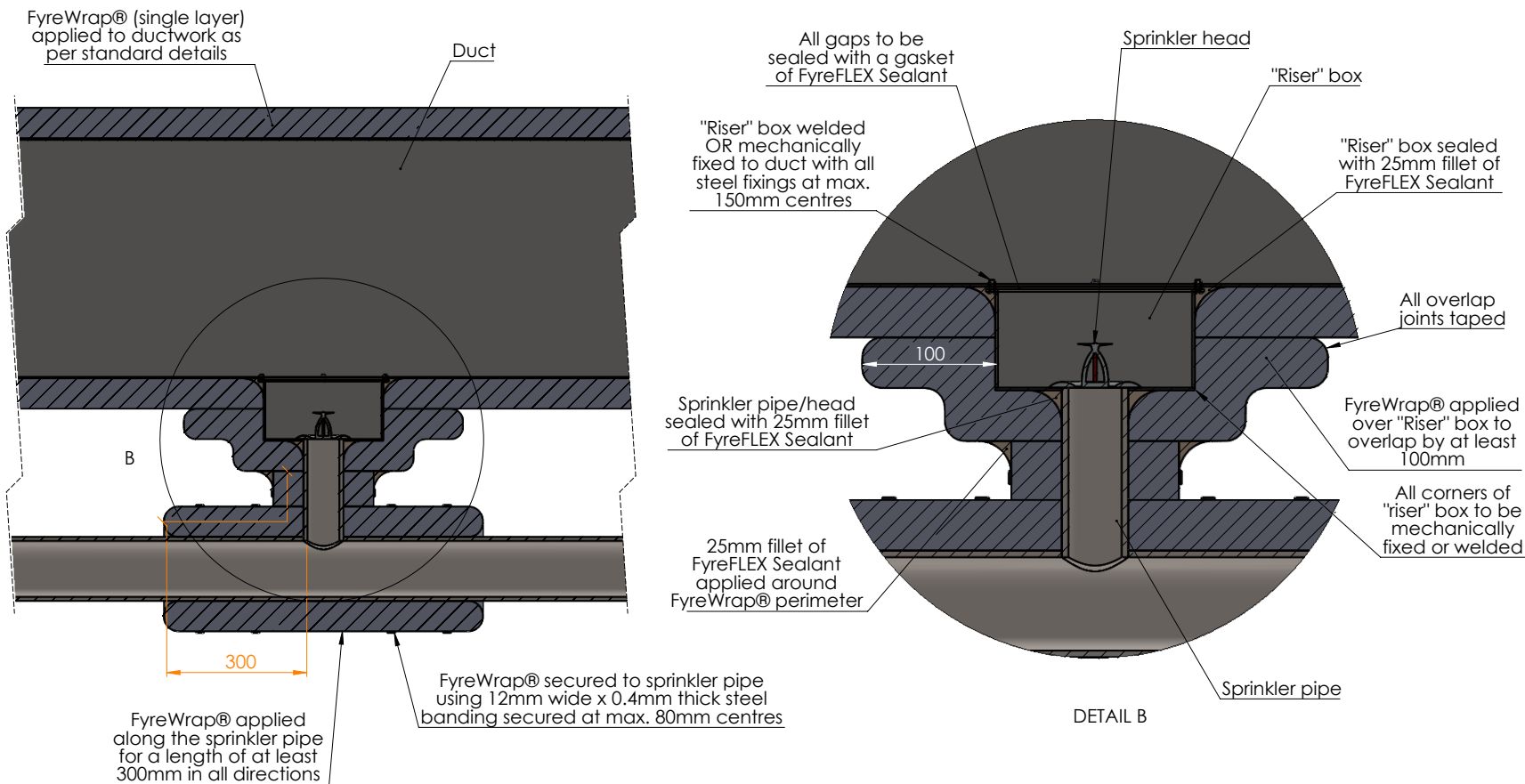



- NOTES:
- FyreWrap® overlaps have not been shown for clarity
  - Dampers to be installed to manufacturers instructions
  - Damper fixings not shown for clarity
  - Adequate fixings of FyreWrap® to be in conjunction with Trafalgar Fire's recommendation of maximum nominal duct size
  - Threaded rod diameters and steel sections MUST NOT exceed the allowable stress limit of 10MPa in accordance with Trafalgar Fire's **BRANZ FAR 2567 report**
  - indicates required location of break-away joints

