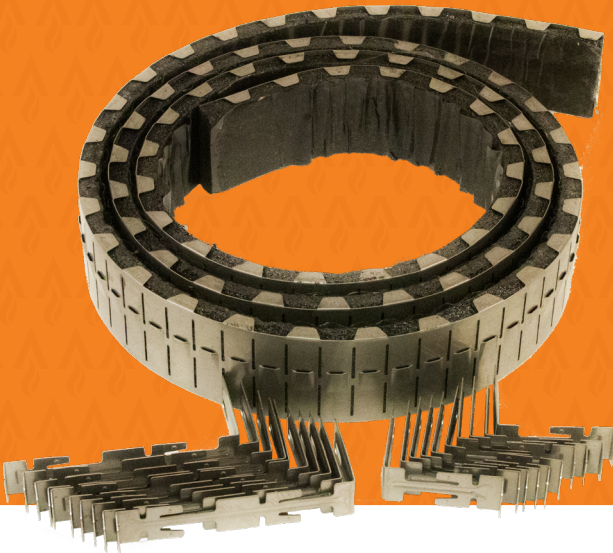


Trafalgar UniCORN CONTINUOUS FIRE COLLAR

The Trafalgar UniCORN Continuous Fire Collar is a fire-rated collar system that is easy to stock, ship, install, & certify. Approved for a range of plumbing, electrical, active fire, and mixed services, without the need to hold a range of collar sizes on-hand for the different services. The Unicorn Continuous Fire Collar is supplied in a roll, and cut to length to suit the service.



KEY FEATURES

- Packaged as a 2310mm roll
- Cut to length to suit service
- Approvals for a range of services
- Fire test approvals to AS1530.4
- FRL's up to -/240/240
- Mounting brackets included in the box
- Range of services for concrete floor slabs
- Approved to protect cable bundles and insulated metal pipes

CONCRETE FLOORS

Plumbers

- PVC Pipe
- HDPE
- Lagged Copper
- Pex

Electricians

- Conduits
- Power Cables
- Data & Communications Cables

Passive Fire

- Mixed service bundles

HVAC&R

- pair coil bundles
- refrigeration lines

TRADES

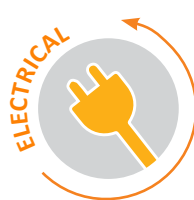


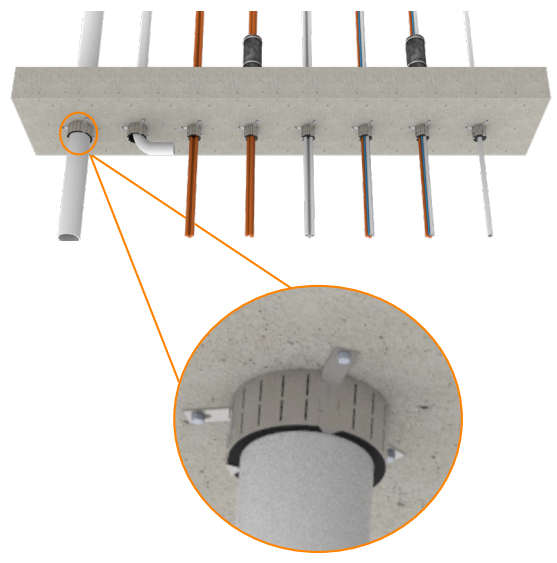
TABLE OF CONTENTS



| Section | Page |
|--|-----------|
| Overview | 1 |
| What is UniCORN | 3 |
| Product Specifications | 3 |
| System Range | 3 |
| Fire Resistance Level | 4 |
| Electrical and Data | 5 |
| FRL Tables Electrical and Data | 6 |
| Installation | 7 |
| Plastic Pipes | 8 |
| FRL Tables Plastic pipes | 9 |
| Installation | 10 |
| Metal and Lagged Pipes | 11 |
| FRL Tables Metal and Lagged pipes | 12 |
| Approved Fixings | 13 |
| Technical Drawings | 14 |

WHAT IS UNICORN?

Trafalgar Unicorn Continuous Fire Collar is designed to meet the ever-evolving needs of modern constructions. Engineered for excellence, this innovative solution offers unparalleled ease in stocking, shipping, installation, and certification, setting a new standard in passive fire protection. Packaged as a 2310mm roll and customizable to any service diameter, the Unicorn Continuous Fire Collar ensures a perfect fit for various applications without the need for multiple collar sizes, simplifying inventory management and reducing overhead costs. Rigorously tested to meet **AS1530.4:2014** standards and boasting **Fire Resistance Levels (FRL) up to -/240/240***, it guarantees compliance with the strictest safety codes for slab installations. Equipped with all necessary installation components, it offers a straightforward, efficient installation process. This system is adaptable, easily accommodating standard and non-standard pipe configurations alike, highlighting our focus on versatile solutions that cater to the diverse needs of construction projects.



PRODUCT SPECIFICATIONS: WHAT'S IN THE BOX?

| Whats in the box? | Quantity |
|---|------------|
| UniCORN Continuous Collar | 1 |
| Brackets | 20 per box |
| Optional Extras: Extra brackets and double brackets (for 150mm Plastic Pipes) available. | |

| Spec | Detail |
|---------------|------------|
| Supply Length | 2310mm |
| Height | 50mm |
| Max FRL | -/240/240* |

*Dependent on service



| Item Number | Description | Min Order Qty |
|-------------|---------------|---------------|
| UniCORN | 50mm x 2310mm | 1 |

FIRE RESISTANCE LEVEL

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:

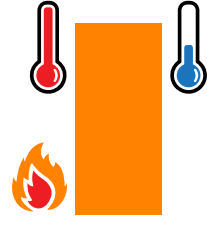
FRL -/240/240 *(example)*



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.

Penetrations are not required to have a Structural Adequacy rating and is usually expressed as a dash. For example, a penetration through a 4-hour load bearing wall would be written as -/240/240.

INTEGRITY

The Unicorn Continuous Fire Collar will achieve an integrity performance for up to 4 hours physically stopping the direct spread of fire, however the insulation performance will be limited to the type of barrier it is installed to and the conductivity of the services.

INSULATION (TEMPERATURE RISE)

Heat transfer via conduction (or heat rise) will occur through the conductive parts of any penetration system. To limit the heat-rise through some of the approved Unicorn Continuous Fire Collar services, our 25mm thick TWrap foil encased blanket can be wrapped around the services to achieve the full FRL of up to 4 hours. Some services achieve 4 hours of insulation without the need for any TWrap. Refer to the tables below for specific details.

CABLES AND CONDUITS ELECTRICAL AND DATA

UniCORN Continuous Fire Collar has been fire tested and approved for the following services:

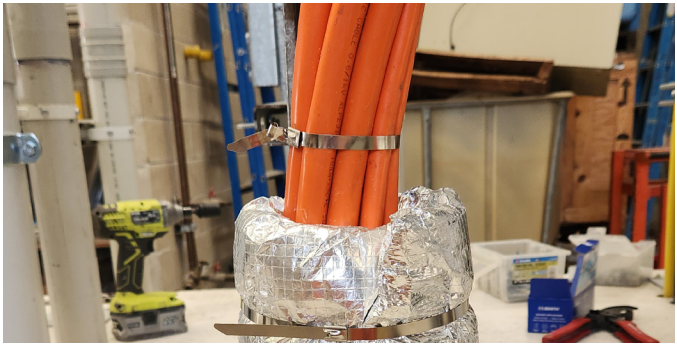
SERVICES

- 25mm conduit
- 6mm² power cables
- CAT6 cables
- 16mm² Power Cables
- CAT3 cables

BARRIER TYPE

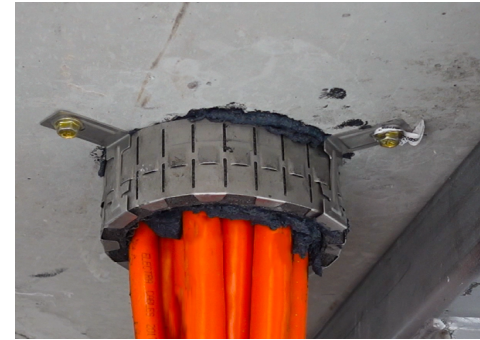
Floors

- Concrete

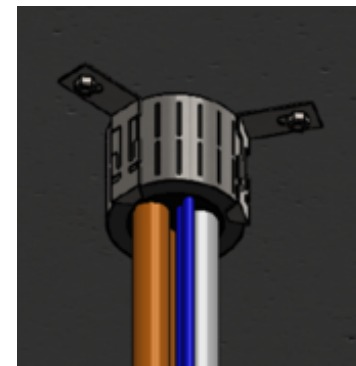
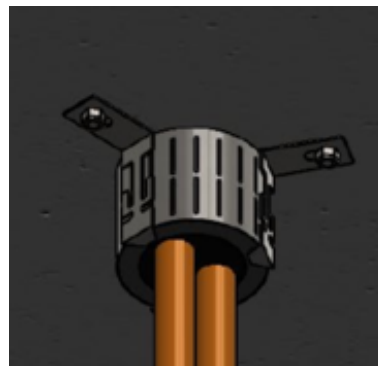
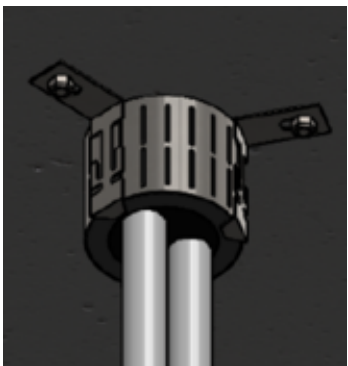


