ENGINEERED FOR SPEED, BUILT FOR COMPLIANCE.

TECHNICAL DATA SHEET

FastWrap-XLS™ Duct Wrap

EDITION: 1
PUBLISHED: MAY 2026

High-performance FRL 120/120/120 fire-rated wrap, 25% lighter for ultra-fast, band-free installation.

AU: 1300 502 677
NZ: 0800 502 677
sales@bossfire.com
www.bossfire.com

CONTENTS

KEY BENEFITS

- **Up to FRL 120/120/120 performance**
- **Internal and external fire scenarios** for horizontal and vertical ducts
- **25% lighter than comparable wrap systems** for faster handling and reduced fatigue
- **Ultra-fast installation** with butt-joint first layer and simplified fixing methodology
- **No banding required**, reducing labour time and install complexity
- **Black foil encapsulation** for clean, exposed ceiling aesthetics
- **Moisture, grease and water-resistant outer layer** to maintain long-term insulation performance
- **Low bio-persistent fibre technology** for safer handling on site
- **Consistent install method for internal and external fire**, reducing errors on site
- **Zero clearance to combustibles**, maximising usable space
- **Ducts up to 3.6m x 3.6m** – offering extremely large variability
- **2, 3 & 4 sided wrap configurations** – ideal for tight access
- **Versatile across HVAC applications** – ventilation, smoke extract, kitchen exhaust, pressurisation systems
- **Wide variety of substrates** - plasterboard & shaftliner walls, concrete and masonry walls, AAC and Speedpanel systems, and concrete floor slabs

1. INTRODUCTION

BOSS FastWrap-XLS™ is a fire-rated blanket specially developed for fire resistant steel duct work.

It is a flexible blanket composed of fibres classified for use with temperatures up to 1200°C which is fully encapsulated with a black reinforced foil to ensure superior aesthetics and safe, easy handling during installation.

The reinforced foil encapsulation prevents water, moisture and grease ingress, ensuring good insulation properties and avoiding the promotion of mould growth.

BOSS FastWrap-XLS™ has a core blanket manufactured using advanced Superwool low bio persistent fibre manufacturing technology. The core blanket features exceptionally low thermal conductivity over other similar fibre insulation systems while meeting fire resistance requirements and reduced handling weight for easier and faster installations.

2. BOSS FASTWRAP-XLS™

BOSS FastWrap-XLS™ is an advanced, ultra-lightweight fire-rated duct wrap engineered to deliver high-performance fire protection without slowing down installation. Designed for steel ductwork across HVAC applications, the system provides up to 120 minutes fire resistance while maintaining exceptional thermal insulation performance. Its low bio-persistent fibre core and fully encapsulated black foil outer layer ensure safe handling, durability, and a clean aesthetic finish for exposed services.

Unlike traditional wrap systems, **FastWrap-XLS™** simplifies installation with a no-banding requirement, butt-joint first layer and identical internal and external fire detailing—helping contractors install faster, reduce labour costs and minimise risk on site. With proven compliance to AS1530.4 and AS4072.1, it delivers a practical, high-performance solution for modern construction where speed, compliance and buildability matter.

3. APPLICATIONS

- Supply Air Ducts
- Pressurisation Ducts
- Smoke Extraction / Exhaust Ducts
- Carpark Exhaust Ducts
- Kitchen Exhaust Ducts
- Steel Ducts requiring fire separation
- Residential & Hotel Buildings
- Industrial & Infrastructure Projects
- Hospitals & Aged Care

Table 1. – Physical Specification

Thickness	38 mm	
Length	7320 mm	
Roll Width(s)	610 mm	1220 mm
Roll Weight(s)	11.88 kg	23.75kg
Weight:	4.65 m²	9.30 m²
Density	70 kg/m3	
R Value (@ 24°C)	6.5 per layer, ASTM c518	
Microbial Resistance	Validated, ASTM C1338	
Low VOC	Validated, CA Section 01350	

4. APPROVED SCENARIOS

BOSS-FastWrap-XLS™ has extensive fire test approvals including AS1530.4: 2014, and AS4072.1-2005 offering up to FRL 120/120/120.

