

## HVAC&R Service Penetrations

This manual focuses specifically on fire stopping HVAC&R service penetrations using the wide range of Trafalgar Fire systems that have been tested and approved to AS1530.4:2014.

These systems cover a wide range of common HVAC&R service types and fire rated barriers to suit common applications on all sites.



### SERVICES COVERED



- Pair coil (FR or PE Insulated)
- Insulated Copper and Steel Pipes
- Chilled Water (CHW) Pipes
- Refrigeration Pipes
- Common insulation types: Armaflex®, Thermotec™, etc.

### BARRIERS COVERED



- Plasterboard walls and shafts
- AAC (Hebel®/WALSC) walls and shafts
- Speedpanel® walls and shafts
- Concrete/Masonry walls and shafts
- Concrete floor slabs
- Plasterboard ceilings
- COREX walls and ceilings

### SYSTEMS - CLICKABLE LOGOS



**FyreBOX** CAST-IN  
**FyreBOX** MAXI  
**FyreBOX** MINI  
**FyreBOX** SLAB-MOUNT  
**FyreBOX** SLAB-MOUNT BAMBINO  
**SuperSTOPPER**

**FyreSHIELD**  
**FyreCOLLAR** CAST-IN  
**FyreCOLLAR** MIXED SERVICES  
**FyrePEX** HP  
**FyreWrap**  
**TWRAP** **TRAFALGAR corex**





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## COMPLIANCE



## COMPLIANCE WITH THE NATIONAL CONSTRUCTION CODE (NCC)

*Formerly known as BCA*

Under the building code, a Deemed to Satisfy (DTS) solution is one that satisfies the performance requirements set out in section C of volume one. Section C specifically deals with the fire protection of openings in fire barriers (i.e. service penetrations in fire rated walls and floors).

### CLAUSE C3.15 – OPENINGS FOR SERVICE INSTALLATIONS

Where any service penetrates a fire barrier that has a Fire Resistance Level (FRL) with respect to integrity and insulation, the installation should comply with the following tested systems:

- A Fire Tested System – An identical prototype, installed in the same wall, shaft, ceiling or floor system that has been fire tested and approved to the fire testing standard AS1530.4:2014 and AS4072.1 which has achieved an FRL of equal to or greater than that required by the fire barrier. Note that for ceilings an addition RISF criteria applies.

For example, if the site has a -/120/120 plasterboard wall system with a pair coil penetration, the product used to seal the pair coil must have been fire tested at an approved laboratory with the same size pair coil in the same wall type and tested for at least 120 minutes without failing the integrity or insulation criteria.

### FIRE TEST APPROVALS

Fire testing is a timely and expensive process, and it is impossible to test every single possible service configuration 'identically' in a practical sense.

- Under the building code C3.15 an accredited testing laboratory is permitted to write a formal assessment confirming the likely fire performance (FRL) of the penetration in accordance with AS4072.1.

For example, if a set of pair coil was tested in a small opening and a large opening with the same sealing system and achieved the same FRL, an assessment might be able to justify a range of approved aperture sizes.

This assessment or approval report can contain only minor variations to the tested systems as per schedule 5 of the NCC.

**Note:** All construction under NCC 2019 and above requires compliance with AS1530.4:2014



*Image of an AS1530.4 fire test of the FyreBOX™ Cast-In with multiple and mixed lagged pipes, pair coil and cables through a single 1250 x 125mm penetration.*





# UNIQUE CHALLENGES OF HVAC&R SERVICE PENETRATIONS

HVAC&R pipes require thermal insulation to maintain the thermal efficiencies required to run air-conditioning, refrigeration and Chilled Water (CHW) plants. However, these insulation materials will quickly burn away in the high temperatures of a fire event, leaving openings and gaps for fire spread. This makes passive fire penetrations of HVAC&R services more challenging than other separate cable and bare metal pipe penetrations.

Note that so called “FR” rated insulation and lagging often are only tested for criteria such as ignition, flame propagation and non-combustibility (AS1530.3), and does not give compliance with AS1530.4 which is a much more severe fire resistance system test where an Fire Resistance Level (FRL) is assigned.

***Trafalgar Fire systems such as FyreCOLLAR Collars, FyrePEX™ HP Sealant, the SuperStopper and the FyreBOX Range utilise high performance intumescent materials that expands with the heat of a fire filling up the spaces left by the burning or melting thermal insulation to tightly seal around the copper pipes.***

Most pair coil installations are run in conjunction with power and data cables plus PVC drains, adding further complexity to the passive fire design.

Trafalgar Fire’s high-grade intumescent material is strong enough to crush off pair coil lagging and form a tight seal around the cables, so all of these services can be bundled together to make passive fire protection of HVAC&R services fast and easy.

There are various Trafalgar systems available for sealing HVAC&R services. We have put together system selectors on the following pages to assist with the best fire stopping selection for your application. Systems are available for all budgets.