FRL TABLES:

CABLES AND CONDUITS - ELECTRICAL AND DATA



| Services | Can mix and match? | How many tabs? | Concrete floors | | Test Report |
|--------------------------------------|--------------------|----------------------------------|-----------------|-------------------|-----------------|
| | | | Min. 150mm | TWrap top side | |
| Power cables up to 6mm ² | Up to 11x | Core holes up to 50mm = 2x tabs | -/120/120 | 450mm | FCO3527 Table 6 |
| Power cables up to 16mm ² | Up to 8x | | -/240/240 | 450mm | |
| CAT6 data cables | Up to 30x | | -/120/120 | 450mm | |
| Telecom cables | Up to 30x | | -/120/120 | 450mm | |
| TPS cables 2.5mm ² | Up to 1x | Core holes up to 100mm = 3x tabs | -/240/120 | Wrap Free! | |
| Fire cables 2.5mm ² | Up to 1x | | -/240/120 | Wrap Free! | |



INSTALLATION

1. SEAL ANNULAR GAP

Seal the annular gap around the service with FyrePEX HP Intumescent Sealant to a 60mm depth.



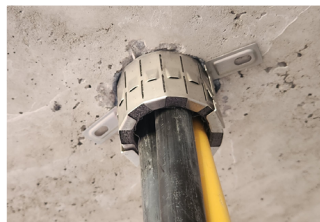
2. CUT COLLAR TO LENGTH

Measure and cut the collar to a length to suit the services/hole size, ensuring the to remain within the scope of approvals.



3. INSTALL COLLAR

Wrap the collar around the services, and secure the ends to each other using 1x mounting bracket.



4. SECURE FIXINGS

Install the remaining mounting brackets (as many as required for the application), and secure into the separating using the fixing type specified in Table 1.



5. FINISH WITH SEALANT

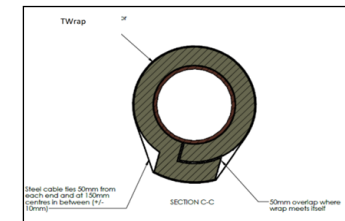
Finish the installation by backfilling the gap from the service to the collar with FyrePEX HP Intumescent sealant.



6A. TWRAP

(IF APPLICABLE)

Wrap the TWrap around the service overlapping 50mm where it meets itself.



6B. TWRAP

(IF APPLICABLE)

Secure TWrap with steel cable ties, 50mm from each end and at 150mm centres between. (TWrap can also be additionally secured with steel reinforced tape).



PLASTIC PIPES

UniCORN Continuous Fire Collar has been fire tested and approved for the following services:



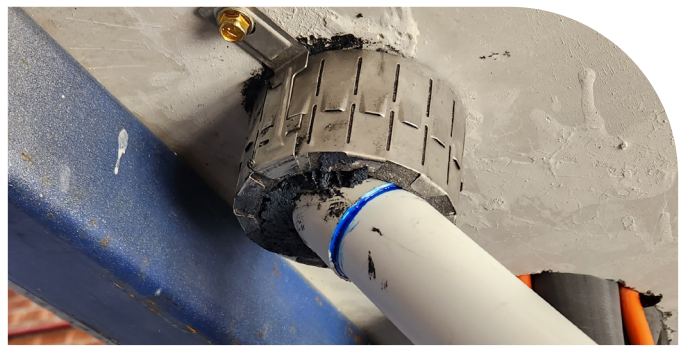
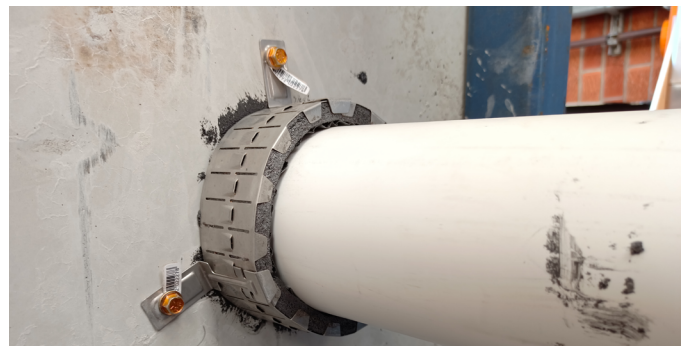
SERVICES

- PVC Stack Pipe
- HDPE Stack Pipe
- PVC Pressure Pipe
- Pex



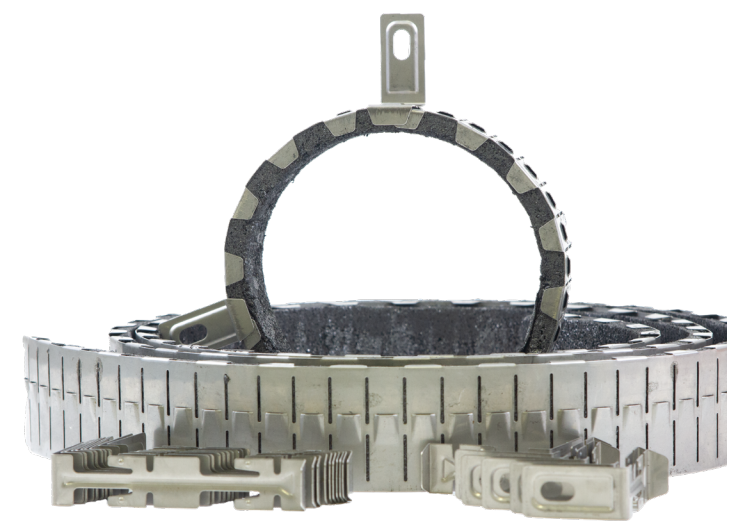
BARRIER TYPE

- Floors
- Concrete



FRL TABLE - PLASTIC PIPES

| Plastic Pipe Services | Can mix and match? | How many tabs? | Concrete Floors | | Test Report |
|-------------------------|---------------------------------|----------------|-----------------|------------|-------------------|
| | | | Min. 150mm | Min. 175mm | |
| PVC-40 | No, single pipe only | 2x | -/180/180 | -/240/240 | FSP2425 #7 |
| PVC-40 with elbow | No, single pipe only | 2x | -/180/180 | -/240/240 | FSP2419 #2 |
| PVC-50 | No, single pipe only | 2x | -/180/180 | -/240/240 | FSP2317 #1 |
| PVC-50 with elbow | No, single pipe only | 2x | -/120/120 | -/120/120 | FCO3527 Table 2 |
| PVC-65 | No, single pipe only | 3x | -/180/180 | -/240/240 | FSP2425 #6 |
| PVC-80 | No, single pipe only | 3x | -/180/180 | -/240/240 | FSP2425 #5 |
| PVC-100 | No, single pipe only | 3x | -/180/180 | -/240/240 | FSP2317 #1 |
| PVC-100 with elbow | No, single pipe only | 3x | -/120/120 | -/120/120 | FCO3527 Table 2 |
| PVC-100 (2x pipes) | 2x pipes wrapped with 1x collar | 6x | -/90/90 | -/90/90 | FSP2425 #3 |
| PVC-150 (Double collar) | No, single pipe only | 3x | -/180/180 | -/240/240 | FSP2425 #4 |
| HDPE-40 | No, single pipe only | 2x | -/180/180 | -/240/240 | FSP2425 #1 |
| HDPE-50 | No, single pipe only | 2x | -/180/180 | -/240/240 | Contact Trafalgar |
| HDPE-56 | No, single pipe only | 3x | -/180/180 | -/240/240 | Contact Trafalgar |
| HDPE-80 | No, single pipe only | 3x | -/180/180 | -/240/240 | Contact Trafalgar |
| HDPE-100 | No, single pipe only | 3x | -/180/180 | -/240/240 | Contact Trafalgar |
| PEX-a 25mm | Yes (1x max) | 2x | -/180/180 | -/240/240 | FSP2425 #8 |
| PEX-b 25mm | Yes (1x max) | 2x | -/180/180 | -/240/240 | FSP2425 #8 |
| PEX-AL-PEX 25mm | Yes (1x max) | 2x | -/180/180 | -/240/240 | FSP2425 #8 |
| PVC-Pressure-40 | No, single pipe only | 2x | -/180/180 | -/240/240 | FSP2419 #9 |
| PVC-Pressure-100 | No, single pipe only | 3x | -/180/180 | -/240/240 | FSP2419 #10 |



INSTALLATION

1. SEAL ANNULAR GAP

Seal the annular gap around the service with FyrePEX HP Intumescent Sealant to a nominal 10mm depth.