As per the designated categories of internal and external fire exposure locations defined in AS1530.4-2014, the **BOSS FastWrap-XLS™** achieves the following:

Australian Standards – AS 1530.4 - 2012		
Horizontal Duct - Internal Fire	2 layers, Second layer 2 to 4.2m length*	**FRL 120/120/120**
Horizontal Duct - External Fire	2 layers, entire length of duct	**FRL 120/120/60**
Vertical Duct - Internal Fire	2 layers, entire length of duct	**FRL 120/120/120**
Vertical Duct - External Fire	2 layers, entire length of duct	**FRL 120/120/60**

*Second layer length is dependent on duct size.

5. FRL APPLICATION

Whilst AS1530.4 defines the testing procedures for internal and external testing, neither AS1530.4 or AS4072.1 directly mandate which areas of a building (i.e. kitchen exhaust, smoke exhaust, stair pressurization etc) require internal or external duct protection. BOSS recommends you confirm the requirements of protection with your project's certifier or relevant certification body.

6. REQUIRED FIXINGS

Component	Minimum Size/Requirement	Application
Aluminum Foil tape	96mm wide	**Over joints only**
Welded Steel pins	38mm head x 2.7mm diameter. Length relative to wrap thickness	**200mm centers and 100mm from flanges or joins.**
Sealant	BOSS FireSilicone-EMA™	**To fill 10mm annular gap to substrate.**

7. TESTED SUBSTRATES

Supporting construction for duct penetrations through the following substrates and their minimum thicknesses are listed below :

- 130mm Hollow and solid masonry walls
- 116mm thick plasterboard walls
- 90mm thick Shaft liner walls
- 78mm Speedpanel walls
- 75mm AAC (Hebel) walls
- 150mm concrete floors

The above list is required to have an established FRL of 120/120/120 and the aperture required relative to maximum annular gap listed in tables 4 – 7.

TABLE 4. HORIZONTAL DUCT - INTERNAL FIRE – 120/120/120

Duct Width (mm)	Duct Height (mm)	Minimum Annular gap (mm)	Maximum Annular gap (mm)	Second of layer of wrap	Third Layer of wrap
600	600	20	35	2000	250
600	900	20	35	2100	250
600	1200	20	35	2200	250
900	900	20	35	2300	250
600	1800	30	45	2400	350
900	1200	20	35	2500	350
1200	1000	20	35	2600	350
600	2400	35	50	2600	350
1200	1200	20	35	2600	350
900	1800	30	45	2700	350
600	3000	40	55	2700	450
600	3600	45	60	2800	450
900	2400	35	50	2800	450
1200	1800	30	45	2900	450
900	3000	40	55	3000	450
1200	2400	35	50	3100	450
900	3600	45	60	3100	450
1800	1800	30	45	3200	450
1200	3000	40	55	3200	450
1200	3600	45	60	3300	450
1800	2400	35	50	3400	450
1800	3000	40	55	3500	450
2400	2400	40	50	3600	450
1800	3600	45	60	3700	450
2400	3000	40	55	3800	450
2400	3600	45	60	3900	450
3000	3000	50	55	4000	450
3000	3600	50	60	4100	450
3600	3600	60	60	4200	450

TABLE 5. VERTICAL DUCT - INTERNAL FIRE – 120/120/120

Duct Width (mm)	Duct Height (mm)	Minimum Annular gap (mm)	Maximum Annular gap (mm)	Second of layer of wrap	Third Layer of wrap
600	600	20	35	Entire Length of duct	250
600	900	20	35		250
600	1200	20	35		250
900	900	20	35		250
600	1800	30	45		350
900	1200	20	35		350
1200	1000	20	35		350
600	2400	35	50		350
1200	1200	20	35		350
900	1800	30	45		350
600	3000	40	55		450
600	3600	45	60		450
900	2400	35	50		450
1200	1800	30	45		450
900	3000	40	55		450
1200	2400	35	50		450
900	3600	45	60		450
1800	1800	30	45		450
1200	3000	40	55		450
1200	3600	45	60		450
1800	2400	35	50		450
1800	3000	40	55		450
2400	2400	40	50		450
1800	3600	45	60		450
2400	3000	40	55		450
2400	3600	45	60		450
3000	3000	50	55		450
3000	3600	50	60		450
3600	3600	60	60		450