Before Fire



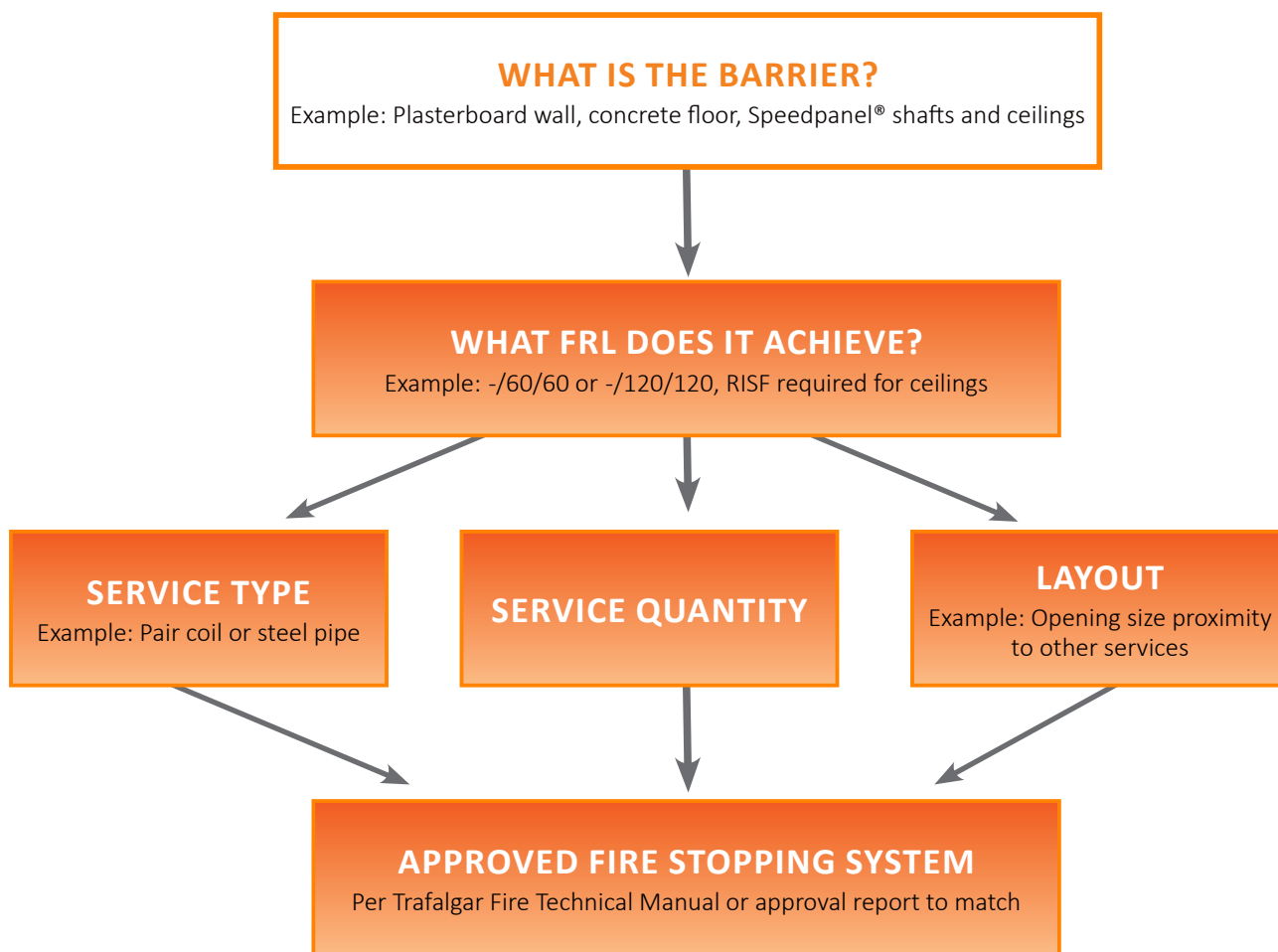
After Fire





## WHAT TO CONSIDER WHEN LOOKING FOR PASSIVE FIRE SYSTEMS

There are a few steps to selecting the correct fire stopping system. It is important to consider all elements of the system (services, barrier, fire stopping, etc). The below guide should assist with this process.



This manual has collated a range of passive fire penetration systems specifically for HVAC&R service penetrations, with system selectors to aid in the selection of materials based off the above variables. Keep reading for more details.



## MIXED SERVICE PENETRATIONS

For service penetrations with multiple types of services, or services from multiple trades, the Trafalgar FyreBOX Range is the perfect solution to fire stop all the services at once. The whole range is covered by one approval report making compliance easy, and is approved for a wide range of services across multiple trades. The FyreBOX Range come in sizes ranging from a 50mm round, all the way up to 1250mm wide.

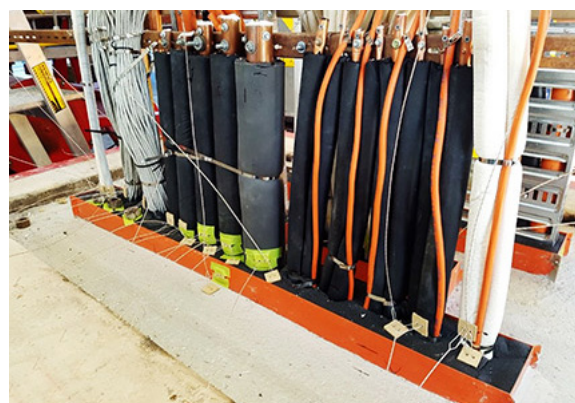
### **FyreBOX** SLAB-MOUNT

The FyreBOX Slab-Mount is fixed directly to the soffit and can be installed before, during, or after the walls go up in a new build. A perfect solution for applications such as apartment entries featuring electrical, plumbing, and HVAC&R services all in one.



