FIREFLY Core Hole Report
# Systems Overview

FAS190236 RIR 1.20

Welcome to the latest edition of our FIREFLY passive fire protection update, showcasing the newest advancements in fire stopping solutions. This edition highlights innovative systems in HVAC, Electrical, Plumbing, Fire Protection, Specialty and Mechanical Services, aimed at enhancing safety, compliance and efficiency in our FAS190236 RIR 1.20 report. Featuring FIREFLY's leading products including FIREFLY Penowrap, FIREFLYMasticHP, FIREFLYBatt and FIREFLYStrap, our systems continue to set new standards in passive fire protection. From high-performance linear gap seals to solutions for insulated pipes, cables, and mixed service bundles, our fire stopping systems offer reliable solutions to meet evolving industry needs.

HVAC Services | Mixed Bundles

Extensive focus was placed on HVAC fire protection in this edition of the FAS190236 report, testing a wide range of mixed bundles including pair coils with nitrile lagging of varying thickness, condensate pipes, Cat 6 cables, TPS cables, power cables and conduits with cables.

The testing resulted in 60 unique IDs catering to different separating elements such as AAC panel walls, FR plasterboard walls and masonry and concrete walls with varying FRLs from -/60/60 to -/180/180. Solutions are also available for horizontal orientation, including concrete floors with FRLs up to -/120/120, with FIREFLY Penowrap and FIREFLYMasticHP proving to be standouts in providing robust fire stopping solutions.
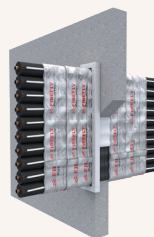
Notable systems, well suited for use in HVAC risers, include configurations of up to 10 nitrile lagged pipes with 2.5 mm² cables, up to 4 x DN20 copper pipes with 25mm lagging and various cables arranged linearly through an opening, protected for up to 2 hours.
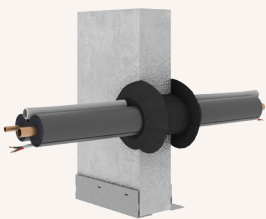
Up to 1 x 3/8 +5/8 FR pair coil with 19 mm insulation 1 x ø18 mm condensate hose 1 x 2.5 mm² 2C+E TPS cable

Protection
FIREFLYMasticHP

V489 | Up to -/90/90

Up to 10 x DN 32 Type B copper pipe with 32 mm nitrile lagging + 10 x 2.5 mm² 2C+E TPS cables

Protection
FIREFLYMastic, FIREFLYMasticHP, FIREFLY Penowrap, FIREFLYStrap FIREFLYBatt

V499 | Up to -/120/120

Up to 2 x 3/8 + 5/8 FR pair coil with 19 mm insulation + 3 x 18 mm condensate hose + 3 x 6 mm² 3C+E cables + 3 x 2.5 mm² TPS cables + 3 x Cat 6 cables

Protection
FIREFLYMasticHP, FIREFLY Penowrap

V500 | Up to –/120/120

Up to 4 x DN20 Type B copper pipes with 25 mm nitrile lagging + 1 x Cat 6 cable + 1 x 2.5 mm² 2C+E TPS cables + 1 x 0.22 mm² data cable + 1 x 18 mm condensate pipe

Protection
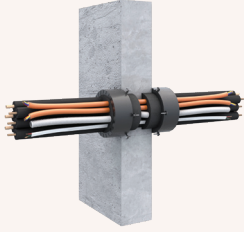FIREFLYMasticHP, FIREFLY FRF-150

V505 | Up to –/120/120

Up to 3 bundles of 1 x 3/8 + 5/8 FR pair coil with 19 mm insulation + 1 x 18 mm condensate hose + 2 x 6 mm² PVC 3C+E cables + 1 x 2C+E 2.5 mm² TPS cable

Protection
FIREFLYMasticHP, FIREFLY Penowrap

V509 | Up to –/120/120

Up to 3 x 3/8 + 5/8 FR pair coil with 19 mm insulation + 1 x 18 mm condensate hose + 2 x 6 mm² PVC 3C+E cables + 1 x 2C+E 2.5mm² TPS cable

Protection
FIREFLYMasticHP, FIREFLY FRF-150

V522 | Up to –/120/120

Up to 10 x DN 32 Type B copper pipe with 32 mm nitrile lagging + 10 x 2.5 mm² 2C+E TPS cables

Protection
FIREFLYMasticHP, FIREFLY Penowrap, FIREFLYBatt, FIREFLYStrap, FIREFLYMastic

H236 | Up to –/120/120

Up to 10 x DN 32 Type B copper pipe with 32 mm nitrile lagging + 10 x 2.5 mm² 2C+E TPS cables

Protection
FIREFLYMasticHP, FIREFLY Penowrap, FIREFLYStrap, FIREFLYMastic

H237 | –/120/120

Wet Fire and Plumbing Services **|** Sprinkler Pipes and PEX Pipes

Our latest sprinkler pipe offerings, V497A and V497B, now achieve the required FRL using 50% less FIREFLY Penowrap than before. Wrapping the pipe with FIREFLY Penowrap for only 150 mm achieves an FRL of up to –/90/90 in AAC walls when an integrity seal is applied using FIREFLYMastic.