TABLE 6. HORIZONTAL & VERTICAL DUCT – EXTERNAL FIRE – 120/120/60

Duct Width (mm)	Duct Height (mm)	Minimum Annular gap (mm)	Maximum Annular gap (mm)	Second of layer of wrap	Third Layer of wrap
600	600	20	35	Entire Length of duct	150
600	900	20	35		150
600	1200	20	35		150
900	900	20	35		150
600	1800	30	45		150
900	1200	20	35		150
1200	1000	20	35		150
600	2400	35	50		150
1200	1200	20	35		150
900	1800	30	45		150
600	3000	40	55		150
900	2400	35	50		150
1200	1800	30	45		150
900	3000	40	55		150
1200	2400	35	50		150
1800	1800	30	45		150
1200	3000	40	55		150
1800	2400	35	50		150
1800	3000	40	55		150
2400	2400	40	50		150
2400	3000	40	55		150
3000	3000	50	55		150
3000	3600	50	60		150
3600	3600	60	60		150

TABLE 7. HORIZONTAL & VERTICAL DUCT – EXTERNAL & INTERNAL FIRE – 120/120/60

Duct Width (mm)	Duct Height (mm)	Minimum Annular gap (mm)	Maximum Annular gap (mm)	Second of layer of wrap	Third Layer of wrap
600	600	20	35	Entire Length of duct	150
600	900	20	35		150
600	1200	20	35		150
900	900	20	35		150
600	1800	30	45		150
900	1200	20	35		150
1200	1000	20	35		150
600	2400	35	50		150
1200	1200	20	35		150
900	1800	30	45		150
600	3000	40	55		150
900	2400	35	50		150
1200	1800	30	45		150
900	3000	40	55		150
1200	2400	35	50		150
1800	1800	30	45		150
1200	3000	40	55		150
1800	2400	35	50		150
1800	3000	40	55		150
2400	2400	40	50		150
2400	3000	40	55		150
3000	3000	50	55		150
3000	3600	50	60		150
3600	3600	60	60		150

8. HANGER AND DUCTWORK DETAILS

BOSS-FastWrap-XLS™ has been tested with the below details as standard duct construction requirements constructed in accordance with AS4252-2012. The specification may vary depending on the size of the duct and the expected fire performance.

8.A RECTANGULAR DUCT (VENTILATION AND SMOKE EXHAUST DUCT)

Duct width (mm)	Duct Height (mm)	Duct Steel thickness (mm)	Stiffeners		Hanger rods per bearer	Hanger rods minimum diameter
			Intermediate (Note 2)	Internal		
700	700	1.0	As per 4254.2-2012	Penetration seal only	2	10
1250	1250	1.0		One x 12mm	2	12
2000	1000	1.0		One x 12mm	2	16
2000	2000	1.0		One x 12mm	2	16
3000	1600	1.2		Two x 12mm	3	18
3000	3000	1.2		Two x 12mm	3	18

Note: Maximum permitted duct section length = 1230mm

Note 2: Intermediate stiffer at the midpoint of the penetration seal only. Stiffeners required at penetration seal and at 1000mm centres.

Note 3: For details on duct hanger rod size, hanger space, support rods, trapezes and fixings to the structure shall be as per table 2, CSIRO FCO-3589

