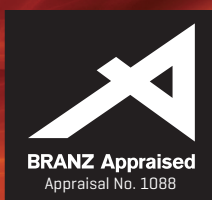


JANUARY 2025

PASSIVE FIRE PROTECTION SYSTEMS ELECTRICAL



allproof.com

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FIRE TESTING

Allproof industries has an extensive testing programme with independent IANZ accredited fire testing laboratories and is consistently working with Industry to provide exceptional products that can help overcome issues regularly faced on site.

The passive fire protection products offered from Allproof are designed to contain a fire in the compartment of origin, thus limiting the spread of fire and smoke for a limited period of time. The fire ratings and installation details are illustrated in this document.

All products are tested to AS1530.4 - 2014 and AS4072.1 - 2005.

The passive fire protection products designed to protect service penetrations are tested using an open/closed format. That is, the pipe is capped on the fire side during the test and is open on the non fire side. When fire testing electrical services, 2m of cable/pipe projects out of the supporting construction (wall or floor) and is deemed to be representative of general electrical systems and associated services.

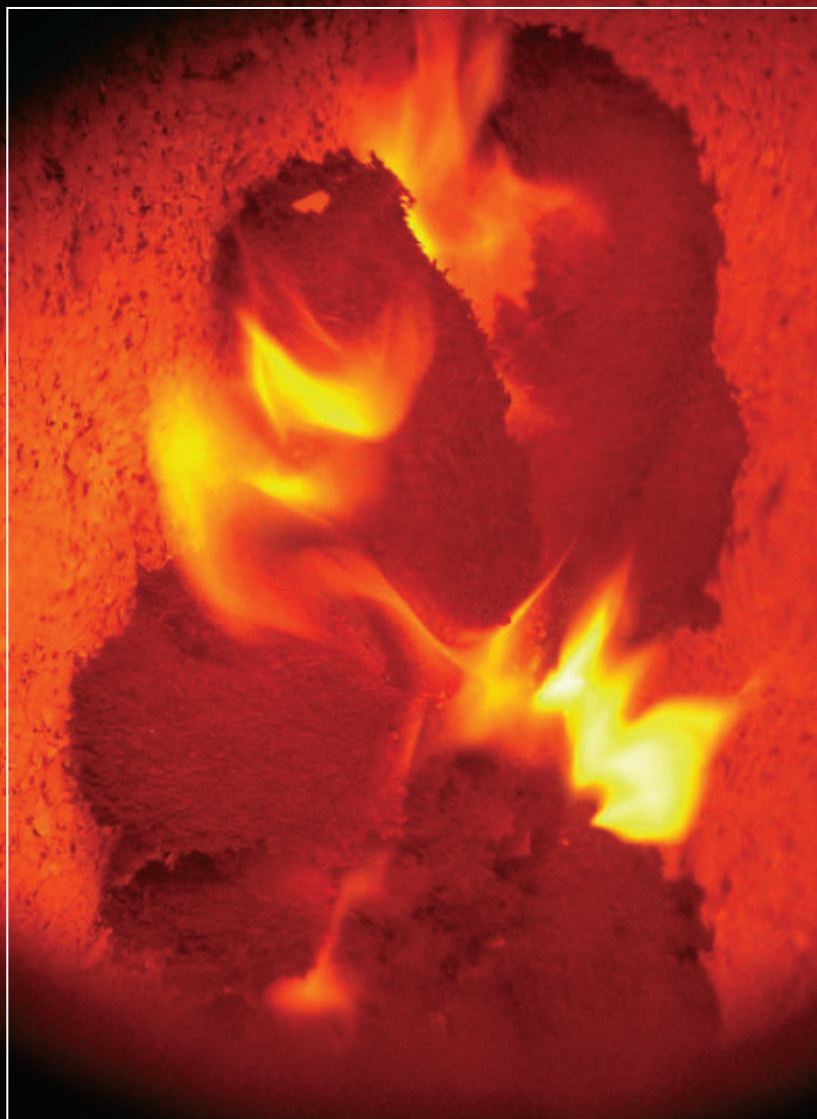


ADVANCED INTUMESCENT

At the core of the Allproof passive fire protection product range is the advanced intumescent technology. This enables Allproof to offer products with performance and design advantages for engineers and installers of passive fire protection products. Allproof's intumescent material expands when exposed to heat and as its volume increases with significant expansion pressure, it produces a stable char. The intumescent char formed is a poor conductor of heat, retarding heat transfer and retaining the integrity and insulation of service penetrations through otherwise fire-resistance rated walls or floors.

ALLPROOF INTUMESCENT TECHNOLOGY:

- > Flexible rubber-like composition allows easy handling
- > Graphite based
- > Moisture resistant
- > Silver/grey in colour
- > Excellent expansion pressure and volume
- > Material stable after expansion



Activated Allproof Intumescent during fire testing in a plasterboard wall.

LOW PROFILE COLLARS



Low profile collars are designed to be installed in concrete, masonry fire rated walls and floors, and fire rated plasterboard walls and ceilings. The Allproof fire collars consist of intumescent material encased in a steel surround with fixing tabs. The advanced intumescent technology allows Allproof to achieve a very low profile height of only 28mm for the 25-80mm fire collars.

When fire occurs the intumescent material expands against the steel surround as the flammable service

running through the collar melts and burns away. The steel casing acts as an excellent heat sync ensuring fast activation of the intumescent, forming a stable fire resistant plug, maintaining both fire integrity and insulation.

Fire collars are designed to be exposed in a wall or floor application (i.e. face fixed). The collars should always be fixed to the underneath of the concrete floor. In wall situations one collar should be used on each exposed side of the fire rated wall.

SUITABLE FOR FITTING TO:

- > Concrete floor
- > Rib & timber infill floor
- > Cross Laminated timber floor
- > Cross laminated timber walls
- > Plasterboard ceilings
- > Plasterboard walls

FEATURES:

- > Totally unaffected by water
- > Unique low profile design (25-80mm)
- > Stainless or galvanized steel case
- > Retro fitting - easy install slide tab
- > For use on various penetrations

INSTALLATION INSTRUCTIONS:

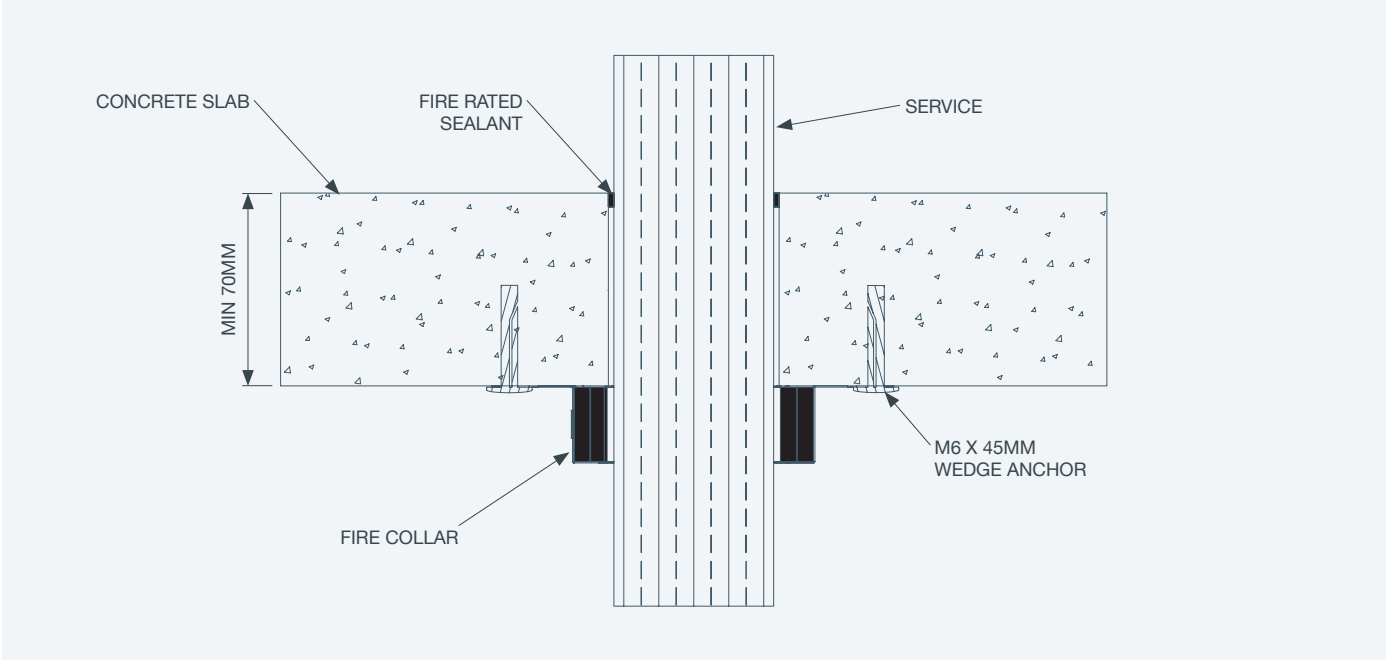
1. Ensure substrate around service is flat and free from obstructions.
2. Open fire collar and position around service.
3. Slide tab through slot in fire collar and fold back 180° to secure.
4. Secure fire collar by using suitable fixings as per testing. Do not use fixings which rely on plastic or nylon components for grip.
5. Install only from underside on floor penetrations. Install fire collar on both sides for wall penetrations.