### **FyreBOX** CAST-IN

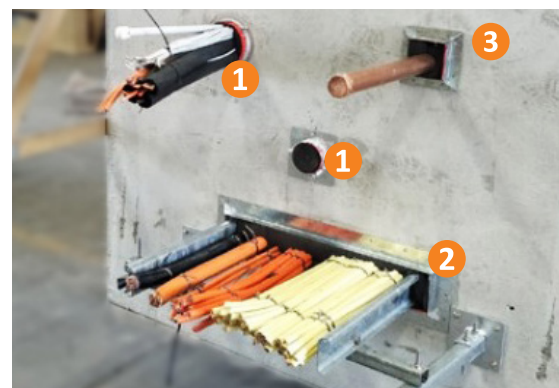
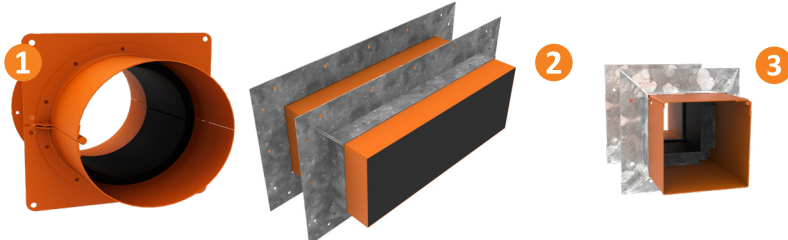
The FyreBOX Cast-In is a solution for new builds. When cast into the slab, the FyreBOX Cast-In essentially makes a fire-rated hole in the slab for building services to pass through. This variant of the FyreBOX is ideal for service riser shafts.



### **SuperSTOPPER**

The FyreBOX- Maxi and FyreBOX- Mini are a retro-fit solution that can be installed anywhere into a wall or floor. Perfect for penetrations that come up later in a build, or rectification work where multiple services have been incorrectly fire-stopped in one single penetration.

### **FyreBOX** MAXI & **FyreBOX** MINI



For more information on the FyreBOX range, go to [tfire.com.au](https://tfire.com.au), call [1800 888 714](tel:1800888714), or email [technical@tgroup.com.au](mailto:technical@tgroup.com.au).



## COMMON HVAC&R SERVICE TYPES

### HVAC&R SERVICE SIZES AND CONSTRUCTION

Fire testing approvals for different types of services can be confusing, and it is often hard to know what is actually approved for use or what sizes are covered. Test results can be specific to a pipe size, insulation brand and thickness, etc, which is often difficult to match on site. The below information is written to clarify what our approvals can cover as a quick reference guide.

| Common Name                     | Thermal Insulation Type   | Image   | Sizes   |
|---------------------------------|---|---|---|
| Pair coil                       | <b>FR Insulation</b><br>FR insulation is commonly nitrile rubber like Armaflex®, Eflex etc.                             |    | Twin tubes up to ¾ and ¾ inch diameter, with insulations up to 25mm thickness. Often run with a drain pipe, power and data cable as a bundle.   |
|                                 | <b>Non-FR Insulation</b><br>Polyethylene (PE), also known as non-FR due to its combustible nature.                      |  | Not often used anymore as thermal efficiency regulations have become stricter. Regardless, there are various approved penetration systems for use.  |
| Copper or steel insulated pipes | <b>Closed cell EDPM Nitrile Rubber</b><br>(AKA Armaflex®, Eflex).   |  | Single copper or steel pipes of any size, with pipe insulations ranging up to 30mm thick.   |
|                                 | <b>Non-Combustible Stone Wool</b><br>Stone wool pipe insulations are considered fire rated as they are non-combustible. |  | Copper pipes ranging from 19mm up to 200mm diameter, and then typically steel pipes for even larger sizes. Tested systems for large CHW pipes are hard to come by.  |
|                                 | <b>Thermobreak® and FlexiCell</b><br>are both types of polyolefin foam insulation with a foil facing.                   |  | This material is commonly used due to its high R-values. Trafalgar have tested this in the FireBOX range, and are currently developing systems for larger pipe sizes. Contact Trafalgar Fire for the latest test updates. |





## SYSTEM SELECTOR

### SMALL PAIR COIL BUNDLES



The following information relates to approved penetration systems for bundles of pair coil that include their own power and data cables. Refer to the relevant Technical Manuals for specific FRL's and installation details. For information on installation, and specific approvals, click on the products below to see the full products technical manual.

**FyrePEX<sup>HP</sup>**



**FyreBOX<sup>SLAB-MOUNT BAMBINO</sup>**



**FyreCOLLAR<sup>MIXED SERVICES</sup>**



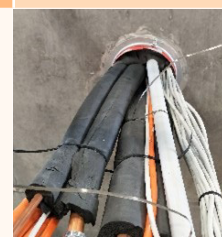
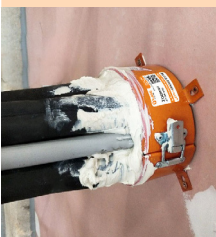
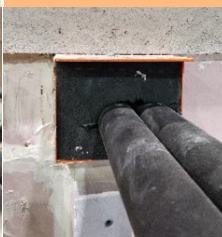
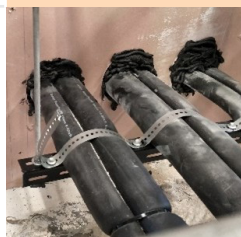
**FyreBOX<sup>MINI</sup>**



**SuperSTOPPER**



|          |                               | FyrePEX <sup>HP</sup> Intumescent Sealant | FyreBOX <sup>SLAB-MOUNT BAMBINO</sup> | FyreCOLLAR Mixed Services Collar | FyreBOX Mini | SuperStopper Circular |
|----------|-------------------------------|---|---------------------------------------|----------------------------------|--------------|-----------------------|
| Barrier  | Plasterboard                  | ✓   | ✓                                     | ✓                                | ✓            | ✓                     |
|          | AAC (Hebel®/WALSC)            | ✓   | ✓                                     | ✓                                | ✓            | ✓                     |
|          | Speedpanel®                   | ✓   | ✓                                     | ✓                                | ✓            | ✓                     |
|          | Concrete/Masonry              | ✓   | ✓                                     | ✓                                | ✓            | ✓                     |
|          | COREX Walls                   | x   | ✓                                     | x*                               | ✓            | ✓                     |
|          | Concrete Floor Slabs          | ✓   | x                                     | ✓                                | ✓            | ✓                     |
| Services | Plasterboard Ceilings         | x   | x                                     | ✓                                | ✓            | ✓                     |
|          | 1 x Pair Coil                 | ✓   | ✓                                     | ✓                                | ✓            | ✓                     |
|          | 2-3 x Pair Coil               | ✓   | ✓                                     | ✓                                | ✓            | ✓                     |
|          | More than 4 x Pair Coil       | x   | x                                     | x                                | x            | x                     |
|          | Bundle including drain pipe   | x   | ✓                                     | x                                | ✓            | ✓                     |
|          | Installed before fire barrier | x   | ✓                                     | x                                | x            | x                     |
|          | Retrofittable                 | ✓   | ✓                                     | ✓                                | ✓            | ✓                     |