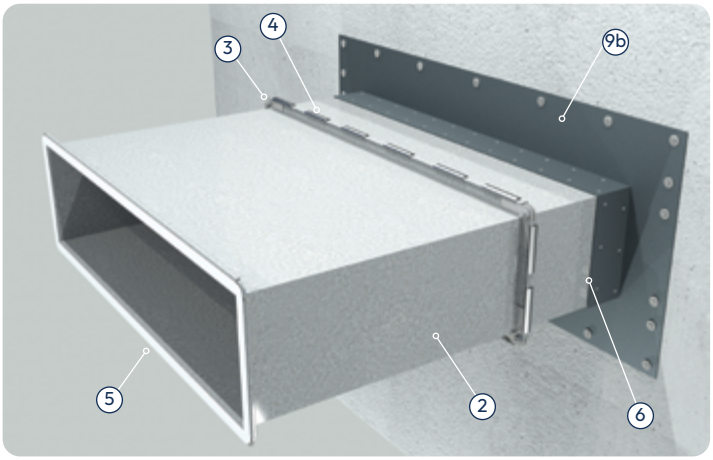
8.B CIRCULAR DUCT

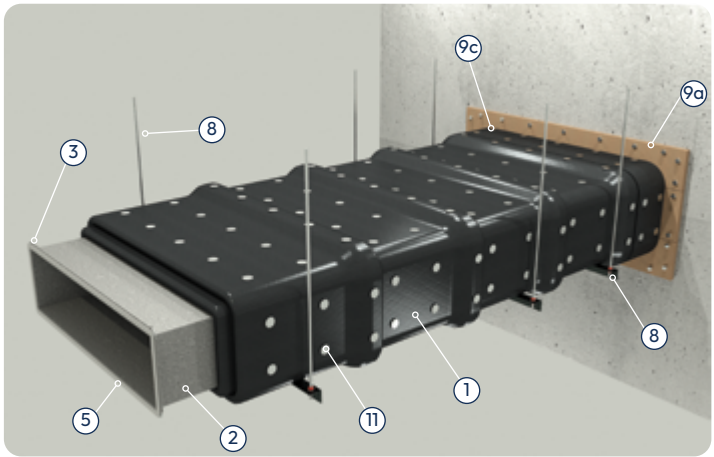
Duct width (mm)	Duct Height (mm)	Duct Steel thickness (mm)	Stiffeners		Hanger rods per bearer	Hanger rods minimum diameter
			Intermediate (Note 2)	Internal		
400	1.0	1.0	As per 4254.2-2012	Nil	2	10
800	1.0	1.0		Nil	2	10
1250	1.0	1.0		1 N0 x 12mm diameter	2	12

Note: For details on duct hanger rod size, hanger space, support rods, trapezes and fixings to the structure shall be as per table 2, CSIRO FCO-3589

9. INSTALLATION

Item		Description
1	Insulation	One or Two layers of 38mm thickness BOSS FastWrap-XLS™.
2	Steel Ductwork	Steel duct constructed to AS 4254.2-2012 with galvanised sheet metal. Duct with external fire exposure only. Minimum 0.8mm BMT and designed for pressure class of at 750Pa or above. Duct with internal fire exposure only. Minimum 1mm BMT and designed for pressure class of at 1000Pa or above. Duct with internal and external fire exposure. Minimum 1mm BMT and designed for pressure class of at 1000Pa or above.
3	Steel Flanges/ Corner Sections	Slip on flange 40mm manufactured from 1mm BMT steel, fixed to duct by spot welding or by use of blind steel rivets, at nominal 100mm centres. Steel flange corner sections to suit 40mm flanges.
4	Flange Clamps	M8 Bolts & Nuts at each corner of the flange. J-Cleats at maximum 150mm centres for ventilation & Smoke extract ducts, at maximum 100mm centres for kitchen extract/grease ducts.
5	Flange Sealant or Gasket	All flange connections and corners are sealed using BOSS approved silicone sealant (refer to Item 6).
6	Sealant	Alternatively, 20mm x 3mm Butyl tape or Superwool Plus paper self-adhesive gasket 30mm x 6mm.
7	Internal Stiffener	BOSS FireSilicone EMA
8	Duct Supports	M10 or M12 threaded rod with 100mm x 100mm x 1.2mm steel plate washer at either end and to inside and outside faces of the steel duct, fixed with nuts to either side and locked in place.
9	Penetration Seal Collars	Suitable for lightweight partitions or masonry walls, sealed using fire rated plasterboard, Steel angle 100mm x 125mm, One layer of BOSS FastWrap-XLS™ blanket.
10	Annular Gap	Tightly pack the annular gap with strips of BOSS FastWrap-XLS™, and seal up on both faces using one of the methods detailed in (Item 9) above.
11	Welded Pins	Minimum 38mm head x 2.7mm diameter mild steel Capacitive Discharge weld cup head pins with spring washers fixed in a grid of nominal 200mm centres, and located at maximum 100mm from all wrap joints

