TECHNICAL HANDBOOK

Fire stopping of service penetrations in timber constructions

2nd edition February 2022

Protecta®

Foreword

The use of solid wooden or cross-laminated timber constructions, walls and floors, is getting more and more popular, hence the need for proper solutions to protect them from fires burning through and with surface protection to hinder the spread of flames. This is especially essential as these constructions are now used as part of the fire compartmentation inside a building.

Polyseam have conducted a test program which has included several constructions in both timber walls and floors with service penetrations and also paints for surface protection.

The timber walls and floors we have tested do resist fires for a certain time period. The walls were 100mm thick, the floors were 150mm thick and they were constructed with materials from randomly chosen manufacturers. All of them had in common an integrity failure between 90 and 125 minutes and during this time the temperatures on the un-exposed faces were relatively low. They can therefore be considered suitable to replace fire rated drywalls and hollow timber floors.

But the significant and real difference from a concrete or masonry construction is that these constructions collapse completely once the fire has burned through. Polyseam would therefore advise that solid timber walls and floors should only be used as secondary loadbearing structures and that they are connected to a primary loadbearing structure made of reinforced concrete, fire protected structural steel or perhaps glulam timber, especially in buildings with more than two floors.

In high-rise buildings, one should also consider using only concrete floors and secure every floor against fire spreading from one floor to the next through internal apertures and via façades. Furthermore, staircases and lifts should be encapsulated in fire compartments made of masonry or concrete always securing at least two escape routes, one on each side of the building.

In addition, in larger rooms, in areas with plenty of people are gathered, or in escape routes; the wall and ceiling surfaces should be protected against spread of flame. This is quite simple to achieve by using a fire protection acrylic paint instead of a normal paint, which can also be tinted in a colour of choice, or as a transparent paint to retain the original wooden surface in both matt and gloss finishes. Special precautions are of course also necessary to avoid the spread of fire from one building to the next.

Considering the above, it is therefore important that with the use of solid wooden or cross-laminated timber constructions, the fire strategy is thought through properly. But by building these buildings to withstand the worst possible fire scenarios, it is in our view quite possible to ensure they are safe.

Kjetil Bogstad
Handbook editor & CEO of Polyseam

'Treet' – Currently the World's second tallest timber (hybrid) high-rise building, in Bergen, Norway

Content

Which products should be used for fire stopping?

In timber constructions, it is common to use circular holes that fit the passing services to retain the constructional strength. Products for fire stopping have therefore been chosen accordingly with the use of Protecta® fire resistant sealants, collars and service transits designed for a small annular gap around the services passing through.

With cable ladders or cable trays, it is also common to have circular holes, side by side, with the ladder or tray discontinued so it does not pass through the construction. In these situations, it is important that the ladder or tray is supported to a nearby construction, to resist fire, so they do not collapse during the required fire resistance period and damaging the fire seal.

Typical sample of penetrating services with annular gap widths between 10 and 30mm

Product Selector - Linear Seals

Properties	Construction	Seal Size	Product
Normal	Walls and floors	Up to 30mm wide	Protecta FR Acrylic
Water proof and high movement		Up to 30mm wide	Protecta FR IPT

Product Selector - Penetrating Services

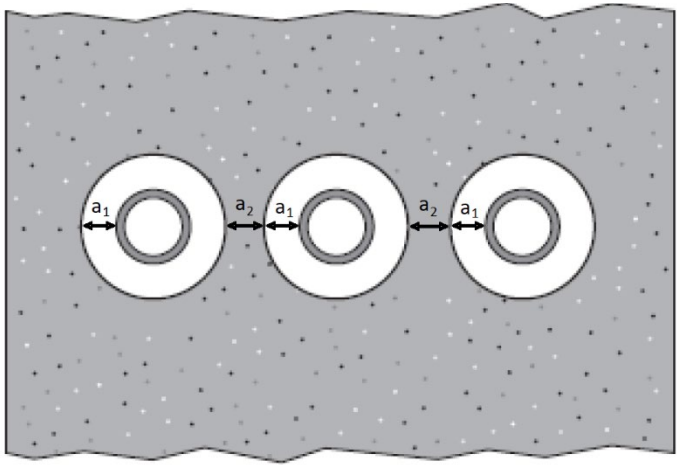
Seal Size	Services	Product(s)
Annular gap between 10 and 20mm wide	Cables	Protecta FR Acrylic w/ or w/o Service Coat FR-1, or Protecta FR Service Transit, or Protecta FR Collar
	Metal pipes; mineral fibre pipe insulations	Protecta FR Acrylic
	Metal pipes; combustible insulations	Protecta FR Acrylic, or Protecta FR Graphite, or Protecta FR Collar
	Plastic pipes	Protecta FR Acrylic, or Protecta FR Collar
	Ventilation ducts	Protecta FR Acrylic with FR Damper

General rules for fire sealing timber constructions

Aperture sizes and layouts

Apertures for fire seals tested with Protecta products have been designed to be the same as recommended by the manufacturers of timber constructions. These are normally circular and fitted to each service penetration to keep the constructional strength as high as possible.

The below rules should be followed when the apertures for the services are drilled. Where cable trays or ladders are used, these should be discontinued on each side of the constructions, so only single or bundled cables pass through circular apertures placed side-by-side. Please make sure any trays or ladders have fire resistant supports to keep cables from falling down for at least 2 hours.



<u>Rules; single apertures, or in a group</u>

1. A group can consist of multiple linear placed apertures.
2. In walls, a group must be placed horizontally.
3. $\mathbf{a_1}$ should ideally be between 10 and 30 mm (details in appendix 1 and 2).
4. $\mathbf{a_2}$ can be:
   - FR Acrylic - 0 mm or anything above, but allocate space for pipe insulation
   - FR Graphite – 30 mm or anything above
   - FR Service Transit – 30 mm or anything above
   - FR Collar – No minimum but allocate space for the collars
5. The minimum distance to the next group must be 100 mm.

Additional guidance from the manufacturer of the construction must also be followed.

PS. Other less typical solutions are also available; please refer to the Installation Instructions for Protecta FR Board.

Service sizes

The test standard (EN1366-3) groups services to be tested for approval. For instance, all cables in the group up to a certain diameter must be tested otherwise, approval is only granted for the exact specimen tested, and this has no practical value.

For cables, there are many groups to test to obtain full approval. For example to obtain approval for all cables up to 21mm diameter, it is necessary to test the following cables: type A1, A2, A3 (A cables are 5 x 1.5mm^2) and B (1 x 95mm^2). The position of the cables in the test is also subject to how the cables are allowed to be positioned in practice.

Our specifications for installation are simplified to allow the installation to be performed correctly and with the least complexity, however testing to achieve the specifications is anything but simple. In general we specify service sizes with the symbol ≤ in front. Without this symbol, the size of the service is exactly as specified. The same can be said for pipes. For metal pipes testing consists of a certain design group which includes pipe diameter and wall thickness. However, where we do not specify this, it is because we have tested all the different wall thicknesses available. For plastic pipes testing also includes the different plastics, eg: PVC, PE and so on, and wall thicknesses are specified unless the pipe is specific.

Fire classifications

In fire stopping, only a few letters are used to indicate the result and what protection the installation gives.

E - Integrity, the time it takes for fire to physically spread through a fire seal. At the point of failure one can see the glow of the fire through the seal, flames coming through or via a cotton pad which catches fire when held close to the seal by the test technician. This is the simplest classification to achieve.

I - Insulation, the temperature, measured on the non-fire side has increased by 180°C on either the fire seal or the services. This is measured through many thermocouples placed in strategic locations. The intention is to replicate the lowest possible temperature that can actually start a fire, even though the fire itself has not passed through the fire seal. This is the more difficult classification to achieve.

The letters are followed by a number, which is how long in minutes the integrity and insulation were maintained. For instance, the classification **E 60** is integrity for one hour, whilst **EI 120** is both integrity and insulation for two hours.

NB. Polyseam recommends that both E & I are used in classifications for timber constructions, as the constructions are combustible.

Pipe end configurations

When testing pipes, one can choose not to cap (or close) or to cap the pipe inside or outside the furnace. The configuration chosen depends on the intended application of the pipe and/or the installation environment. The code defining if a pipe is capped is stated after the fire classification. For instance EI 60 C/U means the pipe was capped inside the furnace, and uncapped outside the furnace.

Field of application rules for pipe end configuration:

		Tested			
		U/U	C/U	U/C	C/C
Covered	U/U	-	NO	NO	NO
	C/U	YES	-	NO	NO
	U/C	YES	YES	-	NO
	C/C	YES	YES	YES	-

Our engineering judgment based on EN 1366-3:2022:

Intended use of pipe		Pipe end condition
Rainwater pipe, plastic	At drainage	U/U [1)]
	Not at drainage	C/C [2)]
Drainage or sewage pipe, plastic	Ventilated drain	C/U [1)]
	Unventilated drain	U/C [2)]
	Drain w/water trap	U/C [1)]
	Not at drainage	C/C [2)]
Metal or plastic pipe in closed system (water, gas, air etc.)		C/C [1)]
Metal pipe in ventilated system (sewage etc.)		U/C [1)]
Flue gas recovery system pipe, plastic		U/C [1)]
Pipe with open ends and ≥ 50cm length on both sides, plastic		U/U [2)]
Waste disposal shaft pipe, metal		U/C [2)]

[1)] Suggested in EN 1366-3:2022. [2)] Polyseam' s judgment based on assessments.

Supporting constructions and service supports

The timber supporting constructions (fire rated walls and floors) should be tested and classified in accordance with EN 13501-2 for the required fire resistance period.

Services in floors should have the first support located maximum 450mm from the top face, and services in walls should have the first support located maximum 250mm from both faces of the wall. Thereafter the services should be supported according to the support system manufacturer's installation instructions.

Test of a timber floor with service penetrations fire sealed with Protecta products

Fire exposed side of a timber construction tested with Protecta products

FAQ's

GENERAL

Q: *What certifications are available?*

A: The Protecta® fire stopping range has ETA certifications and the CE-mark for Europe and Africa, UL-EU International certifications for Asia and South America and local certifications for the United Arab Emirates, New Zealand and Australia.

Q: *To what fire standard is the products tested?*

A: For fire stopping of service penetrations, the test standard used is EN 1366-3 in conjunction with EN 1363-1.

CONSTRUCTIONS

Q: *I have a fire seal in a floor, can I use the approvals for a wall?*

A: No. The EuroNorm states that fire seals in floors have to be tested and approved independently from walls.

Q: *Can approvals for drywalls be used in timber walls?*

A: No. The EuroNorm does not allow this. All timber constructions must be tested and certified separately to other types of constructions.

Q: *I am to do a fire seal in a swimming pool area and need something moisture proof, what should I use?*

A: For smaller seals you can use the Protecta FR IPT sealant. For larger seals you can use Protecta FR Board, but after you have sealed the gaps and openings with FR Acrylic, apply a layer of FR Coating on top of the acrylic.

FIRE SEALS

Q: *A solution states 25mm depth of Protecta FR Acrylic on 25mm backing of stonewool, can I instead seal with 50mm FR Acrylic and skip the backing?*

A: Yes, the FR Acrylic will give better fire resistance than the stonewool backing material so if the total depth is the same or greater this is ok.

Q: *There is a solution for a double sided seal with FR Acrylic at 25mm depth in a timber wall. Can I instead seal this single sided at 50mm depth?*

A: No. The fire seal will be weaker as the penetration speed of the fire will increase during heating of the material. With a double sided fire seal the fire has to effectively 'start again' when it meets the second seal.

Q: *It is stated that I use stonewool backing with Protecta FR Acrylic, can I instead use Protecta Backing material?*

A: Yes, the Protecta backing is made of AES fibre which has greater fire resistant than stonewool. However, if Protecta Backing is stated, you cannot use a stonewool backing.

FAQ's

Q: *I have a special fire seal that is not mentioned in any of the solutions, what do I do?*

A: Please contact us and we will assess if we can write an Engineering Judgment.

CABLES

Q: *The instructions mention cables, but does that include all types of cables?*

A: Yes. We have tested groups of cables which gives approvals for all kinds, including aluminium, copper and fibre optic cables.

PIPES

Q: *I have a penetrating pipe made of iron, but it is not mentioned in the instructions?*

A: Iron is the base metal of steel, so use the instructions for steel pipes.

Q: *I am to fire seal a plastic pipe, but it is not a standard PVC, PE or PP pipe. Can I use the general instructions for plastic pipes?*

A: Yes, in most cases. Where PVC pipes are mentioned, this includes PVC-C and PVC-U pipes. Where PP pipes are mentioned, this includes PP-MV, PP-H, PP-R and similar if the pipe is according to EN 1451-1 or DIN 8077/8078. Where PE pipes are mentioned, this includes PE-LD, PE-MD, PE-HD, PE-X and similar according to EN 1519-1, EN 12201-2 or EN 12666-1.

Q: *It is stated 'alupex' pipes in the instructions; can I use Geberit Mepla MLC pipes?*

A: Yes. Alupex is a general term for composite aluminium pipes. They consist of an aluminium core that is covered on the inner and outer sides with thin plastic. Some alupex pipes on the market are:

- FRÄNKISCHE alpex F50 PROFI
- GEBERIT Mepla MLC
- JRG Sanipex MT
- KE KELIT Kelox
- REHAU Rautitan stabil
- TECEflex
- UPONOR MLC
- VIEGA Sanfix Fosta

Q: *I am to fire seal a Blazemaster cPVC pipe but I have heard it reacts with fire stopping products?*

A: Protecta FR Acrylic should be used; it has been independently tested and does not react with BlazeMaster or other cPVC pipes.

Appendix I

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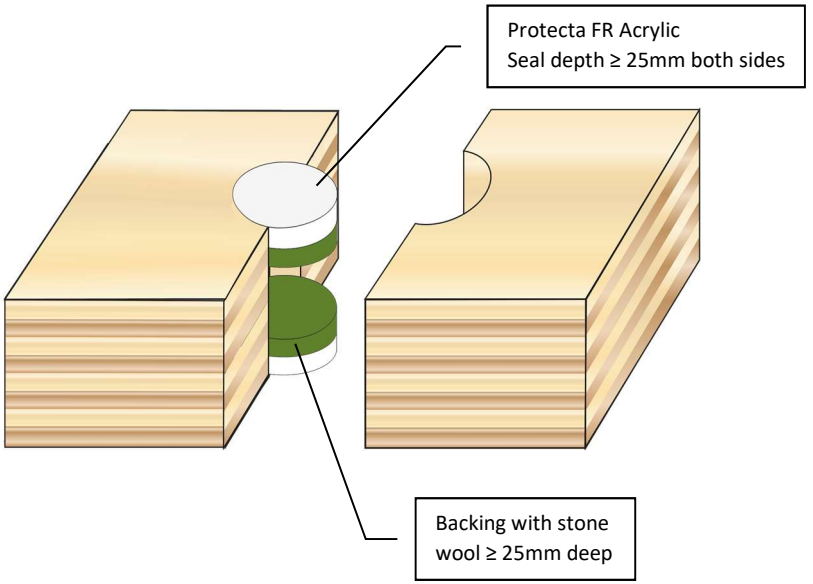
Blank seals & service penetration solutions in floors

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0035

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For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of blank seals in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

Blank seal ≤ Ø220mm	EI 120 & E 120
Reaction to fire	B-s1,d0
Sound reduction	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

Protecta®

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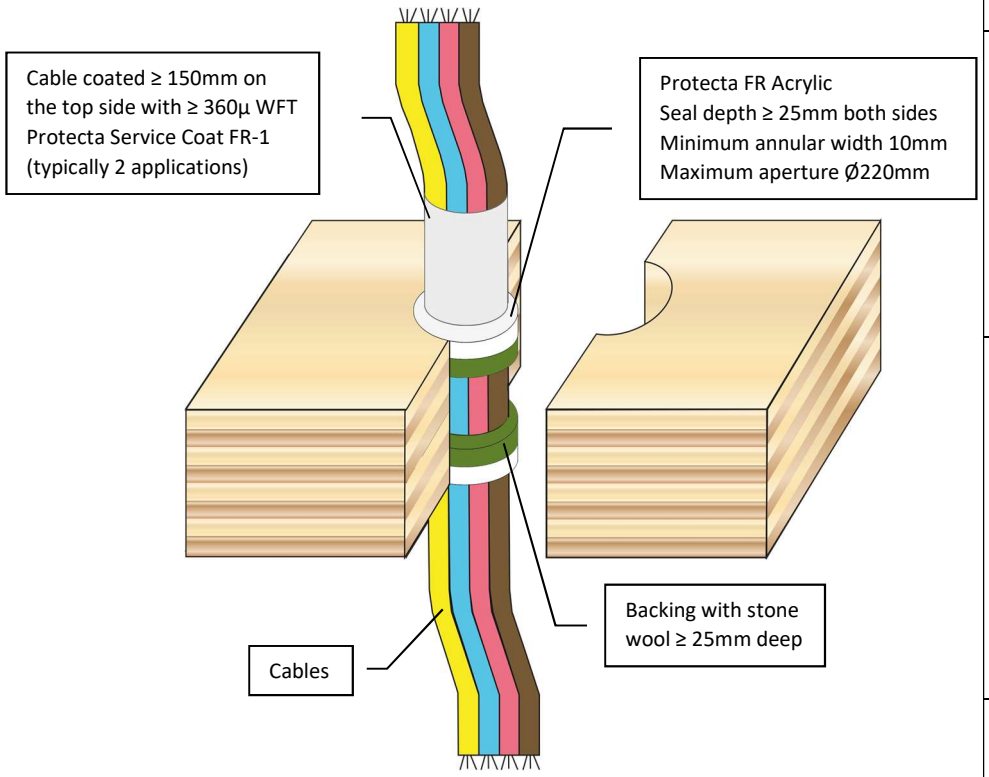
Sheet size: **A4**	Drawn date & no: 17/12/21
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Coat the cable(s) on the top side with Protecta® Service Coat FR-1 to the required length and thickness.
6. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0035