**FyrePEX<sup>HP</sup>**

**FyreBOX<sup>SLAB-MOUNT BAMBINO</sup>**

**FyreCOLLAR<sup>MIXED SERVICES</sup>**

**FyreBOX<sup>MINI</sup>**

**SuperSTOPPER**

\*Some COREX walls are approved- See [COREX solid wall technical manual](#) for more information



## SYSTEM SELECTOR

### LARGE PAIR COIL BUNDLES



The following information relates to approved penetration systems for bundles of pair coil that include their own power and data cables. Refer to the relevant Technical Manuals for specific FRL's and installation details. For information on installation, and specific approvals, click on the products below to see the full products technical manual.

#### SLAB-MOUNT



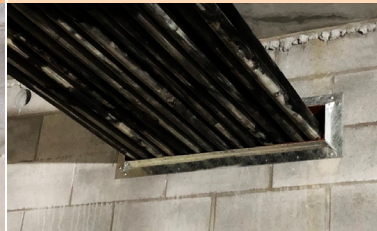


#### CAST-IN



#### MAXI



|              |                               | FyreBOX™ Slab Mount   | FyreBOX™ Cast-In   | FyreBOX™ Maxi   |
|--------------|-------------------------------|---|--|---|
| Barrier      | Plasterboard Walls            | ✓   | ×  | ✓   |
|              | AAC (Hebel®/WALSC)            | ✓   | ×  | ✓   |
|              | Speedpanel®                   | ✓   | ×  | ✓   |
|              | Concrete/Masonry Walls        | ✓   | ×  | ✓   |
|              | COREX Wall                    | ✓   | ×  | ✓   |
|              | Concrete Floor Slabs          | ×   | ✓  | ✓   |
| Services     | Plasterboard Ceilings         | ×   | ×  | ✓   |
|              | 1 x Pair Coil                 | ✓   | ✓  | ✓   |
|              | 2-3 x Pair Coil               | ✓   | ✓  | ✓   |
|              | More than 4 x Pair Coil       | ✓   | ✓  | ✓   |
| Installation | Bundle including drain pipe   | ✓   | ✓  | ✓   |
|              | Installed before fire barrier | ✓   | ✓  | ×   |
|              | Retrofitable                  | ✓   | ×  | ✓   |
|              |                               |  |  |  |

#### SLAB-MOUNT

#### CAST-IN

#### MAXI



## SYSTEM SELECTOR

### Small bundles INSULATED COPPER AND STEEL PIPES Closed cell EPDM rubber insulation



The following information relates to approved penetration systems for single insulated pipes only ranging up to DN50 plus insulation. Refer to the product manuals for specific FRL's and installation details. For information on installation, and specific approvals, click on the products below to see the full products technical manual.

**FyrePEX<sup>HP</sup>**



**FyreBOX<sup>SLAB-MOUNT BAMBINO</sup>**



**FyreCOLLAR<sup>MIXED SERVICES</sup>**



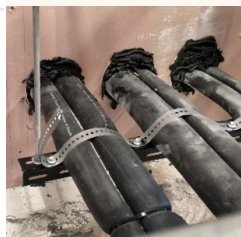
**FyreBOX<sup>MINI</sup>**



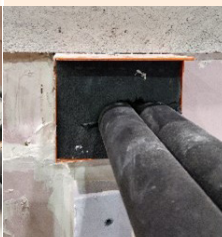
**SuperSTOPPER**



|              |                                      | FyrePEX <sup>HP</sup><br>Intumescent Sealant | FyreBOX <sup>TM</sup> Bambino | FyreCOLLAR Mixed<br>Services Collar | FyreBOX Mini | SuperStopper<br>Circular |
|--------------|--------------------------------------|--|-------------------------------|-------------------------------------|--------------|--------------------------|
| Barrier      | Plasterboard                         | ✓  | ✓                             | ✓                                   | ✓            | ✓                        |
|              | AAC (Hebel®/WALSC)                   | ✓  | ✓                             | ✓                                   | ✓            | ✓                        |
|              | Speedpanel®                          | ✓  | ✓                             | ✓                                   | ✓            | ✓                        |
|              | Concrete/Masonry                     | ✓  | ✓                             | ✓                                   | ✓            | ✓                        |
|              | COREX Walls                          | x  | ✓                             | x                                   | ✓            | ✓                        |
|              | Concrete Floor Slabs                 | ✓  | x                             | ✓                                   | ✓            | ✓                        |
|              | Plasterboard Ceilings                | x  | x                             | x                                   | ✓            | ✓                        |
| Services     | 1 x Single insulated pipe            | ✓  | ✓                             | ✓                                   | ✓            | ✓                        |
|              | 2-3 x Single insulated pipes         | x  | ✓                             | x                                   | ✓            | ✓                        |
|              | More than 4 x Single insulated pipes | x  | x                             | x                                   | x            | x                        |
| Installation | Installed before fire barrier        | x  | ✓                             | x                                   | x            | x                        |
|              | Max pipe size                        | DN32   | DN50                          | DN20                                | DN50         | DN50                     |



