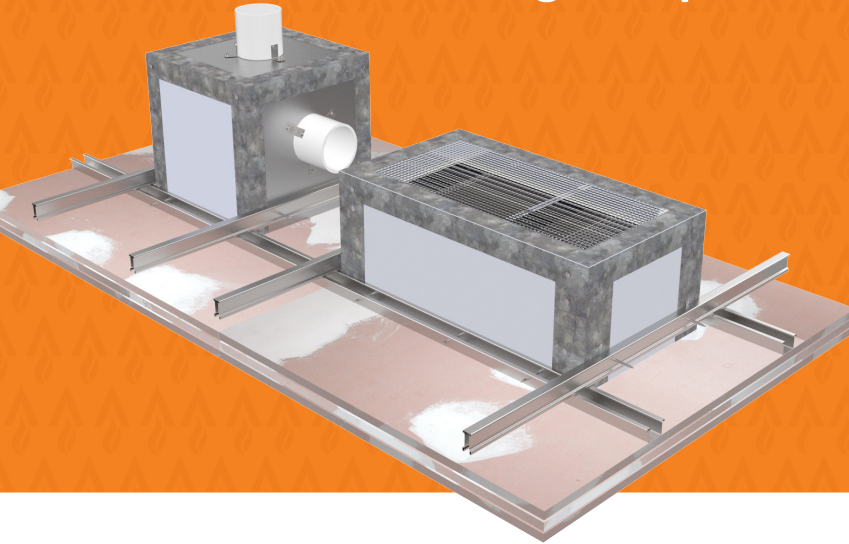


FyreDAMPER

Intumescent Ceiling Dampers



Ceiling dampers are critical in buildings to allow the movement of air whilst maintaining the required fire separation required by the National Construction Code. Trafalgar are proud to have tested ceiling mounted dampers to AS1530.4: 2014 in plasterboard ceilings to provide compliant solutions up to 2 hour fire ratings.



KEY FEATURES

- Steel or timber framing
- Meets the RISF criteria for ceilings
- Testing to AS1530.4-2014
- Approved for Fire Rated Plasterboard Ceilings
- FRL's up to-/120/120 with 60 min. RISF
- Australian made quality

APPLICATIONS

- Bathroom fan exhausts
- Small return air grilles
- Connection to flexi duct
- Ceiling mounted speakers and other openings
- Downlights

TRADES



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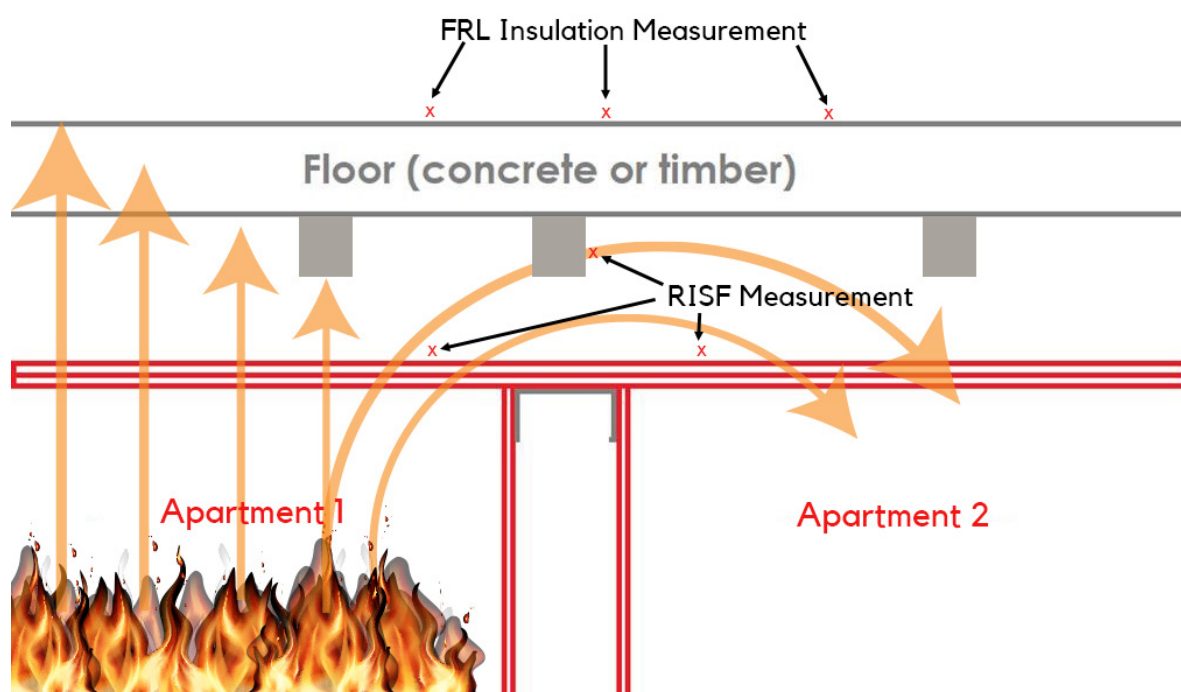
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FyreDAMPER