Client:

Job Title:

Products	Protecta FR Acrylic Protecta Service Coat FR-1 Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of cables in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

Cables ≤ Ø14mm, single or in bundle ≤ Ø100mm
EI 120 & E 120

Cables ≤ Ø50mm, single or in bundle ≤ Ø100mm
EI 90 & E 120

Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

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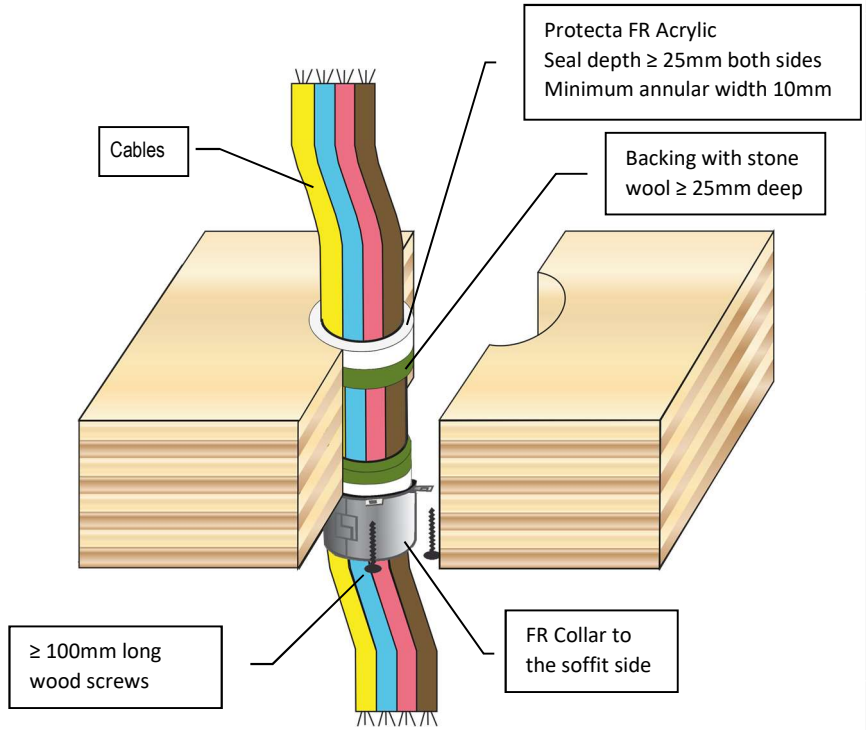
Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place a suitable collar around the cables and ensure that the collar shell and fixing lugs are positioned tightly to the surface of the floor, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the floor and the collar shell.
7. Attach the collar with wood screws.



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Signed and approved:

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of cables in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Cables ≤ Ø21mm in a bundle ≤ Ø55mm with ≤ Ø55mm FR Collar at ≥ 30mm height
EI 120 & E 120

Cables ≤ Ø21mm in a bundle ≤ Ø100mm with ≤ Ø110mm FR Collar at ≥ 50mm height
EI 90 & E 90

Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

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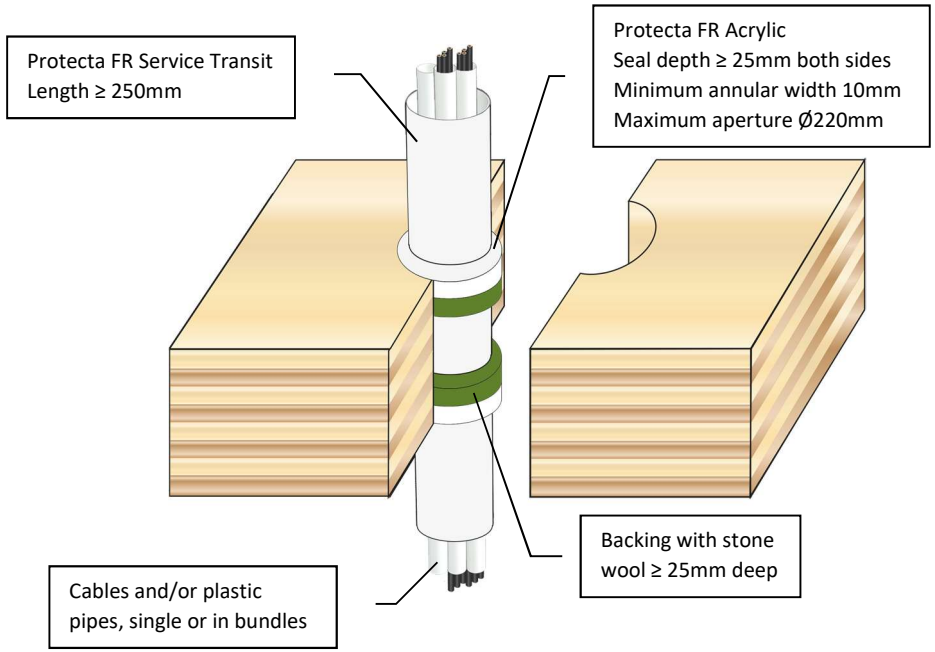
Installation Instructions

1. Before installing Protecta® FR Service Transit ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material and lock the Service Transit in position. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved and that the centre point of the transit is located mid-depth in the floor.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Before cables and/or plastic pipes are inserted through the Service Transit, remove the fibre plug from the middle of the Service Transit. After the insertion of services is completed, ensure that the fibre plug is refitted and positioned correctly around the services in the middle of the Service Transit, leaving no openings so a cold smoke barrier is achieved.
6. Make sure labels with retrofit instructions are placed near the Service Transit on both sides after installation, so future service installations are completed correctly by reinstating the fibre plug.
7. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0043

Client:

Job Title:

Products	Protecta FR Acrylic Protecta FR Service Transit Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of cables and plastic pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

≤ Ø110mm service transits, empty, or with cables ≤ Ø21mm	EI 120 & E 120
≤ Ø110mm service transits with cables ≤ Ø50mm	EI 60 & E 120
≤ Ø110mm service transits with cables ≤ Ø80mm	EI 60 & E 90
≤ Ø90mm service transits with plastic pipes ≤ Ø32mm in bundle; empty or with cables ≤ Ø21mm in bundles	EI 60 & E 120
Ø110mm service transits with plastic pipes ≤ Ø32mm in bundle; empty or with cables ≤ Ø21mm in bundles	EI 120 & E 120
Sound reduction	Rw 42 dB

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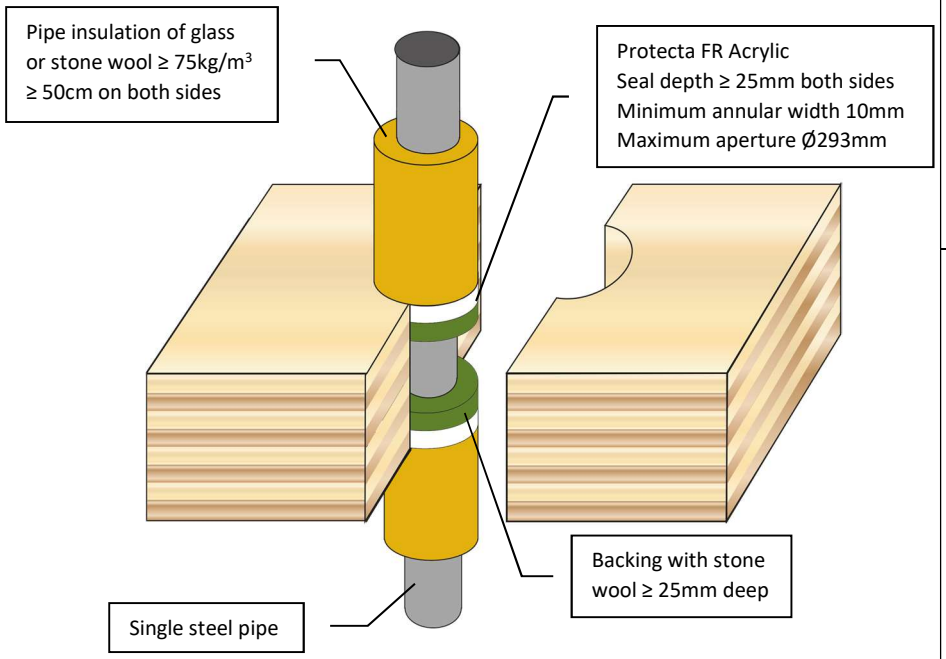
Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. As Protecta® FR Acrylic is water based, in cases where corrosion protection is a problem; some metals may require a barrier between the sealant and the metal surface prior to this installation.
3. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
4. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
5. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
6. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of steel pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

Steel pipe ≤ Ø15mm with ≥ 20mm thick pipe insulation	EI 120 C/C & E 120
Steel pipe ≤ Ø54mm with ≥ 20mm thick pipe insulation	EI 90 C/C & E 120
Steel pipe ≤ Ø273mm with ≥ 25mm thick pipe insulation	EI 60 C/C & E 120
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

ETA 21/0035

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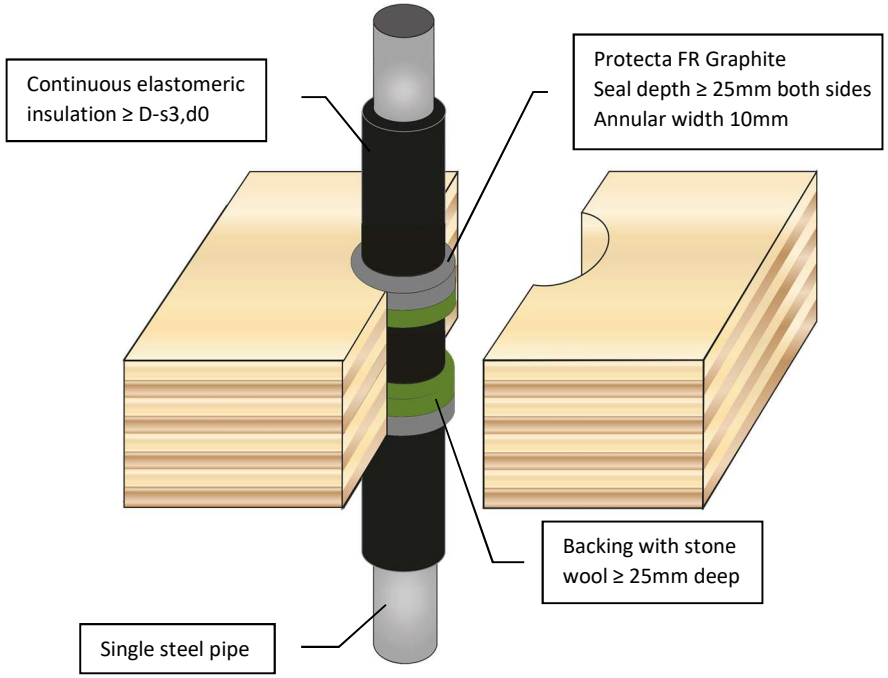
Installation Instructions

1. Before installing Protecta® FR Graphite ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Graphite on both sides to the required depth.
4. Apply the sealant generously avoiding air bubbles. Finish the bead with a moist spatula or pallet knife. Avoid excessive tooling/smoothing as this may make the seal surface wet and soft.
5. Protecta® FR Graphite can be over-painted with most emulsion or alkyd (gloss) paints.



Client:

Job Title:

Products	Protecta FR Graphite Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of steel pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Steel pipe ≤ Ø12mm with 9mm thick pipe insulation	EI 120 C/C & E 120
Steel pipe ≤ Ø114mm with 9 – 24mm thick pipe insulation	EI 45 C/C & E 120
Steel pipe ≤ Ø114mm with 25mm thick pipe insulation	EI 60 C/C & E 120
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 53 dB

ETA 21/0040

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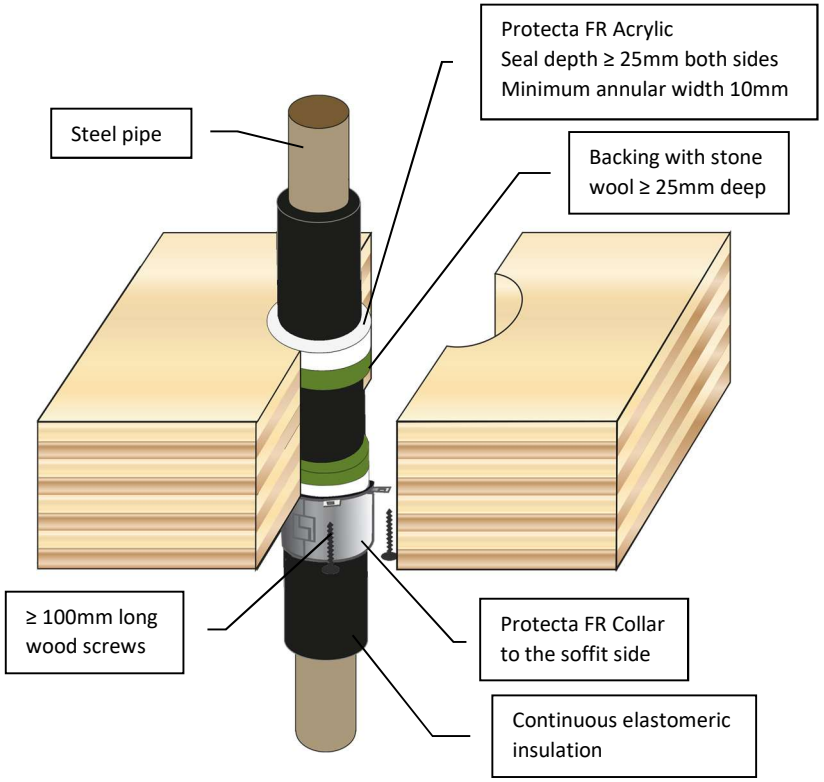
Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place a suitable collar around the pipe insulation and ensure that the collar shell and fixing lugs are positioned tightly to the surface of the floor, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the floor and the collar shell.
7. Attach the collar with wood screws.