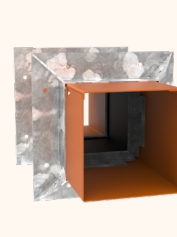
**FyrePEX<sup>HP</sup>**



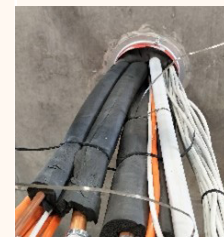
**FyreBOX<sup>SLAB-MOUNT BAMBINO</sup>**



**FyreCOLLAR<sup>MIXED SERVICES</sup>**



**FyreBOX<sup>MINI</sup>**



**SuperSTOPPER**





## SYSTEM SELECTOR

### Large bundles INSULATED COPPER AND STEEL PIPES Closed cell EPDM rubber insulation



The following information relates to approved penetration systems for single insulated pipes only ranging up to DN50 plus insulation. Refer to the product manuals for specific FRL's and installation details. For information on installation, and specific approvals, click on the products below to see the full products technical manual.

#### FyreBOX<sup>™</sup> CAST-IN



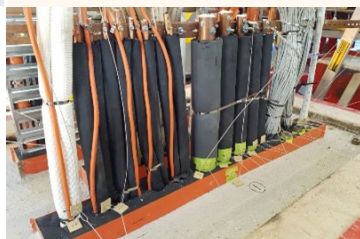
#### FyreBOX<sup>™</sup> SLAB-MOUNT



#### FyreBOX<sup>™</sup> MAXI



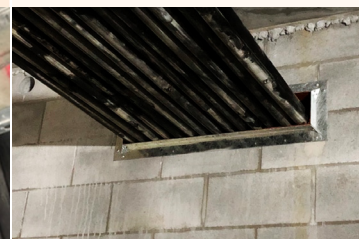
|              | FyreBOX <sup>™</sup> Cast-in         | FyreBOX <sup>™</sup> Slab Mount | FyreBOX <sup>™</sup> Maxi |
|--------------|--------------------------------------|---------------------------------|---------------------------|
| Barrier      | Plasterboard Walls                   | ✓                               | ✓                         |
|              | AAC (Hebel®/WALSC)                   | ✓                               | ✓                         |
|              | Speedpanel®                          | ✓                               | ✓                         |
|              | Concrete/Masonry Walls               | ✓                               | ✓                         |
|              | COREX Walls                          | ✓                               | ✓                         |
| Services     | Concrete Floor Slabs                 | ✗                               | ✓                         |
|              | Plasterboard Ceilings                | ✗                               | ✓                         |
|              | 1 x Single insulated pipe            | ✓                               | ✓                         |
| Installation | 2-3 x Single insulated pipes         | ✓                               | ✓                         |
|              | More than 3 x Single Insulated pipes | ✓                               | ✓                         |
| Installation | Installed before fire barrier        | ✓                               | ✗                         |
|              | Max pipe sizes                       | DN50                            | DN50                      |



#### FyreBOX<sup>™</sup> CAST-IN



#### FyreBOX<sup>™</sup> SLAB-MOUNT



#### FyreBOX<sup>™</sup> MAXI



## SYSTEM SELECTOR

### INSULATED COPPER AND STEEL LARGE BUNDLES

Other insulation types including Rockwool,  
Closed Cell XLPE Insulation (Thermotech™,  
Flexicell, etc)



These systems cover a wide range of common HVAC&R service types and fire rated barriers, to suit common applications on all sites. For information on installation, and specific approvals, click on the products below to see the full Technical Manuals.

**FyreBOX MAXI**



**FyreBOX MINI**



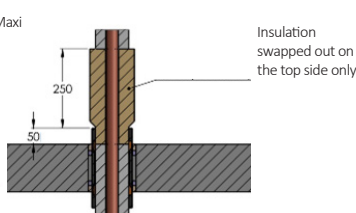
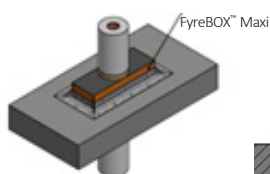
**SuperSTOPPER**



**FyreBOX CAST-IN**

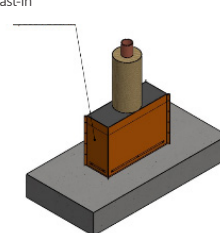


|                      |                        | FyreBOX Maxi  | FyreBOX Mini | SuperSTOPPER | FyreBOX Cast-In |
|----------------------|------------------------|---|--------------|--------------|-----------------|
| Barrier              | Plasterboard Walls     | ✓   | ✓            | ✓            | ✗               |
|                      | AAC (Hebel®/WALSC)     | ✓   | ✓            | ✓            | ✗               |
|                      | Speedpanel®            | ✓   | ✓            | ✓            | ✗               |
|                      | Concrete/Masonry Walls | ✓   | ✓            | ✓            | ✗               |
|                      | COREX Walls            | ✓   | ✓            | ✓            | ✗               |
|                      | Concrete Floor Slabs   | ✓   | ✓            | ✓            | ✓               |
| Insulation Type      | Plasterboard Ceilings  | ✓   | ✓            | ✓            | ✗               |
|                      | Rockwool               | ✓   | ✓            | ✓            | ✓               |
| Thermotech/Flexicell |                        | Available in various sizes and thickness. Contact <a href="mailto:technical@tgroup.com.au">technical@tgroup.com.au</a> for assistance |              |              |                 |



Insulation swapped out on the top side only

FyreBOX™ Cast-In



**FyreBOX MAXI**

**FyreBOX MINI**

**FyreBOX CAST-IN**

Whilst it is desirable to not strip back thermal pipe insulation, there is a lack of tested systems for large metal pipe penetration systems and maintain the FRL of the fire barrier at the same time. Trafalgar Fire can recommend some best-practice installation detailing to maintain the R-value of the penetration and vapour seals using FyreWrap® to lag the pipe for a short distance on either side of the penetration (or top side for floors). Contact the Trafalgar Technical Team.