Previously, V53, V64 and V120 were the go-to solutions for single PEX pipes through AAC walls, however recent testing has demonstrated that FIREFLYMasticHP can handle more. Now, bundling together up to three PEX pipes with FIREFLYMasticHP, using a 30 mm x 30 mm fillet, achieves an FRL of –/90/90 and a 25 mm x 25 mm fillet meets the 60-minute fire rating requirements for AAC panel walls.

Up to 3 x 20 mm PEX

Protection
FIREFLYMasticHP

V492 | Up to –/90/90
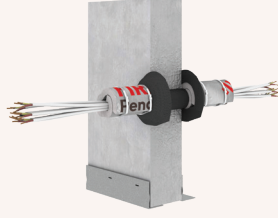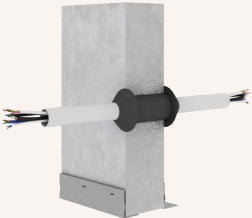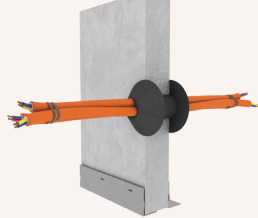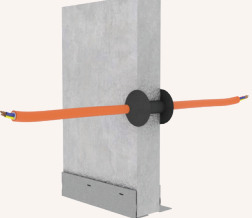

Up to NB 40 mm (48 mm OD) Sprinkler pipe
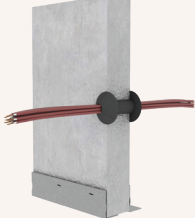
Protection
FIREFLYMasticHP, FIREFLY Penowrap

V497 | Up to –/90/90

Electrical Services | Power and Alarm Cables

In the residential space, a common issue was the fire stopping of 3C+E power cables larger than 6 mm², as most solutions catered up to that size only. FIREFLY addresses this gap by providing solutions for cables up to 16 mm². Through testing, we have verified that 3C+E power cables up to 16 mm² can pass through AAC walls while achieving FRLs of -/60/60 and -/90/90, with FIREFLYMasticHP and FIREFLY Penowrap effectively performing the job.

Additionally, all our offerings now include systems for a bundle of up to 6 TPS power cables and alarm cables, further expanding our solutions for AAC walls. For 16 mm² cables, explore IDs V490, V494 and V495.

Up to 3 x 16mm² PVC 3C+E cables

Protection
FIREFLYMasticHP, FIREFLY Penowrap

V490 | -/90/90

Up to 6 x 2.5mm² PVC 3C+E TPS cables

Protection
FIREFLYMasticHP, FIREFLY Penowrap

V491 | -/90/90

Up to 1 x Ø32 mm uPVC conduit filled with 1 x CAT5e cable 1 x CAT6 cable 1 x RG6 Coax cable 1 x 2F 9/125 fibre optic cable 1 x 1.5 mm² 2C+E TPS cable

Protection
FIREFLYMasticHP

V493 | Up to -/90/90

Up to 3 x 16mm² PVC 3C+E cables

Protection
FIREFLYMasticHP, FIREFLY Penowrap

V494 | -/60/60

Up to 1 x 16mm² PVC 3C+E cable

Protection
FIREFLYMasticHP, FIREFLY Penowrap

V495 | Up to -/90/90

Up to 6 x 1.5 mm² 2C alarm cables

Protection
FIREFLYMasticHP

V496 | Up to -/90/90

Specialty Services | Drink/Beverage Pythons

For years, we have identified fire stopping challenges in pubs and hotels, especially in Class 6 buildings where fire separation is vital. A major challenge has been fire stopping beer pythons - bundles of plastic drink and coolant lines insulated with nitrile rubber lagging and wrapped in PVC tape. These assemblies have posed difficulties in fire resistance tests due to hot gases permeating the porous nitrile. Nonetheless, FIREFLY conducted successful tests on two different sizes of beer pythons, achieving an impressive -/240/240 FRL, providing a valuable solution to the market.