CONCRETE SLAB TEST RESULTS:

DESCRIPTION	SLAB DEPTH (MM)	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	FLOOR FRL*	REPORT NUMBER
CABLES					
1x TPS Cable	70	ALLFC25	28	-/60/45	145431
7x TPS Cables	70	ALLFC25	28	-/60/45	145431
1x CAT6 Data Cable	70	ALLFC25	28	-/60/45	145431
10x CAT6 Data Cables	70	ALLFC25	28	-/60/60	145431
1x Fire Alarm & 1x Fibre Optic Cable	70	ALLFC50	62	-/60/60	145431
25x Fire Alarm & 25x Fibre Optic Cables	70	ALLFC50	62	-/60/60	145431
1x 25mm Mains Cable & 1x 10mm Earth Cable	70	ALLFC25	28	-/60/45	145431

Fixing: M6 x 45mm Wedge Anchors.
For installations resulting in an annular gap of 4mm or greater insert PE backing rod prior to fire rated sealant.

CONCRETE FLOOR SLAB INSTALLATION DETAILS:

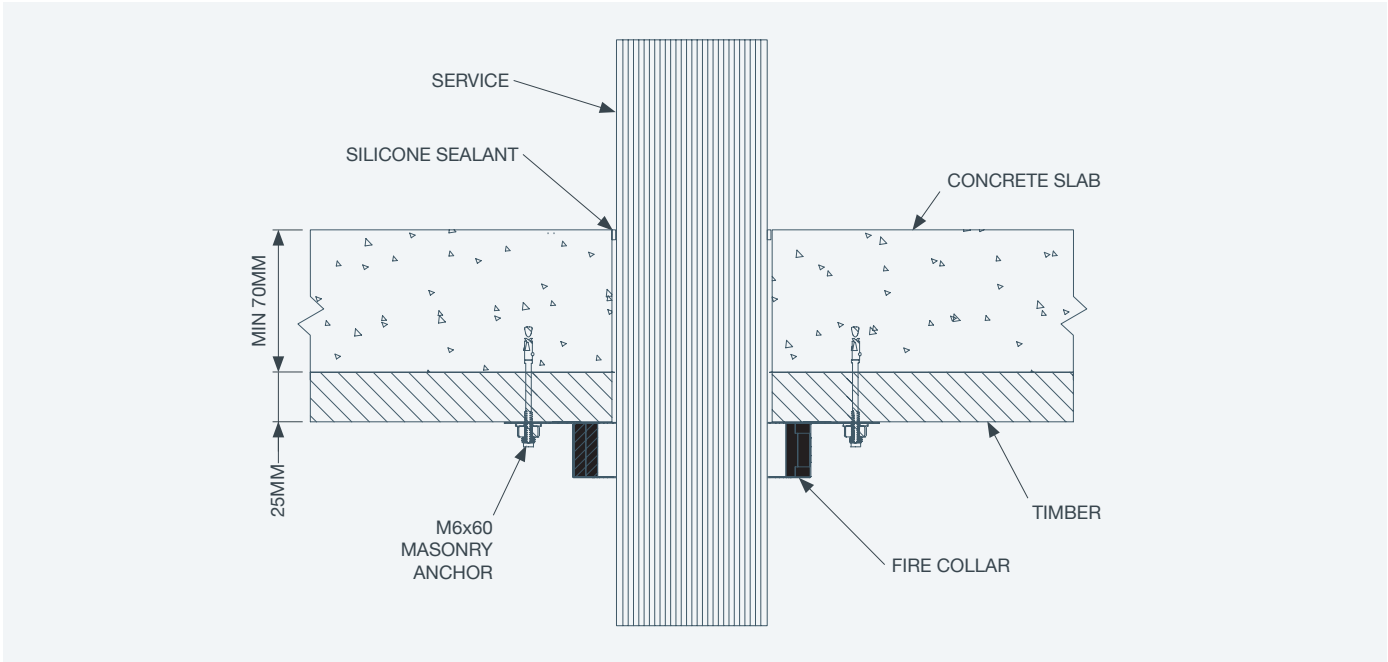


RIB & TIMBER INFILL TEST RESULTS:

DESCRIPTION	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	FLOOR FRL*	REPORT NUMBER
CABLES				
60x TPS Cables	ALLFC80	85	-/90/45	143281-003
100x CAT6 Data Cables	ALLFC80	80	-/90/60	143281-003
25x Fire Alarm & 25x Fibre Optic Cables	ALLFC50	62	-/90/60	143281-003
1x 25mm Mains Cable + 1x 10mm Earth Cable	ALLFC25	28	-/90/45	143281-003
A/C MIXED SERVICES				
1x Pair Coil, 1x TPS Cable & 1x 20mm PVC DWV	ALLFC50	62	-/90/90	143281-003
3x Pair Coil, 6x TPS Cables & 1x 25mm PVC DWV	ALLFC100	102	-/90/30	143281-003

Fixing: Collars tested using M6x60 masonry anchors.
Tested 70mm concrete slab with timber infill boards 25mm thick.
For installations resulting in an annular gap of 4mm or greater insert PE backing rod prior to silicone sealant.

RIB & TIMBER INFILL INSTALLATION DETAILS:

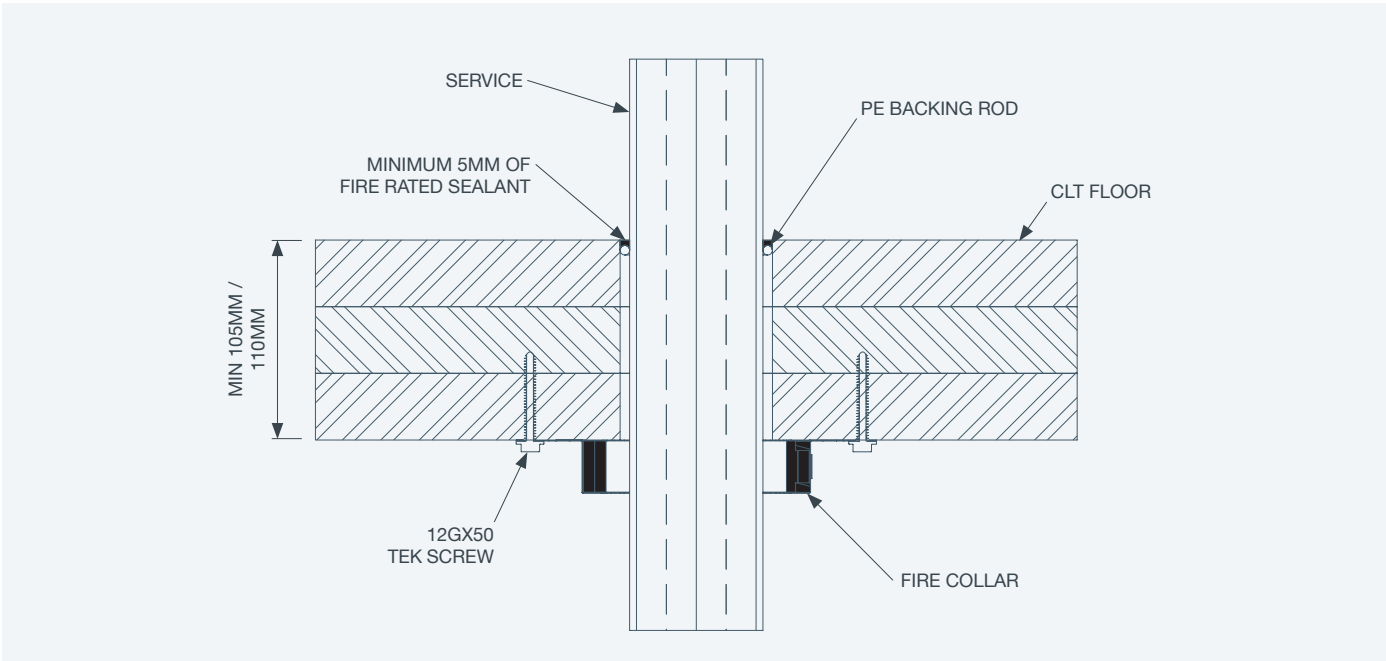


CROSS LAMINATED TIMBER (CLT) FLOOR TEST RESULTS:

DESCRIPTION	TIMBER DEPTH	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	FLOOR FRL*	REPORT NUMBER
CABLES					
1x TPS Cable	110	ALLFC25	32	-/60/60	148131
7x TPS Cables	105	ALLFC25	32	-/60/30	145432
1x CAT6 Data Cable	110	ALLFC25	28	-/60/60	148131
7x CAT6 Data Cables	105	ALLFC25	28	-/60/45	145432
1x 16mm Mains & 1x 10mm Earth Cable	105	ALLFC25	30	-/60/60	145432
A/C MIXED SERVICES					
1x Fire Rated Pair Coil, 1x TPS Cable & 1x CAT6 Data Cable	105	ALLFC80	80	-/60/30	145432

Fixing: Collars tested using Tek Screw 12G x 50mm.
For installations resulting in an annular gap of 4mm or greater insert PE backing rod prior to fire rated sealant.