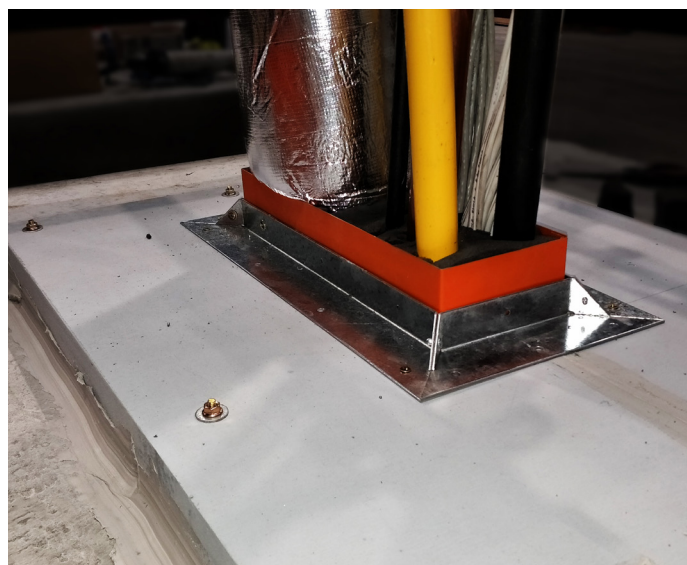
## OVERSIZED OPENINGS

In instances where one or multiple services run through a larger opening, most of the above firestopping systems do not directly apply anymore (refer to the system selector on [page 5](#)). However, Trafalgar Fire have a few products that can be used to bring down the size of an opening and make it appropriate for some of the above fire stopping systems.

### FyreBOARDMAXILITE

FyreBOARD Maxilite® is Trafalgar Fire's calcium silicate board that can be used to bring down the size of an opening in a wall or floor, to install a local fire stopping system. Refer to the our website for more information.

FyreBOARD Maxilite® can also be used to construct fire rated bulkheads which can solve complex problems like riser shafts with no access, or services installed into fire escapes.



### FyreSET



FyreSET® Mortar is a special cement-based mixture formulated specifically for fire rating applications. It is perfect to be backfilled into a concrete floor slab, forming the correct sized open for your local fire stopping like a FyreBOX Cast-In, leaving a neat and tidy finish on site. Refer to the our website for more information.



For assistance with any oversized openings, contact the Trafalgar Fire Technical Team [technical@tgroup.com.au](mailto:technical@tgroup.com.au) for assistance.





## DUCT PROTECTION WITH FyreWrap®

# FyreWrap®



FyreWrap® is the leading passive fire protection solution for commercial ductwork. Cut to size and pinned in place, installation is fast, clean and easy.

- **Fast** – quick installations, especially around complex and tight duct clearances with pins and/or straps
- **Clean** – No need for masking up or site cleaning, plus resistant to mould growth
- **Easy** – Simple install steps with fire rated access panels, plus other trades can work in the same area without disruption
- **Tested** and approved to AS1530.4:2014.

| Exposure   | Maximum FRL  | Report Reference                | Maximum Size  | Duct/Barrier Penetration   |
|--|--|---------------------------------|---------------|----------------------------|
| External Fire<br>(Pressurisation systems<br>or supply ducts) | 1* Layer 180/180/30<br>2* Layer 180/180/60<br>3* Layer 240/240/120<br>(vertical or horizontal) | FC17299-01-1<br>(AS1530.4:2014) | 1200 x 1200mm | Concrete                   |
|  |  |                                 |               | Masonry                    |
|  |  |                                 |               | Plasterboard Walls         |
|  |  |                                 |               | AAC (Hebel®/WALSC)<br>75mm |
| Internal Fire<br>(Exhaust Systems<br>or smoke spill)         | 1 Layer* 180/180/180<br>(vertical ducts)<br><br>120/120/120<br>(horizontal ducts)              | FCO 3226<br>(AS1530.4:2014)     | 3600 x 3600mm | Concrete                   |
|  |  |                                 |               | Masonry                    |
|  |  |                                 |               | Plasterboard Walls         |
|  |  |                                 |               | AAC (Hebel®/WALSC)<br>75mm |
|  |  |                                 |               | Speedpanel® 78mm           |

\* Additional wrap layers required at fire barrier penetrations.

For more information go to our [website](#), call [1800 888 714](tel:1800888714) or email [technical@tgroup.com.au](mailto:technical@tgroup.com.au).



## DUCT PROTECTION WITH FyreSPRAY



### MonoKote®



MONOKOTE® is an industry-leading fireproofing fire spray for the protection of steel ductwork which brings with it over 50 years of proven performance in the field.

It's easy for contractors to apply and it is backed by Trafalgar's technical and field support specialists. This ensures that no matter how a building gets built, MONOKOTE® fireproofing will offer the highest grade of performance.

MONOKOTE® has been specifically designed to be contractor friendly. The materials are typically spray-applied, and can be pumped easily into the upper floors of tall buildings. In addition to being less abrasive and less challenging to pump, users can also elect to inject MONOKOTE® accelerator to impact set time and density of the material.