40 mm Beverage python

Protection
FIREFLYMasticHP, FIREFLY FRF-50

V529 | Up to -/240/240

130 mm Beverage python

Protection
FIREFLYMasticHP, FIREFLY FRF-150

V530 | -/180/180

40 mm Beverage python

Protection
FIREFLYMasticHP, FIREFLY FRF-50
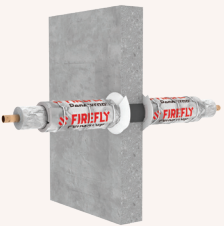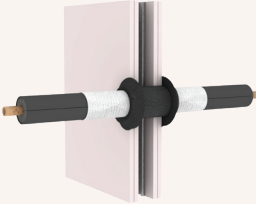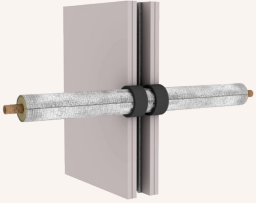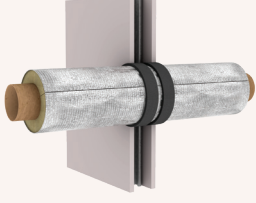
H243 | Up to -/240/240
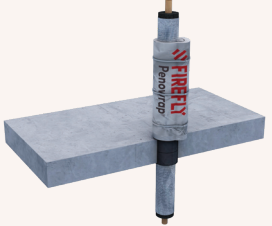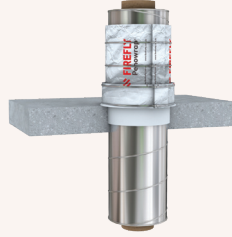
130 mm Beverage python

Protection
FIREFLYMasticHP, FIREFLY FRF-150

H244 | -/180/180

Mechanical Services | Temperature and Moisture Controlled Pipes

Pipe lagging plays a crucial role in modern building design, serving various purposes like energy efficiency, noise reduction, temperature regulation, and condensation control. With a wide range of insulation materials available, each designed to meet specific requirements such as sound attenuation, mold prevention, and thermal efficiency, ensuring effective firestopping can present a complex challenge. Different lagging materials react differently under fire conditions, underscoring the importance of conducting thorough real-world performance testing.

In our recent testing, we evaluated the fire resistance of pipes insulated with various lagging materials, including 4-Zero by Thermotec, Thermobreak, mineral wool, nitrile rubber, and metal-encased mineral wool. These systems underwent fire testing in FR plasterboard walls, concrete slabs, and concrete walls, utilising FIREFLYMasticHP and FIREFLYStrap. The outcomes of these tests offer a valuable solution for passive fire installers, particularly in scenarios involving lagged pipes in retrofit projects. This is crucial in existing buildings where these pipes pass through open service risers, requiring fire stopping at each level to uphold compartmentation and compliance standards.

Up to DN25 copper pipe with 25 mm Thermobreak insulation

Protection
FIREFLYMasticHP, FIREFLY Penowrap, FIREFLYMastic

V501 | -/90/90

Up to DN25 copper pipe with 25 mm Nitrile lagging

Protection
FIREFLYMasticHP, FIREFLY Aluminium Foil Tape

V511 | Up to -/120/120

Up to DN25 copper pipe with 25 mm mineral wool insulation

Protection
FIREFLYMasticHP

V519 | Up to -/120/120

Up to DN50 copper pipe with 38 mm mineral wool insulation

Protection
FIREFLYMasticHP

V523 | Up to -/120/120

DN25 copper pipe with 25 mm Thermotec 4-Zero insulation

Protection
FIREFLYMasticHP, FIREFLY Aluminium Foil Tape, FIREFLY Penowrap, FIREFLYMastic

H240 | Up to -/120/120

Up to 150 mm OD chilled water pipe

Protection
FIREFLYMastic, FIREFLY Penowrap

H242 | Up to -/120/120

Linear Gap Seals | FIREFLYBatt and FIREFLY Span solutions

Using FIREFLYBatt's strength and FIREFLYSpan's expansion capabilities, we have developed linear gap seals that cover gaps up to 250mm. These solutions are suitable for concrete, masonry, and plasterboard walls, as well as concrete floors. The seals are available in friction fit, "One in" and "One out" configurations.

To create these strong and durable seals, cut FIREFLYBatt to match the linear gap, leaving a maximum of 50 mm space at the top for FIREFLYSpan50. Secure FIREFLYSpan50 to the top of FIREFLYBatt using FIREFLYMastic. This installation leverages the strength of FIREFLYBatt for rigidity and the movement capability of FIREFLYSpan 50 to provide an FRL up to -/240/240.

For plasterboard walls, there's even more good news. You can now seal the cavity between linings using FIREFLYBatt. Simply cut FIREFLYBatt to size, insert it into the cavity, and secure it with plasterboard screws from one side only. Then, seal the opening with FIREFLYBatt and FIREFLYSpan. This installation provides an FRL of up to -/120/120, saving both time and cost.