CROSS LAMINATED TIMBER INSTALLATION DETAILS:



2 X 13MM PLASTERBOARD CEILING TEST RESULTS:

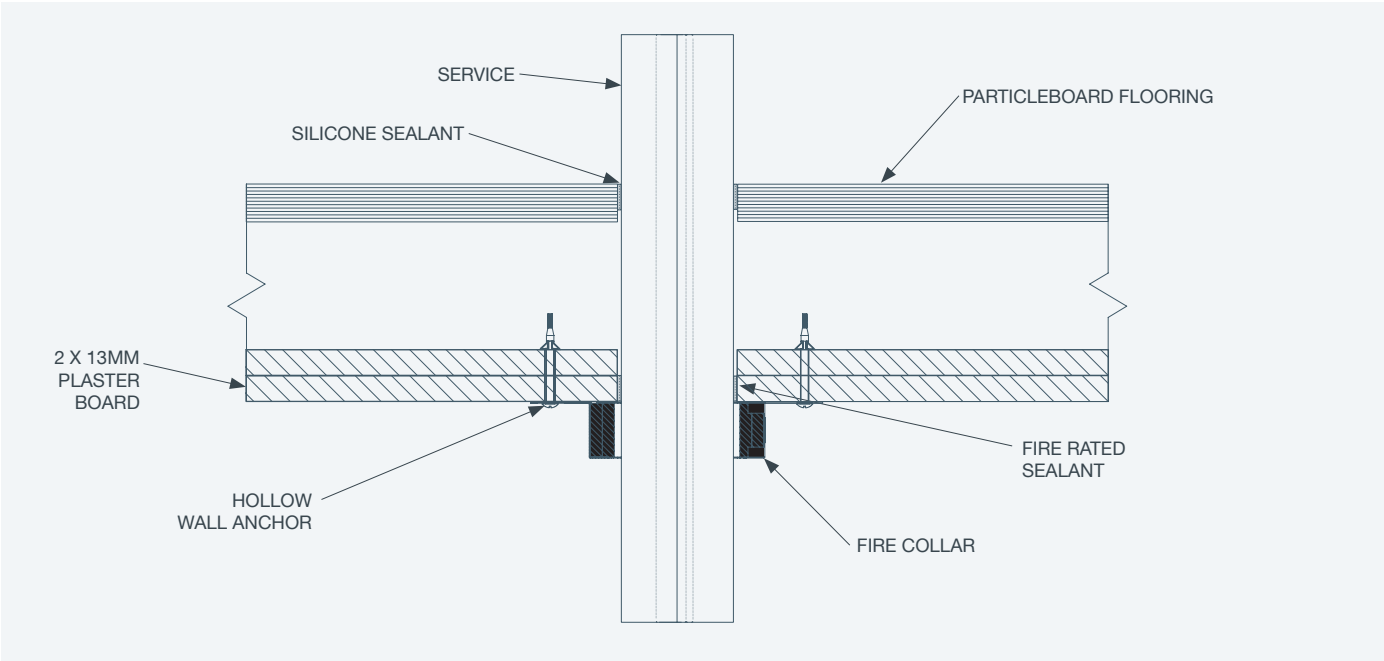
DESCRIPTION	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	PLASTERBOARD FRL*	REPORT NUMBER
CABLES				
1x TPS Cable	ALLFC25	28	-//90/90	146206
7x TPS Cables	ALLFC25	32	-/90/90	142100
8x TPS Cable	ALLFC50	32	-/90/90	146206
1x CAT6 Data Cable	ALLFC25	28	-/90/90	146206
10x CAT6 Data Cables	ALLFC25	28	-/90/90	142100
11x CAT6 Data Cable	ALLFC50	28	-/90/90	146206
1x Fire Alarm & 1x Fibre Optic Cable	ALLFC40	32	-/90/90	146206
10x Fire Alarm & 10x Fibre Optic Cables	ALLFC40	32	-/90/90	146206
1x 16mm Mains Cable + 1x 10mm Earth Cable	ALLFC25	28	-/90/90	146206
1x 25mm Mains Cable & 1x 10mm Earth Cable	ALLFC25	28	-/90/90	142100
A/C MIXED SERVICES				
Pair Coil, TPS Cable & 10mm PVC Pipe	ALLFC50	60	-/90/90	142100
3x Fire Rated Pair Coil, 3x TPS Cables & 1x 25mm PVC DWV	ALLFC100	102	-/90/60	146206

Fixing: Collars tested using hollow wall anchors.

For installations resulting in an annular gap of 4mm or greater insert PE backing rod prior to fire rated sealant and/or silicone sealant.

Tested using a 190mm deep timber framing with two layers of 13mm fire rated plasterboard on the exposed side of the frame and 19mm particleboard flooring on the unexposed side of the frame. A total floor-ceiling thickness of 235mm. Pipe collars are fixed using hollow wall anchors directly into the plasterboard - not fixed into framing or studs. Fire rated sealant is applied in the space between the services and plasterboard on the exposed face and silicone sealant between the service and particleboard flooring on the unexposed face.

2X 13MM PLASTERBOARD CEILING INSTALLATION DETAILS:



16MM PLASTERBOARD CEILING TEST RESULTS:

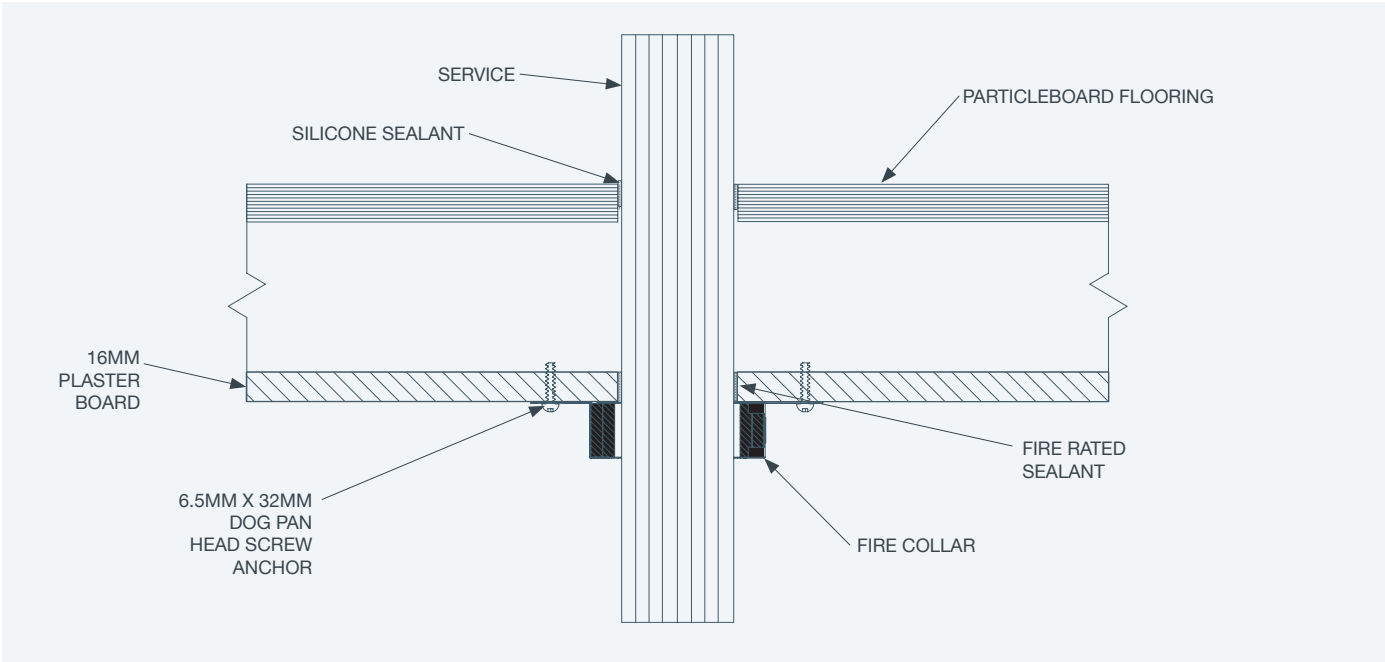
DESCRIPTION	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	PLASTERBOARD WALL FRL*	REPORT NUMBER
CABLES				
7x TPS Cables	ALLFC25	32	-/60/60	148449
10x CAT6 Data Cables	ALLFC25	28	-/60/60	148449

Fixing: 6.5mm x 32mm Dog pan head screw anchors.

For installations resulting in an annular gap of 4mm or greater insert PE backing rod prior to fire rated sealant and/or silicone sealant.

Tested using a 190mm deep timber framing with one layer of 16mm fire rated plasterboard on the exposed side of the frame and 19mm particleboard flooring on the unexposed side of the frame. A total floor-ceiling thickness of 225mm. Fire collars are fixed using dog pan head anchors directly into plasterboard - not fixed into framing or studs. Fire rated sealant is applied in the space between the pipe and plasterboard on the exposed face and silicone sealant between the service and particleboard flooring on the unexposed face.

