Installation Guide
FIREFLY FR Multi-Service Block

Note:

Dimensions of FIREFLY FR Multi-Service Block (FR Block) aperture within the substrate can be:

- 100 mm – 1000 mm wide and up to 100 mm high (one FR Block)

- 100mm – 500 mm wide and up to 200 mm high (two FR Blocks stacked up)

FR Block can be located within:

- the field of the substrate

- in contact with the substrate and the slab above

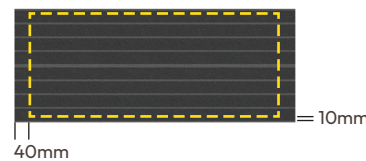Figure 4 – Penetration allowable zone for FIREFLY FR Block within apertures 1000 mm x 100 mm

Figure 4 – Penetration allowable zone for FIREFLY FR Block within apertures 500 mm x 200 mm

Part A | Preparing the substrate

- For Speed Panel, refer to S1

- For Fire Rated Plasterboard wall or Inex wallboard, refer to S2

- For Stonewall Platinum FR60 wall, refer to S3

- For FIREFLYBatt penetration seal, refer to S4.

- For hollow masonry with voids less than 30% of cross section, refer to S5

- For hollow masonry with voids greater than 30% of cross section, refer to S6

- For Brickworks Pronto panel, refer to S7

- For Hebel Power panel, refer to S8

- For Binderholtz CLT wall, refer to S9

- For XLAM CLT wall, refer to S10
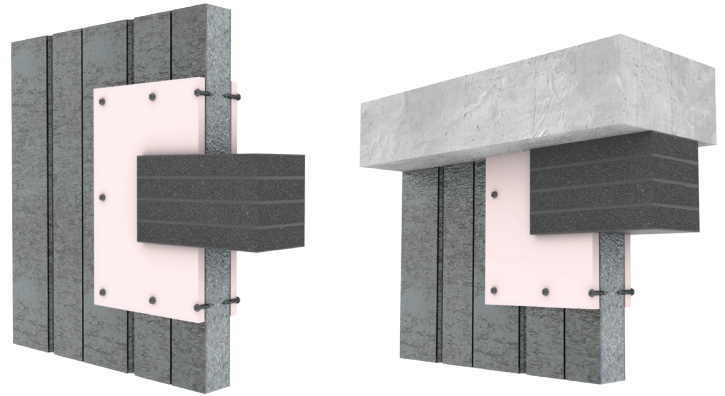
S1 | Speed Panel Wall

Step 1 Cut a neat hole in the wall as per requirements.

Step 2 Measure the dimensions of the aperture.

Step 3 Speed panel aperture track shall have a 100 mm wide strip of 13 mm standard or fire grade plasterboard on each side of the wall around the aperture. It should be fixed with two rows of 10g x 30 mm long self-drilling screws at 25 mm from the corners and then at 100 mm centres.

Step 4 Fill the gaps between the track and speed panel with FIREFLYMastic or FIREFLYMasticHP.

Refer to Part B for further Instructions.


S2 | Fire Rated Plasterboard Wall/ Inex Wall

Step 1 Cut a neat hole in the wall as per requirements.

Step 2 Frame the aperture within the plasterboard wall with steel tracks or timber noggin, whichever is applicable.

Step 3 For single stud wall with cavity > 76 mm, line the aperture with one layer of fire rated plaster-board.

Step 4 For double stud walls (max 64 mm cavity), line the aperture with one layer of fire rated plaster-board.

Refer to Part B for further Instructions.
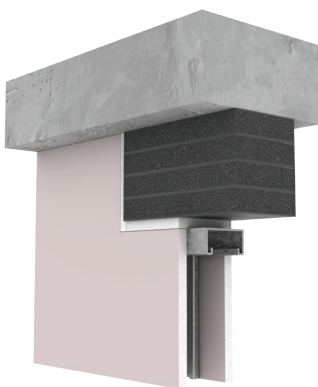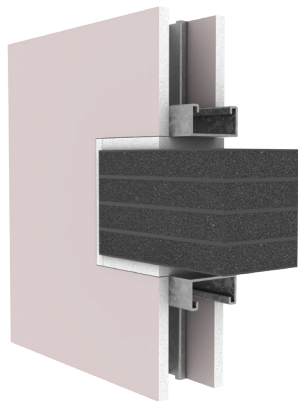
S3 | Stonewall Platinum FR60

Step 1 Cut a neat hole in the wall as per requirements.