ETA 21/0070

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stonewool backing ≥ 33 kg/m³
Application	Fire stopping of steel pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Steel pipe ≤ Ø42mm with 9mm thick pipe insulation with ≤ Ø63mm FR Collar at 50mm height — EI 120 C/C & E 120

Steel pipe ≤ Ø42mm with 10 – 50mm thick pipe insulation with ≤ Ø110mm FR Collar at 50mm height, or Ø125-160mm at 60mm height — EI 60 C/C & E 60

Steel pipe ≤ Ø54mm with 19mm thick pipe insulation with ≤ Ø110mm FR Collar at 50mm height — EI 60 C/C & E 120

Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

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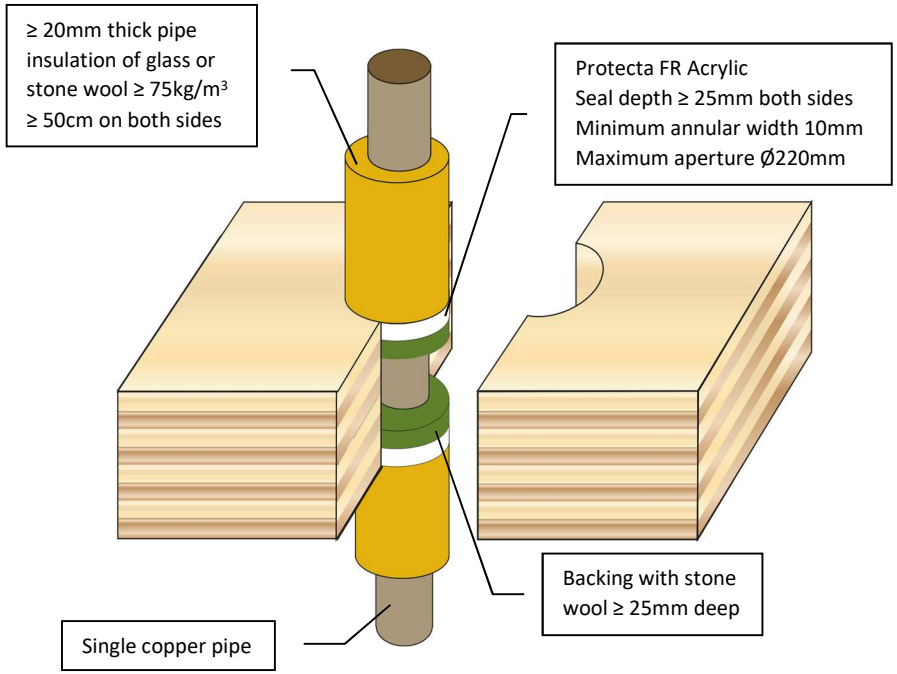
For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Sheet size: **A4**	Drawn date & no: 10/1/22
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. As Protecta® FR Acrylic is water based, in cases where corrosion protection is a problem; some metals may require a barrier between the sealant and the metal surface prior to this installation.
3. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
4. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
5. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
6. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of copper pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

Copper pipe ≤ Ø15mm with ≥ 20mm thick pipe insulation	EI 120 C/C & E 120
Copper pipe ≤ Ø54mm with ≥ 20mm thick pipe insulation	EI 90 C/C & E 120
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

ETA 21/0035

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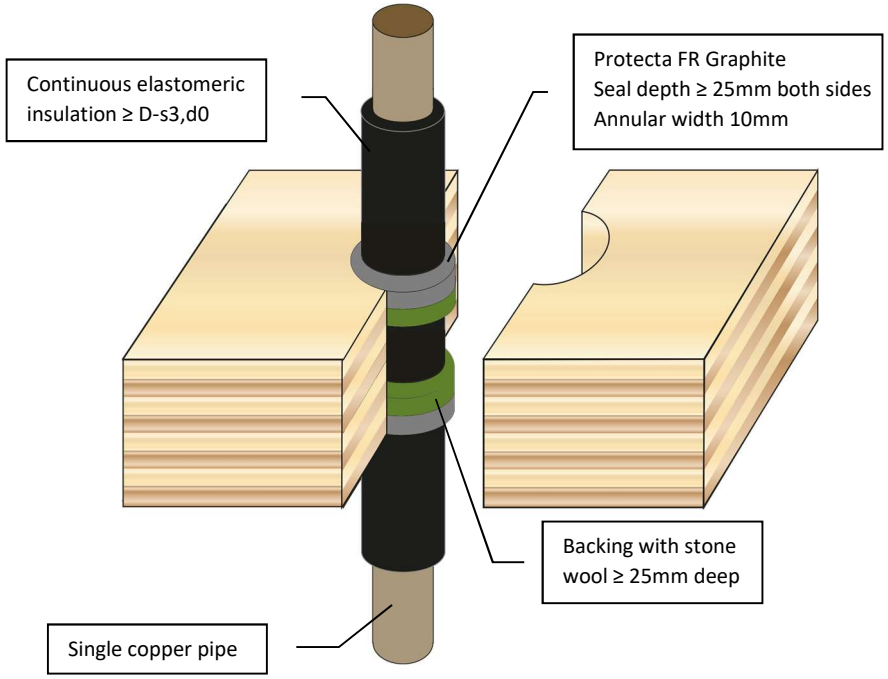
Signed and approved:

Sheet size: **A4**	Drawn date & no: 27/12/21
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Graphite ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Graphite on both sides to the required depth.
4. Apply the sealant generously avoiding air bubbles. Finish the bead with a moist spatula or pallet knife. Avoid excessive tooling/smoothing as this may make the seal surface wet and soft.
5. Protecta® FR Graphite can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0040

Client:

Job Title:

Products	Protecta FR Graphite Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of copper pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Copper pipe ≤ Ø12mm with 9mm thick pipe insulation	EI 120 C/C & E 120
Copper pipe ≤ Ø54mm with 9mm thick pipe insulation	EI 45 C/C & E 120
Copper pipe ≤ Ø54mm with 10 – 25mm thick pipe insulation	EI 30 C/C & E 120
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 53 dB

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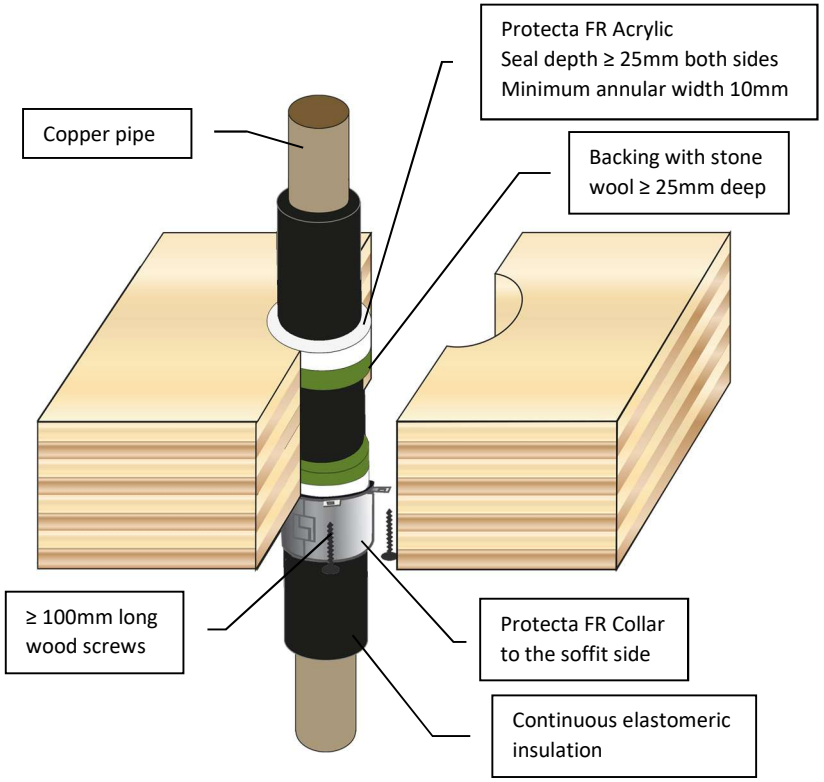
Signed and approved:

Sheet size: **A4**	Drawn date & no: 27/12/21
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place a suitable collar around the pipe insulation and ensure that the collar shell and fixing lugs are positioned tightly to the surface of the floor, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the floor and the collar shell.
7. Attach the collar with wood screws.



ETA 21/0070

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stonewool backing ≥ 33 kg/m³
Application	Fire stopping of copper pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Copper pipe ≤ Ø42mm with 9mm thick pipe insulation with ≤ Ø63mm FR Collar at 50mm height — EI 120 C/C & E 120

Copper pipe ≤ Ø42mm with 10 – 50mm thick pipe insulation with ≤ Ø110mm FR Collar at 50mm height, or Ø125-160mm at 60mm height — EI 60 C/C & E 60

Copper pipe ≤ Ø54mm with 19mm thick pipe insulation with ≤ Ø110mm FR Collar at 50mm height — EI 60 C/C & E 120

Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

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Email: post.uk@polyseam.com

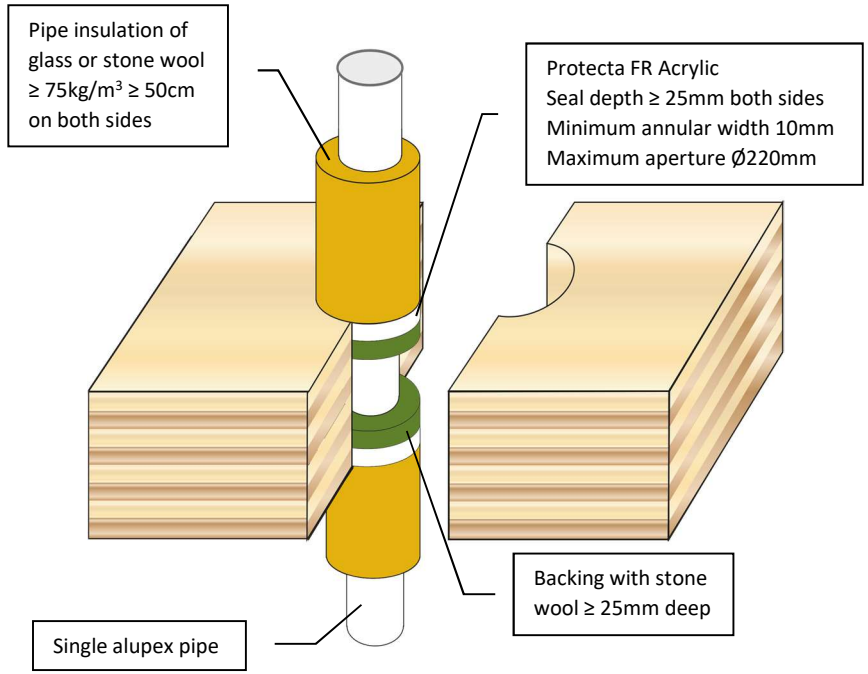
For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Sheet size: **A4**	Drawn date & no: 10/1/22
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of alupex pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

Alupex pipe ≤ Ø16mm with ≥ 20mm thick pipe insulation	EI 120 C/C & E 120
Alupex pipe ≤ Ø75mm with ≥ 25mm thick pipe insulation	EI 90 C/C & E 120
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

ETA 21/0035

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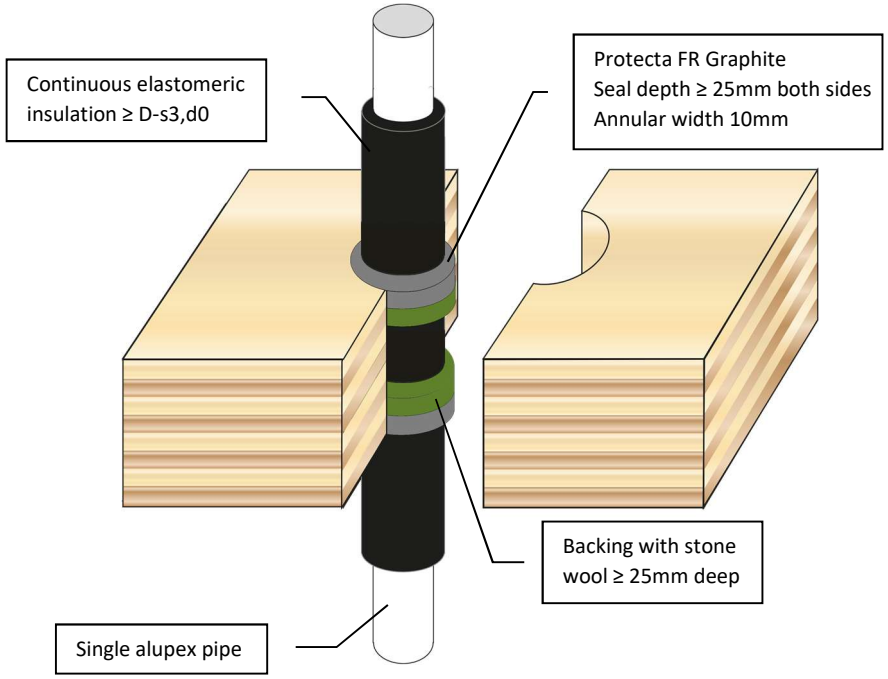
For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Sheet size: **A4**	Drawn date & no: 27/12/21
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Graphite ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Graphite on both sides to the required depth.
4. Apply the sealant generously avoiding air bubbles. Finish the bead with a moist spatula or pallet knife. Avoid excessive tooling/smoothing as this may make the seal surface wet and soft.
5. Protecta® FR Graphite can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0040

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For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Client:

Job Title:

Products	Protecta FR Graphite Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of alupex pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Alupex pipe ≤ Ø16mm with 9mm thick pipe insulation	EI 120 C/C & E 120
Alupex pipe ≤ Ø75mm with 9 – 24mm thick pipe insulation	EI 60 C/C & E 120
Alupex pipe ≤ Ø75mm with 25mm thick pipe insulation	EI 90 C/C & E 120
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 53 dB

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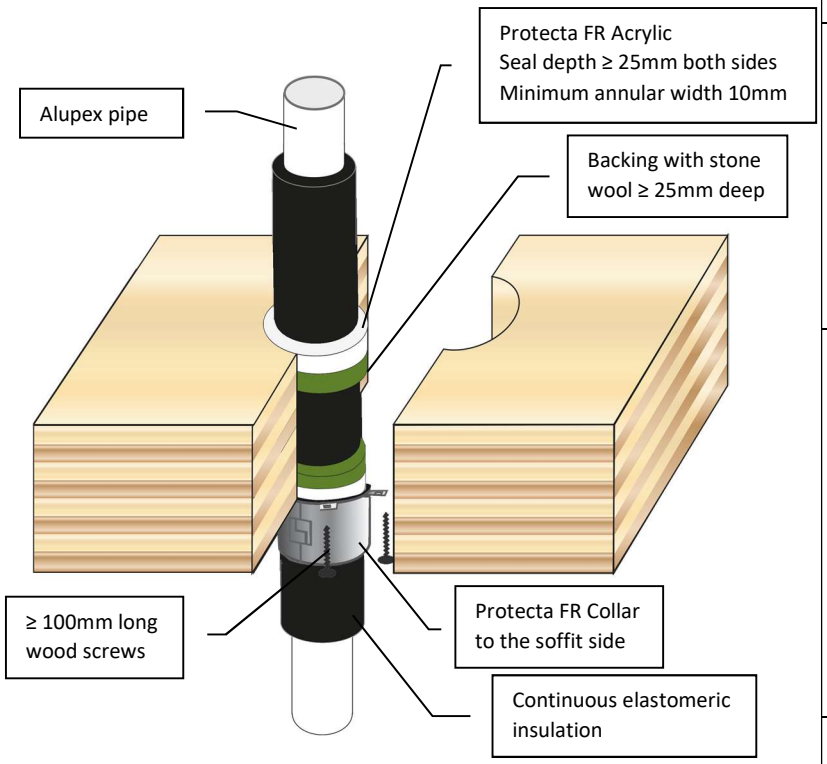
Sheet size: **A4**	Drawn date & no: 27/12/21
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place a suitable collar around the pipe insulation and ensure that the collar shell and fixing lugs are positioned tightly to the surface of the floor, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the floor and the collar shell.
7. Attach the collar with wood screws.



ETA 21/0070

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stonewool backing ≥ 33 kg/m³
Application	Fire stopping of alupex pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Alupex pipe ≤ Ø75mm with 9mm thick pipe insulation with ≤ Ø110mm FR Collar at 50mm height — EI 120 C/C & E 120

Alupex pipe ≤ Ø75mm with 10 – 50mm thick pipe insulation with ≤ Ø110mm FR Collar at 50mm height, or Ø125-200mm at 60mm height — EI 90 C/C & E 120

Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

Protecta®

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Huddersfield, West Yorkshire, HD1 6SB
Tel: +44 (0) 148 4421036
Email: post.uk@polyseam.com

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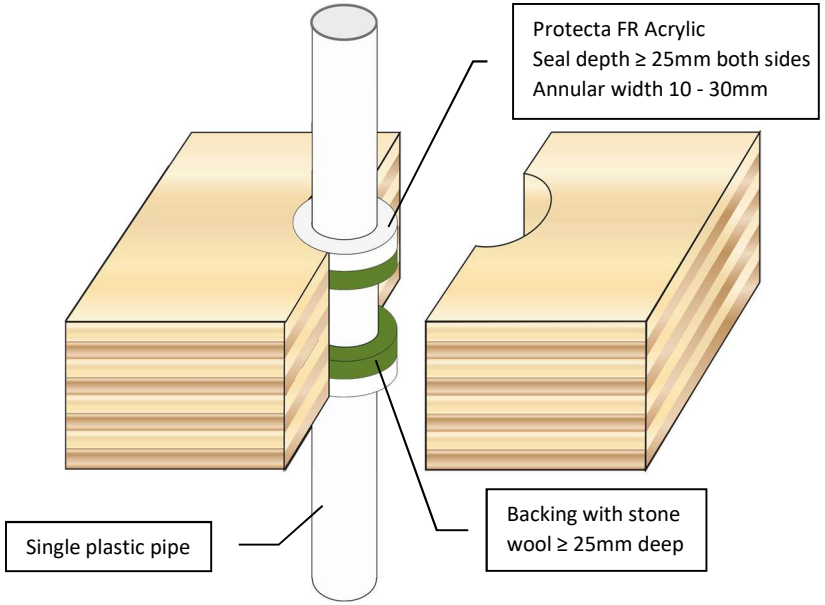
Signed and approved:

Sheet size: **A4**	Drawn date & no: 10/1/22
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0035

As a part of our policy of on-going product development and testing, we reserve the right to modify, alter or change product specifications without giving notice. All information contained in this document is given in good faith and is provided for guidance only. Any drawings provided are for illustrative purposes only. As Polyseam has no control over the methods or competence of installation and of prevailing site conditions, no warranties, expressed or implied, is intended to be given as to the actual performance of the product mentioned or referred to herein and no liability whatsoever will be accepted for any loss, damage or injury arising from the use of the information given.