One in and One out

Protection
FIREFLYMastic, FIREFLYBatt, FIREFLYSpan 50

SV24 | Up to -/240/240

One in and One out

Protection
FIREFLYMastic, FIREFLYBatt, FIREFLYSpan 50

SV26 | Up to -/120/120

2 x friction fit

Protection
FIREFLYMastic, FIREFLYBatt, FIREFLYSpan 50

SV29 | Up to -/240/240

2 x friction fit

Protection
FIREFLYMastic, FIREFLYBatt, FIREFLYSpan 50

SV30 | Up to -/120/120

One in and One out

Protection
FIREFLYMastic, FIREFLYBatt, FIREFLYSpan 50

SH19 | Up to -/240/240

2 x friction fit

Protection
FIREFLYMastic, FIREFLYBatt, FIREFLYSpan 50

SH20 | Up to -/240/240

FAS190236 RIR 1.20 | New Systems

ID	Service	Separating Element	Local FIREFLY Protection	FRL
V489A	Aircon bundle consisting of FR pair coil, condensate hose and TPS cable	AAC panel wall	FIREFLYMasticHP	-/90/90
V489B	Aircon bundle consisting of FR pair coil, condensate hose and TPS cable	AAC panel wall	FIREFLYMasticHP	-/60/60
V490	Up to 3 x 16 mm^2 PVC 3C+E cables	AAC panel wall	FIREFLYMasticHP + FIREFLYPenowrap	-/90/90
V491	Up to 6×2.5 mm^2 PVC 3C +E TPS cables	AAC panel wall	FIREFLYMasticHP + FIREFLYPenowrap	-/90/90
V492A	Up to 3×∅20 mm PEX pipes	AAC panel wall	FIREFLYMasticHP	-/90/90
V492B	Up to 3×∅20 mm PEX pipes	AAC panel wall	FIREFLYMasticHP	-/60/60
V493A	Up to 32 mm conduit with mixed comms cables and TPS cable	AAC panel wall	FIREFLYMasticHP	-/90/90
V493B	Up to 32 mm conduit with mixed comms cables and TPS cable	AAC panel wall	FIREFLYMasticHP	-/60/60
V494	Up to 3 x 16mm^2 circular power cables	AAC panel wall	FIREFLYMasticHP	-/60/60
V495A	1×16 mm^2 circular power cable	AAC panel wall	FIREFLYMasticHP + FIREFLYPenowrap	-/90/90
V495B	1×16 mm^2 circular power cable	AAC panel wall	FIREFLYMasticHP	-/60/60
V496A	Up to 6×1.5 mm^2 fire alarm cables	AAC panel wall	FIREFLYMasticHP	-/90/90
V496B	Up to 6×1.5 mm^2 fire alarm cables	AAC panel wall	FIREFLYMasticHP	-/60/60
V497A	NB40 Steel (48 mm OD) sprinkler pipe	AAC panel wall	FIREFLYMastic + FIREFLYPenowrap	-/90/90
V497B	NB40 Steel (48 mm OD) sprinkler pipe	AAC panel wall	FIREFLYMastic + FIREFLYPenowrap	-/60/60
V498A	Aircon bundle consisting of FR pair coil, condensate hose and 2 TPS cables,Cat 6 cable, Circular power cable	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	-/90/90
V498B	Aircon bundle consisting of FR pair coil, condensate hose and 2 TPS cables,Cat 6 cable, Circular power cable	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	-/120/120

ID	Service	Separating Element	Local FIREFLY Protection	FRL
V498C	Aircon bundle consisting of FR pair coil, condensate hose and 2 TPS cables,Cat 6 cable, Circular power cable	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	–/180/180
V499A	Up to 10×DN 32 Type B copper pipe with nitrile lagging and 10 TPS cables	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYStrap + FIREFLYPenowrap + FIREFLYMasticHP + FIREFLYMastic + FIREFLYBatt	–/120/120
V499B	Up to 10×DN 32 Type B copper pipe with nitrile lagging and 10 TPS cables	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYStrap + FIREFLYPenowrap + FIREFLYMasticHP + FIREFLYMastic + FIREFLYBatt	–/90/90
V500A	Aircon bundle consisting of 2 FR pair coil, 3 condensate hose and 3 TPS cables, 3Cat 6 cables, 3 Circular power cables	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLYPenowrap	–/120/120
V500B	Aircon bundle consisting of 2 FR pair coil, 3 condensate hose and 3 TPS cables, 3Cat 6 cables, 3 Circular power cables	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLYPenowrap	–/90/90
V501	Up to DN25 copper pipe with 25 mm Thermobreak lagging	Min' 100mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLYPenowrap + FIREFLYMastic	–/90/90
V502A	Up to DN25 copper pipe with 25mm with Thermotec 4-Zero lagging	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLYPenowrap	–/90/90
V502B	Up to DN25 copper pipe with 25mm with Thermotec 4-Zero lagging	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLYPenowrap	–/120/120
V503	Up to 100 mm OD chilled water pre-insulated copper pipe with outer steel casing	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMastic + FIREFLYPenowrap	–/120/120
V504A	Up to 150 mm OD chilled water pre-insulated copper pipe with outer steel casing	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMastic + FIREFLYPenowrap	–/90/90
V504B	Up to 150 mm OD chilled water pre-insulated copper pipe with outer steel casing	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMastic + FIREFLYPenowrap	–/120/120
V505A	Aircon bundle with 4 FR DN20 type B copper pipes,Cat 6 cable, TPS cable, data cable and condensate pipe	Min' 90 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF-150	–/60/60