Step 2 Measure the dimensions of the aperture.

Step 3 Make a letterbox structure as per dimensions using 1 layer of FIREFLYBatt. The Batt should be glued together on all four sides of the structure using FIREFLYMastic. Moreover, secure the batts with 90mm pigtail screws at the corners (25 mm away from the edges).
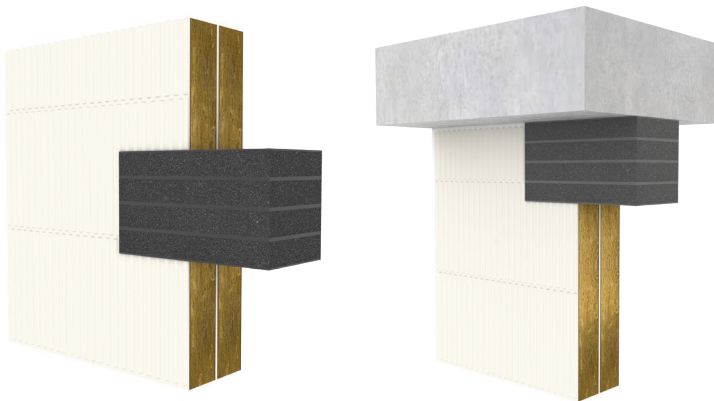
Refer to Part B for further Instructions.

S4 | FIREFLYBatt penetration seal

Step 1 Cut a neat hole in the FIREFLYBAtt as per requirements.

Step 2 Measure the dimensions of the aperture.

Step 3 Use FIREFLYMastic or FIREFLYMasticHP to fill the gaps of up to 10 mm between the FIREFLYBatt and FR Block, if required.

Refer to Part B for further Instructions.

S5 | Solid & Hollow Masonry with voids < 30% of cross section

Step 1 Cut a neat hole in the wall as per requirements.

Step 2 Use FIREFLYMastic or FIREFLYMasticHP to fill the gaps of up to 10 mm between substrate and FR Block, if required.

Step 3 For gaps larger than 10 mm, use FIREFLY-Mortar to fill gaps, if required.
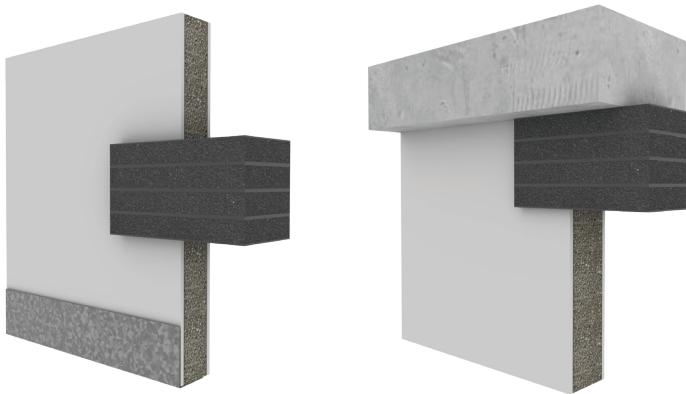
Refer to Part B for further Instructions.
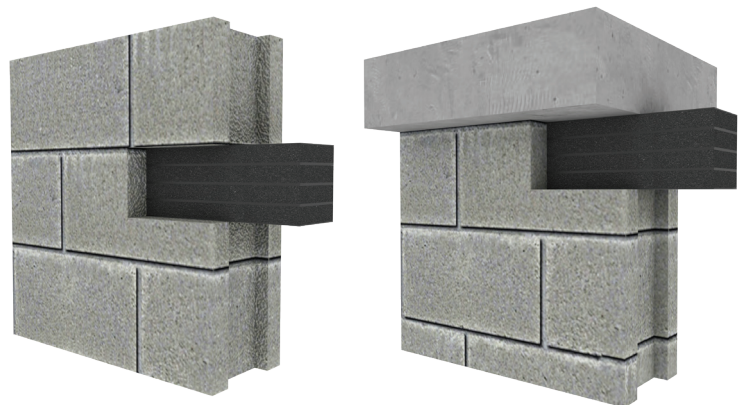
S6 | Solid & Hollow Masonry with voids > 30% of cross section

Step 1 Cut a neat hole in the wall as per requirements.