<b>Drawing Name:</b> Out of line damper install				<b>Test Standard:</b> AS1530.4	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>  <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> 
<b>Project Title:</b> Out of line damper drawings				<b>Fire resistance level:</b>	<b>Drawn By:</b> JH				
<b>Drawing No. :</b>	<b>Sheet:</b>	<b>Date:</b> 12/10/2020	<b>Scale:</b>	<b>Based on Report No.:</b>	<b>Checked By:</b> CT	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING			

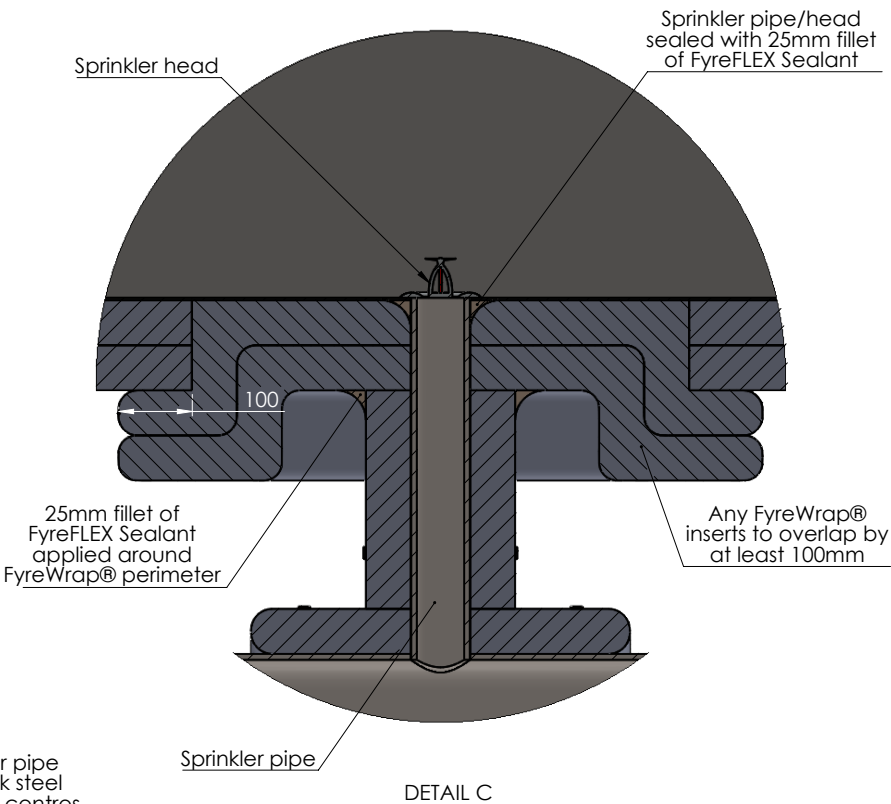
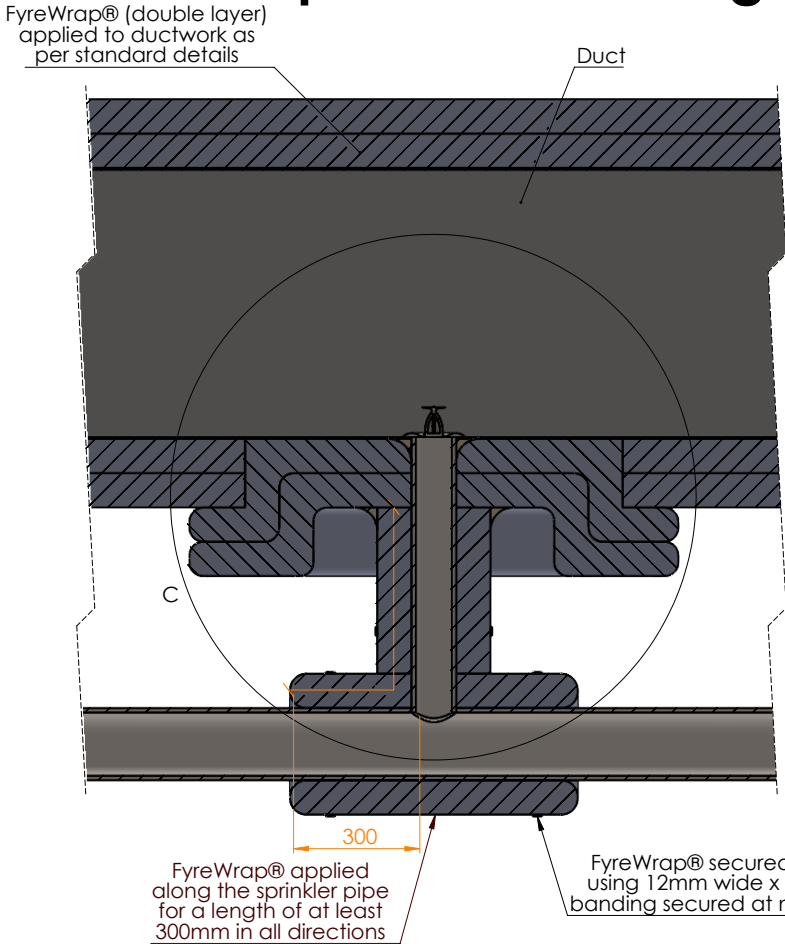