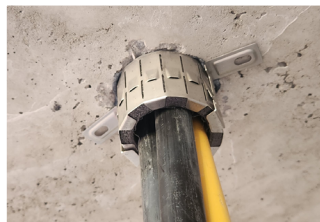
2. CUT COLLAR TO LENGTH

Measure and cut the collar to a length to suit the services/hole size, ensuring the to remain within the scope of approvals.



3. INSTALL COLLAR

Wrap the collar around the services, and secure the ends to each other using 1x mounting bracket.



4. SECURE FIXINGS

Install the remaining mounting brackets (as many as required for the application), and secure into the separating using the fixing type specified in Table 1.



METAL AND LAGGED PIPES

UniCORN Continuous Fire Collar has been fire tested and approved for the following services:

SERVICES

- Pair coil 1x, 2x, 3x
- Hard drawn Copper DN50
- DN25
- NB100

BARRIER TYPE

Floors

- Concrete



FRL TABLES:

METAL AND LAGGED PIPES



| Services | Can mix and match? | How many tabs? | Concrete floors | | Test Reports |
|---|----------------------|----------------|-----------------|-------------------|--------------|
| | | | Min. 150mm | TWrap top side | |
| Hard drawn Copper DN50 + 25mm FR lagging | No, single pipe only | 3x | -/180/- | N/a | FSP2419 #3 |
| DN25 copper pipe (bare) | Yes (max 1x pipe) | 3x | -/240/120 | 300mm top side* | FSP2419 #8 |
| 1xPair coil (3/4 & 3/8") FR lagged with cables* | Max of 3x | 3x | -/240/240 | Wrap Free! | FSP2419 #5 |
| 2xPair coil (3/4 & 3/8") FR lagged with cables* | | 3x | -/120/120 | Wrap Free! | FSP2419 #1 |
| 3xPair coil (3/4 & 3/8") FR lagged with cables* | | 3x | -/120/120 | Wrap Free! | FSP2419 #1 |

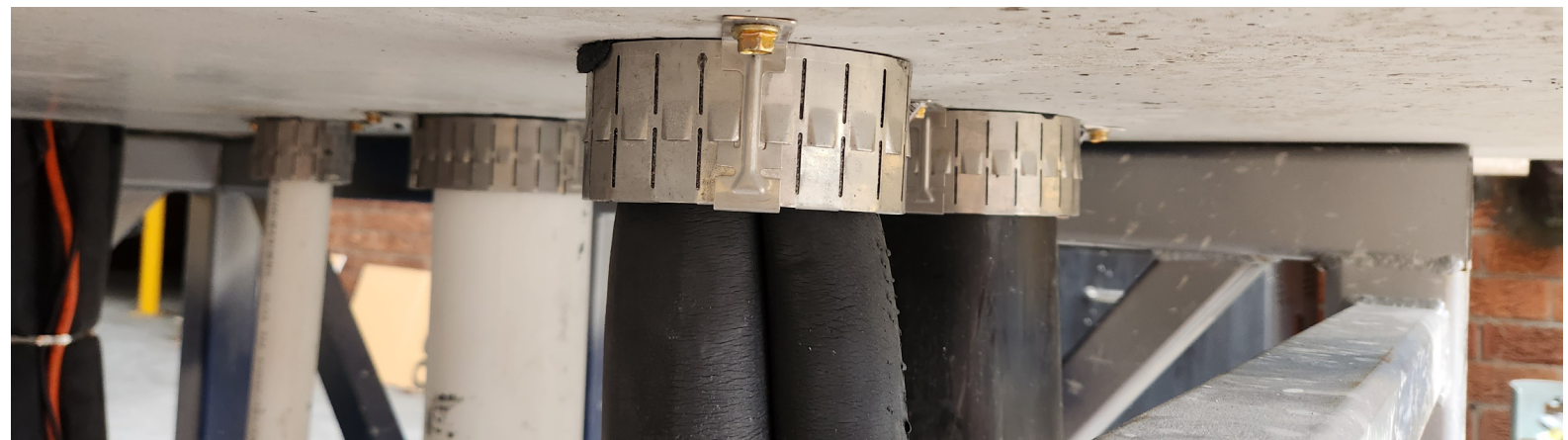





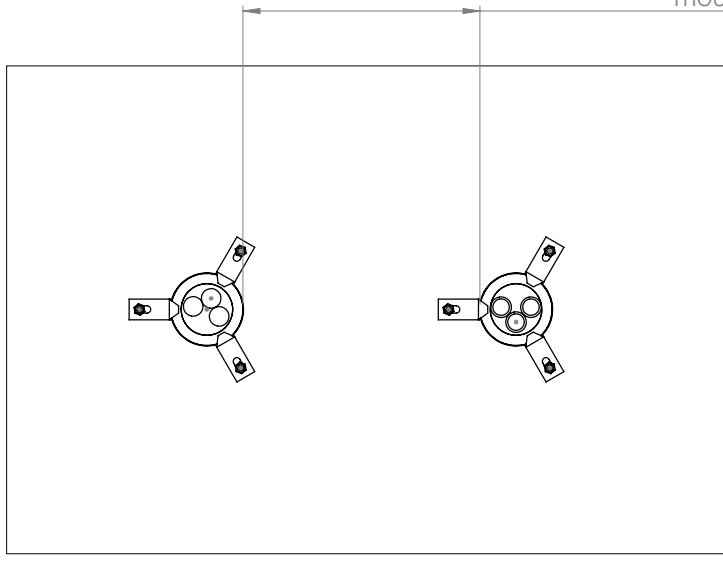
TABLE - 1 APPROVED FIXINGS

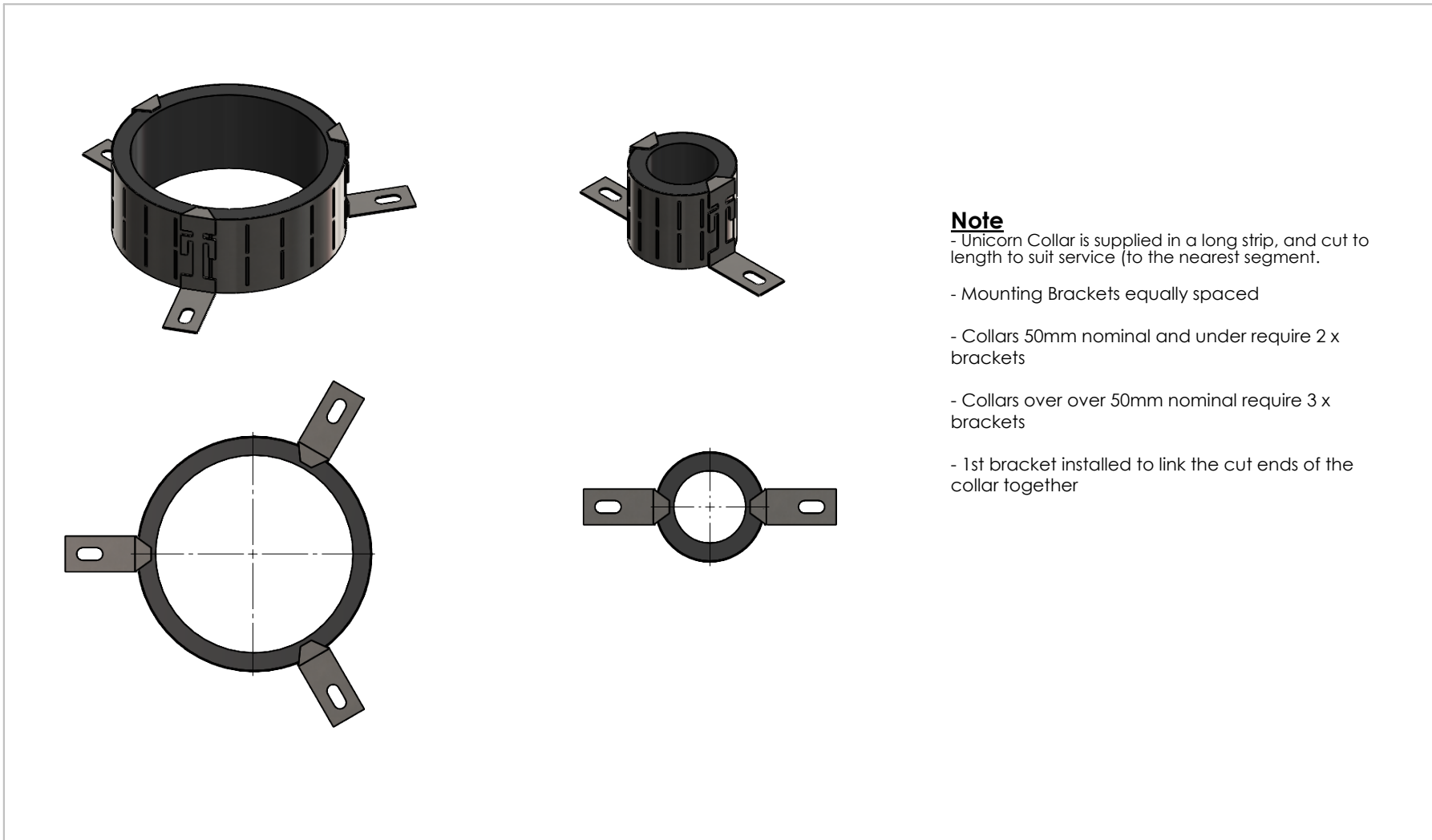
| Element | Collar Fixing Type | |
|---|---|---|
| Min. 120mm Concrete slab or Min.110mm masonry / concrete wall | Min. M6 x 50mm Dynabolt |  |
| | Min. M6 x 50mm Steel knock in anchor |  |
| 96mm Shaftliner Wall | Min. 10G c 38mm Coarse Thread Laminated Screw with washer |  |