Step 2 Install steel sheets over the voids above and below in the aperture.

Step 3 Use FIREFLYMastic or FIREFLYMasticHP to fill the gaps of up to 10 mm between substrate and FR Block, if required.

Step 4 For gaps larger than 10 mm, use mortar to fill the gaps, if required.

Refer to Part B for further Instructions.

S7 | Brickworks Pronto Panel

Step 1 Cut a neat hole in the wall as per requirements.

Step 2 Use FIREFLYMastic or FIREFLYMasticHP to fill the gaps of up to 10 mm between substrate and FR Block, if required.

Refer to Part B for further Instructions.

S8 | Hebel Power Panel

Step 1 Cut a neat hole in the wall as per requirements.

Step 2 Use FIREFLYMastic or FIREFLYMasticHP to fill the gaps of up to 10 mm between substrate and FR Block, if required.

Refer to Part B for further Instructions.
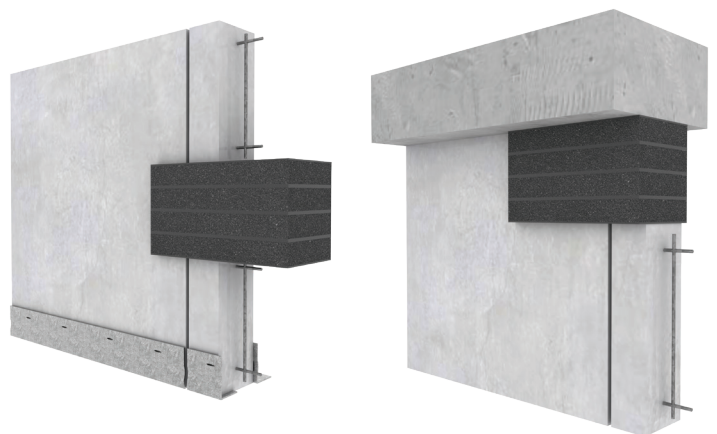
S9 | Binderholz CLT Wall

Step 1 13 mm Knauf Tru-Rock should be present on each side of the CLT wall.

Step 2 Cut a neat hole in the wall as per requirements.

Step 3 Line the CLT aperture with a single layer of 13mm Knauf Tru-Rock.

Step 4 Use FIREFLYMastic HP to fill the gaps of up to 10 mm between the substrate and FR Block, if required.

Step 5 Apply FIREFLYMastic to fill the junctions in the lining.
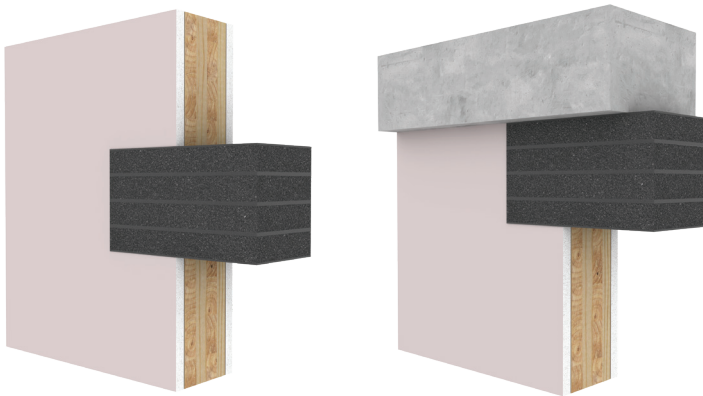
Refer to Part B for further Instructions.
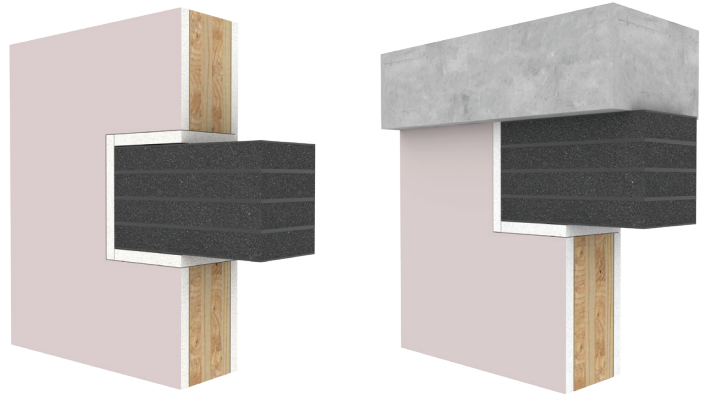
S10 | XLam CLT Wall