Intumescent Ceiling Dampers

What are Ceiling Mounted Dampers?

Fire rated ceilings are an integral part of buildings in order to restrict the spread of fire from one compartment to another where walls are not extended to the floor above, whether it be through a floor-ceiling or a roof-ceiling cavity. The NCC calls up ceilings with the resistance to incipient spread of fire (RISF) in many applications.



It is important to note that the RISF is an additional requirement to the FRL for ceiling applications.

Ceiling dampers are critical in buildings to allow the movement of air whilst maintaining the required fire separation required by the NCC. Fire rated ceilings consist of very thin plasterboard barriers that are quite difficult to penetrate whilst maintaining the fire rating. To combat this issue, our ceiling damper systems are mounted inside of a lightweight FyreBOARD Maxilite enclosure that is mounted into the ceiling framing, that can sit on top of any ceiling mounted fan/lighting unit. When exposed to fire, the damper cell will close off and prevent the spread of fire and restoring the FRL of a building element in which a penetration has been made to permit ventilation air.

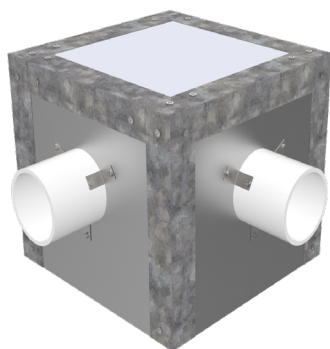
Fire rated plasterboards have traditionally been used as a fire barrier for ceilings and Trafalgar are proud to have tested ceiling mounted dampers to AS1530.4: 2014, providing compliant solutions for up to 2 hour fire ratings.

PRODUCT BENEFITS

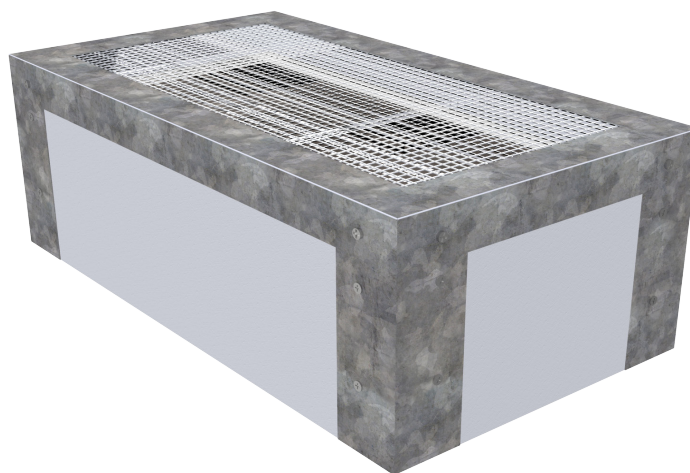
FyreDAMPER: Ceiling Plenum Box and Ceiling Spigot

The Ceiling Plenum Box and Ceiling Spigot damper systems are constructed from FyreBOARD Maxilite. The Ceiling Plenum Box being manufactured with an open air grille for cushion box installation and the Ceiling Spigot produced with a spigot to connect to flexi duct exhaust. A key advantage of this configuration is that Maxilite is a lightweight, high performance fire rated board which will minimise weight in comparison to other fire ceiling damper systems. Maxilite is stable under high temperature stress and remains strong and crack free, even when exposed to fully developed fires. This is another key characteristic to ensure the damper remains in place within the Maxilite board which is critical to allow unimpeded function of the damper.

The FyreDAMPER configurations are approved for use in fire rated plasterboard ceilings providing up to -/120/120 FRL, including up to 60 minute RISF..



FyreDAMPER Ceiling Spigot



FyreDAMPER Ceiling Plenum Box

FyreDAMPER

Fire Rating – How is fire performance measured?