ID	Service	Separating Element	Local FIREFLY Protection	FRL
V505B	Aircon bundle with 4 FR DN20 type B copper pipes,Cat 6 cable, TPS cable, data cable and condensate pipe	Min' 96 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF-150	-/90/90
V505C	Aircon bundle with 4 FR DN20 type B copper pipes,Cat 6 cable, TPS cable, data cable and condensate pipe	Min' 116 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF-150	-/120/120
V506A	Aircon bundle with 4 FR DN20 type B copper pipes,Cat 6 cable, TPS cable, data cable and condensate pipe	Min' 90 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-150	-/60/60
V506B	Aircon bundle with 4 FR DN20 type B copper pipes,Cat 6 cable, TPS cable, data cable and condensate pipe	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-150	-/90/90
V506C	Aircon bundle with 4 FR DN20 type B copper pipes,Cat 6 cable, TPS cable, data cable and condensate pipe	Min' 120mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-150	-/120/120
V507A	Aircon bundle consisting of FR pair coil, condensate hose and 2 TPS cables, 3 Circular power cables and PVC conduit with TPS cables	Min' 90 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF-100	-/60/60
V507B	Aircon bundle consisting of FR pair coil, condensate hose and 2 TPS cables, 3 Circular power cables and PVC conduit with TPS cables	Min' 96 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF-100	-/90/90
V507C	Aircon bundle consisting of FR pair coil, condensate hose and 2 TPS cables, 3 Circular power cables and PVC conduit with TPS cables	Min' 116 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF-100	-/120/120
V507D	Aircon bundle consisting of FR pair coil, condensate hose and 2 TPS cables, 3 Circular power cables and PVC conduit with TPS cables	Min' 128 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF-100	-/180/180
V508A	Aircon bundle consisting of FR pair coil, condensate hose and 2 TPS cables, 3 Circular power cables and PVC conduit with TPS cables	Min' 90 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-100	-/60/60
V508B	Aircon bundle consisting of FR pair coil, condensate hose and 2 TPS cables, 3 Circular power cables and PVC conduit with TPS cables	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-100	-/90/90

ID	Service	Separating Element	Local FIREFLY Protection	FRL
V508C	Aircon bundle consisting of FR pair coil, condensate hose and 2 TPS cables, 3 Circular power cables and PVC conduit with TPS cables	Min' 120 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-100	-/120/120
V508D	Aircon bundle consisting of FR pair coil, condensate hose and 2 TPS cables, 3 Circular power cables and PVC conduit with TPS cables	Min' 150 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-100	-/180/180
V509A	Up to 3 Aircon bundles consisting of FR pair coil, condensate hose, 2 Circular power cables and TPS cable	Min' 90 mm thick FR Plasterboard wall	FIREFLYMastic + FIREFLYPenowrap	-/60/60
V509B	Up to 3 Aircon bundles consisting of FR pair coil, condensate hose, 2 Circular power cables and TPS cable	Min' 96 mm thick FR Plasterboard wall	FIREFLYMastic + FIREFLYPenowrap	-/90/90
V509C	Up to 3 Aircon bundles consisting of FR pair coil, condensate hose, 2 Circular power cables and TPS cable	Min' 116 mm thick FR Plasterboard wall	FIREFLYMastic + FIREFLYPenowrap	-/120/120
V510A	Up to 3 Aircon bundles consisting of FR pair coil, condensate hose, 2 Circular power cables and TPS cable	Min' 90mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMastic + FIREFLYPenowrap	-/60/60
V510B	Up to 3 Aircon bundles consisting of FR pair coil, condensate hose, 2 Circular power cables and TPS cable	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMastic + FIREFLYPenowrap	-/90/90
V510C	Up to 3 Aircon bundles consisting of FR pair coil, condensate hose, 2 Circular power cables and TPS cable	Min' 120 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMastic + FIREFLYPenowrap	-/120/120
V511A	DN25 type B Copper pipe with 25mm nitrile lagging	Min' 90 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY Foil tape	-/60/60
V511B	DN25 type B Copper pipe with 25mm nitrile lagging	Min' 96 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY Foil tape	-/90/90
V511C	DN25 type B Copper pipe with 25mm nitrile lagging	Min' 116 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY Foil tape	-/120/120
V512A	DN25 type B Copper pipe with 25mm nitrile lagging	Min' 90 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY Foil tape	-/60/60