Step 1 16mm Fire Rated Plasterboard should be present on each side of the CLT wall.

Step 2 Cut a neat hole in the wall as per requirements.

Step 3 Use FIREFLYMasticHP to fill the gaps of up to 10 mm between the substrate and FR Block, if required.

Refer to Part B for further Instructions.

Part B | Prior to installation of services

Step 1

Measure the dimensions of the aperture.
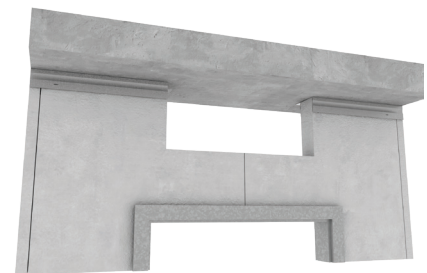
Step 2

Cut the FR Block as per the dimensions of the aperture.
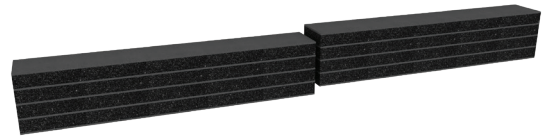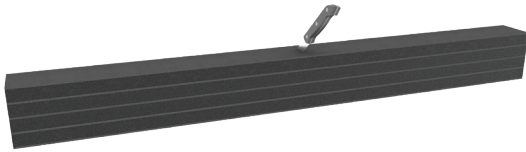
Step 3

Run 2 x 6 mm beads of FIREFLYMasticHP around the inside of the aperture, on each side of the wall.

Step 4

Place first block of FR Block into the aperture, then apply two beads of FIREFLYMasticHP on the top of the first block.

Step 5

Squeeze the second block and place it into the aperture.

Refer to Part C for installation of services.
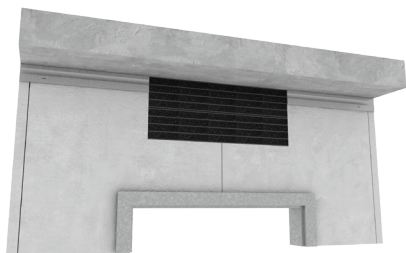
Part B | Pre-installed services

If services are installed in the aperture prior to the installation of the FR Block, first mark the approximate location of the services on the FR Block, and cut the FR Block as per **Part C** of this guide to accommodate different services, then complete the steps outlined below.

Step 1

Split the first block of the FR Block into two layers.

Step 2

Run 2 x 6 mm beads of FIREFLYMasticHP around the inside of the aperture, on each side of the wall.

Step 3

Install the first layer at the bottom of the aperture.

Step 4

Apply a bead of FIREFLYMasticHP on the top of the first layer.
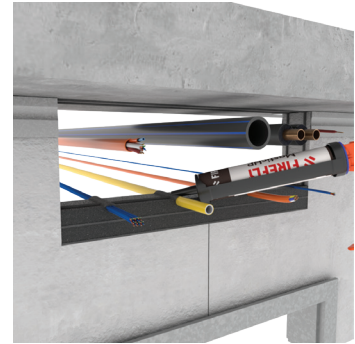
Step 5