16MM PLASTERBOARD CEILING INSTALLATION DETAILS:



13MM PLASTERBOARD WALL TEST RESULTS:

DESCRIPTION	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	PLASTERBOARD WALL FRL*	REPORT NUMBER
PVC CONDUIT				
25mm PVC Conduit Filled with 2x Electrical Cables	ALLFC25	28	-/60/45	5810
CABLES				
1x TPS Cable	ALLFC25	28	-/60/60	146207
7x TPS Cables	ALLFC25	32	-/60/45	146207
8x TPS Cables	ALLFC50	32	-/60/60	146207
25x TPS Cables	ALLFC50	57	-/60/45	143281
1x CAT6 Data Cable	ALLFC25	28	-/60/60	146207
10x CAT6 Data Cables	ALLFC25	28	-/60/30	146207
11x CAT6 Data Cables	ALLFC50	28	-/60/30	146207
60x CAT6 Data Cables	ALLFC50	57	-/60/45	143281
1x Fire Alarm Cable	ALLFC25	28	-/60/60	147932
10x Fire Alarm Cables	ALLFC25	28	-/60/60	147932
11x Fire Alarm Cables	ALLFC50	30	-/60/60	148954
40x Fire Alarm Cables	ALLFC50	57	-/60/60	148954
1x Fire Alarm & 1x Fibre Optic Cable	ALLFC25	28	-/60/60	146207
6x Fire Alarm & 6x Fibre Optic Cables	ALLFC25	32	-/60/60	143281
1x 16mm Mains Cable + 1x 10mm Earth Cable	ALLFC25	28	-/60/60	146207
1x 25mm Mains Cable + 1x 10mm Earth Cable	ALLFC25	28	-/60/60	146207
A/C MIXED SERVICES				
1x Pair Coil, 1x TPS Cable & 1x 20mm PVC DWV	ALLFC50	60	-/60/30	147932
2x Pair Coil, 2x TPS Cables & 1x 25mm PVC DWV	ALLFC100	95	-/60/60	147932
3x Pair Coil, 6x TPS Cables & 1x 32mm PVC DWV	ALLFC100	95	-/60/30	143281
A/C MIXED SERVICES - IN WALL				
*Pair Coil, TPS Cable & 20mm PVC DWV (Flexi Hose)	ALLFC50	95	-/60/60	13509

Fixing: Collars tested using hollow wall anchors.

Tested using a 64mm wide steel stud with a single layer of 13mm fire rated plasterboard on each side of the frame. A total wall thickness of 90mm. Fire collars are fixed using hollow wall anchors directly into the plasterboard - not fixed into framing or studs in wall. Fire rated sealant is applied in the space between the service and plasterboard on both the exposed and unexposed face.

* In wall Pair Coil uses fire rated sealant as smoke seal, see notes on install detail below.

STANDARD NON-FIRE RATED 13MM PLASTERBOARD WALL TEST RESULTS:

DESCRIPTION	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	PLASTERBOARD WALL FRL*	REPORT NUMBER
CABLES				
1x TPS Cable	ALLFC25	28	-/30/30	148639
7x TPS Cables	ALLFC25	32	-/30/-	148639
1x CAT6 Data Cable	ALLFC25	28	-/30/30	148639
10x CAT6 Data Cables	ALLFC25	28	-/30/30	148639
1x Fire Alarm Cable	ALLFC25	28	-/30/30	148639
10x Fire Alarm Cables	ALLFC25	28	-/30/30	148639
1x 16mm Mains Cable + 1x 10mm Earth Cable	ALLFC25	28	-/30/30	148639

Fixing: 6.5mm x 32mm Dog screw wall anchors.

Tested using a 64mm wide steel stud with a single layer of 13mm fire rated plasterboard on each side of the frame. A total wall thickness of 90mm. Fire collars are fixed using Dog Screw Anchors directly into the plasterboard - not fixed into framing or studs in wall. Fire rated sealant is applied in the space between the service and plasterboard on both the exposed and unexposed face.

PLASTERBOARD INSTALLATION DETAILS:

FACE FIXED WITH HOLLOW WALL ANCHOR
(SEE RELEVANT TABLE)

DETAIL SHOWS CONDUIT PIPE, OTHER TESTED SERVICES TO BE BUNDLED TOGETHER THROUGH THE PENETRATION, FIRE COLLAR AND SEALANT INSTALL CONSISTENT WITH ALL SERVICES.

IN WALL (SEE RELEVANT TABLE)

DETAIL SHOWS PAIR COIL, OTHER TESTED SERVICES TO BE BUNDLED TOGETHER IN A SIMILAR FASHION, FIRE COLLAR AND SEALANT INSTALL CONSISTENT WITH ALL SERVICES.

FACE FIXED WITH DOG PAN HEAD SCREW

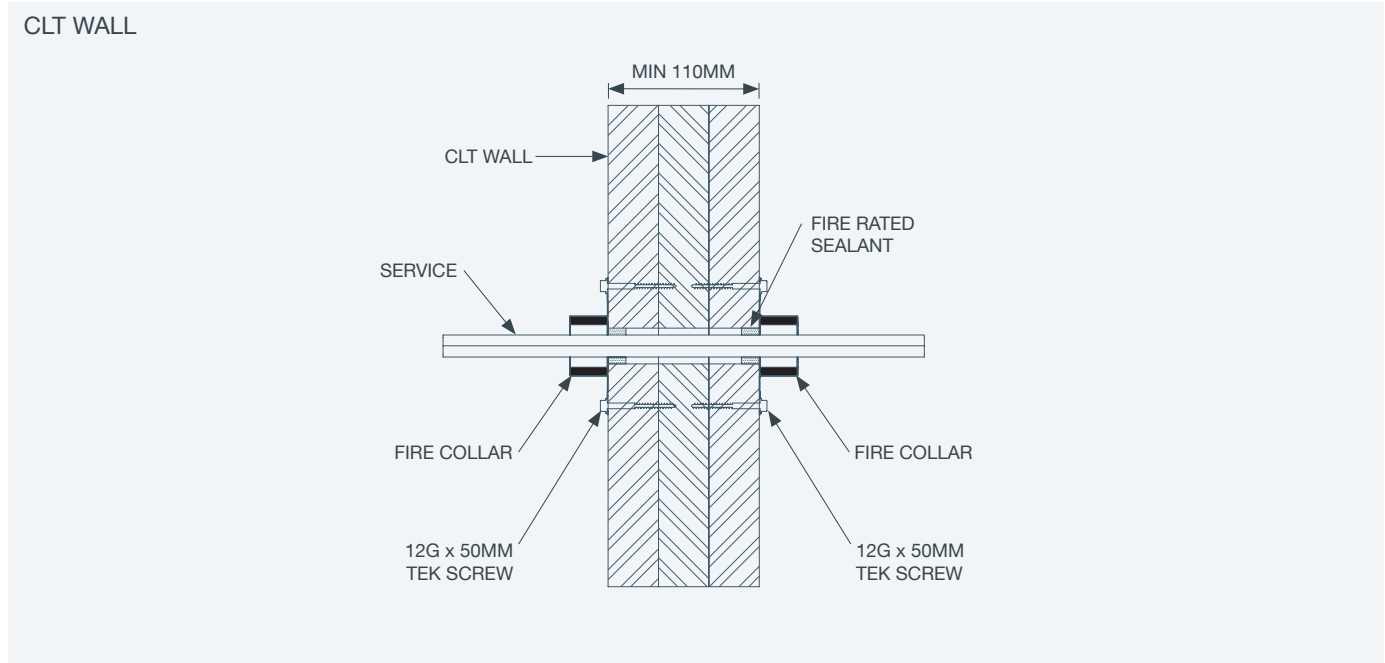
6.5MM X 32MM DOG PAN HEAD SCREW ANCHOR

Smoke seal on pair coil achieved with fire rated sealant between service and fire collar. Other services not to include fire rated sealant between service and collar unless otherwise stated.

CROSS LAMINATED TIMBER (CLT) WALL TEST RESULTS:

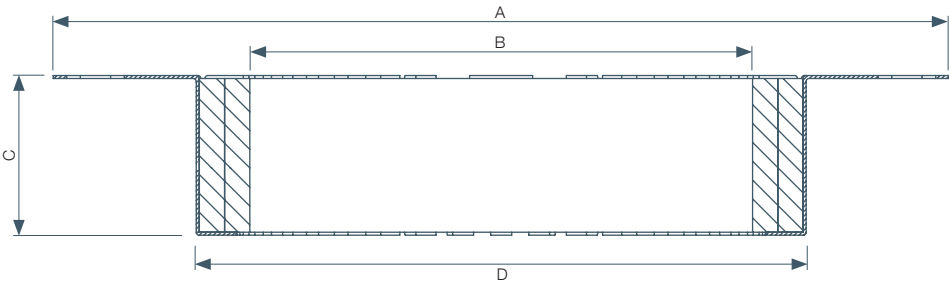
DESCRIPTION	TIMBER DEPTH	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	WALL FRL*	REPORT NUMBER
CABLES					
1x TPS Cable	110	ALLFC25	26	-/60/60	148132
7x TPS Cables	110	ALLFC25	32	-/60/60	148132
1x CAT6 Data Cable	110	ALLFC25	26	-/60/60	148132
10x CAT6 Data Cable	110	ALLFC25	32	-/60/60	148132
1x 16mm Mains Cable + 1x 10mm Earth Cable	110	ALLFC25	30	-/60/60	148132
1x 25mm Mains Cable + 1x 10mm Earth Cable	110	ALLFC25	35	-/60/60	148132

Fixing: Collars tested using Tek Screw 12G x 50mm.
For installations resulting in an annular gap of 4mm or greater insert PE backing rod prior to fire rated sealant.



PIPE COLLAR DIMENSIONS

CODE	NOM. PIPE DIAMETER	OUTSIDE DIAMETER (A)	INSIDE DIAMETER (B)	COLLAR HEIGHT (C)	COLLAR DIAMETER (D)	# OF FIXING TABS
ALLFC25GALV	25mm	100mm	31mm	28mm	44mm	2
ALLFC40SS ALLFC40GALV	40mm	121mm	50mm	28mm	63mm	2
ALLFC50SS ALLFC50GALV	50mm	122mm	63mm	28mm	88mm	3
ALLFC65SS ALLFC65GALV	65mm	136mm	77mm	28mm	102mm	3
ALLFC80SS ALLFC80GALV	80mm	154mm	95mm	28mm	120mm	3
ALLFC100SS ALLFC100GALV	100mm	213mm	120mm	38mm	145mm	4
ALLFC150SS ALLFC150GALV	150mm	258mm	165mm	54mm	190mm	6
ALLFC200SS	200mm	319mm	203mm	102mm	242mm	6
ALLFC250SS	225mm	370mm	253mm	102mm	292mm	6



CAST-IN COLLARS



Allproof Cast-In Fire Collars (CIFIC) are designed to reduce the labour content of passive fire rating service penetrations on concrete floors that are poured on site. Simply fix the base to the formwork on site and the service penetration is located complete with passive fire protection. This eliminates the need for core drilling of penetrations after the floor is poured and retro fitting a fire collar or wrap. Once the floor is poured and formwork stripped, simply cut off the top of the Cast-In Collar and install service.