An FRL (fire resistance level) is a handy way of summarising the performance of a building element. It consists of 3 numbers, all given in minutes:

FRL 120/120/120

(example)



Structural Adequacy

The ability of the building element to support the weight of adjacent building elements.

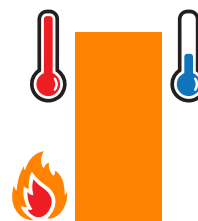
ie: a brick wall supporting a concrete floor slab above.



Integrity

The ability of an element to prevent the passage of flames and hot gasses.

ie: a plasterboard wall remaining intact and not allowing holes to form.



Insulation

The ability of an element to resist heat transfer from the exposed face to the unexposed face.

ie: a bundle of cables remaining below a set temperature limit on the unexposed side of the wall penetration system.

Note: Service penetrations such as ceiling mounted dampers are not required to have a Structural Adequacy rating and is therefore usually expressed as a dash. For example, a ceiling mounted damper installed in a 2-hour fire rated ceiling would be written as -/120/120

Integrity

The Ceiling Plenum Box and Ceiling Spigot mounted damper can achieve integrity performance of up to 2 hours, physically stopping the direct spread of fire depending on the ceiling system.

Insulation (Temperature Rise)

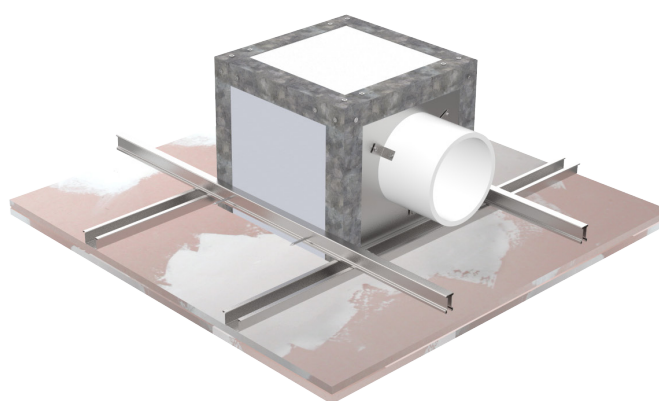
To prevent the spread of fire via heat transfer, the unexposed face of the floor-ceiling system must remain under a maximum temperature rise of 180°C, and under an average temperature rise of 140°C.

Resistance to the Incipient Spread of Fire (RISF)

To measure performance inside the floor-ceiling cavity space, the test method in AS1530.4 specifies thermocouples to be placed within the ceiling cavity. The temperatures of the ceiling mounted damper and cavity must remain below 250°C.

FRL -Fire Rated Plasterboard Ceiling

CEILING SPIGOT FIRE DAMPER IN PLASTERBOARD CEILING

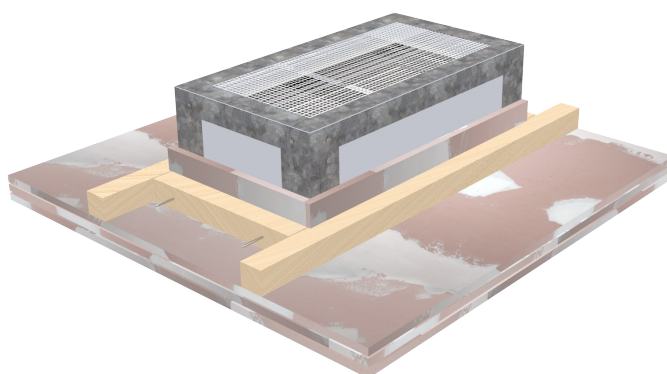


Ceiling construction	Max. damper box sizes (mm)	FRL
Min. 1x layer of 16mm fire grade plasterboard, with timber or steel framing system	Max internal dimensions: 1200 long x 600 wide Max external height: 600mm high	-/30/30 + 30 RISF
Min. 1x layer of 13mm and 1x layer 16mm fire grade plasterboard, with timber or steel framing system		-/60/60 + 60 RISF
Min. 2x layers of 16mm fire grade plasterboard, with timber or steel framing system*		-/90/90 + 60 RISF
Min. 3x layers of 16mm fire grade plasterboard, with timber or steel framing system*		-/120/120 + 60 RISF

*Timber framing must be lined with 13mm FR Plasterboard for 90 and 120 minute applications