For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of plastic pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

PVC-U or PVC-C pipe ≤ Ø32mm with wall thickness 1.0-2.4mm	EI 120 U/C & E 120
PE, ABS or SAN+PVC pipe ≤ Ø32mm with wall thickness 2.0-3.0mm	EI 120 U/C & E 120
PP pipe ≤ Ø 32mm with wall thickness 1.8-4.4mm	EI 120 U/C & E 120
PEX pipe-in-pipe ≤ Ø 25mm	EI 120 C/C & E 120
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

Protecta®

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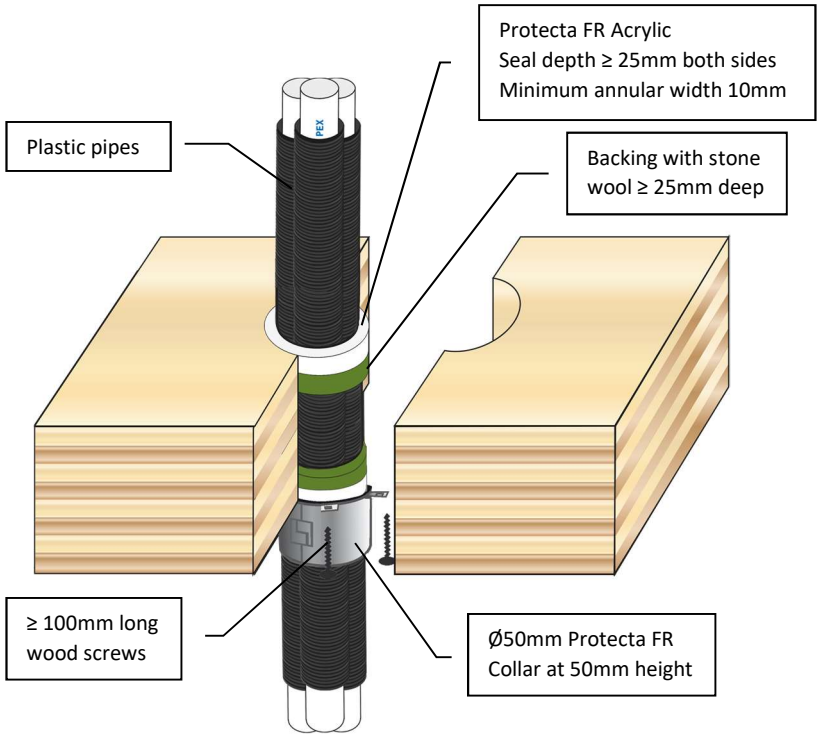
Sheet size: **A4**	Drawn date & no: 3/1/22
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place a suitable collar around the pipes and ensure that the collar shell and fixing lugs are positioned tightly to the surface of the floor, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the floor and the collar shell.
7. Attach the collar with wood screws.



ETA 21/0070

As a part of our policy of on-going product development and testing, we reserve the right to modify, alter or change product specifications without giving notice. All information contained in this document is given in good faith and is provided for guidance only. Any drawings provided are for illustrative purposes only. As Polyseam has no control over the methods or competence of installation and of prevailing site conditions, no warranties, expressed or implied, is intended to be given as to the actual performance of the product mentioned or referred to herein and no liability whatsoever will be accepted for any loss, damage or injury arising from the use of the information given.

For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stonewool backing ≥ 33 kg/m³
Application	Fire stopping of PEX plastic pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

PEX pipe-in-pipes ≤ Ø25mm, single, or in a bundle ≤ Ø50mm

EI 90 C/C & E 90

Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

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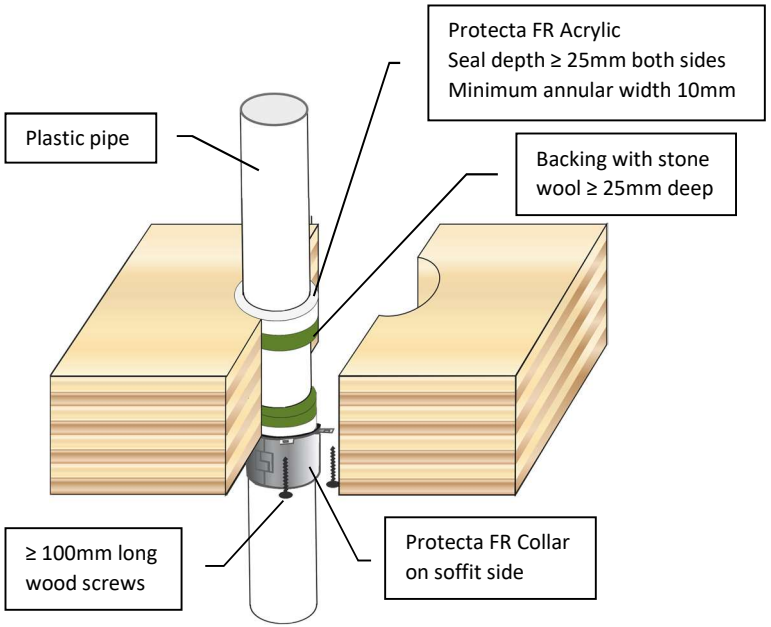
Email: post.uk@polyseam.com

Sheet size: **A4**	Drawn date & no: 22/8/21
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place a suitable collar around the pipe and ensure that the collar shell and fixing lugs are positioned tightly to the surface of the floor, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the floor and the collar shell.
7. Attach the collar with wood screws.



Services	Min. Collar Height	Classification
≤ Ø50mm PVC-U & PVC-C	30mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U (E 90)
≤ Ø90mm PVC-U & PVC-C	50mm	EI 120 C/C, EI 120 U/C, EI 60 C/U, EI 60 U/U
≤ Ø110mm PVC-U & PVC-C	30mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U
≤ Ø110mm PVC-U & PVC-C	50mm	EI 120 C/C, EI 90 U/C (E 120), EI 60 C/U
≤ Ø160mm PVC-U & PVC-C	60mm	EI 120 C/C, EI 120 U/C, EI 60 C/U, EI 60 U/U
≤ Ø200mm PVC-U & PVC-C	60mm	EI 60 C/C (E 120)
≤ Ø315mm PVC-U & PVC-C	75mm	EI 60 C/C
≤ Ø400mm PVC-U & PVC-C	100mm	EI 60 C/C
≤ Ø55mm PE, ABS & SAN+PVC	30mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U
≤ Ø50mm PE, ABS & SAN+PVC	50mm	EI 120 C/C, EI 120 U/C, EI 60 C/U, EI 60 U/U
≤ Ø110mm PE, ABS & SAN+PVC	30mm	EI 60 C/C, EI 60 U/C
≤ Ø110mm PE, ABS & SAN+PVC	50mm	EI 120 C/C, EI 120 U/C, EI 60 C/U, EI 60 U/U
≤ Ø160mm PE, ABS & SAN+PVC	60mm	EI 120 C/C, EI 120 U/C, EI 60 C/U, EI 60 U/U
≤ Ø200mm PE, ABS & SAN+PVC	60mm	EI 120 C/C
≤ Ø250mm PE, ABS & SAN+PVC	75mm	EI 120 C/C
Ø315x18.7mm PE, ABS & SAN+PVC	75mm	EI 120 C/C
Ø400x36.3mm PE, ABS & SAN+PVC	100mm	EI 90 C/C

Services	Min. Collar Height	Classification
≤ Ø50mm PP	30mm	EI 120 C/C, EI 120 U/C, EI 120 C/U, EI 120 U/U
≤ Ø110mm PP	50mm	EI 120 C/C, EI 120 U/C, EI 60 C/U, EI 60 U/U
≤ Ø140mm PP	60mm	EI 120 C/C, EI 120 U/C, EI 60 C/U, EI 60 U/U
≤ Ø160mm PP	60mm	EI 120 C/C, EI 120 U/C, EI 60 C/U, EI 60 U/U
≤ Ø200mm PP	60mm	EI 120 C/C
≤ Ø250mm PP	75mm	EI 60 C/C
Ø315x28.6mm PP	75mm	EI 60 C/C
≤ Ø400mm PP	100mm	EI 30 C/C

ETA 21/0070

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stonewool backing ≥ 33 kg/m³
Application	Fire stopping of plastic pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Fire classifications in tables on the left. For full specifications, please refer to the Installation Instructions.

Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

Protecta®

Polyseam Ltd, 15 St Andrews Road, Huddersfield, West Yorkshire, HD1 6SB
Tel: +44 (0) 148 4421036
Email: post.uk@polyseam.com

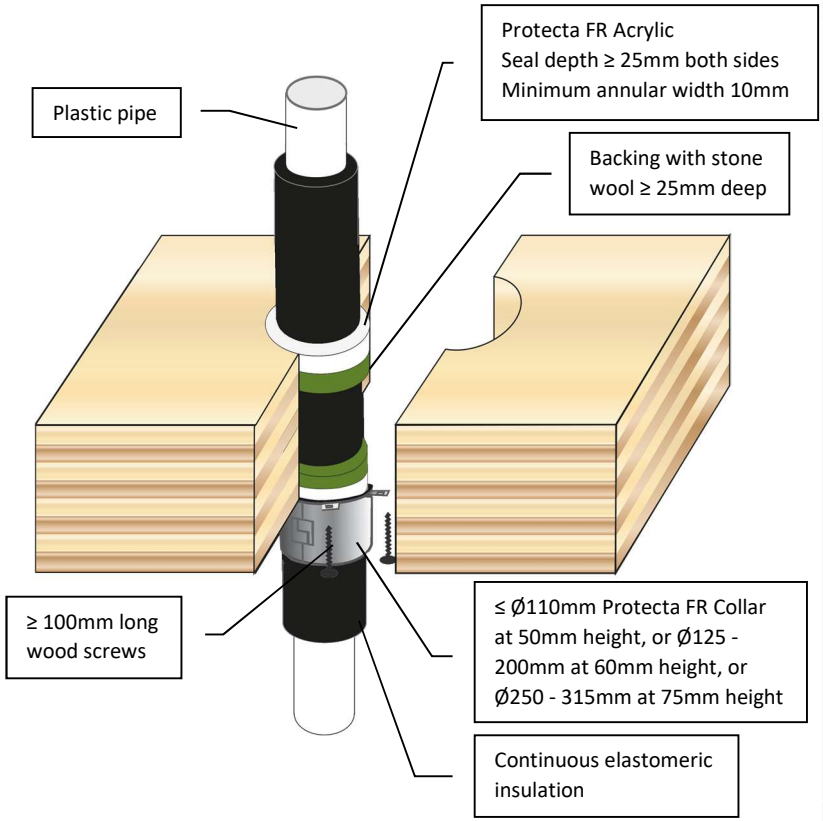
For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Sheet size:	Drawn date & no:
A4	10/1/22
Scale:	Drawn by:
NTS	K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place a suitable collar around the pipe insulation and ensure that the collar shell and fixing lugs are positioned tightly to the surface of the floor, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the floor and the collar shell.
7. Attach the collar with wood screws.



ETA 21/0070

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stonewool backing ≥ 33 kg/m³
Application	Fire stopping of insulated plastic pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

PE pipe ≤ Ø160mm with wall thickness 3.0 – 9.5mm and 9mm thick pipe insulation
EI 120 C/C & E 120

PE pipe ≤ Ø160mm with wall thickness 3.0 – 9.5mm and 10 – 50mm thick pipe insulation
EI 120 C/C & E 120

PP pipe ≤ Ø160mm with wall thickness 1.8 – 9.1mm and 9mm thick pipe insulation
EI 120 C/C & E 120

PP pipe ≤ Ø160mm with wall thickness 1.8 – 9.1mm and 10 – 50mm thick pipe insulation
EI 60 C/C & E 60

Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

Protecta®
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For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

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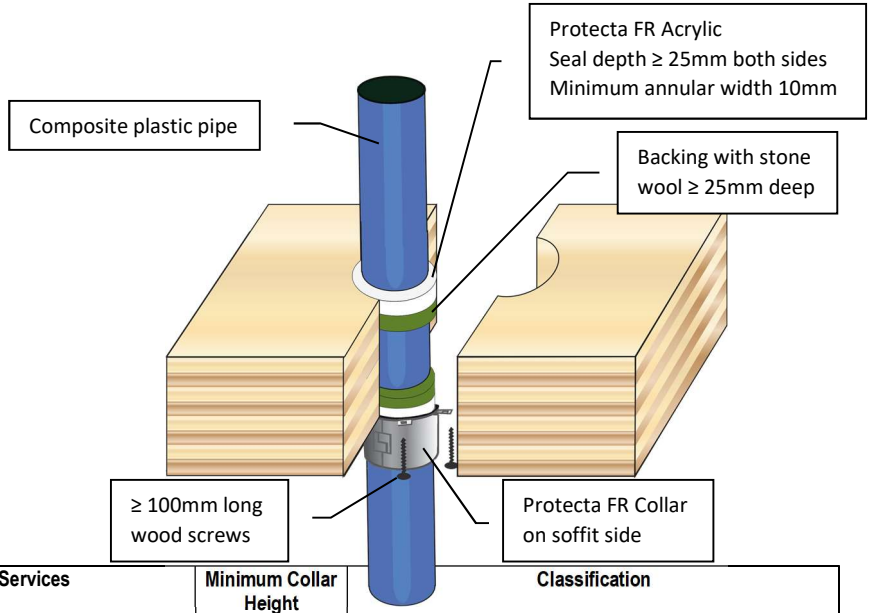
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place a suitable collar around the pipe and ensure that the collar shell and fixing lugs are positioned tightly to the surface of the floor, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the floor and the collar shell.
7. Attach the collar with wood screws.



Services	Minimum Collar Height	Classification
≤ Ø32mm Aquatherm Green SDR9	30mm	EI 120 C/C
≤ Ø50mm Aquatherm Green SDR9	50mm	EI 120 C/C
≤ Ø110mm Aquatherm Green SDR9	50mm	EI 120 C/C
≤ Ø50mm BluePower	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U, EI 120 U/U
≤ Ø110mm BluePower	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U
Ø125mm BluePower	60mm	EI 120 C/C, EI 120 U/C, EI 120 C/U
Ø160mm BluePower	60mm	EI 120 C/C, EI 120 U/C, EI 120 C/U
≤ Ø50mm Geberit Silent-PP	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U, EI 120 U/U
≤ Ø110mm Geberit Silent-PP	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U
≤ Ø50mm Polo-Kal NG pipes	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U, EI 120 U/U
≤ Ø110mm Polo-Kal NG pipes	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U
Ø125mm Polo-Kal NG pipes	60mm	EI 120 C/C, EI 120 U/C
Ø160mm Polo-Kal NG pipes	60mm	EI 120 C/C, EI 120 U/C (E 120 C/U)
≤ Ø50mm Rehau Raupiano Plus	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U, EI 120 U/U
≤ Ø110mm Rehau Raupiano Plus	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U
Ø125mm Rehau Raupiano Plus	60mm	EI 120 C/C, EI 120 U/C, EI 120 C/U
Ø160mm Rehau Raupiano Plus	60mm	EI 120 C/C, EI 120 U/C (E 120 C/U)
Ø 50mm Uponor Decibel	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U, EI 120 U/U
≤ Ø110mm Uponor Decibel	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U
≤ Ø50mm Wavin SiTech	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U, EI 120 U/U
≤ Ø110mm Wavin SiTech	50mm	EI 120 C/C, EI 120 U/C, EI 120 C/U

ETA 21/0070

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stonewool backing ≥ 33 kg/m³
Application	Fire stopping of composite plastic pipes in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Fire classifications in tables on the left. For full specifications, please refer to the Installation Instructions.

Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

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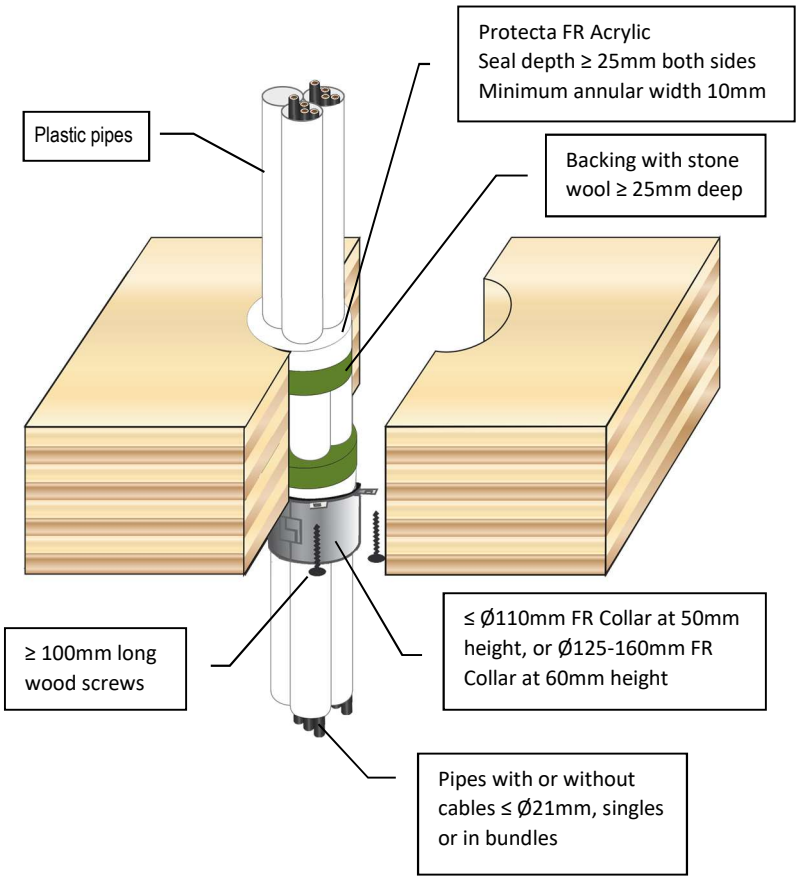
Scale:	Drawn by:
NTS	K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place a suitable collar around the pipes and ensure that the collar shell and fixing lugs are positioned tightly to the surface of the floor, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the floor and the collar shell.
7. Attach the collar with wood screws.



ETA 21/0070

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stonewool backing ≥ 33 kg/m³
Application	Fire stopping of plastic pipes and cables in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

PVC pipes ≤ Ø32mm, single, or in a bundle
≤ Ø160mm with wall thickness 1.0 – 2.4mm
EI 90 C/U & E 90

PE & ABS pipes ≤ Ø32mm, single, or in a bundle
≤ Ø160mm with wall thickness 2.0 – 3.0mm
EI 90 C/U & E 90

PP pipes ≤ Ø32mm, single, or in a bundle
≤ Ø160mm with wall thickness 1.8 – 4.4mm
EI 90 C/U & E 90

Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

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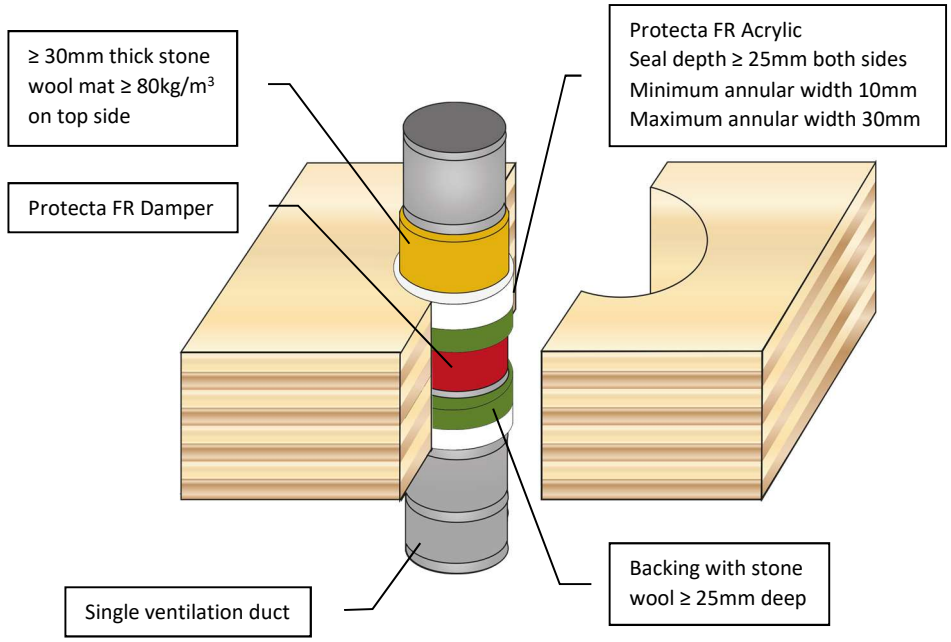
Installation Instructions

1. Before installing Protecta® FR Damper ensure that the surface of surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material and lock the Damper in position. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved and that the centre point of the Damper is located mid-depth in the floor.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Connect the ventilation duct(s) to the damper.
6. Insulate the duct towards the fire seal on the top side with stone wool mat.
7. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



UL EU
UL-EU-01028-CPR

Client:

Job Title:

Products	Protecta FR Acrylic Protecta FR Damper Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of ventilation ducts in timber floors
Construction	Minimum floor thickness of 150 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Ventilation duct ≤ Ø400mm with ≥ 150mm stone wool mat	EI 90 & E 90
Ventilation duct ≤ Ø1000mm with ≥ 500mm stone wool mat	EI 90 & E 90
Sound & Air flow	See technical data sheet
External pressure with zero leakage	Min. 200 Pa
Reaction to fire	B-s1,d0

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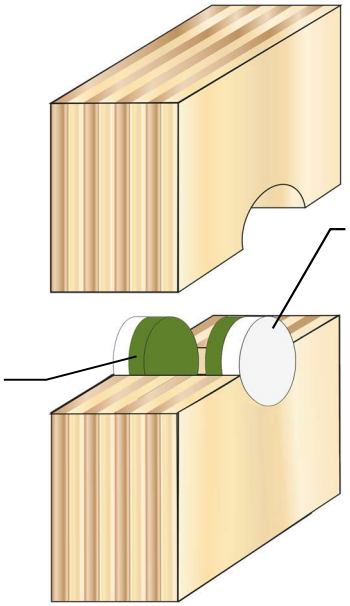
Appendix II

-

Blank seals & service penetration solutions in walls

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of blank seals in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

Blank seal ≤ Ø180mm	EI 120 & E 120
Reaction to fire	B-s1,d0
Sound reduction	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

ETA 21/0035

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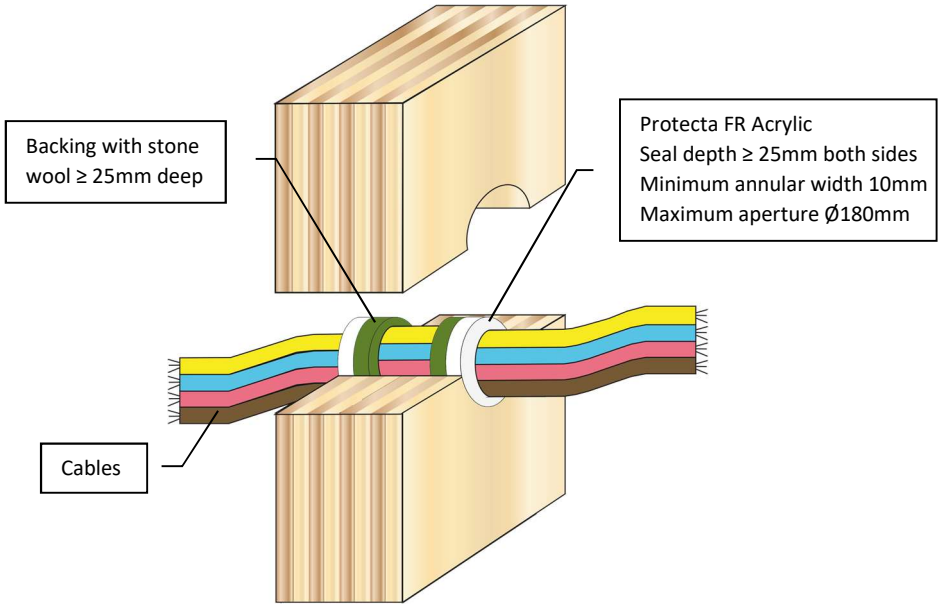
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0035

Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of cables in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

Cables ≤ Ø14mm single or in a bundle ≤ Ø100mm	EI 90 & E 90
Cables ≤ Ø50mm single or in a bundle ≤ Ø100mm	EI 30 & E 90
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

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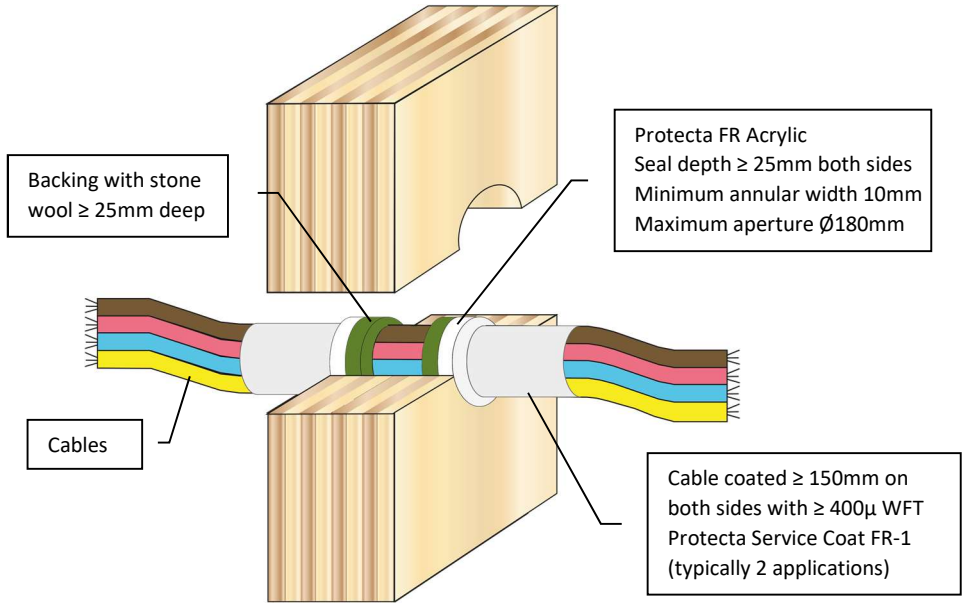
Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Coat the cable bundle on both sides with Protecta® Service Coat FR-1 to the required length and thickness.
6. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0035

Client:

Job Title:

Products	Protecta FR Acrylic Protecta Service Coat FR-1 Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of cables in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

Single cable ≤ Ø21mm	EI 90 & E 90
Cables ≤ Ø50mm in a bundle ≤ Ø100mm	EI 60 & E 90
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

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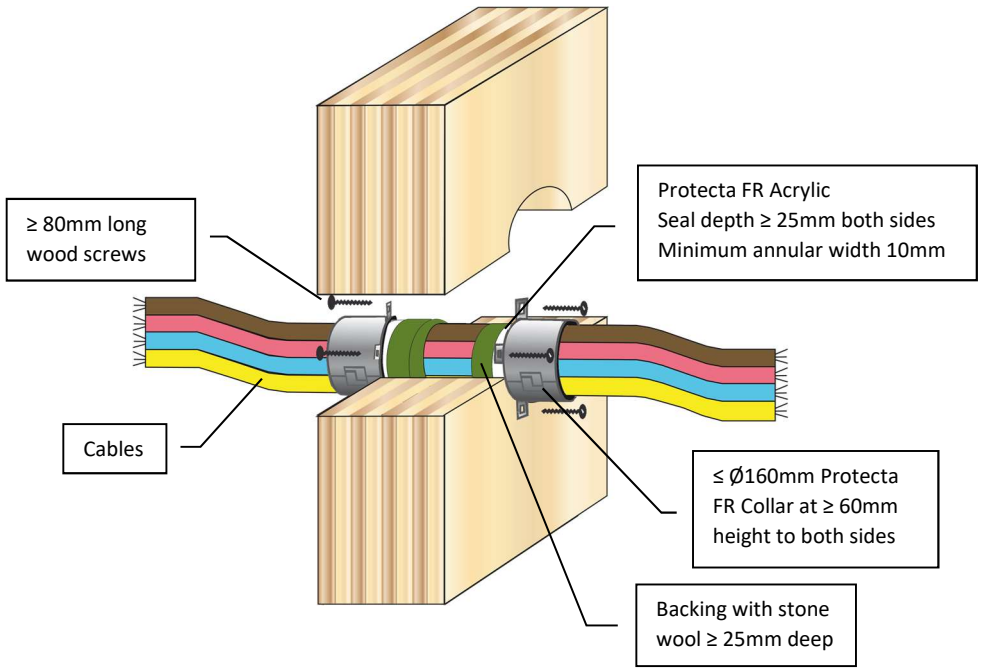
Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place suitable collars around the cables and ensure that the collar shells and fixing lugs are positioned tightly to the surface of the wall, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the wall and the collar shell.
7. Attach the collars with wood screws.



ETA 21/0070

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of cables in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Cables ≤ Ø80mm in a bundle ≤ Ø160mm
EI 60 & E 90

Sound reduction (seal only)
Rw 62 dB

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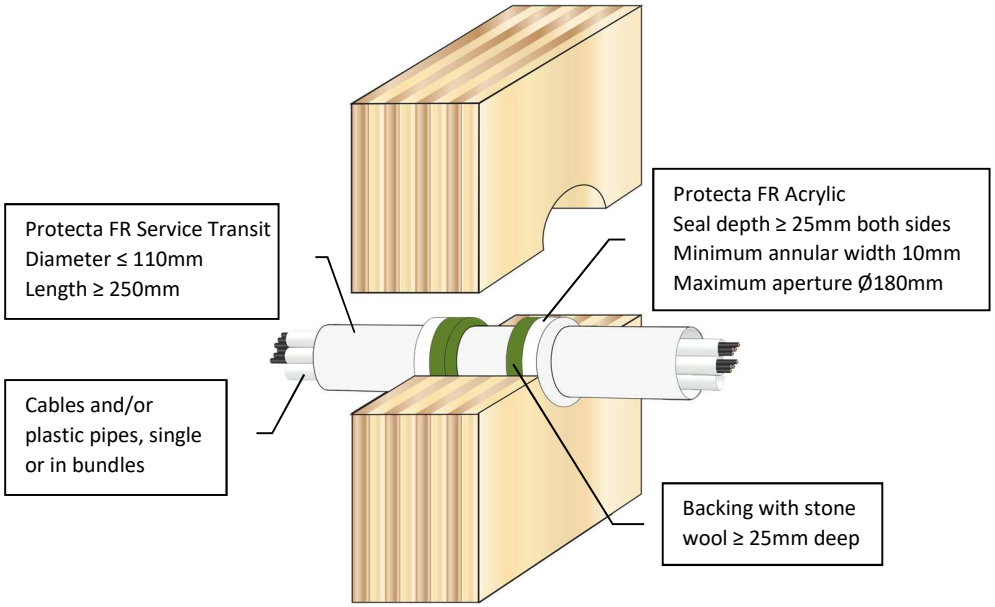
Installation Instructions

1. Before installing Protecta® FR Service Transit ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material and lock the Service Transit in position. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved and that the centre point of the transit is located mid-depth in the floor.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Before cables and/or plastic pipes are inserted through the Service Transit, remove the fibre plug from the middle of the Service Transit. After the insertion of services is completed, ensure that the fibre plug is refitted and positioned correctly around the services in the middle of the Service Transit, leaving no openings so a cold smoke barrier is achieved.
6. Make sure labels with retrofit instructions are placed near the Service Transit on both sides after installation, so future service installations are completed correctly by reinstating the fibre plug.
7. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0043

Client:

Job Title:

Products	Protecta FR Acrylic Protecta FR Service Transit Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of cables and plastic pipes in timber walls
onstruction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Empty, or with cables ≤ Ø21mm in bundle ≤ Ø100mm — EI 90 & E 90

Cables ≤ Ø80mm in bundle ≤ Ø100mm — EI 60 & E 90

Plastic pipes ≤ Ø32mm in bundle; empty or with cables ≤ Ø21mm in bundles — EI 90 U/C & E 90

Sound reduction — Rw 42 dB

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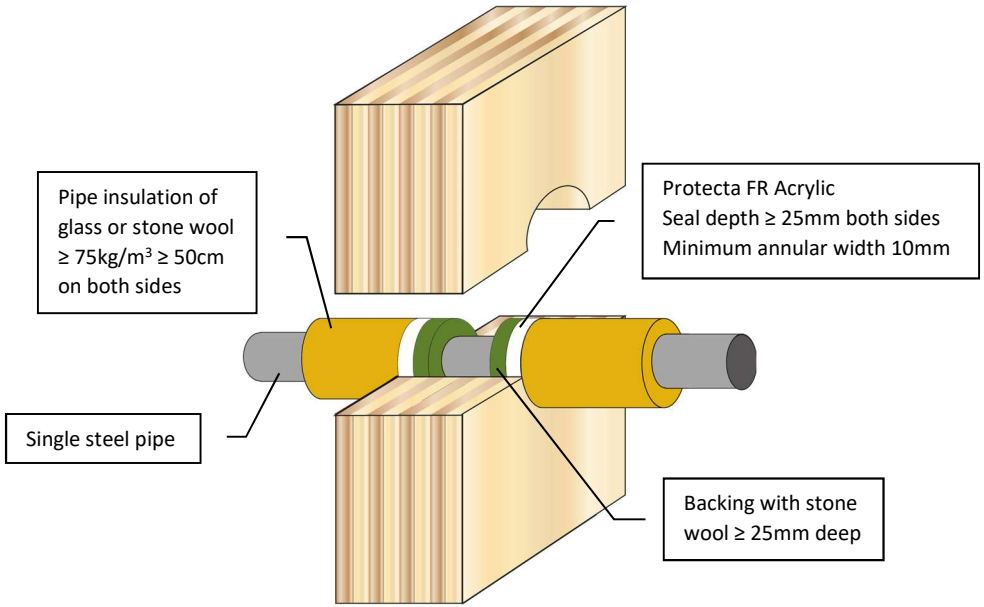
Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. As Protecta® FR Acrylic is water based, in cases where corrosion protection is a problem; some metals may require a barrier between the sealant and the metal surface prior to this installation.
3. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
4. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
5. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
6. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0035

Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of steel pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

Steel pipe ≤ Ø54mm with ≥ 20mm thick pipe insulation in maximum aperture Ø180mm
EI 60 C/C & E 90

Steel pipe ≤ Ø273mm with ≥ 25mm thick pipe insulation in maximum aperture Ø293mm
EI 60 C/C & E 90

Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

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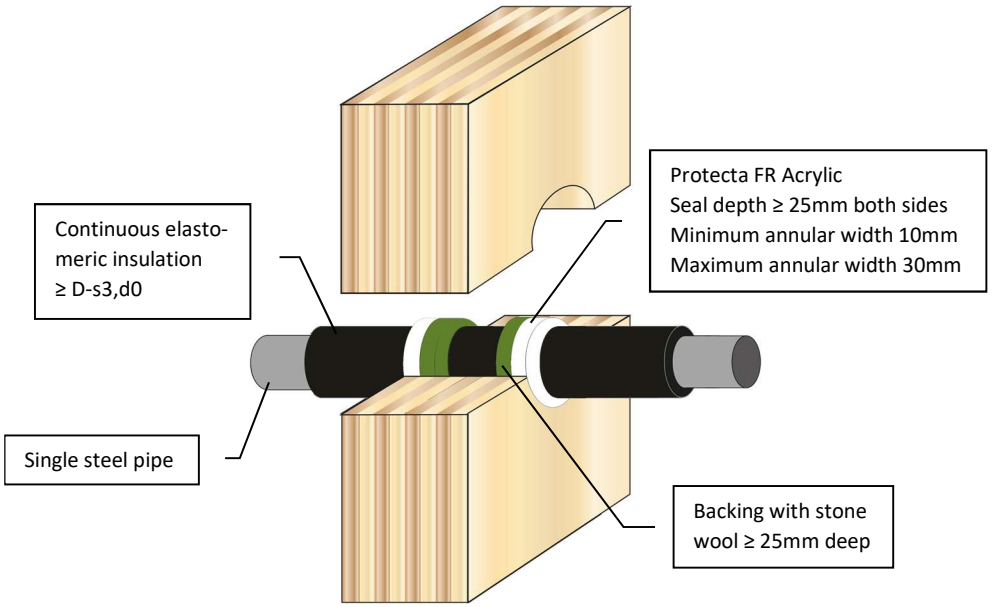
Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0035

As a part of our policy of on-going product development and testing, we reserve the right to modify, alter or change product specifications without giving notice. All information contained in this document is given in good faith and is provided for guidance only. Any drawings provided are for illustrative purposes only. As Polyseam has no control over the methods or competence of installation and of prevailing site conditions, no warranties, expressed or implied, is intended to be given as to the actual performance of the product mentioned or referred to herein and no liability whatsoever will be accepted for any loss, damage or injury arising from the use of the information given.

For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of steel pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Steel pipe ≤ Ø12mm with 9mm thick pipe insulation	EI 60 C/C & E 90
Steel pipe ≤ Ø54mm with 9mm thick pipe insulation	EI 30 C/C & E 60
Steel pipe ≤ Ø114mm with 9 – 25mm thick pipe insulation	EI 30 C/U & E 30
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 53 dB

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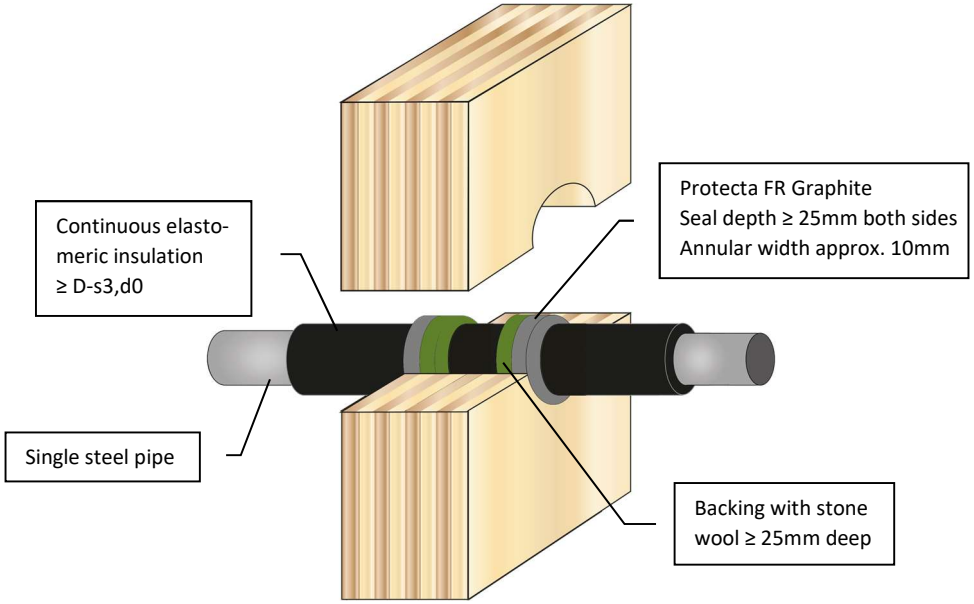
Installation Instructions

1. Before installing Protecta® FR Graphite ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Graphite on both sides to the required depth.
4. Apply the sealant generously avoiding air bubbles. Finish the bead with a moist spatula or pallet knife. Avoid excessive tooling/smoothing as this may make the seal surface wet and soft.
5. Protecta® FR Graphite can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0040

Client:

Job Title:

Products	Protecta FR Graphite Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of steel pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Steel pipe ≤ Ø12mm with 13mm thick pipe insulation	EI 120 C/C & E 120
Steel pipe ≤ Ø114mm with 13mm thick pipe insulation	EI 90 C/U & E 90
Steel pipe ≤ Ø114mm with 14 – 25mm thick pipe insulation	EI 45 C/U & E 90
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 53 dB

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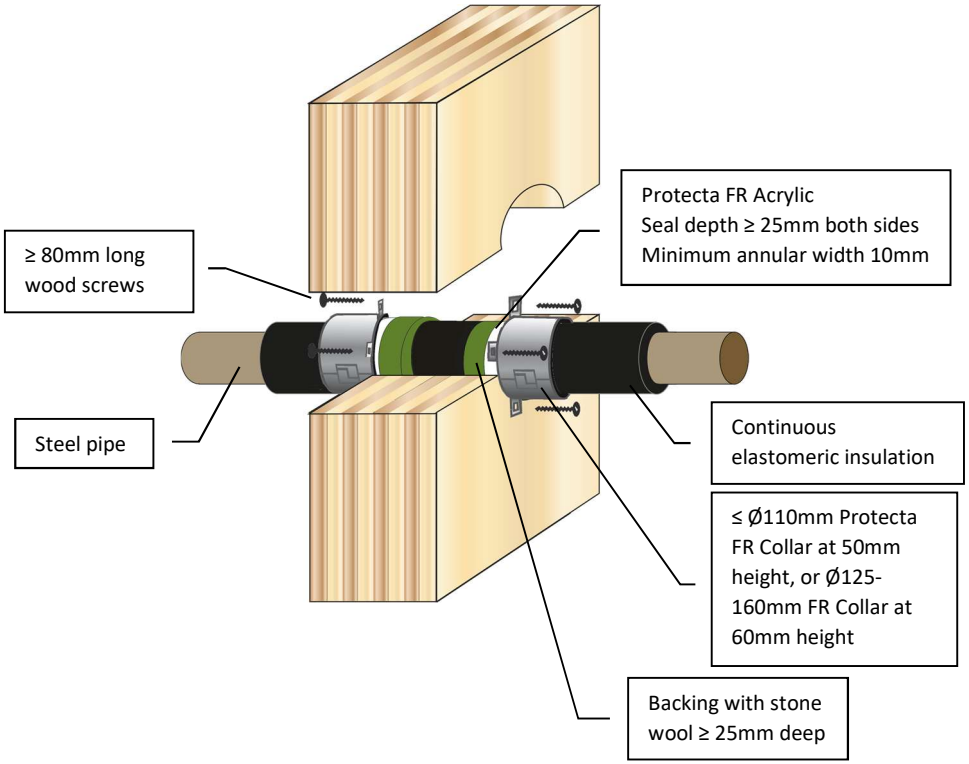
Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place suitable collars around the pipe insulation and ensure that the collar shells and fixing lugs are positioned tightly to the surface of the wall, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the wall and the collar shell.
7. Attach the collars with wood screws.



ETA 21/0070

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of steel pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Steel pipe ≤ Ø54mm with 9 – 50mm thick pipe insulation

EI 60 C/C & E 90

Sound reduction (seal only)

Rw 62 dB

Protecta®

Polyseam Ltd, 15 St Andrews Road, Huddersfield, West Yorkshire, HD1 6SB
Tel: +44 (0) 148 4421036
Email: post.uk@polyseam.com

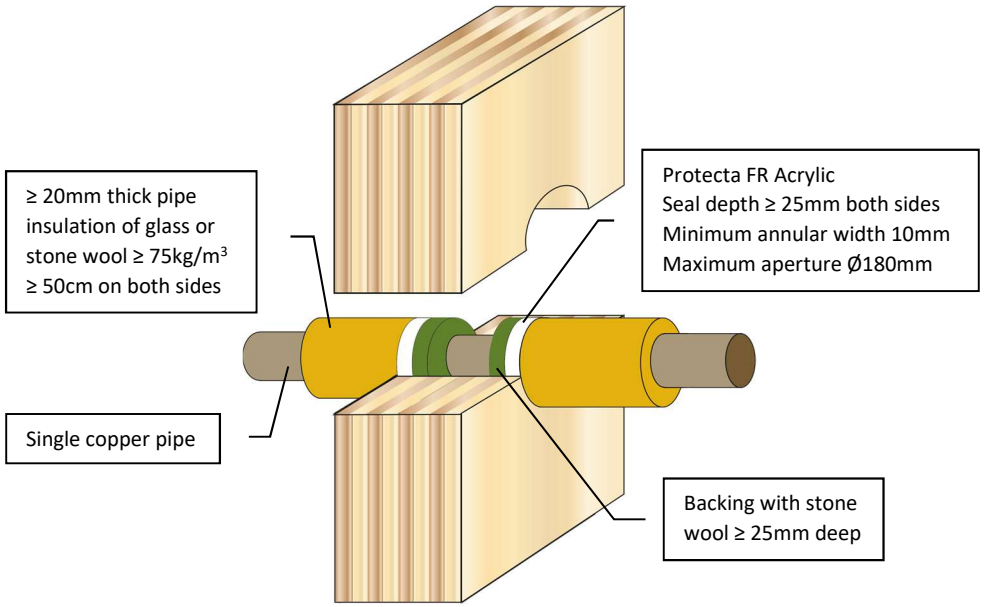
For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Sheet size: **A4**	Drawn date & no: 13/2/22
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. As Protecta® FR Acrylic is water based, in cases where corrosion protection is a problem; some metals may require a barrier between the sealant and the metal surface prior to this installation.
3. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
4. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
5. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
6. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of copper pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

Copper pipe ≤ Ø54mm	EI 60 C/C & E 90
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

ETA 21/0035

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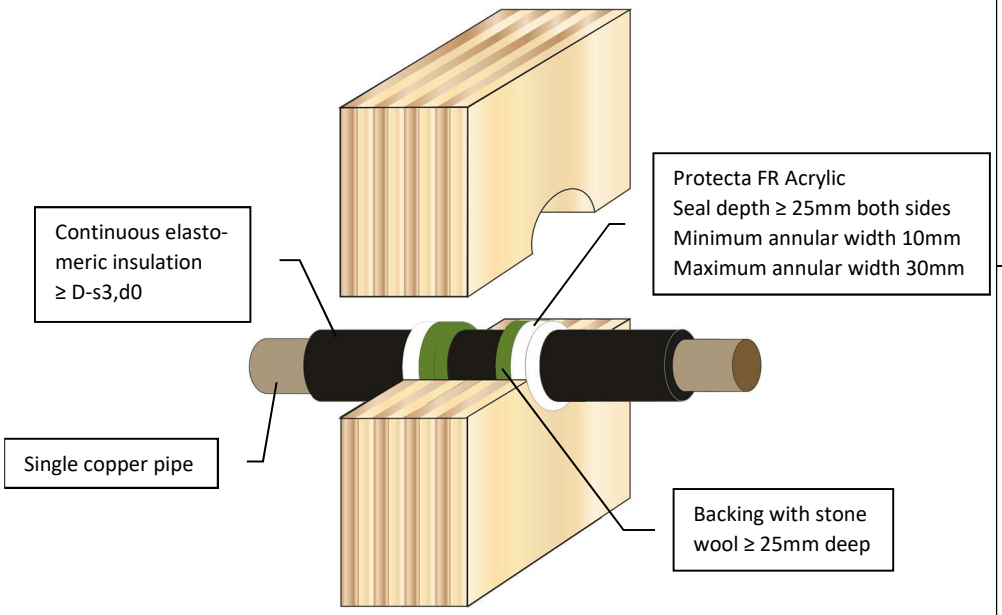

ETA 21/0035

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For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of copper pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Copper pipe ≤ Ø12mm with 9mm thick pipe insulation	EI 60 C/C & E 90
Copper pipe ≤ Ø54mm with 9mm thick pipe insulation	EI 30 C/C & E 60
Copper pipe ≤ Ø54mm with 10 – 25mm thick pipe insulation	EI 20 C/C & E 30
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 53 dB

Protecta®

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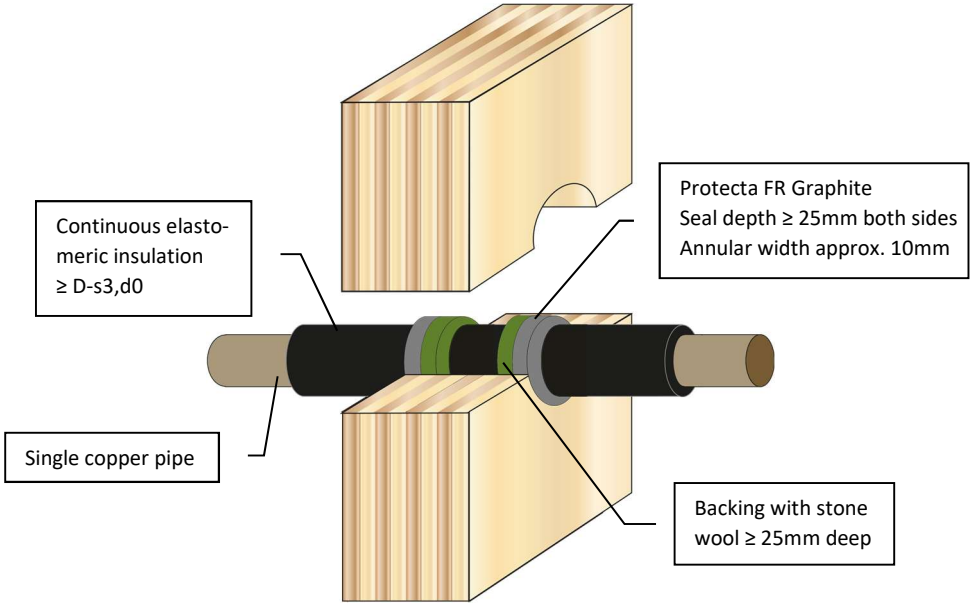
Sheet size: **A4**	Drawn date & no: 13/2/22
Scale: **NTS**	Drawn by: K.B

Installation Instructions

1. Before installing Protecta® FR Graphite ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Graphite on both sides to the required depth.
4. Apply the sealant generously avoiding air bubbles. Finish the bead with a moist spatula or pallet knife. Avoid excessive tooling/smoothing as this may make the seal surface wet and soft.
5. Protecta® FR Graphite can be over-painted with most emulsion or alkyd (gloss) paints.