INSTALLATION INSTRUCTIONS:

1. Fix to formwork in correct location.
2. Pour concrete floor.
3. Remove formwork ensuring galvanised steel ring is exposed.
4. Cut plastic collar to desired height.
5. Install service.
6. Seal gap between service and collar on top side of floor with intumescent sealant.

SUITABLE FOR FITTING WITHIN:

- > Solid masonry floors

FEATURES:

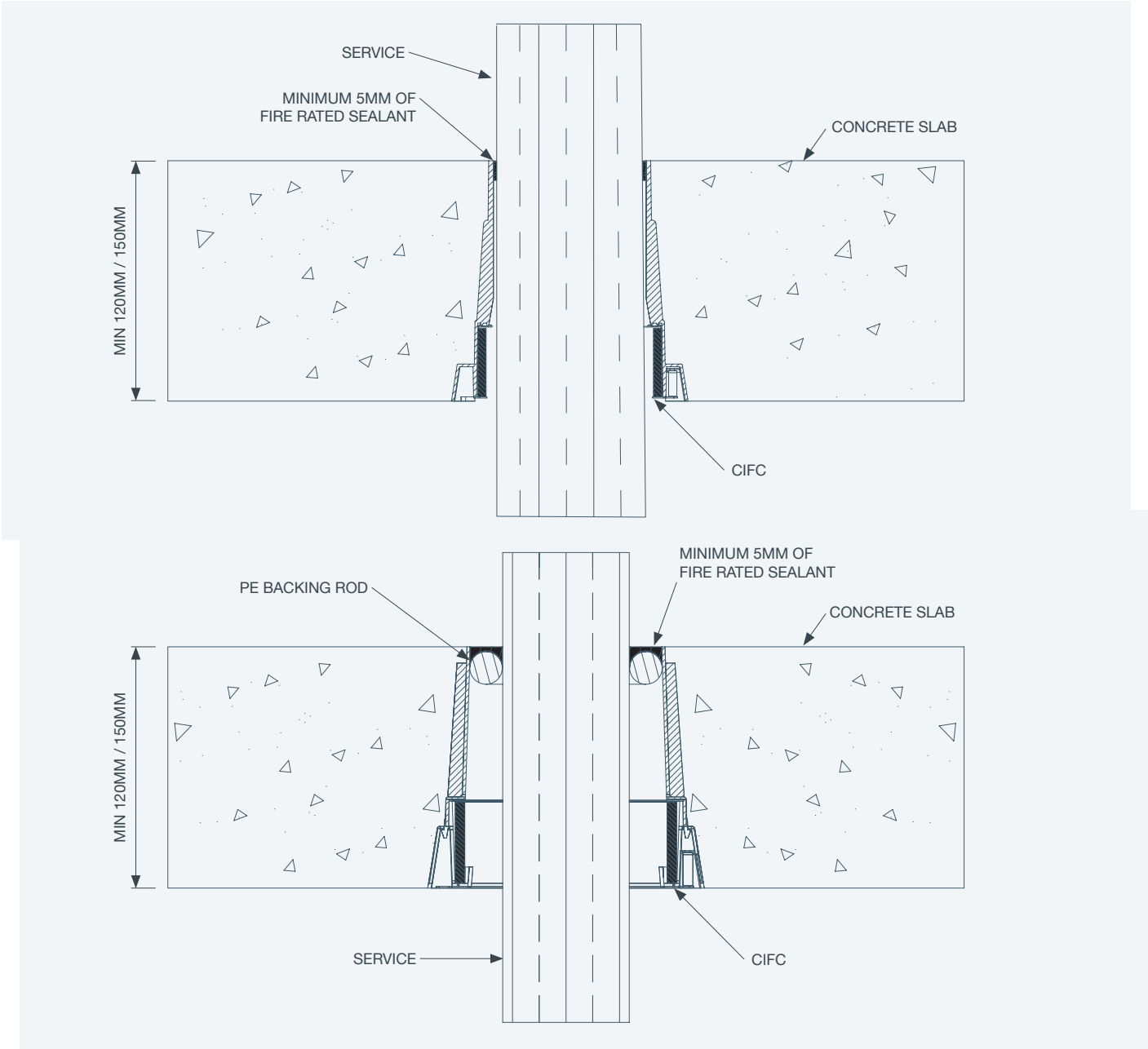
- > 250mm overall height
- > Sturdy construction for casting in
- > Multiple fixing positions
- > Made from recycled PP

CONCRETE SLAB TEST RESULTS:

DESCRIPTION	SLAB DEPTH (MM)	PRODUCT CODE	FLOOR FRL*	REPORT NUMBER
CABLES				
25x TPS Cables	120	CIFC50S	-/180/45	145535
35x CAT6 Data Cables	120	CIFC50S	-/180/120	145535
25x Fire Alarm & 25x Fibre Optic Cables	120	CIFC50S	-/180/120	146150
A/C MIXED SERVICES				
3x Fire Retardant Pair Coil	150	CIFC100S	-/180/180	143281-004
1x Fire Retardant Pair Coil + 1x TPS & 1x CAT6 Data Cables	150	CIFC100S	-/180/-	145430
3x Fire Retardant Pair Coil + 3x TPS & 3x CAT6 Data Cables	150	CIFC100S	-/180/60	145430

For installations resulting in an annular gap of 4mm or greater insert PE backing rod prior to fire rated sealant.

CONCRETE SLAB INSTALLATION DETAILS:



DROP IN FIRE COLLARS



Allproof Drop In Fire Collars (DIFC) provide a simple and effective passive fire rating option for thin concrete floors or trapezoidal steel tray concrete floors. These composite floors feature profile changes on the underside of the slab and make it difficult to fire rate with a conventional fire collar fixed to the underside of a floor slab.

INSTALLATION INSTRUCTIONS:

1. Core drill hole to specified diameter to suit service size.
2. Install Drop-In Fire Collar fixing with two metal pin anchors. (Floor waste installs require the tabs to be recessed into the slab).
3. Ensure collar on underside of slab is exposed no greater than 80mm and recessed in slab no more than 5mm.
4. Insert service through collar.
5. Seal gaps between concrete/collar and collar/service with a minimum 5mm depth of silicone sealant.

SUITABLE FOR FITTING WITHIN:

- > Trapezoidal steel tray concrete floors (composite floors)
- > Cross laminated timber floors

FEATURES:

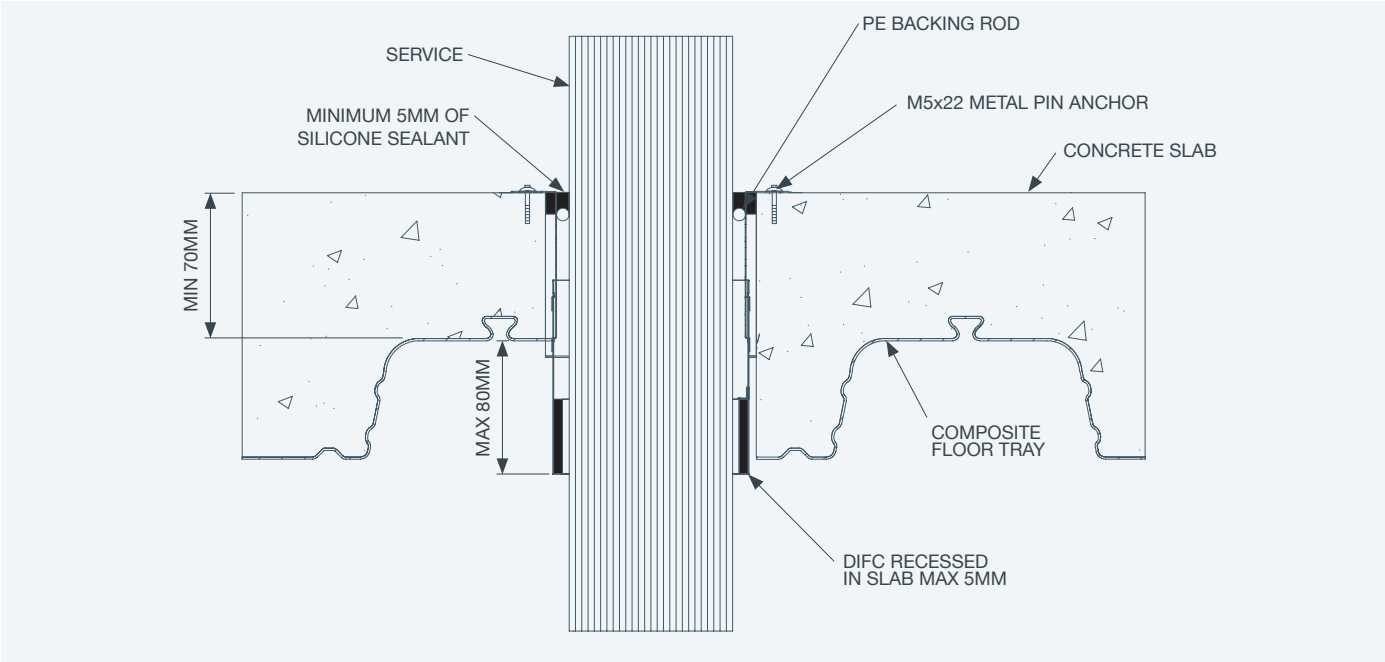
- > Installed and fixed from top side of slab
- > Can be retrofit around pipe
- > Made from Galvanised steel