FRL -Fire Rated Plasterboard Ceiling

CEILING PLENUM FIRE DAMPER IN PLASTERBOARD CEILING



Ceiling construction	Max. damper box sizes (mm)	FRL
Min. 1x layer of 16mm fire grade plasterboard, with timber or steel framing system	Max internal dimensions: 1180 long x 580 wide Max external height: 600mm high	-/30/30 + 30 RISF
Min. 1x layer of 13mm and 1x layer 16mm fire grade plasterboard, with timber or steel framing system		-/60/60 + 60 RISF
Min. 2x layers of 16mm fire grade plasterboard, with timber or steel framing system*		-/90/90 + 60 RISF
Min. 3x layers of 16mm fire grade plasterboard, with timber or steel framing system*		-/120/120 + 60 RISF

*Timber framing must be lined with 13mm FR Plasterboard for 90 and 120 minute applications

INSTALLATION

FyreDAMPER

STEP 1 OPENING AND ACCESS



Cut a hole in the ceiling equal to or smaller than the inside dimensions of the FyreDAMPER

If access is needed to the top side of the ceiling, refer to FyreSHIELD PLUS for ceilings technical manual

STEP 2 FRAMING



Install additional ceiling furring channel on the top side of the ceiling along all 4x sides of the damper box, tied back to the existing ceiling support frame (so that the weight of the assembly is not loading the plasterboard)

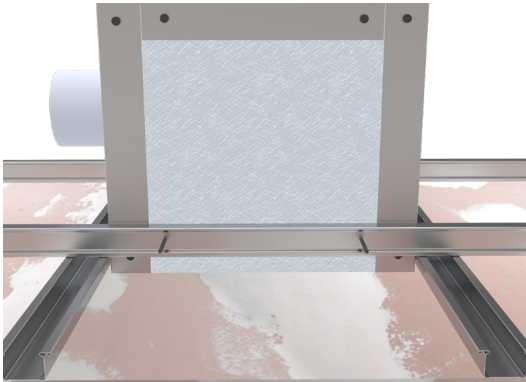
If the framing doesn't line up with the damper box, additional maxilite board can be placed where screw fixings are to be installed. Refer to page 12- 13

STEP 3 BEDDING



Bed the base of the damper box or top of ceiling with a gasket of FyreFLEX sealant, and place the damper box on top of the ceiling

STEP 4A FIXING 1



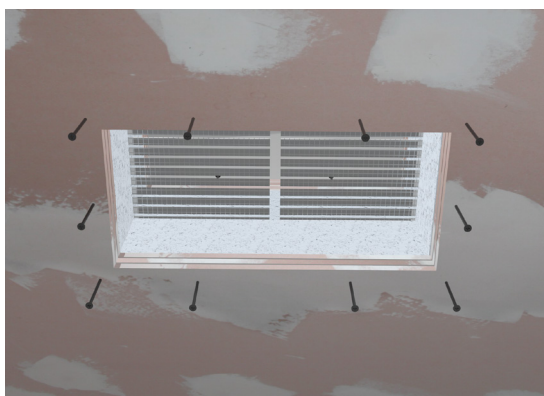
Fix damper box to the supports with min. 10g x 100mm plasterboard screws at each corner with max. 150mm centers between. Refer to drawings on [Page 13](#).

INSTALLATION

FyreDAMPER Ceiling Spigot



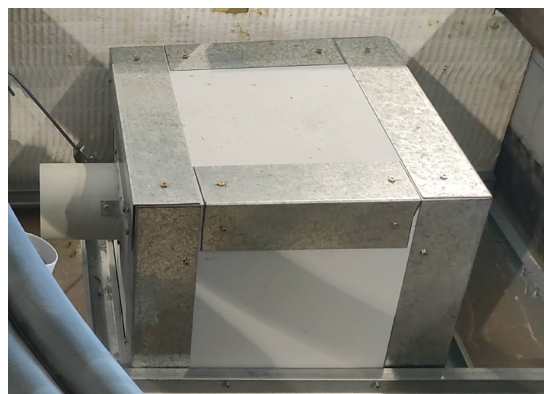
STEP 4B FIXING 2



Screw fit screws through the plasterboard into the walls of the damper box at 200mm centres.