ETA 21/0040

Client:

Job Title:

Products	Protecta FR Graphite Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of copper pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Copper pipe ≤ Ø12mm with 13mm thick pipe insulation	EI 120 C/C & E 120
Copper pipe ≤ Ø54mm with 13mm thick pipe insulation	EI 90 C/C & E 120
Copper pipe ≤ Ø54mm with 14 – 25mm thick pipe insulation	EI 30 C/C & E 120
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 53 dB

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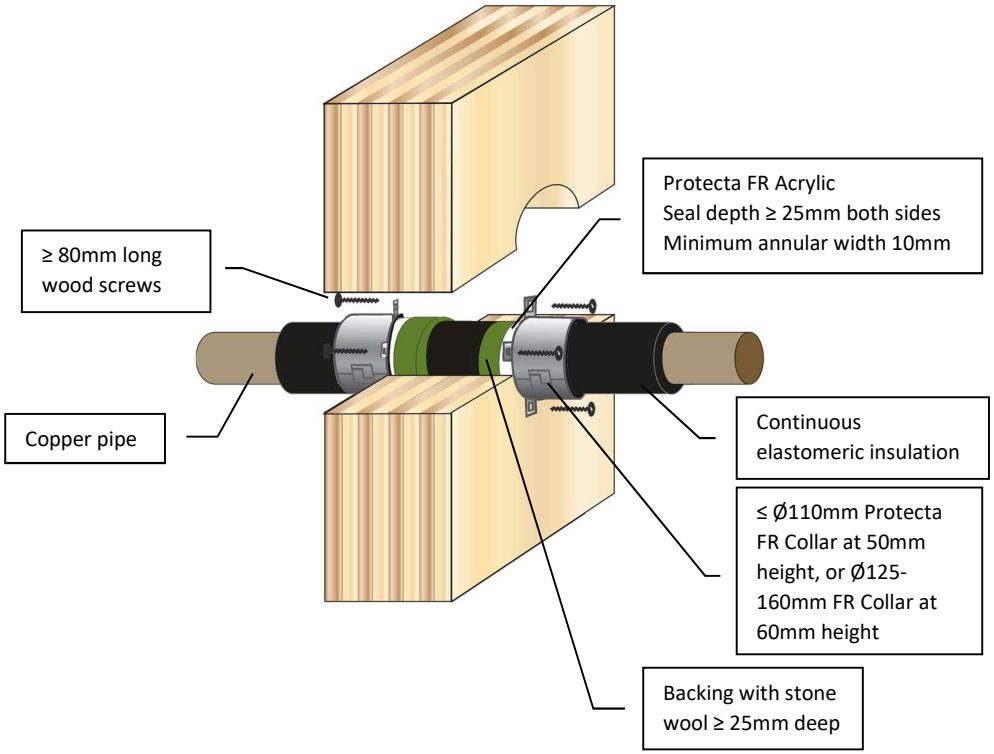
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place suitable collars around the pipe insulation and ensure that the collar shells and fixing lugs are positioned tightly to the surface of the wall, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the wall and the collar shell.
7. Attach the collars with wood screws.



ETA 21/0070

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of copper pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Copper pipe ≤ Ø54mm with 14 – 50mm thick pipe insulation

EI 60 C/C & E 90

Sound reduction (seal only)

Rw 62 dB

Polyseam Ltd, 15 St Andrews Road, Huddersfield, West Yorkshire, HD1 6SB
Tel: +44 (0) 148 4421036
Email: post.uk@polyseam.com

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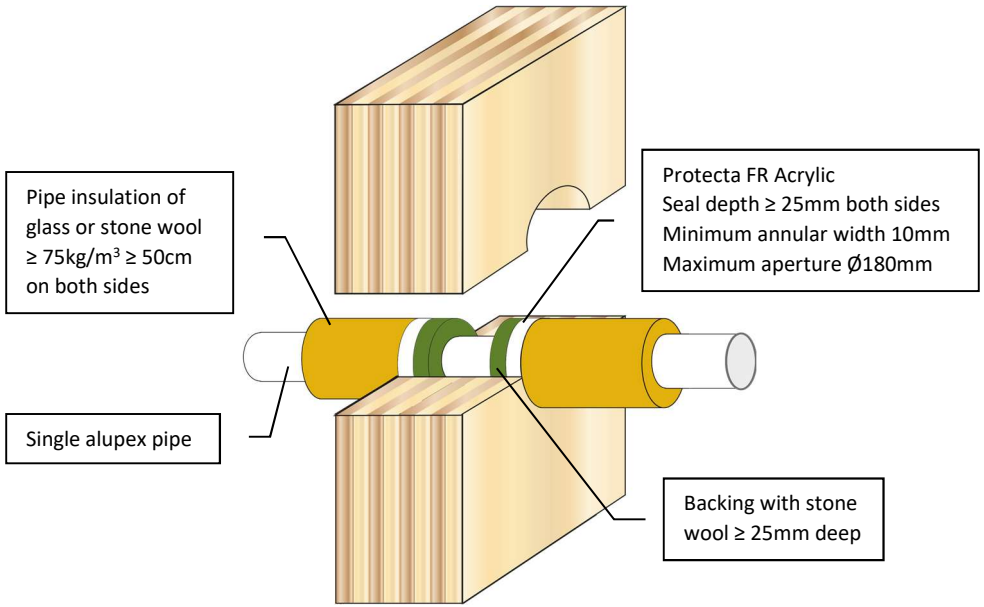

Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of alupex pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

Alupex pipe ≤ Ø75mm with ≥ 25mm thick pipe insulation	EI 90 C/C & E 90
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

ETA 21/0035

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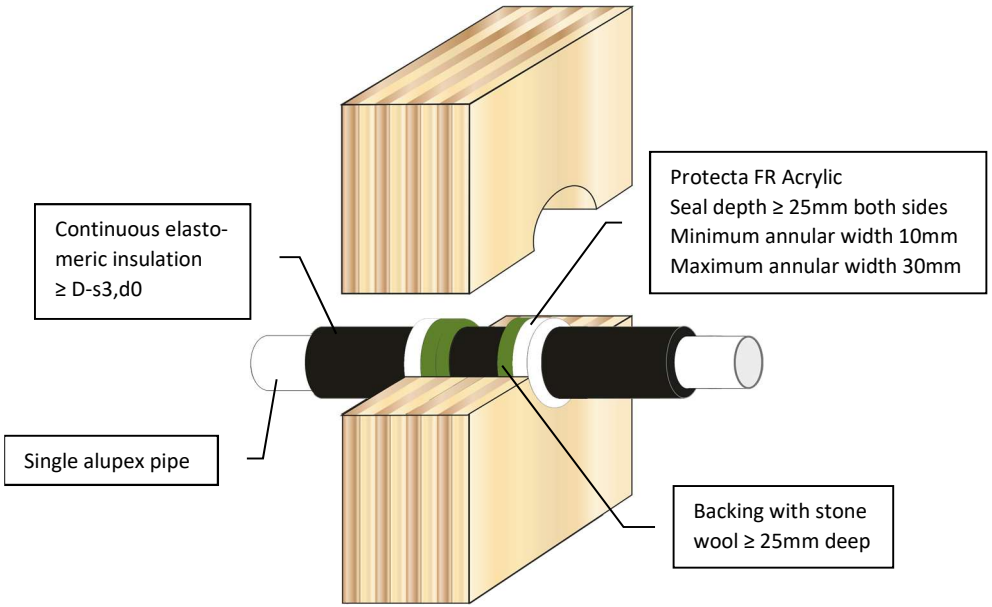

ETA 21/0035

Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of alupex pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Alupex pipe ≤ Ø16mm with 9mm thick pipe insulation	EI 90 C/C & E 90
Alupex pipe ≤ Ø75mm with 9mm thick pipe insulation	EI 45 C/C & E 60
Alupex pipe ≤ Ø75mm with 10 – 25mm thick pipe insulation	EI 45 C/C & E 45
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 53 dB

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Installation Instructions

1. Before installing Protecta® FR Graphite ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Graphite on both sides to the required depth.
4. Apply the sealant generously avoiding air bubbles. Finish the bead with a moist spatula or pallet knife. Avoid excessive tooling/smoothing as this may make the seal surface wet and soft.
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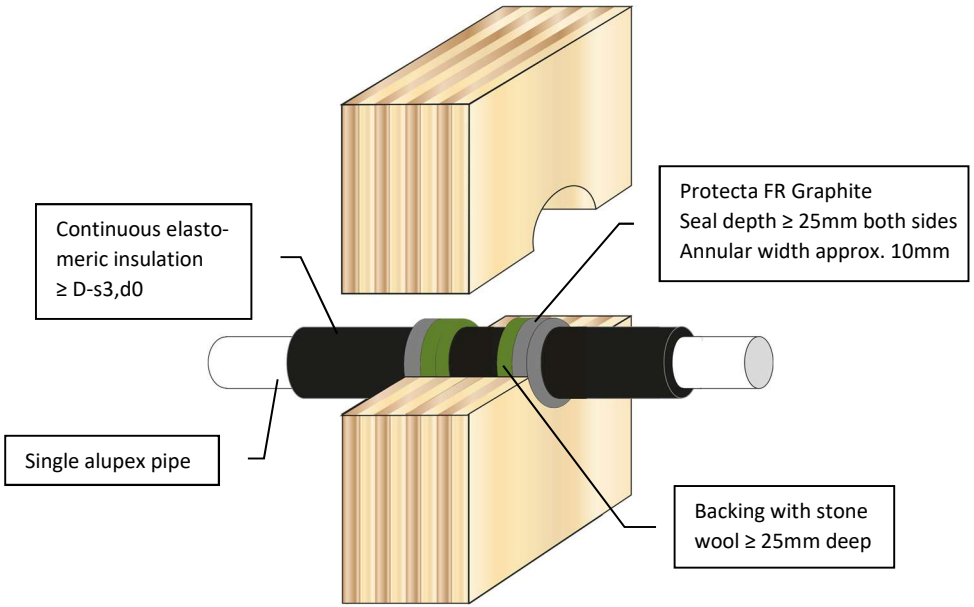

ETA 21/0040

Client:

Job Title:

Products	Protecta FR Graphite Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of alupex pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Alupex pipe ≤ Ø16mm with 13mm thick pipe insulation	EI 120 C/C & E 120
Alupex pipe ≤ Ø75mm with 13mm thick pipe insulation	EI 45 C/C & E 120
Alupex pipe ≤ Ø75mm with 14 – 24mm thick pipe insulation	EI 45 C/C & E 90
Alupex pipe ≤ Ø75mm with 25mm thick pipe insulation	EI 90 C/C & E 90
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 53 dB

Protecta®

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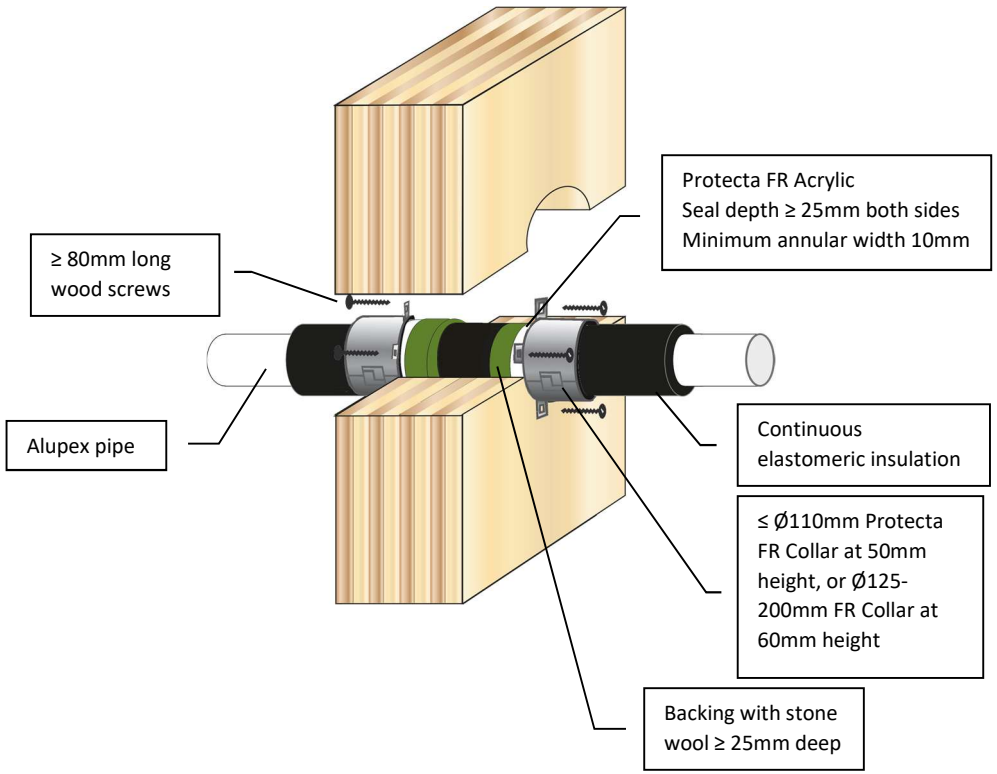
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place suitable collars around the pipe insulation and ensure that the collar shells and fixing lugs are positioned tightly to the surface of the wall, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the wall and the collar shell.
7. Attach the collars with wood screws.



ETA 21/0070

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of alupex pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Alupex pipe ≤ Ø75mm with 9 – 50mm thick pipe insulation

EI 60 C/C & E 90

Sound reduction (seal only)

Rw 62 dB

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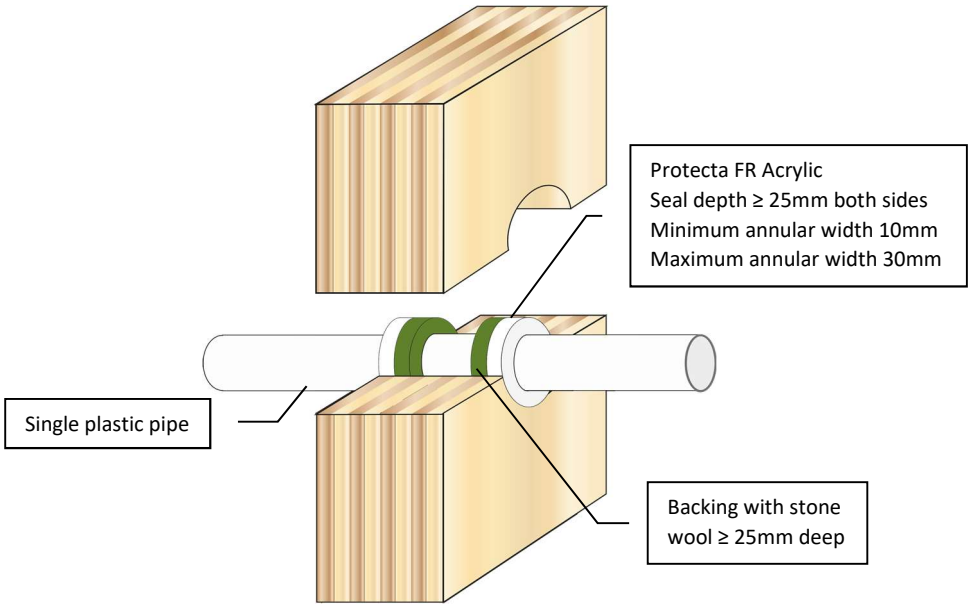

Client:

Job Title:

Products	Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of plastic pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire, Sound and Air classifications

PVC-U or PVC-C pipe ≤ Ø32mm with wall thickness 1.0-2.4mm	EI 90 U/C & E 90
PE, ABS or SAN+PVC pipe ≤ Ø32mm with wall thickness 2.0-3.0mm	EI 90 U/C & E 90
PP pipe ≤ Ø 32mm with wall thickness 1.8-4.4mm	EI 90 U/C & E 90
PEX pipe-in-pipe ≤ Ø 25mm	EI 90 C/C & E 90
Reaction to fire (seal only)	B-s1,d0
Sound reduction (seal only)	Rw 62 dB
Pressure with zero leakage	Min. 200 Pa

ETA 21/0035

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3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
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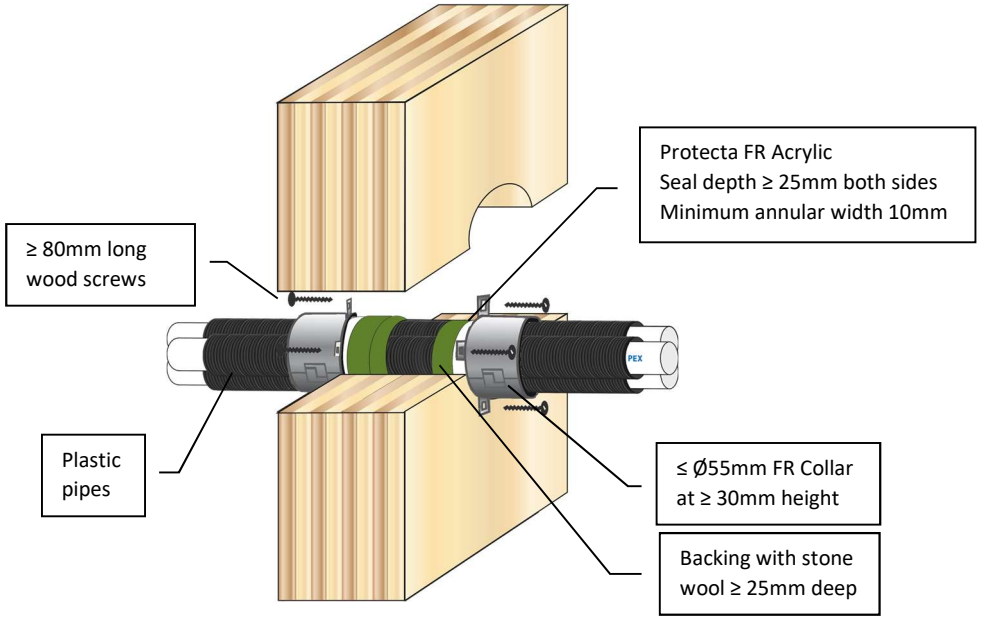
5. Place suitable collars around the pipes and ensure that the collar shells and fixing lugs are positioned tightly to the surface of the wall, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the wall and the collar shell.
7. Attach the collars with wood screws.