Collar Spacing

Collars to be located with a minimum of 40mm separation from collar to collar, not counting the brackets.


Min 40mm edge to edge between adjacent collar bodies (not measured from mounting brackets)

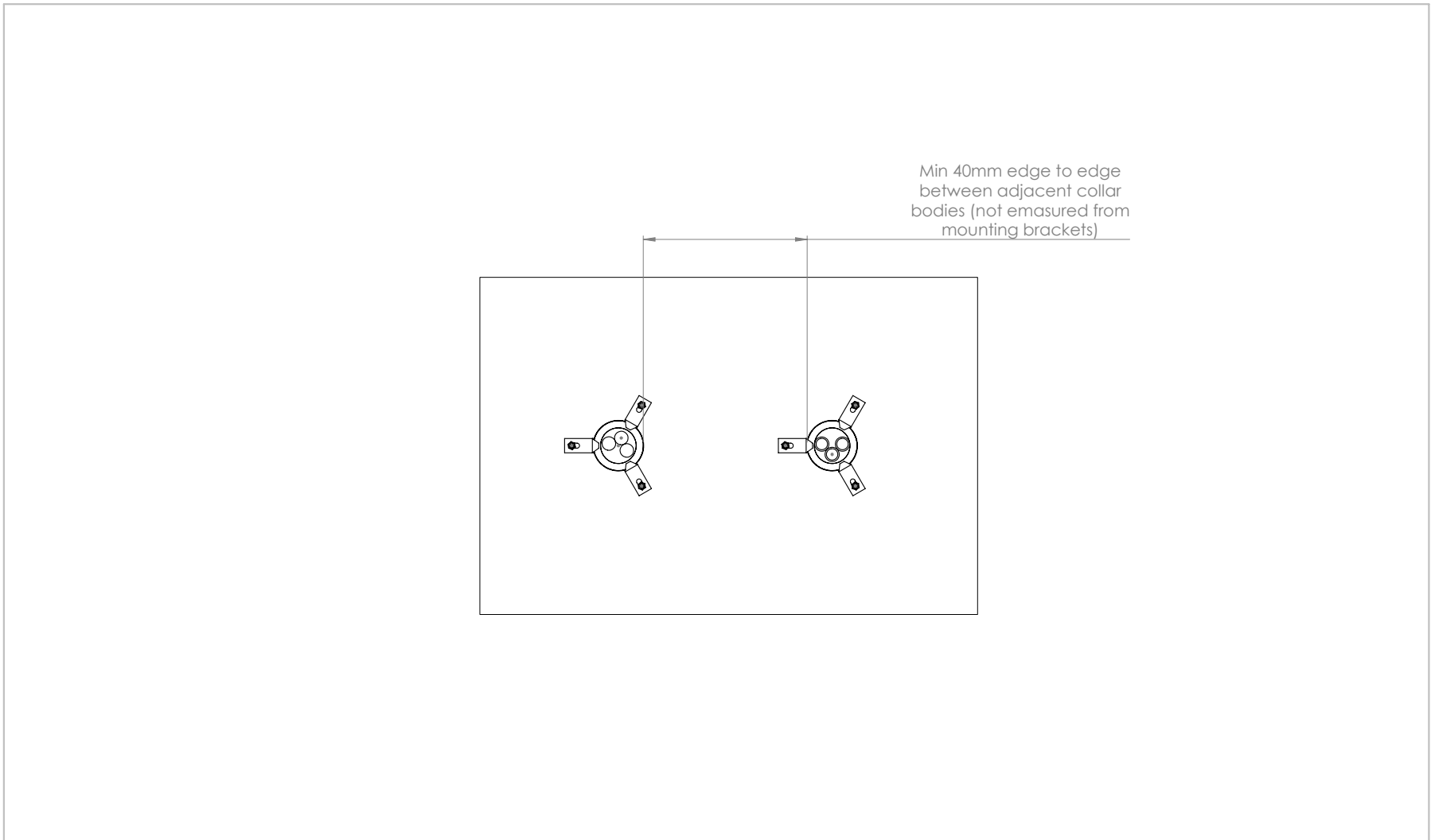





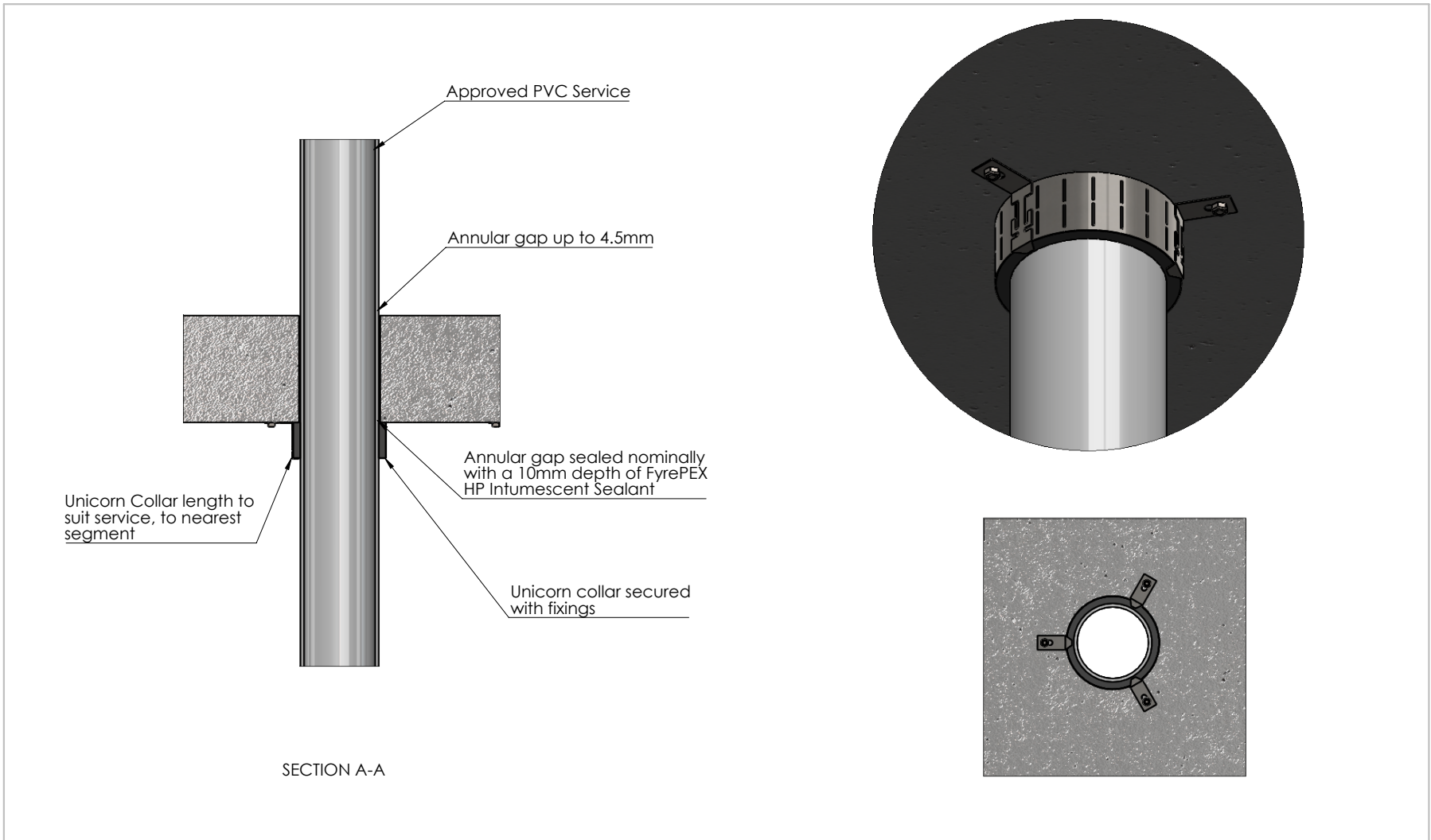
Note


- Unicorn Collar is supplied in a long strip, and cut to length to suit service (to the nearest segment).
- Mounting Brackets equally spaced
- Collars 50mm nominal and under require 2 x brackets
- Collars over over 50mm nominal require 3 x brackets
- 1st bracket installed to link the cut ends of the collar together