STEP 5 CONNECT

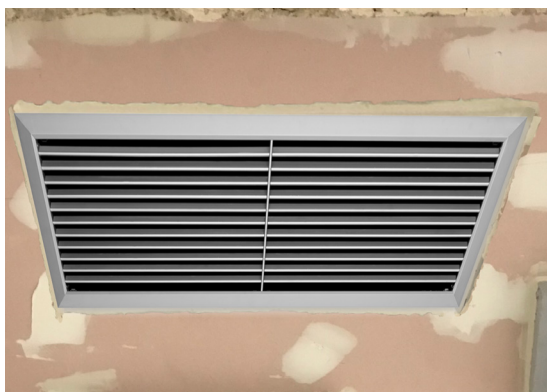


If required, connect the spigot supplied to ducting work with appropriate breakaway/slip joints (Ceiling Spigot only).

For cable penetrations refer to drawings in page 12-13

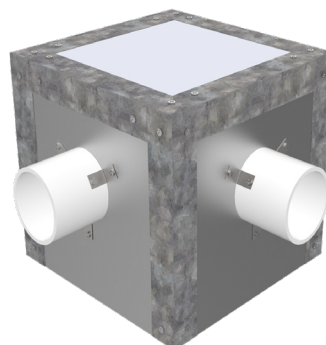
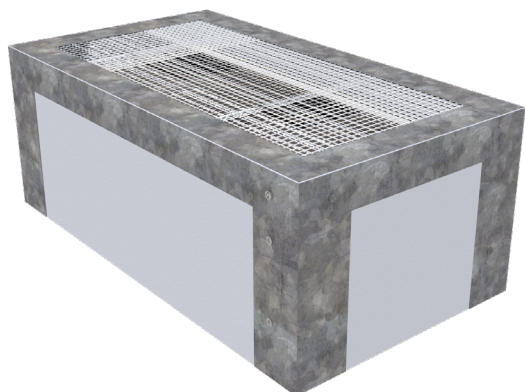


STEP 6 GRILLE



Install ceiling cover grille into the ceiling from below if required.

SYSTEM RANGE



Item Number	Description	Min Order Qty
FD-C-Plenum - Custom	Return air (open grille)	1
FD-C-Spigot - Custom	Connection to exhaust/ flexi duct	1

SYSTEM RANGE RELATED SERVICES



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 White	1	64

FAQ?

Q Can the ceiling be constructed with 2 or 3 layers of 13mm fire rated plasterboard?

A FyreDAMPERS can be installed in ceilings constructed to achieve the required FRL.

Q Can the ceiling damper be mounted over a combined fan/light unit?

A Yes, as long as the cutout does not exceed approved sizes.

Q Can I get a custom size made for my application?

A Yes, we can manufacture boxes to suit your needs.

Q Can I cut out parts of the ceiling box to fit over ceiling frame?

A No, the ceiling damper must be installed in the same manner as it was tested.

SOCIAL MEDIA

Linked in

YouTube

Cables MUST penetrate same face where spigot is located
Up to 2x TPS/firecables for -/90/90 + 60RISF
and -/120/120 + 60RISF

Fyreflex sealant to full depth with 30x30mm fillet
Max. opening of 32mm

Max. 300mm Circular
or 300x300mm Square Damper

Up to 2x Spigot Dampers per box
Spigots located on separate faces
OR separated by min. 50mm if on the same face

Max. 40mm Maxilite to pack out gap between framing and ceiling damper if required.
Up to all 4 sides

10gx100mm plasterboard screws
fixed into framing
Max. 150mm centres

Max. Opening size in ceiling
1200x600mm

10gx100mm plasterboard screws
Max. 200mm centres and at each corner

Drawing Name: FyreDAMPER Spigot Box(2)

Test Standard:
A^c

Codes:

Revision:

Date:

No.:	
------	--

NOTICE:

Project Title: Ceiling Damper Drawings

Fire resistance level:

Drawn By:
DP

NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)

Drawing No. :
8

Sheet:
8 of 9

Date:
1/05/2023

Scale:
NTS

Based on Report No.:

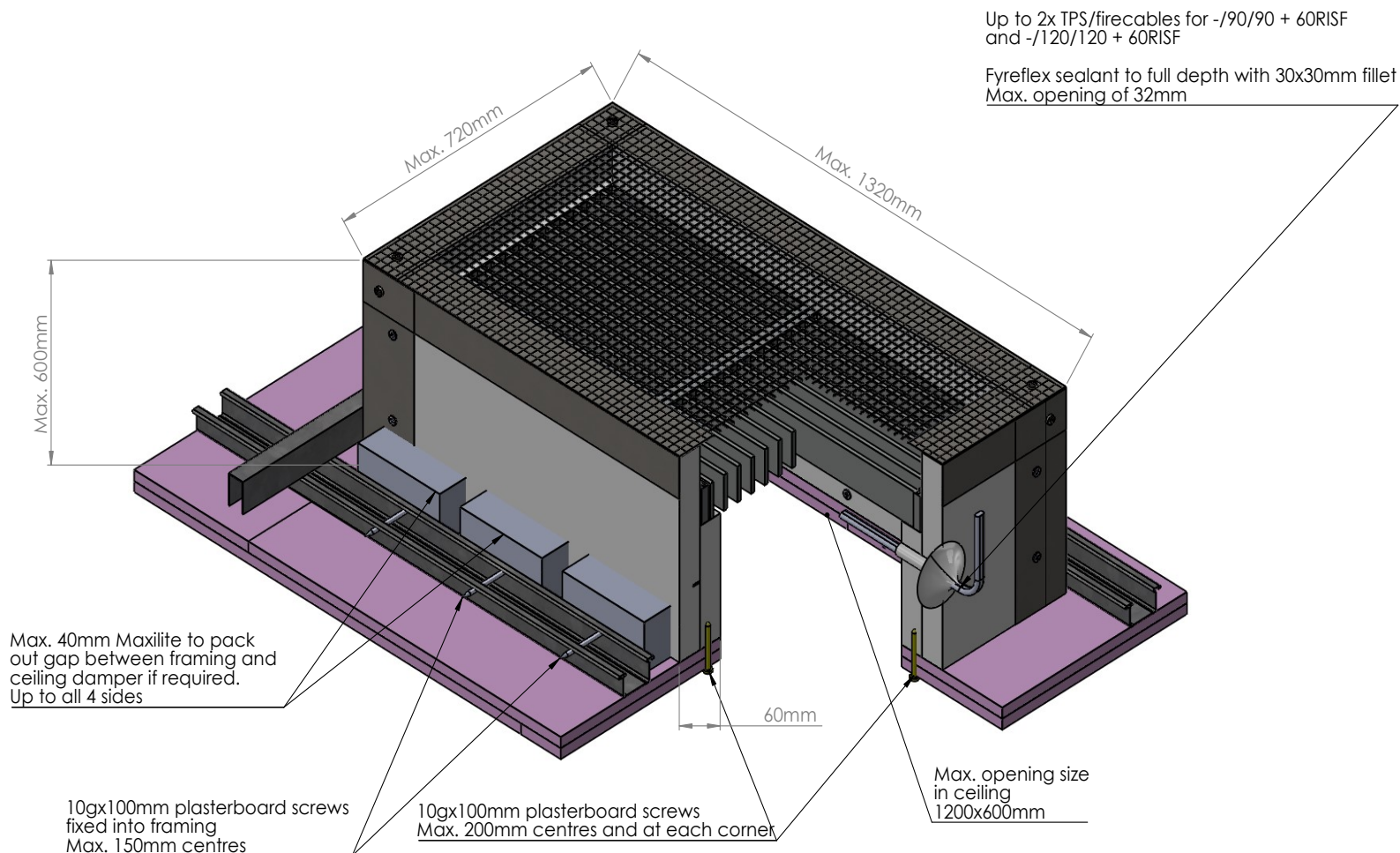
Checked By:	JH
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☐ STANDARD DRAWING
☐ PROJECT DRAWING



TRAFALGAR
FIRE

Trafalgar Head Office:
PO BOX 545
Chester Hill NSW 2162
T: 1800 888 714
F: 1800 201 500
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W: www.tfire.com.au



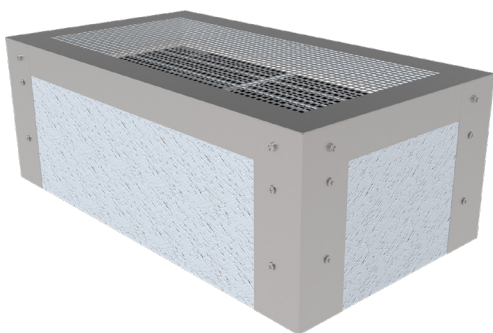
Drawing Name: FyreDAMPER Plenum Box(2)				Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE:
Project Title: Ceiling Damper Drawings				Fire resistance level:	Drawn By: DP	<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> TRAFALGAR FIRE Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@tgroup.com.au W: www.tfire.com.au			
Drawing No. : 9	Sheet: 9 of 9	Date: 1/05/2023	Scale: NTS	Based on Report No.:	Checked By: JH				

FyreDAMPER CEILING PLENUM BOX ORDER CONFIRMATION

Customer to complete for each size Ceiling Plenum Box required. All dampers will be manufactured based on internal dimensions supplied by the customer within a tolerance of +/-2mm.