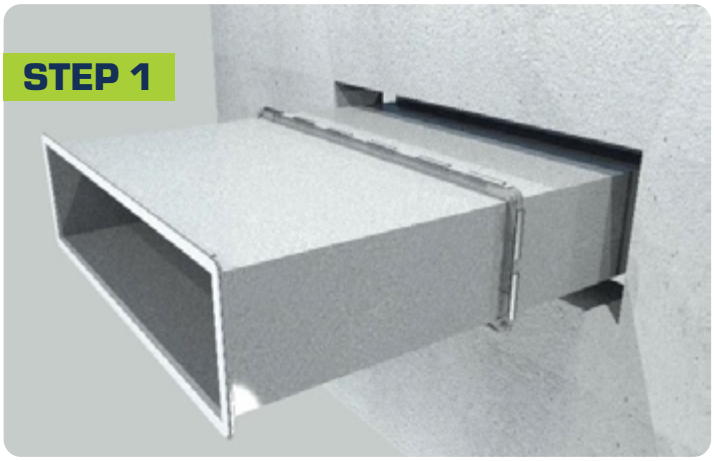




ADDITIONAL INSTALLATION EQUIPMENT AND CONSUMABLES

- Capacitive Discharge Gun/Welder and Cup Head Pins (to suit various thicknesses)
- Aluminium Black Foil Tape (to seal cut edges)
- Sharpe Knife or Utility Blade
- Steel Rivets and Screws (appropriate type for substrate)
- Cordless Drill
- Rivet Gun
- Personal Protective Equipment (PPE) - Safety Glasses, Gloves, Respirators, etc.
- Caulking Gun
- Spatula or blade for smoothing

STEP BY STEP INSTALL



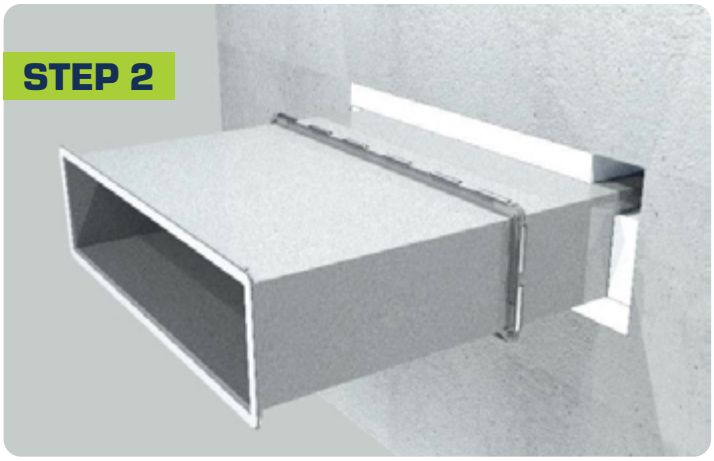
Steel Duct Installation

Install the steel duct through the substrate/wall penetration and onto the hanger support and bearer system.

Ensure the steel duct is installed in accordance with AS4254.1

Note: Unprotected hangers should not exceed 1500 mm in length.

The substrate, wall or floor, should have a fire resistance equal to or greater than that of the duct system. Hanger supports should be within 500 mm on either side of the compartment wall.



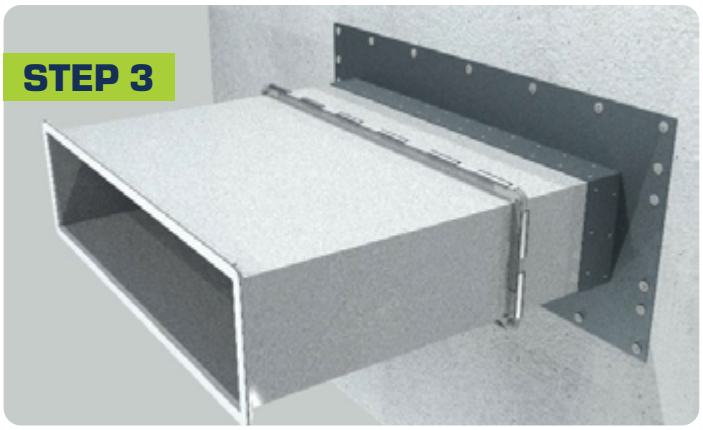
Annular Gap

Annular gap minimum and maximum as per tables 4-7 in the technical data sheet.

Pack the annular gap with compressed unfoiled contents BOSS FastWrap-XLS™ Blanket strips.

BOSS FastWrap-XLS™ must be tightly compressed into the annular space between the duct and substrate, recessed 10 mm back from the face of the substrate.