For more information about installing MONOKOTE®, you can find the [technical manual here](#).

| Exposure                  | Maximum FRL | Report Reference              | Maximum Size  |
|---------------------------|-------------|-------------------------------|---------------|
| Internal or External Fire | 240/240/180 | FC15909-01<br>(AS1530.4:2005) | 2400 x 2400mm |

MONOKOTE® is suitable for use for the fire protection of ventilation and air conditioning ducts that are constructed in accordance with A4254.2 (rigid ducts) such as:

- Kitchen Exhaust
- Smoke spill
- Smoke exhaust
- Combined kitchen exhaust/smoke
- Fire stair pressurization
- Diesel pump exhaust

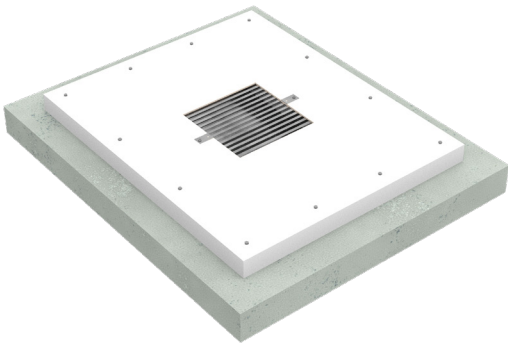
Monokote also is also tested and approved for:

- Fire protection of structural steel columns and beams via AS4100 with section factors up to 365 Hp/A
- Interfaces with other structural steel protection boards like Corex board
- Coatbacks of steel members to secondary members
- Upgrading concrete floor slabs including steel decked slabs

For more information go to [our website](#), call [1800 888 714](#) or email [technical@tgroup.com.au](#).



# Maxilite Damper Upgrades



You can find a list of approved installation details in the [Maxilite Damper Upgrade technical manual](#).

Note: Fire Dampers by their nature are constructed with steel framing and therefore do not commonly achieve insulation ratings. To accommodate for this, AS1668.1 includes requirements for fire damper installations which can allow their insulation rating to be waived in certain conditions.

| Substrate                     | Maximum approved size of Maxilite   | FRL   | Approved Dampers   |
|-------------------------------|-------------------------------------|---|--|
| Concrete/Masonry (wall/floor) | One sheet<br>60mm x 1500mm x 1000mm | Up to -/120/- (limited to that of the damper/fire barrier). | Any fire damper up to 800mm x 800mm which has been independently tested and validated for use in a wall/floor for 120 minutes integrity. |
| Hollow Block                  |                                     |   |  |
| Plasterboard                  |                                     |   |  |
| Shaft Wall                    |                                     |   |  |
| Hebel                         |                                     |   |  |
| Speedpanel                    |                                     |   |  |
| COREX Wall*                   |                                     |   |  |

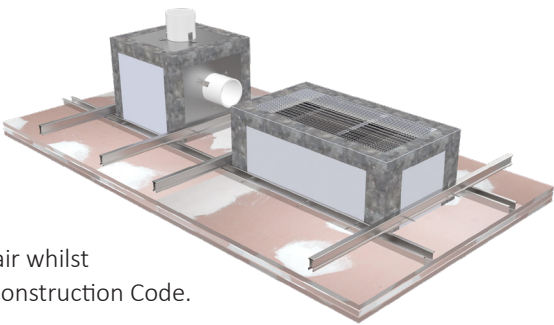
\*2 hour Trafalgar COREX shaft wall configuration only (2x 25mm Trafalgar COREX board)







# FyreDAMPER



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 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.

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

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





# FIRE RATED ACCESS PANELS



It is common on construction sites to come across service shaft penetrations that only have one sided access. This can be an issue as most fire stopping systems are required to be symmetrical and as such need access to both sides for installation. Further to this, access to both sides is often required for inspection and maintenance throughout the life of the building.

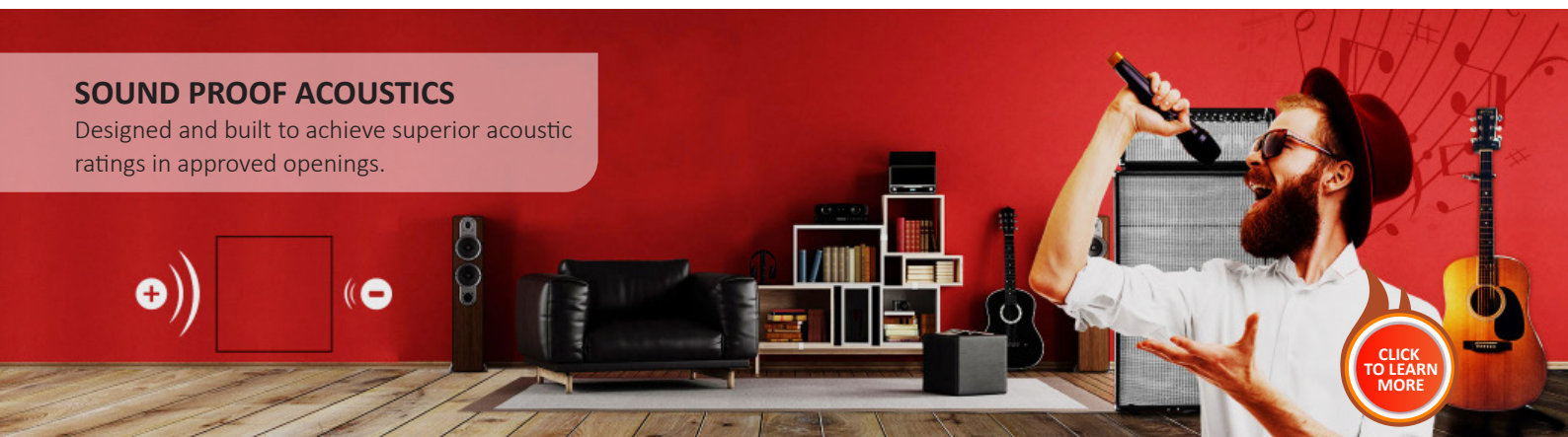
A simple solution to this is to install an Access Panel. The main consideration is that much like service penetrating in the wall, the access panel must also be fire rated to maintain the FRL of the barrier.