Install the second layer of FR Bock on top of the first, and apply a bead of FIREFLYMastic on top of this, second layer.
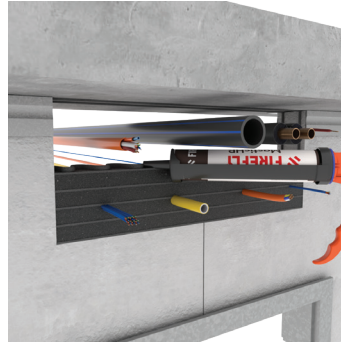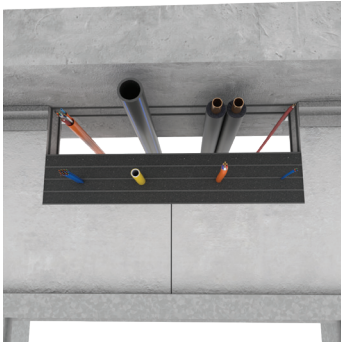
Step 6

Repeat the above steps for the second FR Block until the aperture is sealed off.
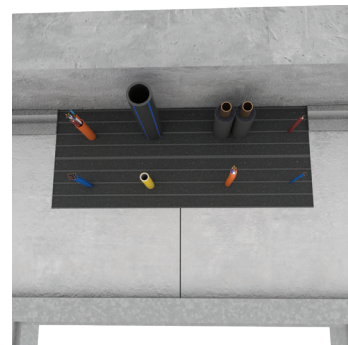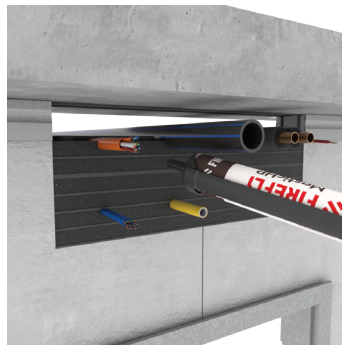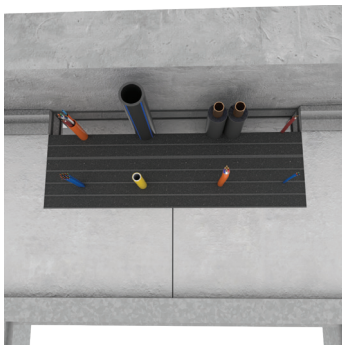
Part C | Installation of services

For Services up to 16 mm

Step 1 For very small services, use a pointy screw-driver to create a hole in the sponge and insert the service; for larger services up to 16 mm, cut a cross in the FR Block sponge using a steak knife.

Step 2 Simply insert the service.

Note: Individual services must be separated by 40 mm.