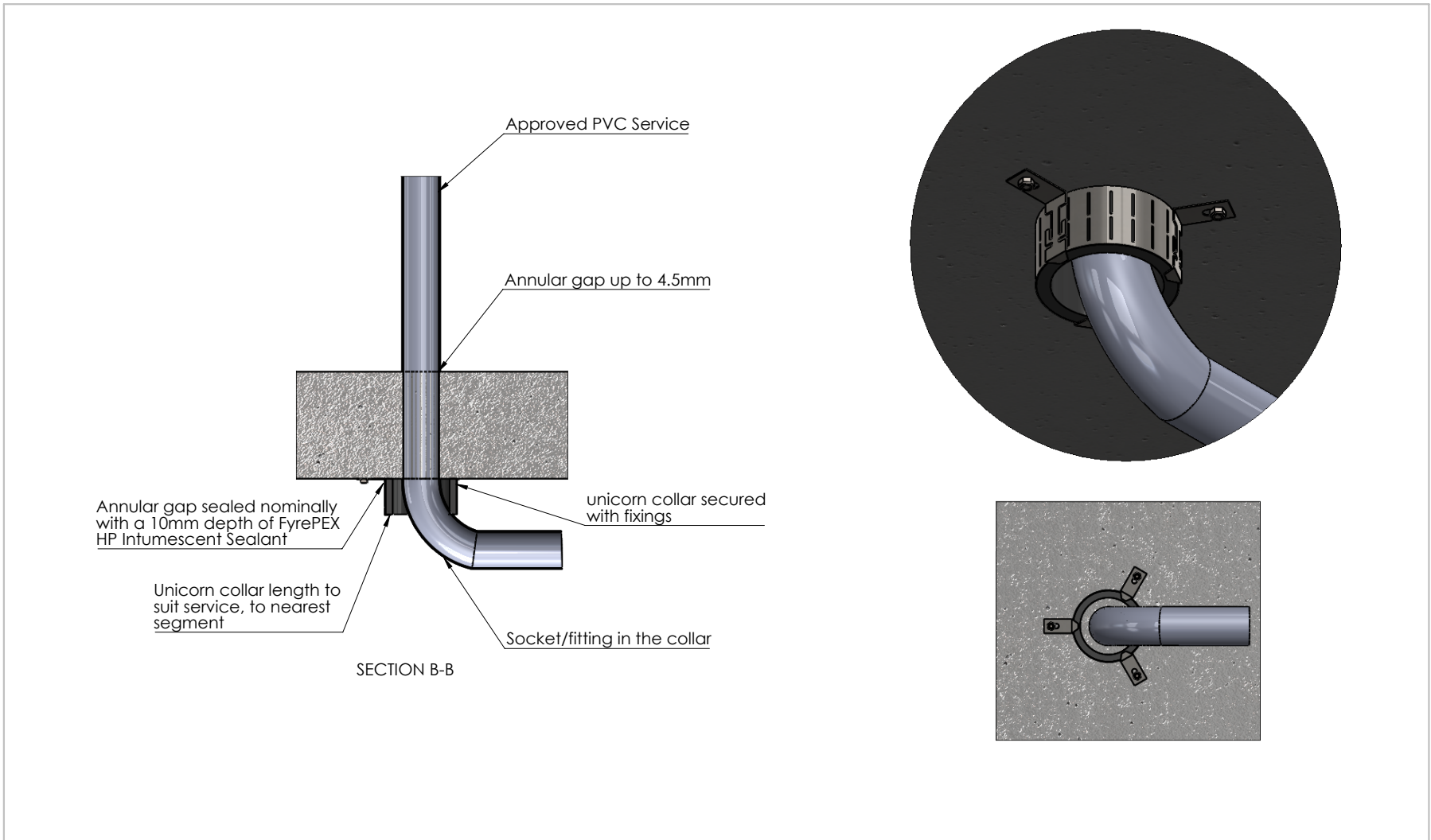
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| Drawing Name: Overview | | | | Test Standard: AS1530.4 | Codes: | Revision: | Date: | No.: | NOTICE: |
| Project Title: Unicorn Collar Drawings | | | | Fire resistance level: | Drawn By: DP | <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> | | | |
| Drawing No. : 1 | Sheet: 1 of 11 | Date: 1/30/2024 | Scale: NTS | Based on Report No.: | Checked By: JH | <input type="checkbox"/> STANDARD DRAWING |  TRAFALGAR Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.fire.com.au | | |
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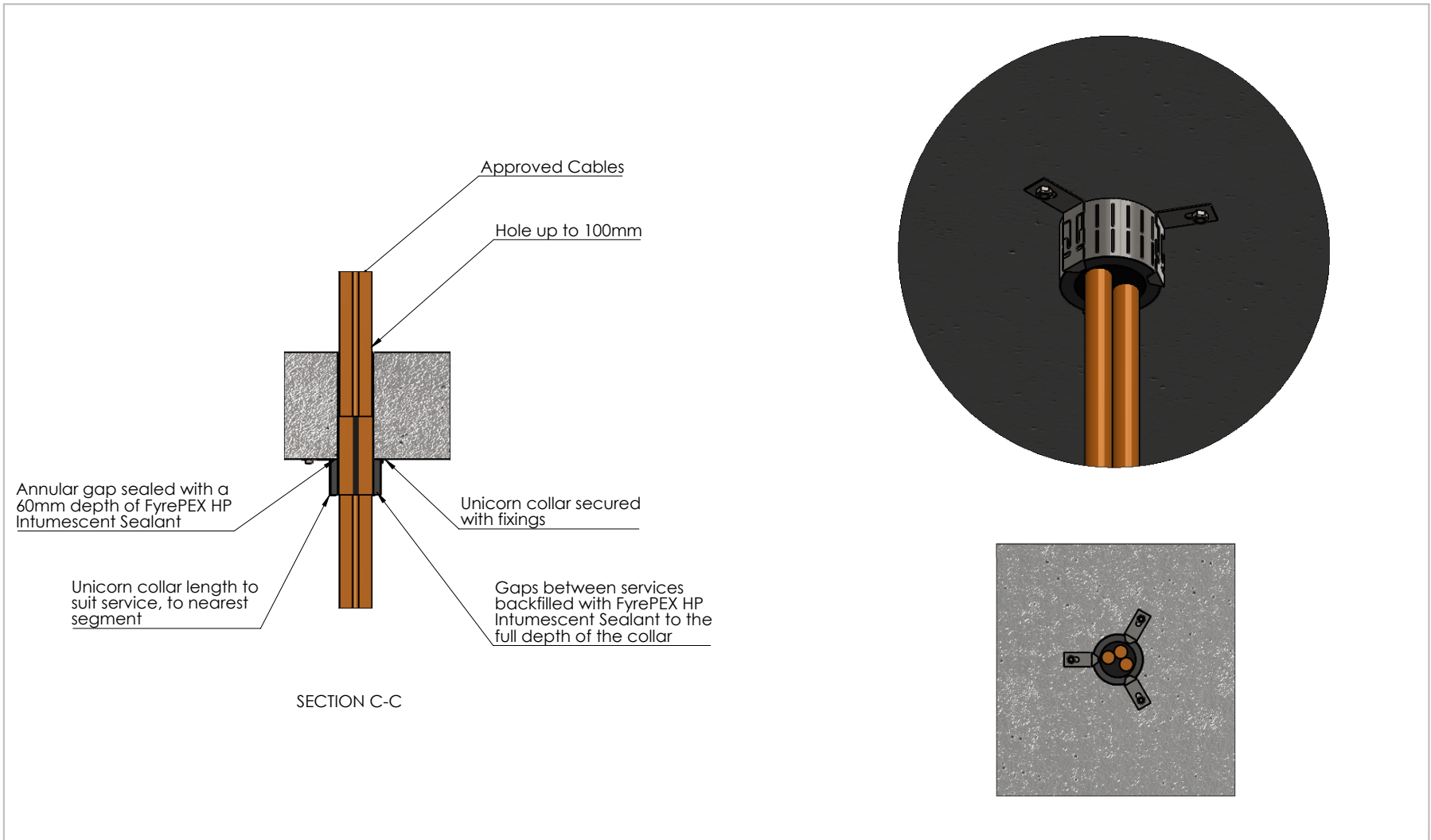
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| Drawing Name: Collar Separation | | | | Test Standard: AS1530.4 | Codes: | Revision: | Date: | No.: | NOTICE: |
| Project Title: Unicorn Collar Drawings | | | | Fire resistance level: | Drawn By: SM | <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> | | | |
| Drawing No. : 2 | Sheet: 2 of 11 | Date: 1/30/2024 | Scale: NTS | Based on Report No.: | Checked By: JH | <input type="checkbox"/> STANDARD DRAWING |  TRAFALGAR FIRE <small>Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.fire.com.au</small> | | |
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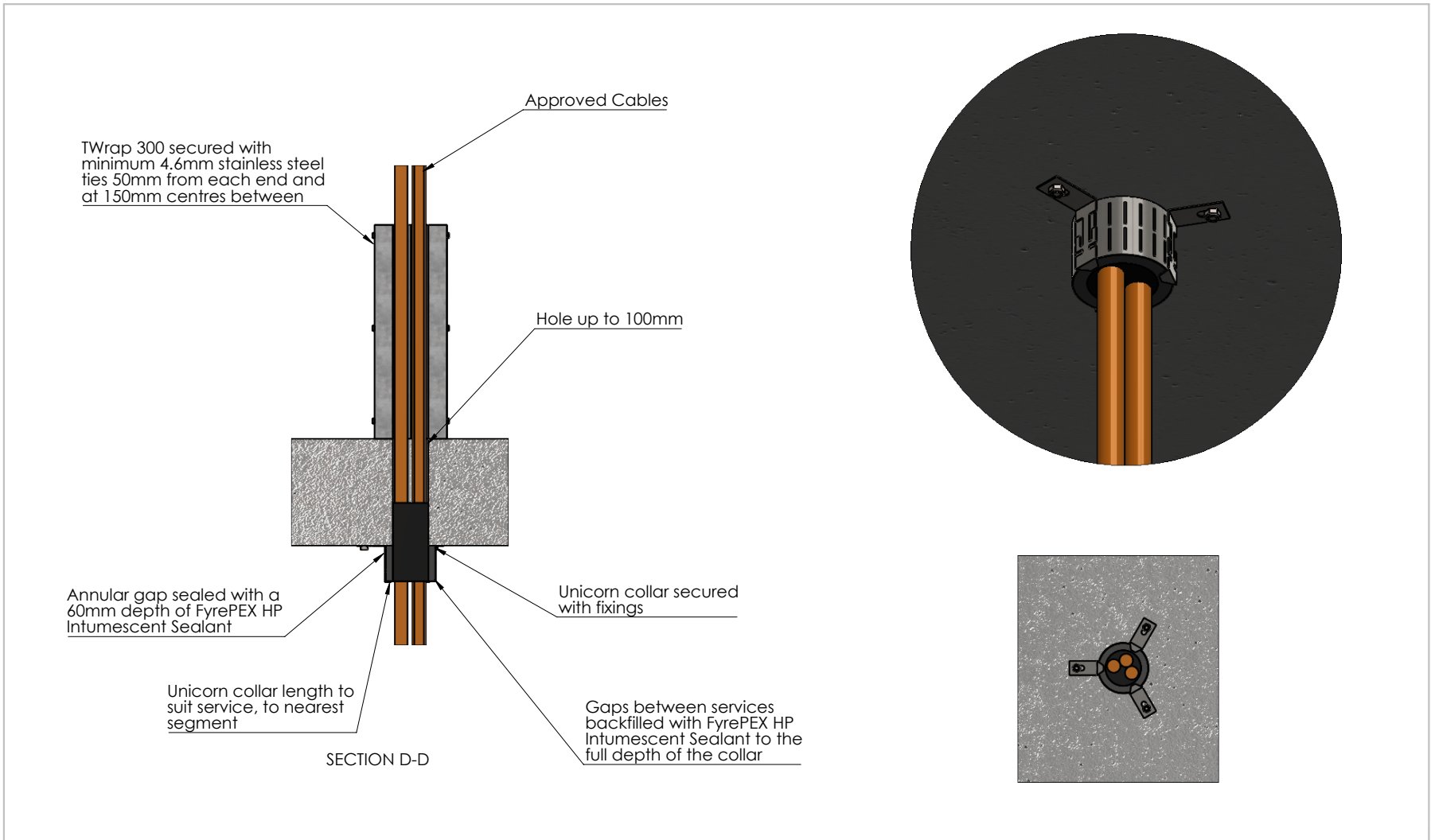
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|---|--------------------------|---------------------------|----------------------|-----------------------------------|--------------------------|---|---|-------------|----------------|
| Drawing Name: PVC Service - Floor | | | | Test Standard: AS1530.4 | Codes: | Revision: | Date: | No.: | NOTICE: |