# Sprinkler Head Installed in "Riser" Box - Single Layer



<b>Drawing Name:</b> "Riser" Box - Single				<b>Test Standard:</b> AS1530.4	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> FyreWrap® Sprinkler Penetration				<b>Fire resistance level:</b>	<b>Drawn By:</b> JC				<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> 
<b>Drawing No. :</b> 2	<b>Sheet:</b> 2 of 4	<b>Date:</b> 13/10/2020	<b>Scale:</b> NTS	<b>Based on Report No.:</b>	<b>Checked By:</b> CT	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING			

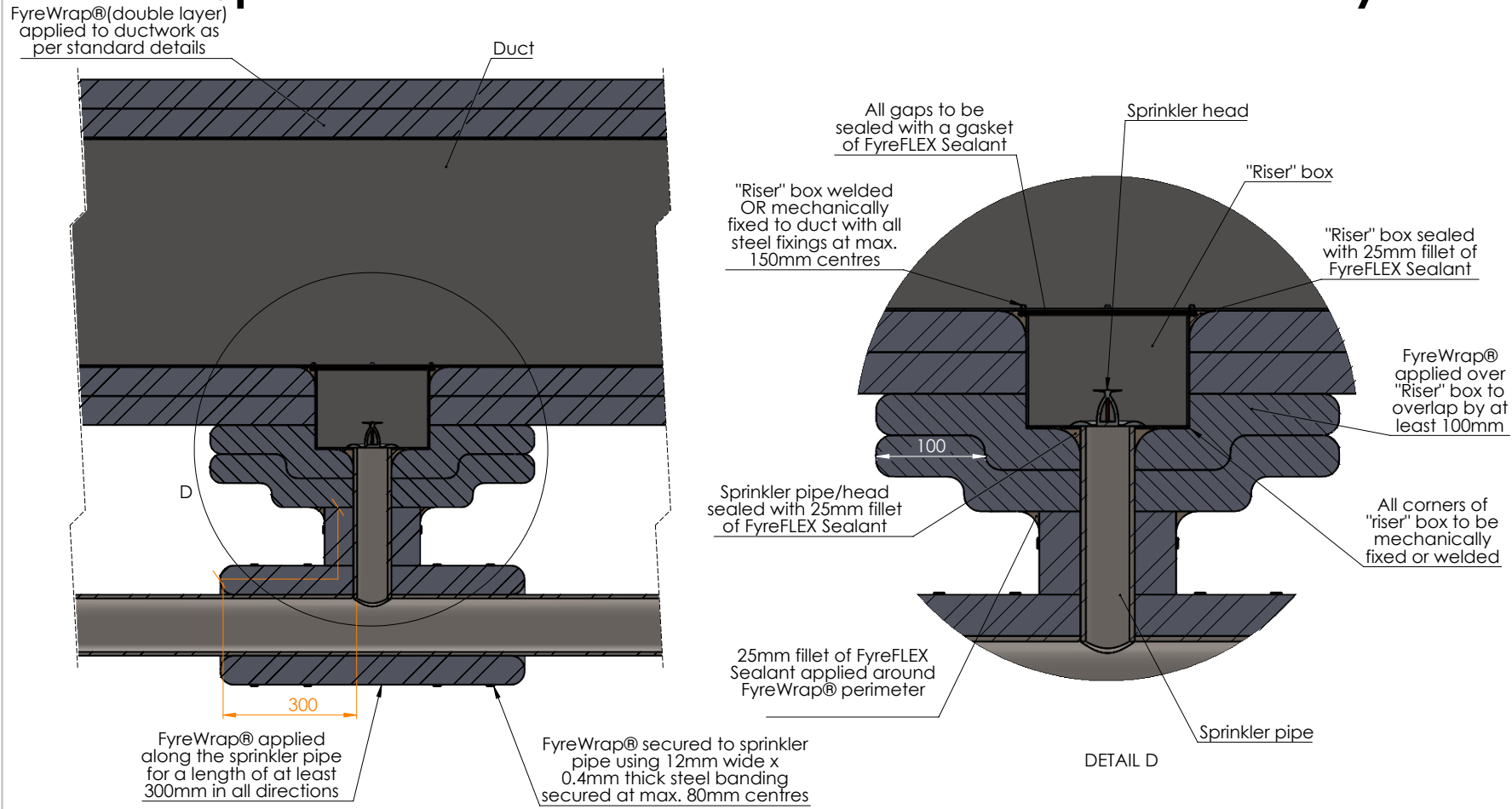
# Sprinkler Head Against Duct Wall - Double Layer




NOTE: Sprinkler head located minimum 50mm from FyreBOARD Maxilite™ strips at the wall penetration

<b>Drawing Name:</b> Head Against Wall - Double				<b>Test Standard:</b> AS1530.4	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>
<b>Project Title:</b> FyreWrap® Sprinkler Penetration				<b>Fire resistance level:</b>	<b>Drawn By:</b> JC	<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small>			
<b>Drawing No. :</b> 3	<b>Sheet:</b> 3 of 4	<b>Date:</b> 12/10/2020	<b>Scale:</b> NTS	<b>Based on Report No.:</b>	<b>Checked By:</b> CT	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING			

# Sprinkler Head Installed in "Riser" Box - Double Layer



NOTE: Sprinkler head located minimum 50mm from FyreBOARD Maxilite™ strips at the wall penetration

<b>Drawing Name:</b> "Riser" Box - Double				<b>Test Standard:</b> AS1530.4	<b>Codes:</b>	<b>Revision:</b>	<b>Date:</b>	<b>No.:</b>	<b>NOTICE:</b>  <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm).</small> 
<b>Project Title:</b> FyreWrap® Sprinkler Penetration				<b>Fire resistance level:</b>	<b>Drawn By:</b> JC				
<b>Drawing No. :</b> 4	<b>Sheet:</b> 4 of 4	<b>Date:</b> 12/10/2020	<b>Scale:</b> NTS	<b>Based on Report No.:</b>	<b>Checked By:</b> CT	<input type="checkbox"/> <b>STANDARD DRAWING</b> <input type="checkbox"/> <b>PROJECT DRAWING</b>			