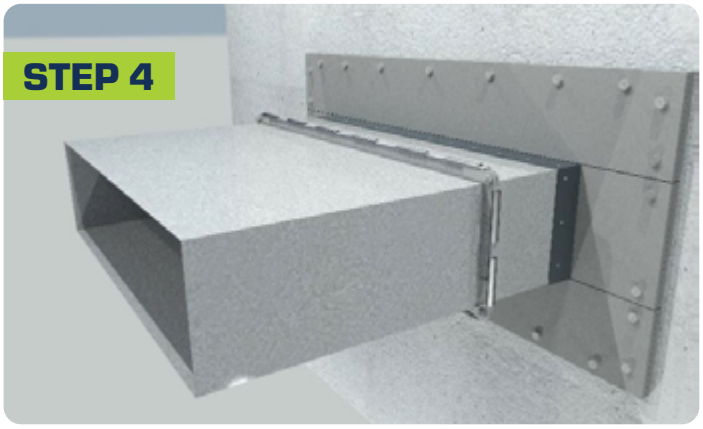
BOSS FireSilicone-EMA™ should be applied to fill this 10 mm depth and finished flush with the wall or floor.



Seal Penetration with Steel Angle

After the annular gap is sealed, install a 2mm-thick Steel Angle, 100mm x 125mm.

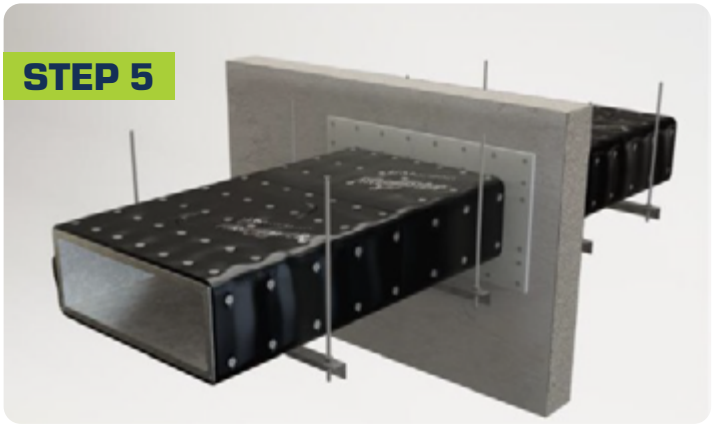
Fix the 100 mm angle width to the duct with steel blind rivets at nominal 100mm centres and fix the 125mm angle width with a minimum 45mm-deep substrate or manufacturer-approved fixings at maximum 150mm centres.



Apply Fire rated plasterboard

Apply two layers of minimum 13mm thick Fire Rated plasterboard, fixed to the wall with an overlap/pattress of 150mm, using all steel fixings at nominal 200mm centres,

Fixings have a minimum penetration of 45mm through the steel angle and into the substrate.



Apply First Layer

Apply the first layer of BOSS FastWrap-XLS™ around the duct, ensuring each end of the FastWrap meets end to end in a butt joint.

Use aluminium foil tape on the FastWrap-XLS™ to hold the wrap in place while pinning is in progress.

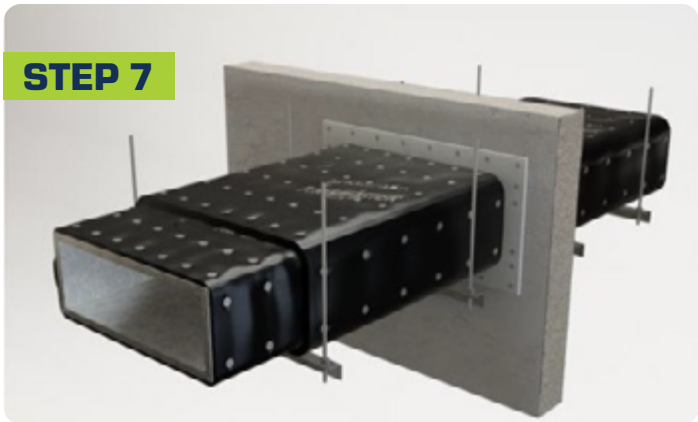
Secure the first layer with steel cup head pins by welding directly through the duct wrap, using pins of the appropriate length.

Note: Ensure pins have pointed tips to aid penetration through the foil facing and to ensure a secure weld.

Pinning Arrangement

Steel cup head anchors are installed on a 200 mm x 200 mm grid.