Refer to Part D for local protection of different services.
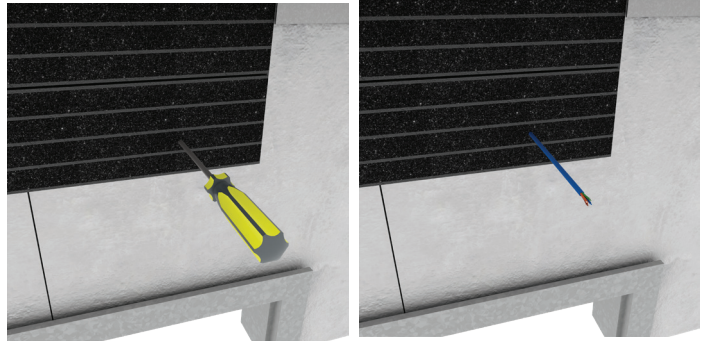
Very small services
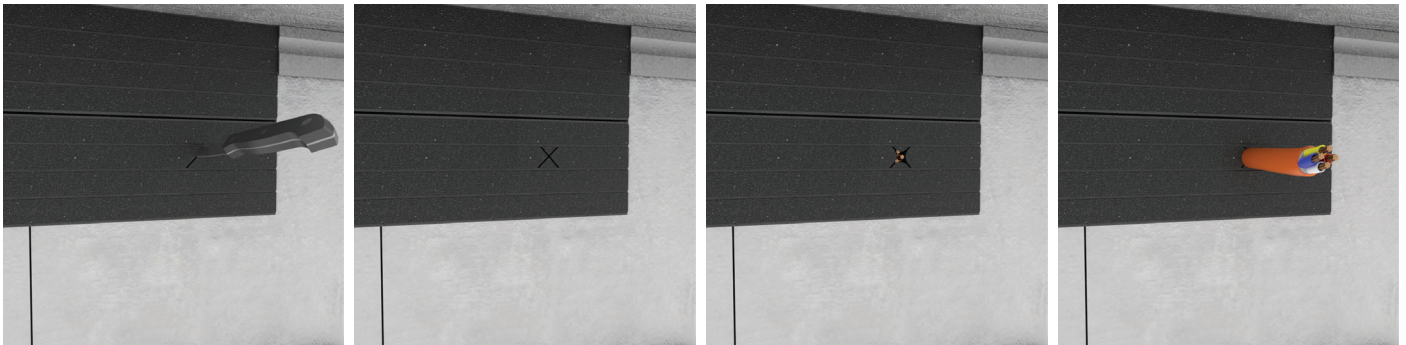
Services up to 16 mm
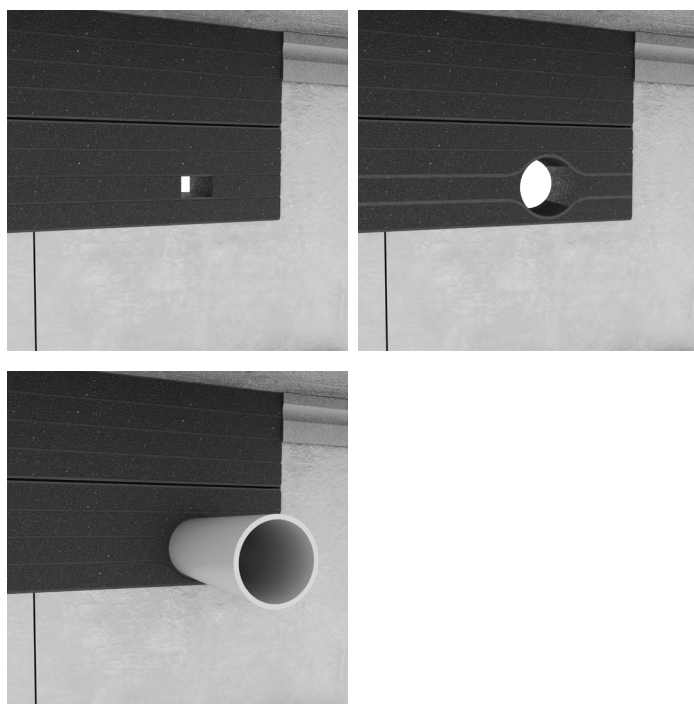
Services between 16 mm & 40 mm

Step 1 For larger services such as cable bundles, conduits or large pipes, cut the sponge in a rectangular shape using a steak knife or similar knife. **Do not cut the graphite layers.**

Step 2 Place your fingers in the hole and open the gaphite layers to cut enough space for the service.

Step 3 Insert the service into the hole

Note: Individual services must be separated by 40 mm.

Refer to Part D for local protection of different services.

For Services larger than 40 mm

Step 1 Cut the middle layer of graphite only where the service is to be installed.

Step 2 Cut the sponge in a rectangular shape using a steak or similar knife.