Frame Type	Custom Dimensions (mm)	
	INTERNAL Dimensions (mm)	
	Length (Max. 1180mm)	
	Width (Max. 580mm)	
	Height (Max. 500mm)	
	<p>External Dimensions are:</p> <p>(Internal Width + 120mm) x</p> <p>(Internal Length + 120mm) x</p> <p>(Internal Height + 100mm)</p>	
	<p>Internal Use Only</p> <p>Damper Size:</p>	

FyreFLEX Sealant required for bedding the Plenum box to the ceiling and for sealing cable penetrations.
If the above does not meet your requirements, please contact our Sales Team on 1800 888 714.



Special
Instructions

Company Name

Contact Name

Quantity | Date

E-mail | Phone

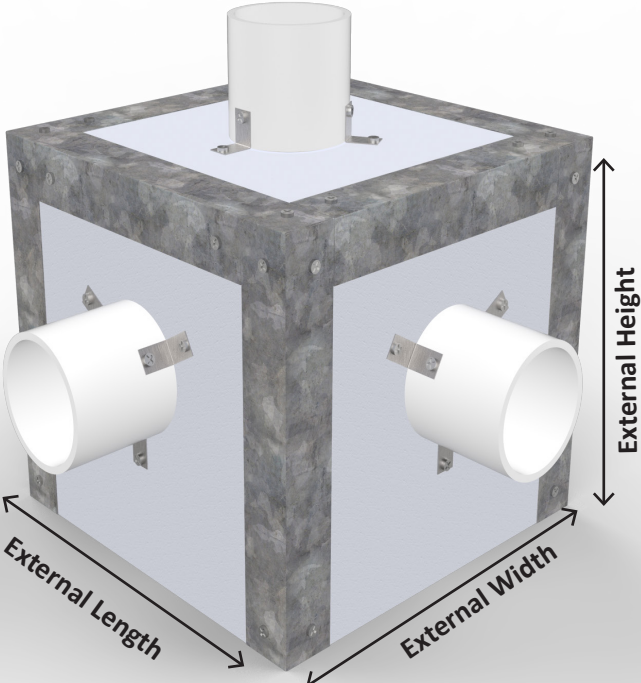
Signature

FyreDAMPER
CEILING SPIGOT
ORDER CONFIRMATION

Customer to complete for each size Ceiling Spigot Box required. All dampers will be manufactured based on internal dimensions supplied by the customer within a tolerance of +/- 2mm.

Frame Type

Choose Spigots on Selected Face
(MAX 2 SPIGOTS PER BOX)



Custom Dimensions (mm)

INTERNAL Dimensions (mm)

Length (Max. 1200mm)	
Width (Max. 600mm)	
Height (Max. 520mm)	

External Length = Internal Length + 80mm (and an additional 40mm if Spigot located on the Width Face)

External Width = Internal Width + 80mm (and an additional 40mm if Spigot located on the Length Face)

External Height = Internal Height + 40mm (and an additional 40mm if Spigot located on the Top Face)

(Eg. A Spigot Box with a Spigot located on the "Length" face with internal dimensions 300Lx300Wx300H has external dimensions 380Lx420Wx340H)

Spigot Sizes

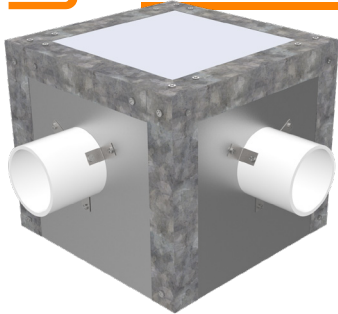
110	165
250	315

2nd Spigot on
Selected Face

2nd Spigot on
Opposite Face

FyreFLEX Sealant required for bedding the Spigot box to the ceiling and for sealing cable penetrations.

If the above does not meet your requirements, please contact our Sales Team on 1800 888 714.



Special Instructions

Company Name

Contact Name

Quantity | Date

E-mail | Phone

Signature