ID	Service	Separating Element	Local FIREFLY Protection	FRL
V512B	DN25 type B Copper pipe with 25mm nitrile lagging	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY Foil tape	-/90/90
V512C	DN25 type B Copper pipe with 25mm nitrile lagging	Min' 120 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY Foil tape	-/120/120
V513A	Aircon bundle consisting of 2 FR pair coil, condensate hose 2 TPS cables and 2 Circular power cables	Min' 90 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF-100	-/60/60
V513B	Aircon bundle consisting of 2 FR pair coil, condensate hose 2 TPS cables and 2 Circular power cables	Min' 96 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF-100	-/90/90
V513C	Aircon bundle consisting of 2 FR pair coil, condensate hose 2 TPS cables and 2 Circular power cables	Min' 116 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF-100	-/120/120
V514A	Aircon bundle consisting of 2 FR pair coil, condensate hose 2 TPS cables and 2 Circular power cables	Min' 90 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-100	-/60/60
V514B	Aircon bundle consisting of 2 FR pair coil, condensate hose 2 TPS cables and 2 Circular power cables	Min' 100 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-100	-/90/90
V514C	Aircon bundle consisting of 2 FR pair coil, condensate hose 2 TPS cables and 2 Circular power cables	Min' 120 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-100	-/120/120
V515A	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 90 mm thick FR Plasterboard wall	FIREFLYMasticHP	-/60/60
V515B	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 96 mm thick FR Plasterboard wall	FIREFLYMasticHP	-/90/90
V515C	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 116 mm thick FR Plasterboard wall	FIREFLYMasticHP	-/120/120
V516A	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 90mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	-/60/60
V516B	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 100mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	-/90/90

ID	Service	Separating Element	Local FIREFLY Protection	FRL
V516C	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 120mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	–/120/120
V517A	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 90 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLYPenowrap	–/60/60
V517B	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 96 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLYPenowrap	–/90/90
V517C	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 116 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLYPenowrap	–/120/120
V518A	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 90mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLYPenowrap	–/60/60
V518B	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 100mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLYPenowrap	–/90/90
V518C	Aircon bundle consisting of FR pair coil, condensate hose 2 TPS cables and Circular power cable	Min' 120mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLYPenowrap	–/120/120
V519A	DN25 type B copper pipe with 25 mm mineral wool pipe insulation	Min' 90 mm thick FR Plasterboard wall	FIREFLYMasticHP	–/60/60
V519B	DN25 type B copper pipe with 25 mm mineral wool pipe insulation	Min' 96 mm thick FR Plasterboard wall	FIREFLYMasticHP	–/90/90
V519C	DN25 type B copper pipe with 25 mm mineral wool pipe insulation	Min' 116 mm thick FR Plasterboard wall	FIREFLYMasticHP	–/120/120
V520A	DN25 type B copper pipe with 25 mm mineral wool pipe insulation	Min' 90 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	–/60/60
V520B	1×DN25 type B copper pipe with 25 mm mineral wool pipe insulation	Min' 100mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	–/90/90
V520C	1×DN25 type B copper pipe with 25 mm mineral wool pipe insulation	Min' 120 mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	–/120/120
V521A	Aircon bundle consisting of 3 FR pair coil, condensate hose TPS cables and 2 Circular power cables	Min' 90 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF–150	–/60/60