Step 3 Place your fingers in the hole and open the gaphite layers to cut enough space for the service.
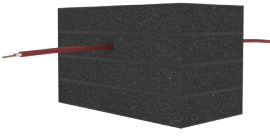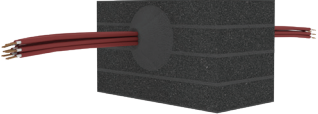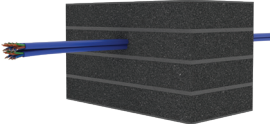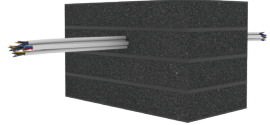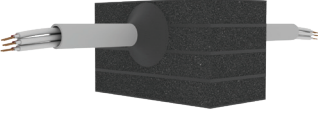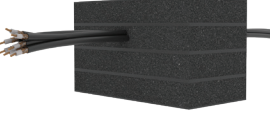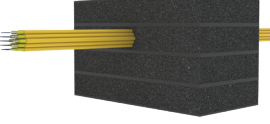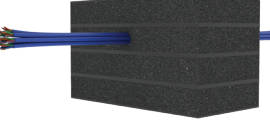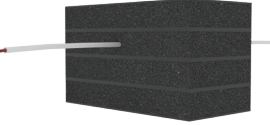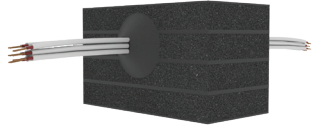
Step 4 Insert the service into the hole
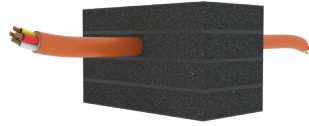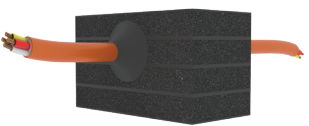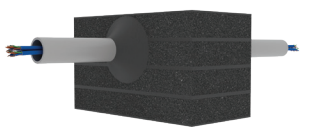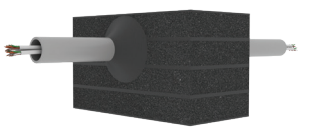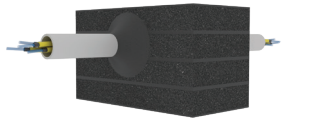
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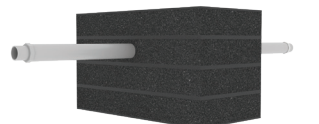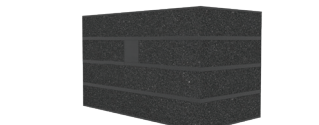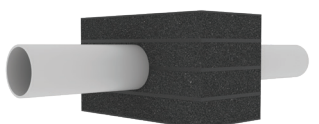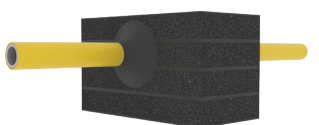
Refer to Part D for local protection of different services.
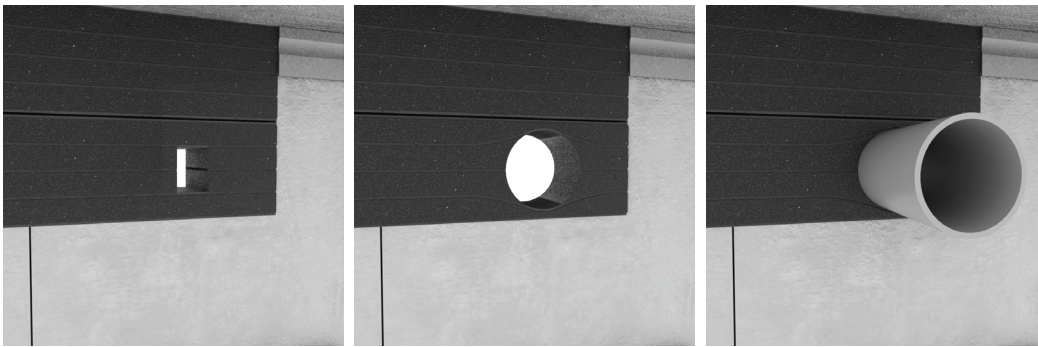
Part D | Service Penetration details

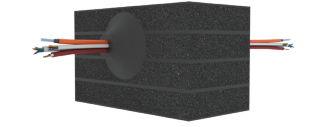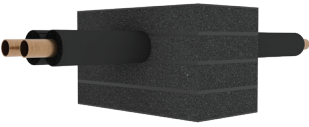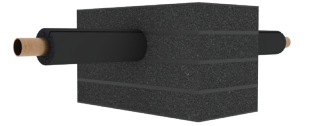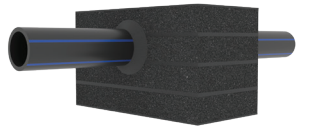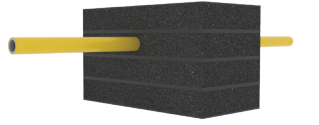| Service ID	Service (Maximum core size or cable diameter, or pipe diameter)	Additional Local Protection	Figures
Electrical & Communication			
SP1	Fire Alarm 2C 2.5mm^2 cable Bundle – 1 cable	NONE	
SP2	Fire Alarm 2C 2.5mm^2 cable Bundle – 2 to 6 cables	25mm fillet of FIREFLYMastic HP	
SP3	CAT 6 cable Bundle- 1 to 6 cables	NONE	
SP4	4C Security Cable bundle- 1 to 6 cables	NONE	
SP5	26mm PVC conduit with TPS (2.5mm² 2C+E) Cable Bundle – 1 to 6 cables	25mm fillet of FIREFLYMastic HP	
SP6	RG6 Cable Bundle- 1 to 6 cables	NONE	
SP7	5mm & 10mm Fibre Optic Cable bundle – 1 to 20 cables	NONE	
SP9	Cat 5/Cat 5e Cable bundle – 1 to 6 cables	NONE	
SP14	TPS (2.5mm² 2C+E) Single Cable	NONE	
SP15	TPS (2.5mm² 2C+E) Cable Bundle 2 to 6 cables	25mm fillet of FIREFLYMastic HP	