| Project Title: Unicorn Collar Drawings | | | | Fire resistance level: | Drawn By: SM | <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> | | | |
| Drawing No. : 3 | Sheet: 3 of 11 | Date: 1/30/2024 | Scale: NTS | Based on Report No.: | Checked By: JH | <input type="checkbox"/> STANDARD DRAWING |  <p>TRAFALGAR PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.fire.com.au</p> | | |
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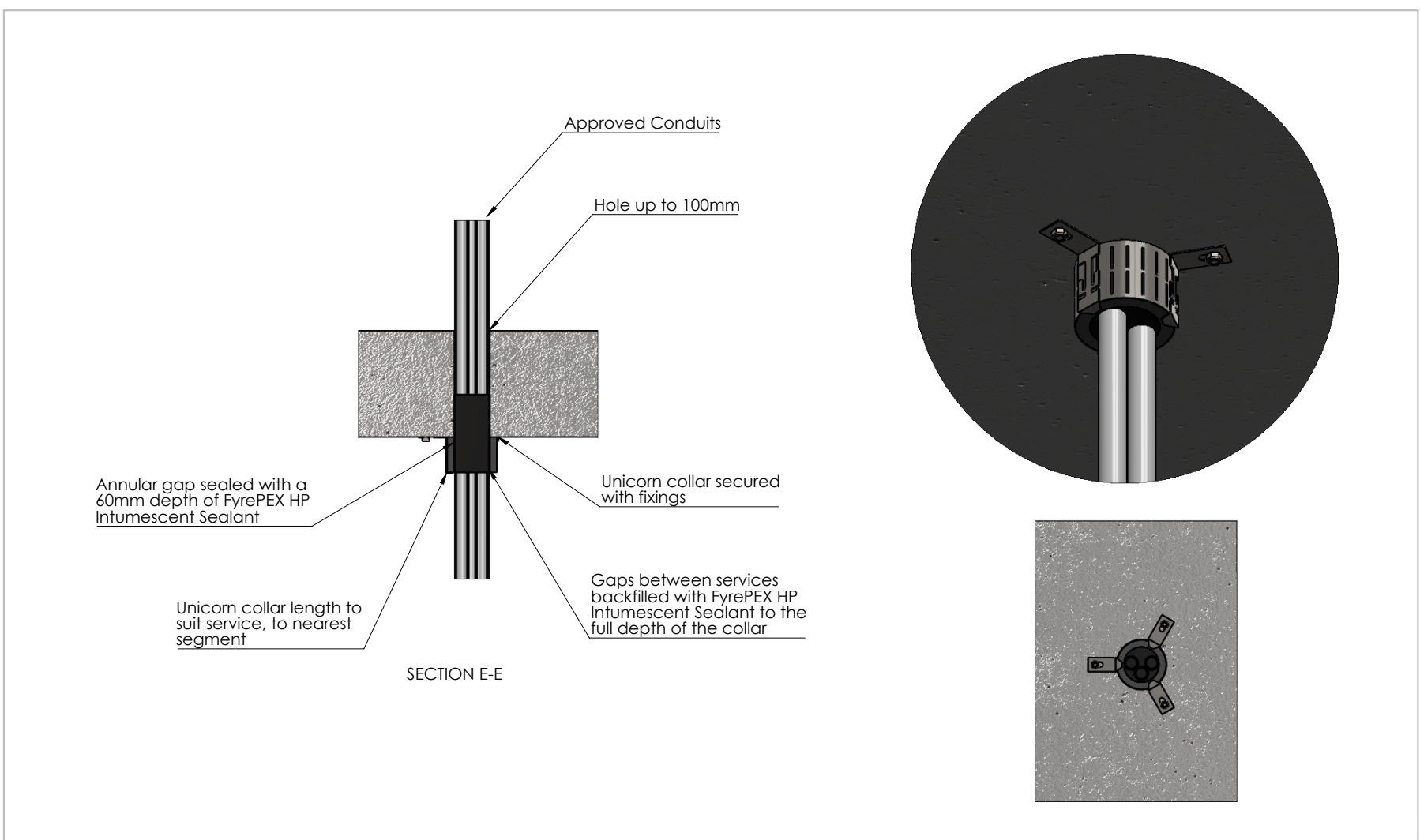
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| Project Title: Unicorn Collar Drawings | | | | Fire resistance level: | Drawn By: SM | <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> | | | |
| Drawing No. : 4 | Sheet: 4 of 11 | Date: 1/30/2024 | Scale: NTS | Based on Report No.: | Checked By: JH | <input type="checkbox"/> STANDARD DRAWING |  <p>TRAFALGAR FIRE</p> <p><small>Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.fire.com.au</small></p> | | |
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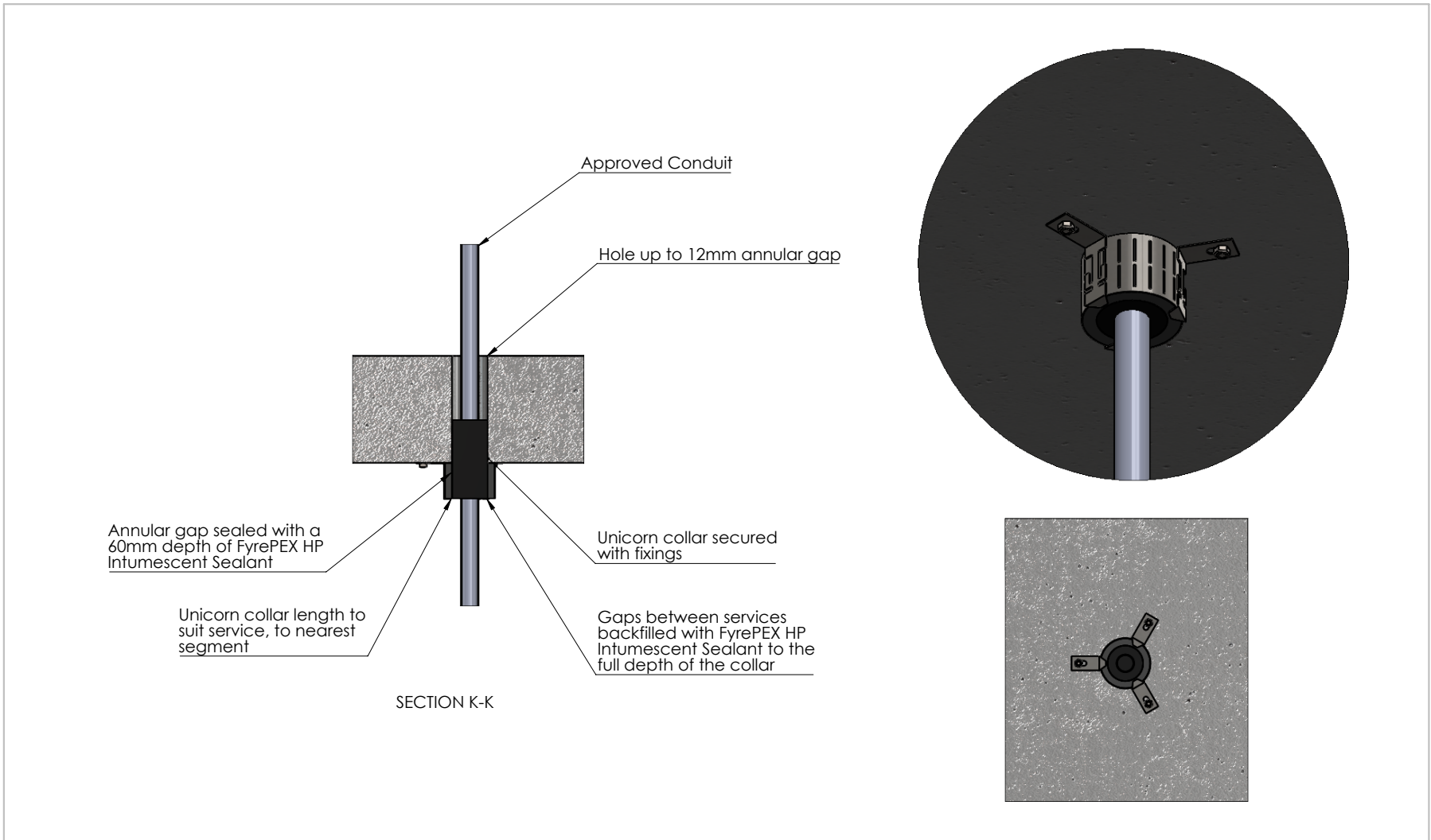
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|---|--------------------------|---------------------------|----------------------|-----------------------------------|--------------------------|---|---|-------------|----------------|
| Drawing Name: Cable Services - Floor | | | | Test Standard: AS1530.4 | Codes: | Revision: | Date: | No.: | NOTICE: |
| Project Title: Unicorn Collar Drawings | | | | Fire resistance level: | Drawn By: SM | <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> | | | |
| Drawing No. : 5 | Sheet: 5 of 11 | Date: 1/30/2024 | Scale: NTS | Based on Report No.: | Checked By: JH | <input type="checkbox"/> STANDARD DRAWING |  <p>TRAFALGAR PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.fire.com.au</p> | | |