ID	Service	Separating Element	Local FIREFLY Protection	FRL
V521B	Aircon bundle consisting of 3 FR pair coil, condensate hose TPS cables and 2 Circular power cables	Min' 96 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF–150	–/90/90
V521C	Aircon bundle consisting of 3 FR pair coil, condensate hose TPS cables and 2 Circular power cables	Min' 116 mm thick FR Plasterboard wall	FIREFLYMasticHP + FIREFLY FRF–150	–/120/120
V522A	Aircon bundle consisting of 3 FR pair coil, condensate hose TPS cables and 2 Circular power cables	Min' 90mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF–150	–/60/60
V522B	Aircon bundle consisting of 3 FR pair coil, condensate hose TPS cables and 2 Circular power cables	Min' 100mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF–150	–/90/90
V522C	Aircon bundle consisting of 3 FR pair coil, condensate hose TPS cables and 2 Circular power cables	Min' 120mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF–150	–/120/120
V523A	1×DN50 type B copper pipe with 38 mm mineral wool pipe insulation	Min' 90 mm thick FR Plasterboard wall	FIREFLYMasticHP	–/60/60
V523B	1×DN50 type B copper pipe with 38 mm mineral wool pipe insulation	Min' 96 mm thick FR Plasterboard wall	FIREFLYMasticHP	–/90/90
V523C	1×DN50 type B copper pipe with 38 mm mineral wool pipe insulation	Min' 116 mm thick FR Plasterboard wall	FIREFLYMasticHP	–/120/120
V524A	1×DN50 type B copper pipe with 38 mm mineral wool pipe insulation	Min' 90mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	–/60/60
V524B	1×DN50 type B copper pipe with 38 mm mineral wool pipe insulation	Min' 100mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	–/90/90
V524C	1×DN50 type B copper pipe with 38 mm mineral wool pipe insulation	Min' 120mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP	–/120/120
V525A	1×DN25 copper pipe with 25mm Thermobreak insulation.	Min' 90 mm thick FR Plasterboard wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	–/60/60
V525B	1×DN25 copper pipe with 25mm Thermobreak insulation.	Min' 96 mm thick FR Plasterboard wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	–/90/90
V525C	1×DN25 copper pipe with 25mm Thermobreak insulation.	Min' 116 mm thick FR Plasterboard wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	–/120/120

ID	Service	Separating Element	Local FIREFLY Protection	FRL
V526A	1×DN25 copper pipe with 25mm Thermobreak insulation.	Min' 90mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	-/60/60
V526B	1×DN25 copper pipe with 25mm Thermobreak insulation.	Min' 100mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	-/90/90
V526C	1×DN25 copper pipe with 25mm Thermobreak insulation.	Min' 120mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	-/120/120
V527A	1×DN25 copper pipe with 25mm Thermotec 4-Zero insulation	Min' 90 mm thick FR Plasterboard wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	-/60/60
V527B	1×DN25 copper pipe with 25mm Thermotec 4-Zero insulation.	Min' 96 mm thick FR Plasterboard wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	-/90/90
V527C	1×DN25 copper pipe with 25mm Thermotec 4-Zero insulation.	Min' 116 mm thick FR Plasterboard wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	-/120/120
V528A	1×DN25 copper pipe with 25mm Thermotec 4-Zero insulation.	Min' 90mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	-/60/60
V528B	1×DN25 copper pipe with 25mm Thermotec 4-Zero insulation.	Min' 100mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	-/90/90
V528C	1×DN25 copper pipe with 25mm Thermotec 4-Zero insulation.	Min' 120mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYStrap + FIREFLYMasticHP + FIREFLYPenowrap	-/120/120
V529A	40 mm Beverage python with nitrile rubber insulation	Min' 100mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-50	-/90/90
V529B	40 mm Beverage python with nitrile rubber insulation	Min' 120mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-50	-/120/120
V529C	40 mm Beverage python with nitrile rubber insulation	Min' 150mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-50	-/180/180
V529D	40 mm Beverage python with nitrile rubber insulation	Min' 175mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-50	-/240/240

ID	Service	Separating Element	Local FIREFLY Protection	FRL
V530	130 mm Beverage python with nitrile rubber insulation	Min' 150mm thick Concrete, Masonry or Solid Gypsum block wall	FIREFLYMasticHP + FIREFLY FRF-150	-/180/180
H235A	Aircon bundle consisting of FR pair coil, condensate pipe 2 TPS cables, Cat 6 cable and Circular power cable	Min 100mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP	-/90/90
H235B	Aircon bundle consisting of FR pair coil, condensate pipe 2 TPS cables, Cat 6 cable and Circular power cable	Min 120mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP	-/120/120
H235C	Aircon bundle consisting of FR pair coil, condensate pipe 2 TPS cables, Cat 6 cable and Circular power cable	Min 150mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP	-/180/180
H236A	Up to 10×DN 32 Type B copper pipe with nitrile lagging and 10 TPS cables	Min 100mm thick Concrete, Masonry or Hebel floors	FIREFLYStrap + FIREFLYPenowrap + FIREFLYMasticHP + FIREFLYMastic + FIREFLYBatt	-/90/90
H236B	Up to 10×DN 32 Type B copper pipe with nitrile lagging and 10 TPS cables	Min 100mm thick Concrete, Masonry or Hebel floors	FIREFLYStrap + FIREFLYPenowrap + FIREFLYMasticHP + FIREFLYMastic + FIREFLYBatt	-/120/120
H237	Up to 10×DN 32 Type B copper pipe with nitrile lagging and 10 TPS cables	Min 150mm thick Concrete, Masonry or Hebel floors	FIREFLYStrap + FIREFLYPenowrap + FIREFLYMasticHP + FIREFLYMastic + FIREFLYBatt	-/120/120
H238A	Aircon bundle consisting of 2 FR pair coil, 3 condensate hose pipe 3 TPS cables, 3Cat 6 cable and 3 Circular power cables	Min 120mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP + FIREFLYPenowrap	-/120/120
H238B	Aircon bundle consisting of 2 FR pair coil, 3 condensate hose pipe 3 TPS cables, 3Cat 6 cable and 3 Circular power cables	Min 100mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP + FIREFLYPenowrap + FIREFLYMastic	-/90/90
H239	1×DN25 copper pipe with 25mm Thermobreak insulation	Min 100mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP + FIREFLYPenowrap + FIREFLYMastic	-/90/90
H240A	1×DN25 copper pipe with 25mm Thermotec 4-Zero insulation	Min 100mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP + FIREFLYPenowrap	-/90/90
H240B	1×DN25 copper pipe with 25mm Thermotec 4-Zero insulation	Min 120mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP + FIREFLYPenowrap + FIREFLYMastic	-/120/120