COMPOSITE FLOOR TEST RESULTS:

DESCRIPTION	SLAB DEPTH (MM)	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	FLOOR FRL*	REPORT NUMBER
CABLES					
1x TPS Cables	70/130	DIFC32	57	-/120/60	146205
7x TPS Cables	70/130	DIFC32	57	-/120/45	146205
60x TPS Cables	70/130	DIFC80	112	-/120/60	143281-002
1x CAT6 Data Cable	70/130	DIFC32	57	-/120/60	146205
10x CAT6 Data Cable	70/130	DIFC32	57	-/120/60	146205
100x CAT6 Data Cables	70/130	DIFC80	112	-/120/60	143281-002
11x Fire Alarm & 11x Fibre Optic Cables	70/130	DIFC50	86	-/120/90	146205
25x Fire Alarm & 25x Fibre Optic Cables	70/130	DIFC50	86	-/120/90	143281-002
1x16mm Mains Cable & 1x 10mm Earth Cable	70/130	DIFC32	57	-/120/45	146205
1x 25mm Mains Cable & 1x 10mm Earth Cable	70/130	DIFC32	57	-/120/30	143281-002
A/C MIXED SERVICES					
1x Pair Coil, 1x TPS Cable & 1x 20mm PVC DWV	70/130	DIFC50	82	-/120/90	143281-002
3x Pair Coil, 6x TPS Cables & 1x 25mm PVC DWV	70/130	DIFC100	142	-/60/45	143281-002

70/130 - Tested on a composite concrete floor with 70mm minimum thickness and 130mm maximum thickness. Profile change of 60mm.
For installations resulting in an annular gap of 4mm or greater insert PE backing rod prior to silicone sealant.

COMPOSITE FLOOR INSTALLATION DETAILS:

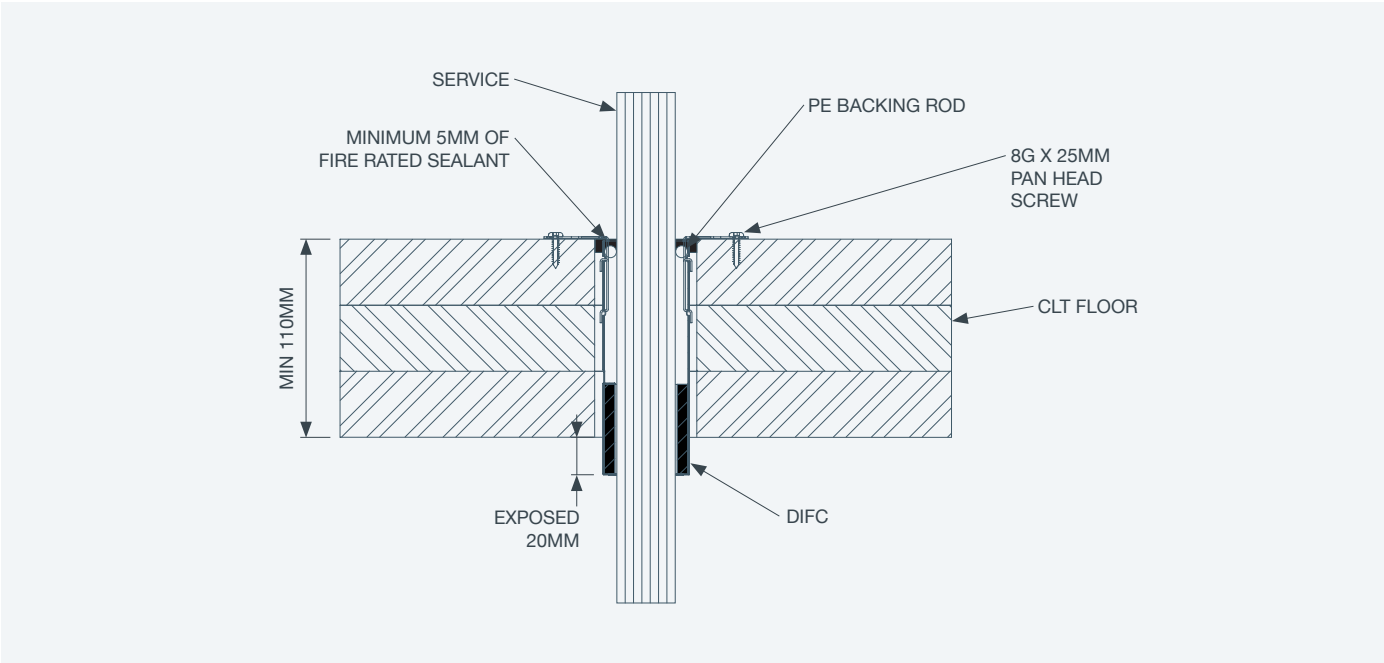


CROSS LAMINATED TIMBER (CLT) FLOOR TEST RESULTS:

DESCRIPTION	TIMBER DEPTH	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	FLOOR FRL*	REPORT NUMBER
CABLES					
1x TPS Cable	110	DIFC32	57	-/60/60	148131
7x TPS Cables	110	DIFC32	57	-/60/45	146208
1x CAT6 Data Cable	110	DIFC32	57	-/60/60	148131
1 x 16mm Mains Cable & 1x 10mm Earth Cable	110	DIFC32	57	-/60/30	148131
1x 25mm Mains Cable & 1x 10mm Earth Cable	110	DIFC32	57	-/60/45	146208

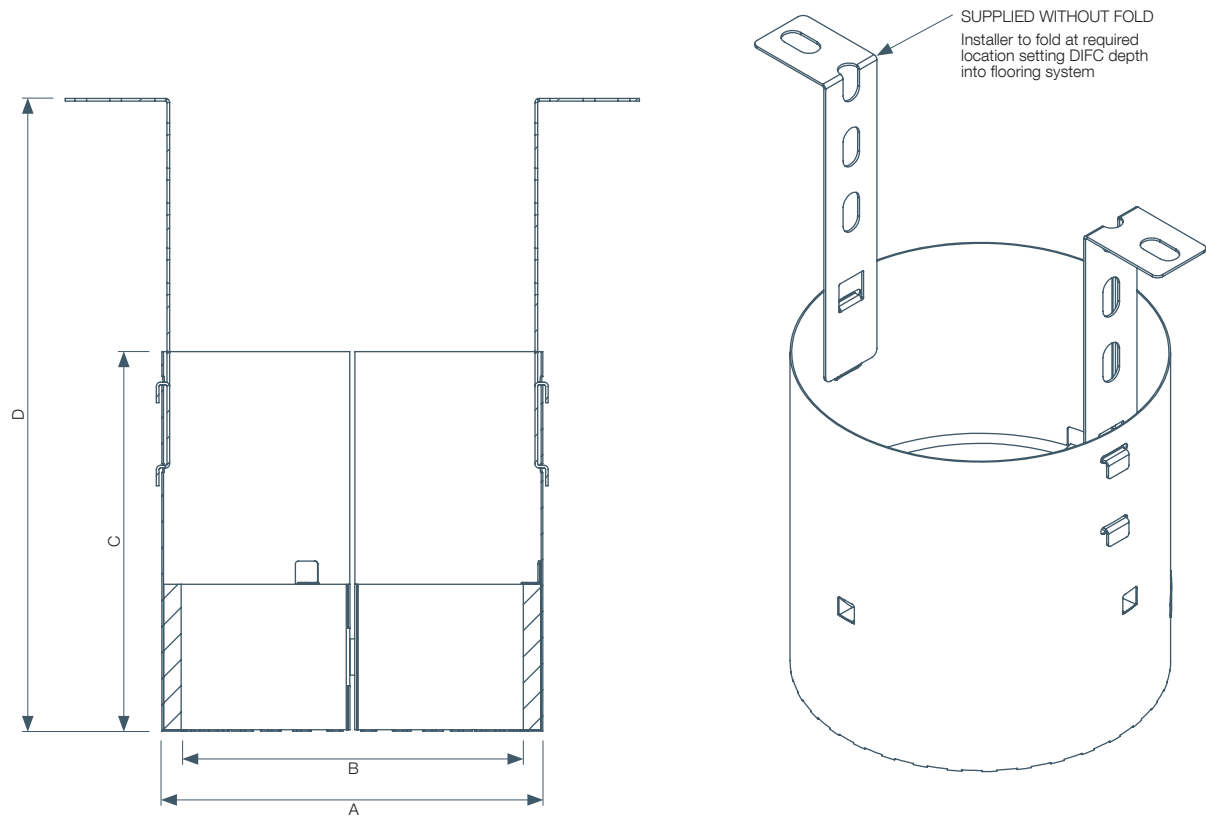
Fixing: Collars tested using 8G X 25mm Pan Head Screw.
For installations resulting in an annular gap of 4mm or greater insert PE backing rod prior to fire rated sealant.