Pins shall be installed at a nominal distance of 100 mm from the duct or blanket edges. (insert a 200 x 200mm and 10mm form edge dimensions on the photo)

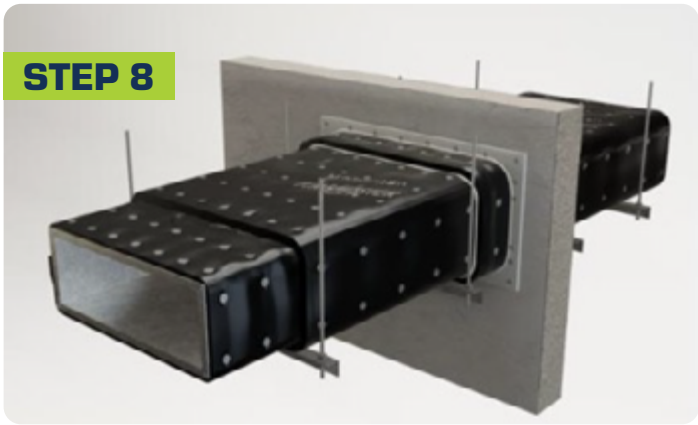


Apply Second layer

Apply the second layer of BOSS FastWrap-XLS™ over the previous layer. Each section of duct wrap on this second layer should overlap the previous one by 100mm.

Pin the second and if required, third layer of BOSS FastWrap-XLS™, as per Step 6, taking care to offset the pin by 100mm to avoid colliding with the pins in the first layer. Note: Refer to table 4 – 7 for the distance along the duct of the second and third layer, where required.

For overlapping detail drawings referring to CSIRO FCO-3589



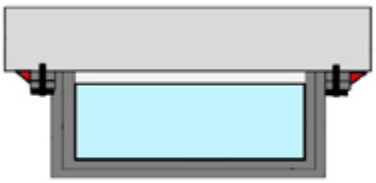
Apply Final Layer

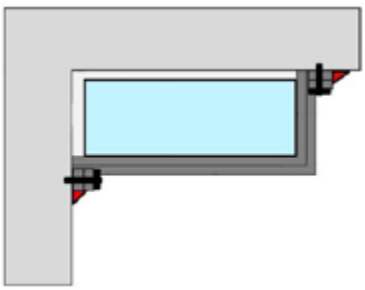
Apply the final layer (collar) of duct wrap to be installed against the face of the wall 250mm to 450mm wide and pinned as per Step 7.

Refer to table 4 – 7 for guidance on the final layer wrap width.

For overlapping detail drawings referring to CSIRO FCO-3589

2 & 3 SIDED INSTALL





Additional install (all of the above steps apply)

Make sure the adjoining floors and or walls have an equal FRL as of that to the BOSS FastWrap-XLS™ and are non-combustible.

Maximum clearance from floor and or wall is a maximum of 80mm with the wrap fixed to the wall with a 50 x 2mm flat steel bar, bolted to the floor with a minimum M6 x 100mm or 14g x 100mm screws at 300mm centres.

Edges of the wrap sealed with BOSS FireSilicone-EMA™ in a 30 x 30mm fillet.

APPENDIX A - CIRCULAR DUCTS

The application of the BOSS FastWrap-XLS™ wrap to circular ducts is the same principal as for square or rectangular ducts. The use of spiral wound cold formed rolled steel ducts are permitted.

CIRCULAR DUCT

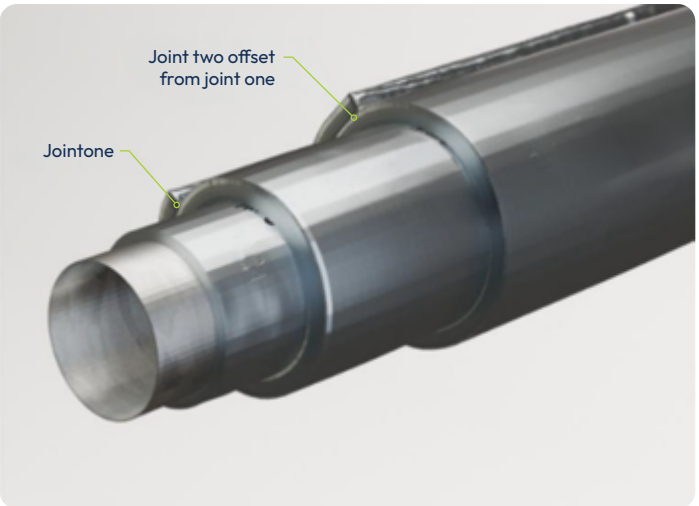
The BOSS FastWrap-XLS™ overlaps itself each layer should be offset minimum 1/4 diameter of the duct from the preceding layer.