ID	Service	Separating Element	Local FIREFLY Protection	FRL
H241A	100 mm OD chilled water pre-insulated copper pipe with outer steel casing	Min 100mm thick Concrete, Masonry or Hebel floors	FIREFLYMastic + FIREFLYPenowrap	-/90/90
H241B	100 mm OD chilled water pre-insulated copper pipe with outer steel casing	Min 120mm thick Concrete, Masonry or Hebel floors	FIREFLYMastic + FIREFLYPenowrap	-/120/120
H242A	150 mm OD chilled water pre-insulated copper pipe with outer steel casing	Min 100mm thick Concrete, Masonry or Hebel floors	FIREFLYMastic + FIREFLYPenowrap	-/90/90
H242B	150 mm OD chilled water pre-insulated copper pipe with outer steel casing	Min 120mm thick Concrete, Masonry or Hebel floors	FIREFLYMastic + FIREFLYPenowrap	-/120/120
H243A	40 mm Beverage python with nitrile rubber insulation	Min 120mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP + FIREFLY FRF-50	-/120/120
H243B	40 mm Beverage python with nitrile rubber insulation	Min 150mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP + FIREFLY FRF-50	-/180/180
H243C	40 mm Beverage python with nitrile rubber insulation	Min 175mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP + +FIREFLY FRF-50	-/240/240
H244	130 mm Beverage python with nitrile rubber insulation.	Min 150mm thick Concrete, Masonry or Hebel floors	FIREFLYMasticHP + FIREFLY FRF-150	-/180/180
SV24	Horizontal linear gap seal	Concrete, Masonry or Gypsum block wall – various thickness	FIREFLYMastic + FIREFLYBatt + FIREFLYSpan 50	Up to -/240/240
SV25	Vertical linear gap seal	Concrete, Masonry or Gypsum block wall – various thickness	FIREFLYMastic + FIREFLYBatt + FIREFLYSpan 50	Up to -/240/240
SV26	Horizontal linear gap seal	FR Plasterboard wall – various thickness	FIREFLYMastic + FIREFLYBatt + FIREFLYSpan 50	Up to -/120/120
SV27	Vertical linear gap seal	FR Plasterboard wall – various thickness	FIREFLYMastic + FIREFLYBatt + FIREFLYSpan 50	Up to -/120/120
SV28	Horizontal linear gap seal	Concrete, Masonry or Gypsum block wall – various thickness	FIREFLYMastic + FIREFLYBatt + FIREFLYSpan 50	Up to -/240/240
SV29	Vertical linear gap seal	Concrete, Masonry or Gypsum block wall – various thickness	FIREFLYMastic + FIREFLYBatt + FIREFLYSpan 50	Up to -/240/240
SV30	Horizontal linear gap seal	FR Plasterboard wall – various thickness	FIREFLYMastic + FIREFLYBatt + FIREFLYSpan 50	Up to -/120/120
SV31	Vertical linear gap seal	FR Plasterboard wall – various thickness	FIREFLYMastic + FIREFLYBatt + FIREFLYSpan 50	Up to -/120/120

ID	Service	Separating Element	Local FIREFLY Protection	FRL
SH19	Linear gap seal	Concrete slab – various thickness	FIREFLYMastic + FIREFLYBatt + FIREFLYSpan 50	Up to –/240/240
SH20	Linear gap seal	Concrete slab – various thickness	FIREFLYMastic + FIREFLYBatt + FIREFLYSpan 50	Up to –/240/240

Be sure to contact our customer service team or reach out to your FIREFLY Account Manager for a copy of the FAS190236 RIR1.20 report at your earliest convenience. Full details of all systems can be found in FIREFLY PFP, available for desktop and mobile.

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