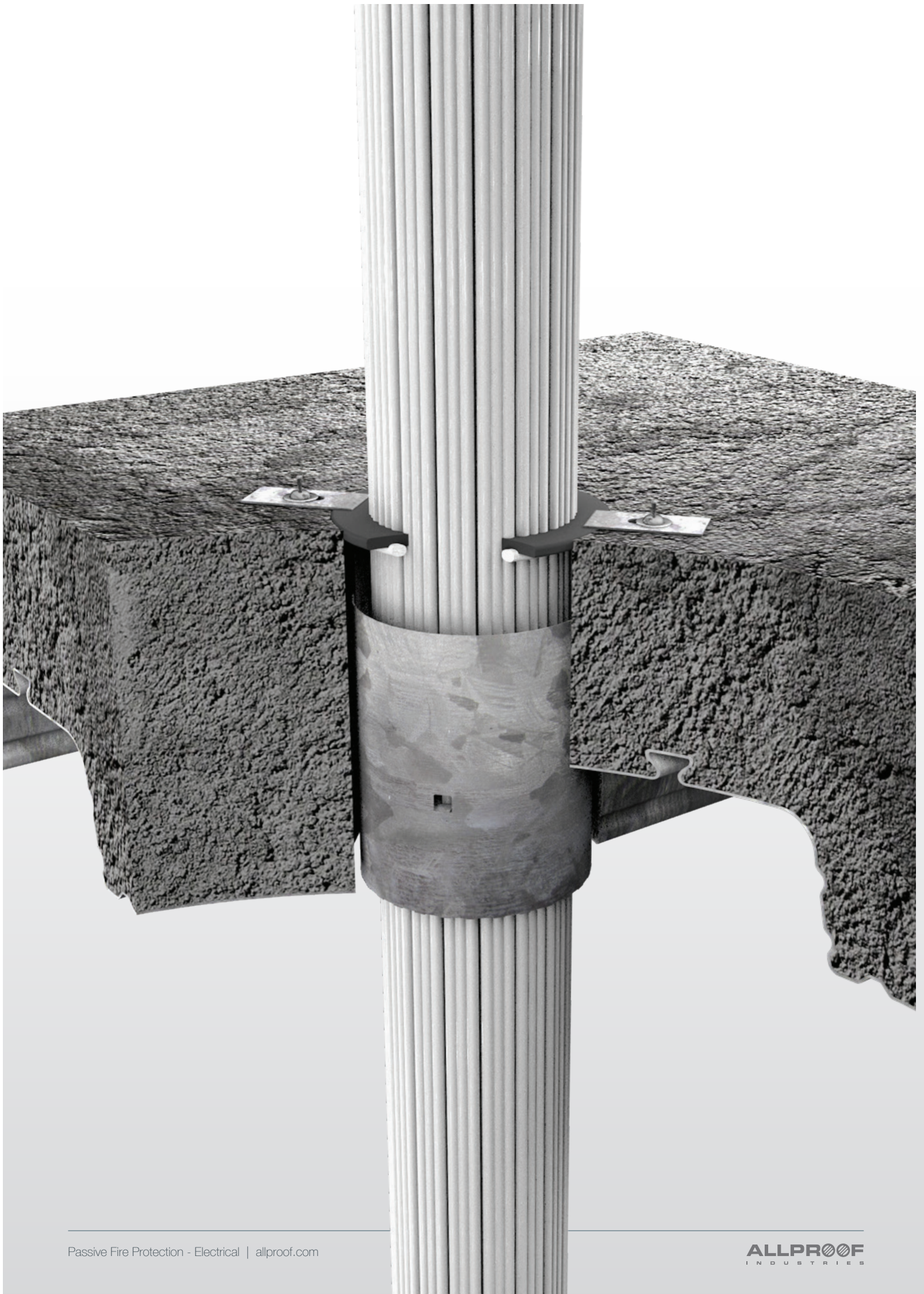
CROSS LAMINATED TIMBER INSTALLATION DETAILS:



DIFC COLLAR DIMENSIONS:

CODE	OUTER DIAMETER (A)	INNER DIAMETER (B)	CYLINDER LENGTH (C)	MIN - MAX DEPTH (D)
FLOOR DEPTHS UPTO 210MM				
DIFC32 X210	48	35	130	130 - 210
DIFC40 X210	66	53	130	130 - 210
DIFC50 X210	79	66	130	130 - 210
DIFC65 X210	92	78	130	130 - 210
DIFC80 X210	106	92	130	130 - 210
DIFC100 X210	131	118	130	130 - 210
DIFC125 X210	154	133	130	130 - 210
DIFC150 X210	187	161	130	130 - 210





WALLTHROUGH



The Wallthrough is ideal for apartment and hotel room entry points where a multi service penetration point is needed through a fire rated plasterboard wall.

The Allproof Industries Wallthrough can be installed before the services or retrofit into the fire rated plasterboard substrate allowing for adaptability in the Project. The Wallthrough is made from stainless steel to be a solid and robust passive fire penetration solution.

The Wallthrough consists of a stainless sleeve internally lined with intumescent which reacts to heat closing the penetration. Services are run through the sleeve with an NBR block seal installed around the services on both sides. Fire rated sealant is then applied over the NBR block seal completing a smoke seal. The installation is then finalised with a 300mm wide length of FIREFLY Penowrap around the services overlapping the Wallthrough and secured with foil tape and stainless steel cable ties. See installation instructions for full details.

SUITABLE FOR FITTING TO:

> Plasterboard walls

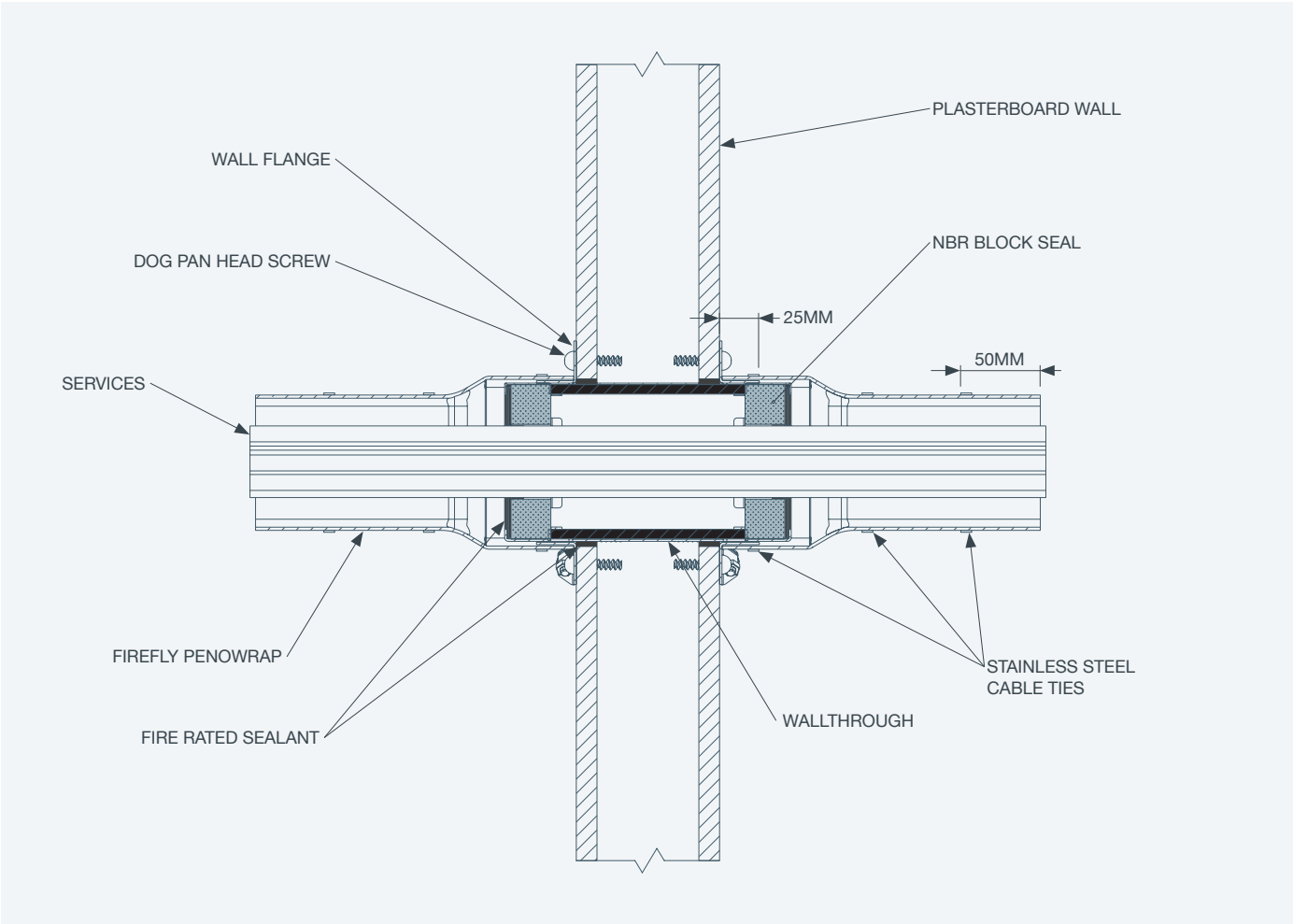
FEATURES:

- > Totally unaffected by water
- > No need to frame out penetration
- > Multi-service solution
- > Low profile flange
- > Retro or pre-service install fitting

INSTALLATION INSTRUCTIONS:

1. Cut penetration through plasterboard wall 305mm x 105mm.
2. Install Wallthrough sleeve.
3. Seal aperture between Wallthrough sleeve and plasterboard wall with fire rated sealant to depth of plasterboard and maximum width of 5mm on both sides of wall.
4. Install friction fit flange around sleeve, tension sleeve using flange fixing screws and secure to plasterboard wall using Dog Pan Head Screw anchors.
5. Remove NBR block seal and install services.
6. Refit block seal around the individual service shapes.
7. Apply sealant between block seal and Wallthrough.
8. Apply sealant between block seal and services
9. Install 300mm wide FIREFLY Penowrap around Wallthrough box perimeter and services, FIREFLY Penowrap should overlap by 100mm and taped at join using foil backed tape.
10. Secure in position using stainless steel cable ties, 1st cable tie to be positioned 25mm from wall face around Wallthrough. 3rd cable to be 50mm from end of FIREFLY Penowrap with second cable secured at an equal distance between the 1st and the 3rd.