Service ID	Service (Maximum core size or cable diameter, or pipe diameter)	Additional Local Protection	Figures
SP16	16mm Orange mains Cable (6mm^2 3C+E, Round)	NONE	
SP25	100mm x 19mm Steel Cable Tray	NONE	
SP26	PVC or XLPE 20mm "flat" or "round" mains Power Cable (16mm^2 3C+E),	25mm fillet of FIREFLYMastic HP Or A 100mm wide TBA Firefly Penowrap with 100mm overlap and fixed into place with 2 x equally spaced stainless steel cable ties.	
SP27	26mm PVC conduit with CAT 6 cable Bundle- 1 to 6 cables	25mm fillet of FIREFLYMastic HP	
SP28	26mm PVC conduit with CAT 5/CAT 5e Cable bundle - 1 to 6 cables	25mm fillet of FIREFLYMastic HP	
SP29	26mm PVC conduit with 5mm & 10mm Fibre Optic Cable bundle - 1 to 20 cables	25mm fillet of FIREFLYMastic HP	
SP30	Any combination of SP2, SP3, SP4, SP6, SP7, SP9 – Up to 6 cables	25mm fillet of FIREFLYMastic HP	
Plumbing & Hydraulics			
SP21	Double Armaflex lagged 19mm copper pipes with Armaflex FRV 9mm-wall lagging	Full depth FIREFLYMastic HP between the 2 pipes	
SP22	Single Armaflex lagged 19mm copper pipes with Armaflex FRV 9mm-wall lagging	NONE	
SP10	40mm HDPE Pipe	10mm fillet of FIREFLYMastic HP	

Service ID	Service (Maximum core size or cable diameter, or pipe diameter)	Additional Local Protection	Figures
SP11	PEX Pipes 16mm x 2.2mm to 32mm x 4.4mm	NONE	
SP12	PEX AL Pipe 16mm x 2.2mm	NONE	
SP13	CPVC Sprinkler Pipe 34.4mm up to 48mm	Pipe to be wrapped locally with grease proof paper prior to installation into the FR Block.	
SP17	Galvanised Steel Pipes up to 50mm OD	A 25mm fillet of FIREFLYMastic HP on the interface between the FR Block and steel. A 100mm wide TBA Firefly Penowrap is applied with 100mm overlap and fixed into place with 2 x equally spaced stainless cable ties. Any gaps around the pipe to be filled to the full depth of FR Block with FIREFLYMastic HP.	
SP18	PVC Spigot & Ø16mm PVC Flexi-drain pipe	NONE	
SP20	Hole repair up to 30mm x 25mm - FIREFLYMastic HP	NONE	
SP23	PVC Pipes up to 50mm	NONE	
SP24	32mm × 4.7mm PE-X/AL/PE Pipe	25mm fillet of FIREFLYMastic HP	
HVAC			
SP8	Pair Coil copper pipes in nitrile rubber insulation: ARDENT PR CU FR 13mm 1/4" & 1/2" R410A (6.35mm × 0.80mm – 12.7mm × 0.80mm) OR 3/8" & 5/8" Pair Coil copper pipes in 8.9mm thick and 7.8mm thick ARDENT	Apply FIREFLYMasticHP to the full depth of FR Block between the 2 pipes.	