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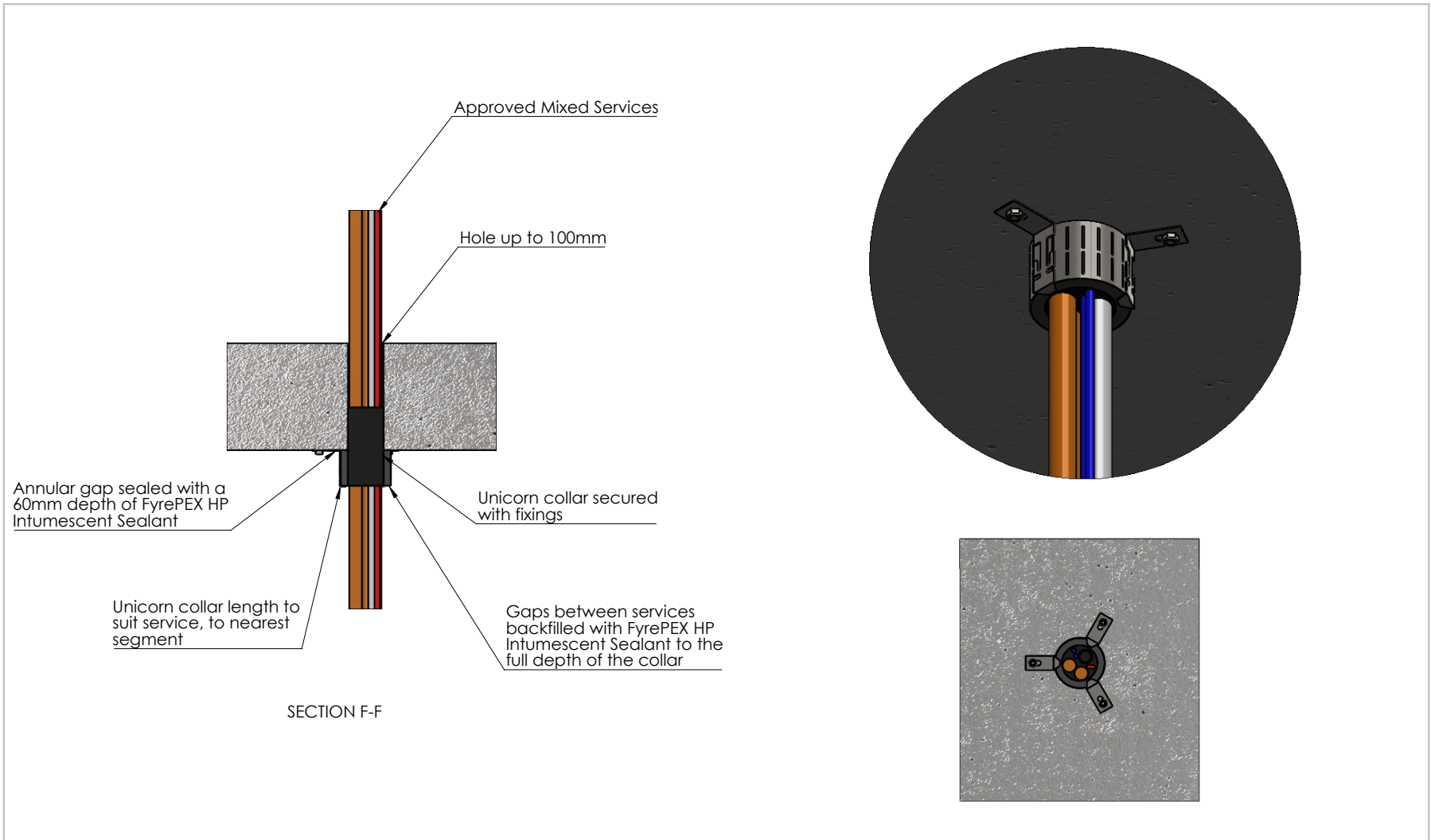
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|---|--------------------------|---------------------------|----------------------|-----------------------------------|--------------------------|---|--|-------------|----------------|
| Drawing Name: Cable Services - TWrap - Floor | | | | Test Standard: AS1530.4 | Codes: | Revision: | Date: | No.: | NOTICE: |
| Project Title: Unicorn Collar Drawings | | | | Fire resistance level: | Drawn By: SM | <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> | | | |
| Drawing No. : 6 | Sheet: 6 of 11 | Date: 1/30/2024 | Scale: NTS | Based on Report No.: | Checked By: JH | <input type="checkbox"/> STANDARD DRAWING |  <p>TRAFALGAR PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@tgroup.com.au W: www.fire.com.au</p> | | |
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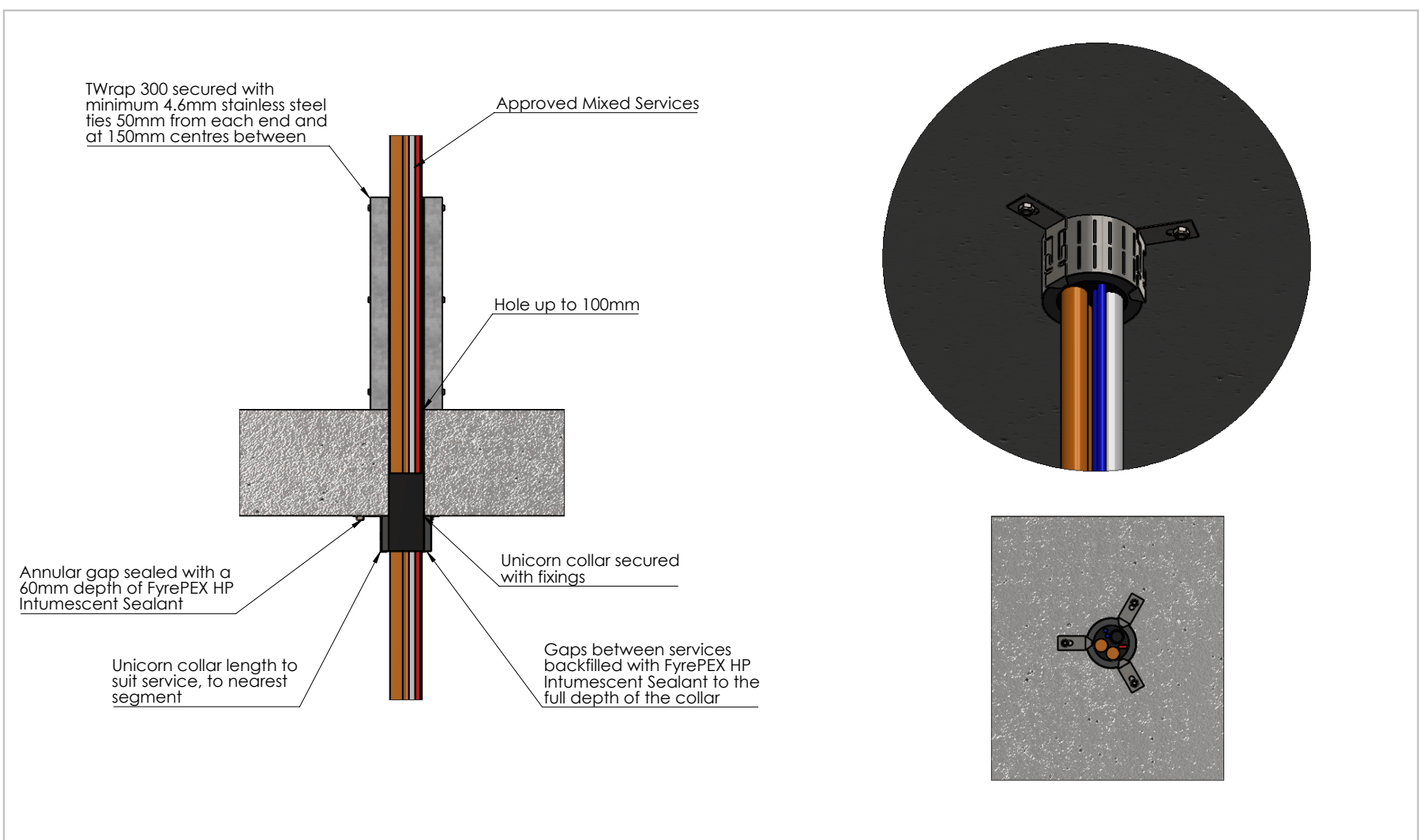
| | | | | | | | | | |
|---|--------------------------|---------------------------|----------------------|-----------------------------------|--------------------------|---|---|-------------|----------------|
| Drawing Name: Conduit Services - Floor | | | | Test Standard: AS1530.4 | Codes: | Revision: | Date: | No.: | NOTICE: |
| Project Title: Unicorn Collar Drawings | | | | Fire resistance level: | Drawn By: SM | <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> | | | |
| Drawing No. : 7 | Sheet: 7 of 11 | Date: 1/30/2024 | Scale: NTS | Based on Report No.: | Checked By: JH | <input type="checkbox"/> STANDARD DRAWING |  <p>TRAFALGAR PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.fire.com.au</p> | | |
| | | | | | | <input type="checkbox"/> PROJECT DRAWING | | | |