PLASTERBOARD WALL INSTALLATION DETAILS:



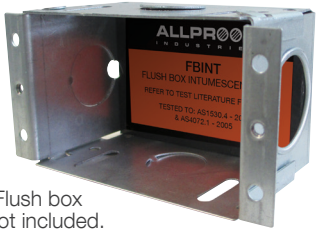
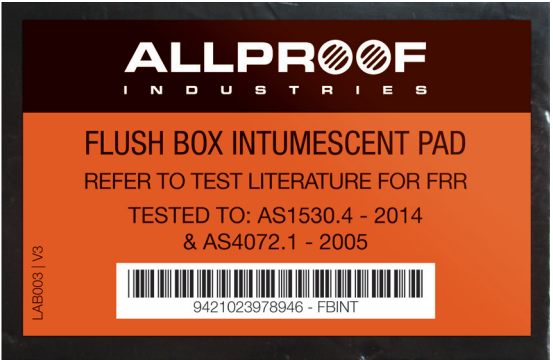
PLASTERBOARD WALL TEST RESULTS:

DESCRIPTION	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	WALL FRL*	REPORT NUMBER
MIXED SERVICES				
1 x 20mm PEX Pipe				
1 x 20mm Lagged PEX Pipe (19mm Wall x 22mm NBR Lagging)				
1 x 40mm Galvanised Steel Sprinkler Pipe				
4 x Fire Alarm Cables				
1 x 16mm 3 Core Mains Cable		305x105	-/60/45	148954
4 x Fire Alarm Cables				
2 x CAT6 Cables				
2 x Fire Optic Cables				

Fixing: Wall Flange fixed using 6.5mm x 32mm Dog Pan Head Screw.

Tested using a 64mm wide steel stud with a single layer of 13mm fire rated plasterboard on each side of the frame. A total wall thickness of 90mm. Wallthrough fixed using Dog Pan Head screw anchors directly into the plasterboard - not fixed into framing or studs in wall. Fire rated sealant is applied in the space between the Wallthrough and plasterboard as well as between the service and NBR block seal on both the exposed and unexposed face.

FBINT



*Flush box
not included.

Flush Box Intumescent Pads are designed to be installed into metal flush boxes installed in hollow fire rated walls.

SUITABLE FOR FITTING TO:

> Plasterboard walls

FEATURES:

- > Totally unaffected by water
- > Low profile pad with minimal impact on space
- > Easy to install

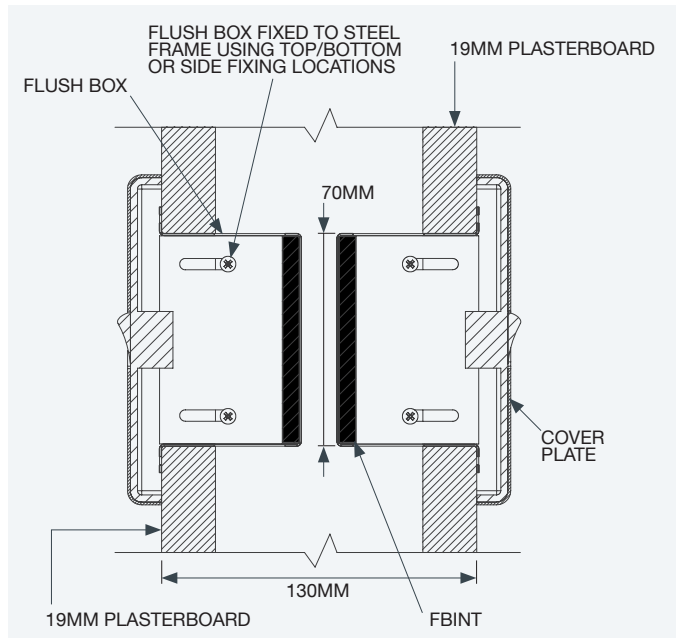
INSTALLATION INSTRUCTIONS:

1. Fix flush box to framing and to relevant detail (opposite).
2. Firmly insert FBINT with adhesive against back of flush box.
3. Finish installation of wiring and fix face plate.

PLASTERBOARD WALL TEST RESULTS:

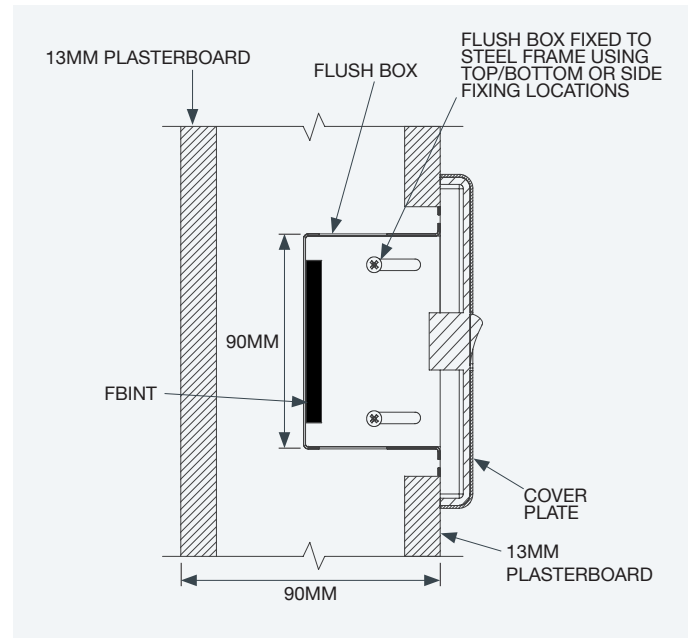
FLUSH BOX	PRODUCT CODE	INSTALL	PLASTERBOARD WALL FRL*	REPORT NUMBER
13MM PLASTERBOARD WALL				
Double Flush Box - 100x75x48mm	FBINT	Detail 2	-/60/60	13509-001
Single Flush Box - 95x50x48mm	FBINT	Detail 3	-/60/60	148954
13MM STANDARD NON-FIRE RATED PLASTERBOARD WALL				
Single Fush Box - 90x50x48mm	FBINT	Detail 3	-/30/30	148639
Double Flush Box - 100x75x48mm	FBINT	Detail 2	-/30/30	13088-001
19MM PLASTERBOARD WALL				
Single Flush Box - 75x50x52mm	FBINT	Detail 1	-/120/90	4101

DETAIL 1:



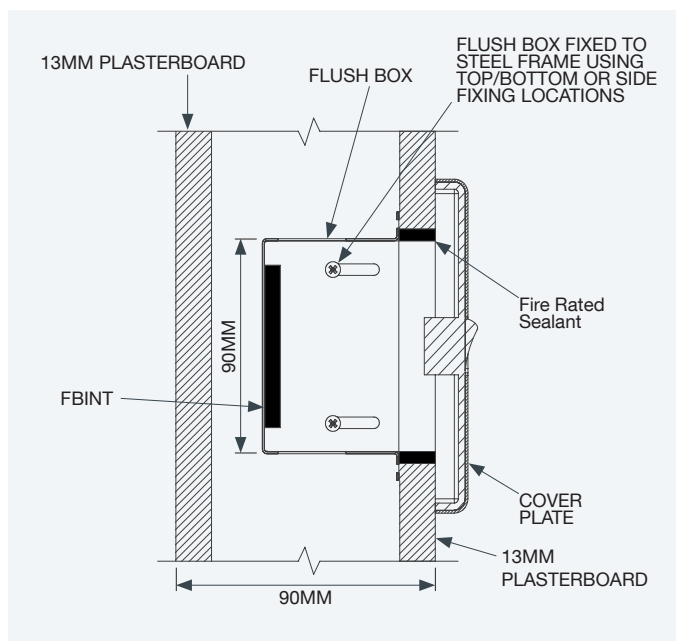
Detail 1: Tested as a back to back installation on a hollow wall system comprised of a 92mm steel frame and 1 x layer of 19mm fire rated plasterboard on each side of the frame (total wall thickness of 130mm). Flush box fixed to the frame using top/bottom or side fixing locations with an Allproof FBINT pad installed on internal rear surface.

DETAIL 2:



Detail 2: Tested using a 64mm wide steel stud with a single layer of 13mm plasterboard on each side of the frame. A total wall thickness of 90mm. Flush box fixed to the frame using top/bottom or side fixing locations with an Allproof FBINT pad installed on internal rear surface.

DETAIL 3:



Detail 3: Tested using a 64mm wide steel stud with a single layer of 13mm plasterboard on each side of the frame. A total wall thickness of 90mm. Flush box fixed to the frame using top/bottom or side fixing locations with an Allproof FBINT pad installed on internal rear surface and an annular gap of a maximum of 5mm which was filled with Fire Rated Sealant.



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