The NCC requirements for an Access Panel in a service shaft, is -/xx/30. For example, an Access Panel installed into a 90min plasterboard shaft wall must achieve -/90/30. Trafalgar have a range of Access Panels designed to achieve this, none more prominent than the FyreSHIELD™.

FyreSHIELD™ is a proudly Australian made Access Panel system which has been designed and tested to be built into partition walls and riser shafts. With improved fire and acoustic performance while maintaining the signature Trafalgar Australian-made quality, the FyreSHIELD™ is the only Access Panel worth specifying and installing!

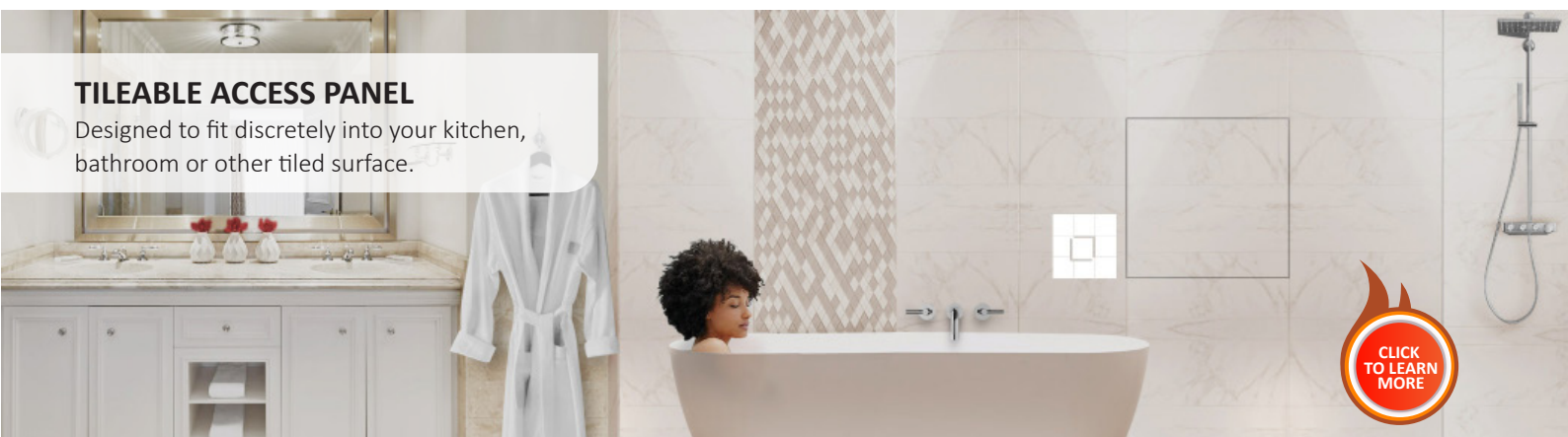
## SOUND PROOF ACOUSTICS

Designed and built to achieve superior acoustic ratings in approved openings.



## TILEABLE ACCESS PANEL

Designed to fit discretely into your kitchen, bathroom or other tiled surface.

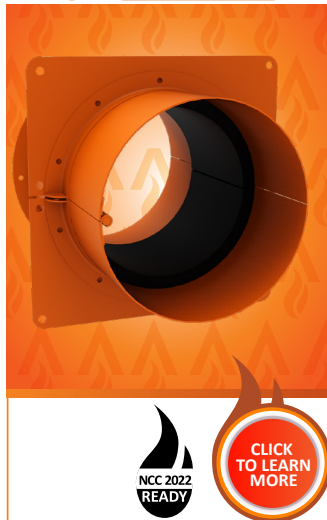


For more information on the FyreSHIELD™ range or any other Access Panels, go to [taccess.com.au](https://taccess.com.au), or call [1800 888 714](tel:1800888714). In some instances, non-fire rated Access Panels will be required, for example a wall penetration within a non fire-rated ceiling space. In this instance, a non fire rated access panel could be installed in the ceiling to gain access to the service penetration for maintenance and inspection purposes. For our range of non fire-rated access panels head to [taccess.com.au](https://taccess.com.au). The range includes metal, wood, acoustic, and more Access Panels for every application.



## RELATED SYSTEMS

### SuperSTOPPER



### FyreBOX MAXI



### FyreBOX MINI



### FyreBOX SLAB-MOUNT



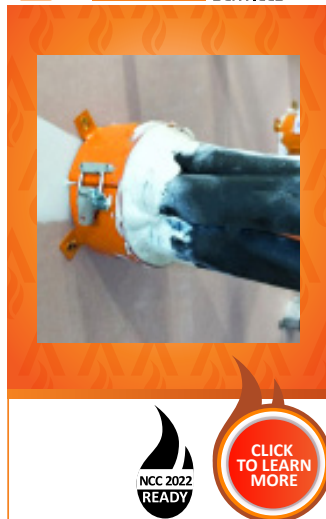
### FyreBOX SLAB-MOUNT BAMBINO



### FyreBOARD MAXILITE



### Fyre COLLAR MIXED SERVICES



### FyrePEX HP







## RELATED SYSTEMS

### FyreWrap



CLICK TO LEARN MORE

### FyreSET



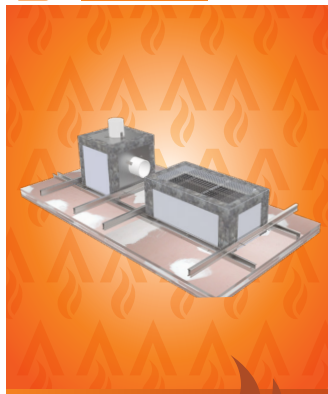
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### FyreSHIELD



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### FyreDAMPER



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### FyreBOXCAST-IN



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### FyreFLEX



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### FyreSPRAY



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