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|---|--------------------------|---------------------------|----------------------|-----------------------------------|--------------------------|---|---|-------------|----------------|
| Drawing Name: Single Conduit Service - Floor | | | | Test Standard: AS1530.4 | Codes: | Revision: | Date: | No.: | NOTICE: |
| Project Title: Unicorn Collar Drawings | | | | Fire resistance level: | Drawn By: SM | <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> | | | |
| Drawing No. : 8 | Sheet: 8 of 11 | Date: 1/30/2024 | Scale: NTS | Based on Report No.: | Checked By: JH | <input type="checkbox"/> STANDARD DRAWING |  <p>TRAFALGAR PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.fire.com.au</p> | | |
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|---|--------------------------|---------------------------|----------------------|-----------------------------------|--------------------------|---|---|-------------|----------------|
| Drawing Name: Mixed Services - Floor | | | | Test Standard: AS1530.4 | Codes: | Revision: | Date: | No.: | NOTICE: |
| Project Title: Unicorn Collar Drawings | | | | Fire resistance level: | Drawn By: SM | <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> | | | |
| Drawing No. : 9 | Sheet: 9 of 11 | Date: 1/30/2024 | Scale: NTS | Based on Report No.: | Checked By: JH | <input type="checkbox"/> STANDARD DRAWING |  <p>TRAFALGAR PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.fire.com.au</p> | | |
| | | | | | | <input type="checkbox"/> PROJECT DRAWING | | | |



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|---|---------------------------|---------------------------|----------------------|-----------------------------------|--------------------------|---|---|-------------|----------------|
| Drawing Name: Mixed Services - TWrap - Floor | | | | Test Standard: AS1530.4 | Codes: | Revision: | Date: | No.: | NOTICE: |
| Project Title: Unicorn Collar Drawings | | | | Fire resistance level: | Drawn By: SM | <small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small> | | | |
| Drawing No. : 10 | Sheet: 10 of 11 | Date: 1/30/2024 | Scale: NTS | Based on Report No.: | Checked By: JH | <input type="checkbox"/> STANDARD DRAWING |  <p>TRAFALGAR PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@group.com.au W: www.fire.com.au</p> | | |
| | | | | | | <input type="checkbox"/> PROJECT DRAWING | | | |