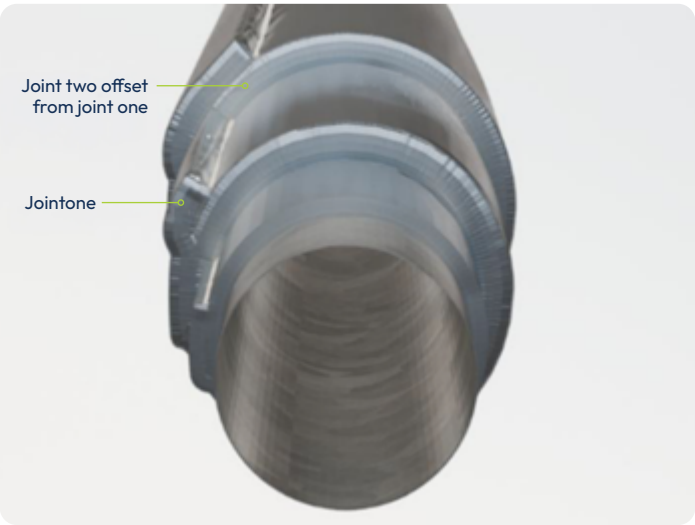
1. Place the BOSS FastWrap-XLS™ onto the duct using aluminium foil tape on the blanket to hold the wrap in place.
2. All joints between each blanket piece are tightly compressed with a 20mm compression and butted together, except for those on the second layer, which should overlap by at least 100mm.

WRAP JOINT OFFSET DETAILS

3. Joints between blankets formed by the blanket width within each layer fitted to the duct are offset by a minimum of 300mm from those in the layer above or beneath.
4. The use of aluminium foil tape is recommended to hold the blanket layers in place until cup head pins and washers are welded in place once the final layer of blanket is installed.
5. Apply first layer of 38mm BOSS FastWrap-XLS™ with tightly abutting joints between adjacent blankets and with a minimum 100mm overlap.
   (For overlapping detail drawings referring to CSIRO FCO-3589)
6. Apply second layer of 38mm blanket with the butt joints staggered a minimum of 300mm from the first layer. All joints between adjacent blankets and along the longitudinal joint to overlap minimum 100mm.

The Final layer is to be pinned into position using steel cup head anchor pins to fix the outer layer of blanket to the steel duct. The anchor pins are installed at a grid formed at 200mm centres along the length of the circular duct and at 200mm centres following the circumference of the duct. Pins shall be installed at a maximum distance of 100mm from the flanges or joining ends of each duct section and/or from the





10. HEALTH AND SAFETY

To learn more about the safe handling of BOSS FastWrap-XLS™, see the Safety Data Sheet available at bossfire.com

11. IS THIS PUBLICATION CURRENT?

This document may be superseded by new versions. If you are unsure of whether or not this document is a current publication, please contact us. **AU:** 1300 502 677 **NZ:** 0800 502 677 **Int:** +61 2 9524 4040 **Email:** info@bossfire.com

12. LIMITATION

BOSS Passive Fire Pty Ltd has provided the above technical information in good faith and to the best of its knowledge. This information was deemed to be correct at the time of publication. Should any data come to BOSS Passive Fire's attention relating to the fire resistance or performance of the product described BOSS Passive Fire reserve the right to amend this report.

BOSS Passive Fire strive to constantly improve and develop products so this information may change without notice.

The information contained herein has been developed as a guide only and it does not constitute a guarantee of compliance of all applications. Each project and/or application may have specific requirements and you should investigate these carefully. Ensure that you have read and understood the appropriate certification relative to your needs, and ensure you seek acceptance from the Certifying Authority or compliance inspector before installation. For updates on the range of BOSS Fire® certification please contact BOSS Technical Services. **AU:** 1300 502 677 **NZ:** 0800 502 677 **Int:** +61 2 9524 4040 **Email:** info@bossfire.com

BOSS

Further Information

For additional technical information on the performance of **FireMastic-300**™, other **BOSS Fire**® products or any other BOSS Fire® related information please contact us on:

AU: 1300 502 677
NZ: 0800 502 677

sales@bossfire.com
www.bossfire.com