ETA 21/0070

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Signed and approved:

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of PEX plastic pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

PEX pipe-in-pipes ≤ Ø25mm, single, or in a bundle ≤ Ø55mm — EI 90 C/C & E 90

Sound reduction (seal only) — Rw 62 dB

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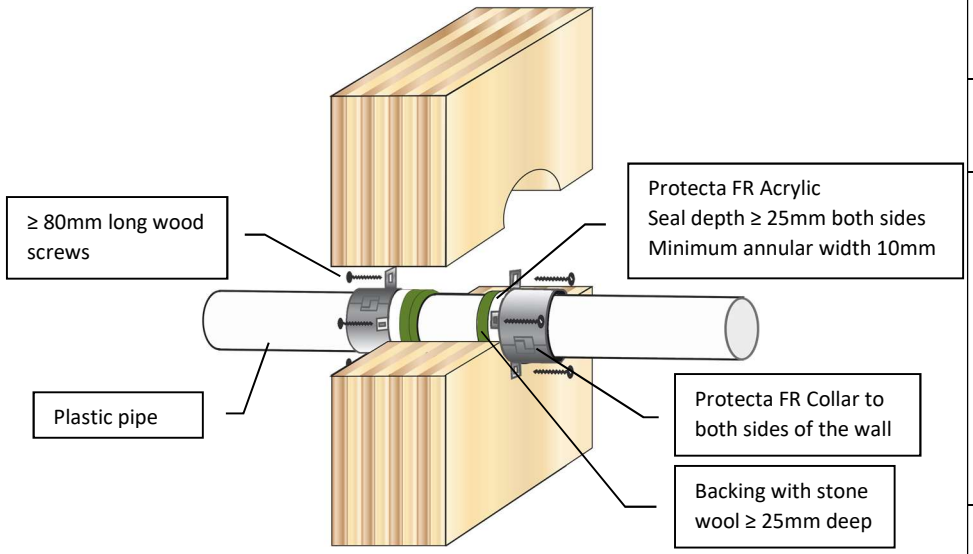
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place suitable collars around the pipe and ensure that the collar shells and fixing lugs are positioned tightly to the surface of the wall, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the wall and the collar shell.
7. Attach the collars with wood screws.



Services	Minimum Collar Height	Classification
≤ Ø50mm PVC-U & PVC-C	30mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U (E 90)
≤ Ø110mm PVC-U & PVC-C	30mm	EI 60 C/C, EI 60 U/C
≤ Ø140mm PVC-U & PVC-C	50mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U (E 90)
≤ Ø160mm PVC-U & PVC-C	60mm	EI 90 C/C, EI 90 U/C, EI 60 C/U, EI 60 U/U
≤ Ø200mm PVC-U & PVC-C	60mm	EI 90 C/C, EI 90 U/C
≤ Ø315mm PVC-U & PVC-C	75mm	EI 90 C/C
≤ Ø400mm PVC-U & PVC-C	100mm	EI 90 C/C
≤ Ø50mm PE, ABS & SAN+PVC	30mm	EI 60 C/C, EI 60 U/C (E 90)
≤ Ø50mm PE, ABS & SAN+PVC	50mm	EI 90 C/C, EI 90 U/C, EI 90 C/U, EI 90 U/U
≤ Ø110mm PE, ABS & SAN+PVC	30mm	EI 60 C/C, EI 60 U/C
≤ Ø110mm PE, ABS & SAN+PVC	50mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U (E 90)
≤ Ø140mm PE, ABS & SAN+PVC	60mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U (E 90)
Ø160mm PE, ABS & SAN+PVC	60mm	EI 90 C/C, EI 90 U/C, EI 90 C/U, EI 90 U/U
≤ Ø200mm PE, ABS & SAN+PVC	60mm	EI 90 C/C, EI 90 U/C
Ø400x36.3mm PE, ABS & SAN+PVC	100mm	EI 90 C/C
≤ Ø50mm PP	30mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U (E 90)
≤ Ø110mm PP	30mm	EI 60 C/C, EI 60 U/C (E 90)
≤ Ø110mm PP	50mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U (E 90)
≤ Ø160mm PP	60mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U
≤ Ø200mm PP	60mm	EI 90 C/C, EI 90 U/C
Ø400x22.7mm PP	100mm	EI 60 C/C

ETA 21/0070

Client:

Job Title:

Products Protecta FR Collar
Protecta FR Acrylic
Stone wool backing ≥ 33 kg/m³

Application Fire stopping of plastic pipes in timber walls

Construction Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Fire classifications in table on the left. For full specifications, please refer to the Installation Instructions.

Sound reduction (seal only)
Rw 62dB

Polyseam Ltd, 15 St Andrews Road, Huddersfield, West Yorkshire, HD1 6SB
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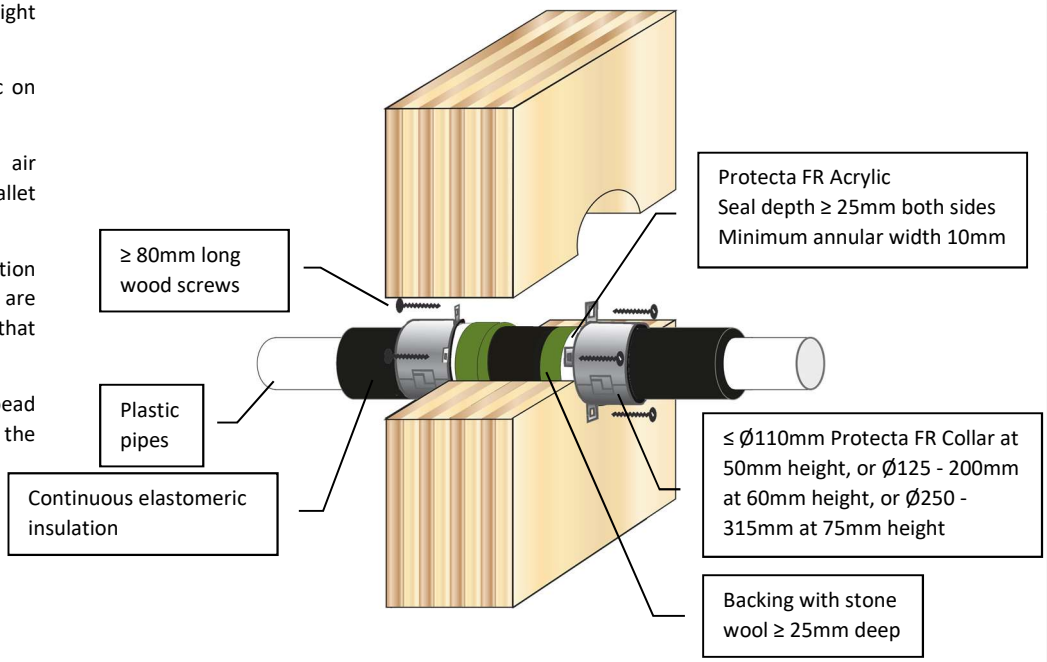
A4	13/2/22
Scale:	Drawn by:
NTS	K.B

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place suitable collars around the pipe insulation and ensure that the collar shells and fixing lugs are positioned tightly to the surface of the wall, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the wall and the collar shell.
7. Attach the collars with wood screws.



Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of insulated plastic pipes in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

PE pipe ≤ Ø160mm with wall thickness 3.0 – 9.5mm and 9 – 50mm thick pipe insulation
EI 90 C/C & E 90

PE pipe Ø160mm with wall thickness 4.9 – 9.5mm and 9 – 50mm thick pipe insulation
EI 90 C/C & E 90

PP pipe ≤ Ø160mm with wall thickness 1.8 – 14.6mm and 9 – 50mm thick pipe insulation
EI 90 C/C & E 90

PP pipe Ø160mm with wall thickness 4.9 – 14.6mm and 9 – 50mm thick pipe insulation
EI 90 C/C & E 90

Sound reduction (seal only) Rw 62 dB

ETA 21/0070

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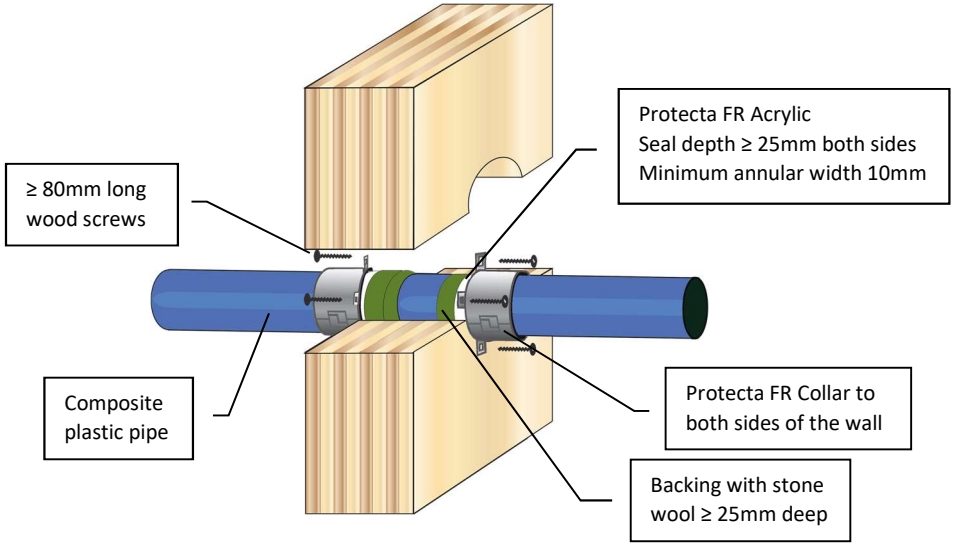
Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place suitable collars around the pipe and ensure that the collar shells and fixing lugs are positioned tightly to the surface of the wall, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the wall and the collar shell.
7. Attach the collars with wood screws.



Services	Minimum Collar Height	Classification
≤ Ø32mm Aquatherm Green SDR9	30mm	EI 90 C/C
≤ Ø50mm Aquatherm Green SDR9	50mm	EI 90 C/C
≤ Ø110mm Aquatherm Green SDR9	50mm	EI 60 C/C (E 90)
≤ Ø50mm BluePower	50mm	EI 90 C/C, EI 90 U/C, EI 90 C/U, EI 90 U/U
≤ Ø110mm BluePower	50mm	EI 60 C/C, EI 60 U/C, EI 60 C/U (E 90)
Ø125mm BluePower	60mm	EI 60 C/C, EI 60 U/C, EI 60 C/U
Ø160mm BluePower	60mm	EI 90 C/C, EI 90 U/C, EI 90 C/U
≤ Ø50mm Geberit Silent-PP	50mm	EI 90 C/C, EI 90 U/C, EI 90 C/U, EI 90 U/U
≤ Ø110mm Geberit Silent-PP	50mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U (E 90)
≤ Ø50mm Polo-Kal NG pipes	50mm	EI 90 C/C, EI 90 U/C, EI 90 C/U, EI 90 U/U
≤ Ø110mm Polo-Kal NG pipes	50mm	EI 90 C/C, EI 90 U/C, EI 90 C/U, EI 90 U/U
Ø125mm Polo-Kal NG pipes	60mm	EI 90 C/C, EI 90 U/C (E 90 C/U, E 90 U/U)
Ø160mm Polo-Kal NG pipes	60mm	EI 90 C/C, EI 90 U/C, EI 90 C/U, EI 90 U/U
≤ Ø50mm Rehau Raupiano Plus	50mm	EI 90 C/C, EI 90 U/C, EI 90 C/U, EI 90 U/U
≤ Ø110mm Rehau Raupiano Plus	50mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U (E 90)
≤ Ø160mm Rehau Raupiano Plus	60mm	EI 90 C/C, EI 90 U/C, EI 90 C/U, EI 90 U/U
≤ Ø110mm Uponor Decibel pipes	50mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U (E 90)
≤ Ø50mm Wavin SiTech	50mm	EI 90 C/C, EI 90 U/C, EI 90 C/U, EI 90 U/U
≤ Ø110mm Wavin SiTech	50mm	EI 60 C/C, EI 60 U/C, EI 60 C/U, EI 60 U/U (E 90)

ETA 21/0070

Client:

Job Title:

Products Protecta FR Collar
Protecta FR Acrylic
Stone wool backing ≥ 33 kg/m³

Application Fire stopping of composite plastic pipes in timber walls

Construction Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

Fire classifications in table on the left. For full specifications, please refer to the Installation Instructions.

Sound reduction (seal only)
Rw 62dB

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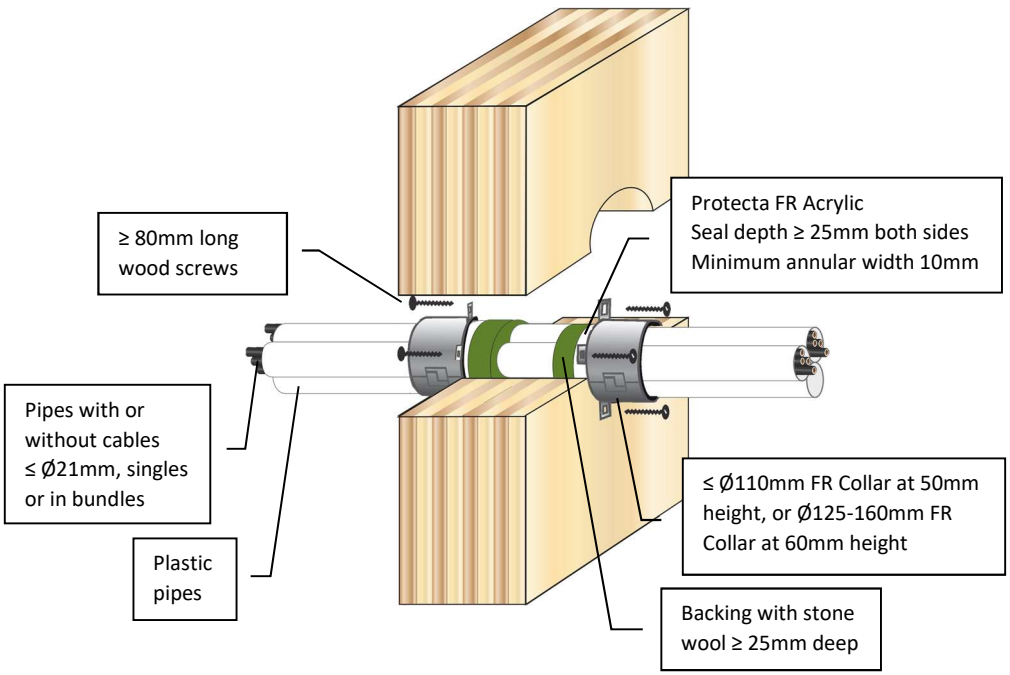
Signed and approved:

Installation Instructions

1. Before installing Protecta® FR Acrylic ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Place suitable collars around the pipes and ensure that the collar shells and fixing lugs are positioned tightly to the surface of the wall, so that the fixings can be inserted fully.
6. Where the surface is uneven, apply a sealing bead of Protecta® FR Acrylic between the wall and the collar shell.
7. Attach the collars with wood screws.



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For all technical details on the products specified please refer to the technical data sheets that can be found on www.protecta.eu

Signed and approved:

Client:

Job Title:

Products	Protecta FR Collar Protecta FR Acrylic Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of plastic pipes and cables in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire & Sound classification

PVC pipes ≤ Ø40mm, single, or in a bundle
≤ Ø160mm with wall thickness 1.0 – 3.7mm
EI 90 U/C & E 90

PE & ABS pipes ≤ Ø40mm, single, or in a bundle
≤ Ø160mm with wall thickness 2.0 – 3.7mm
EI 90 U/C & E 90

PP pipes ≤ Ø40mm, single, or in a bundle
≤ Ø160mm with wall thickness 1.8 – 3.7mm
EI 90 U/C & E 90

Sound reduction (seal only) Rw 62 dB

Protecta®

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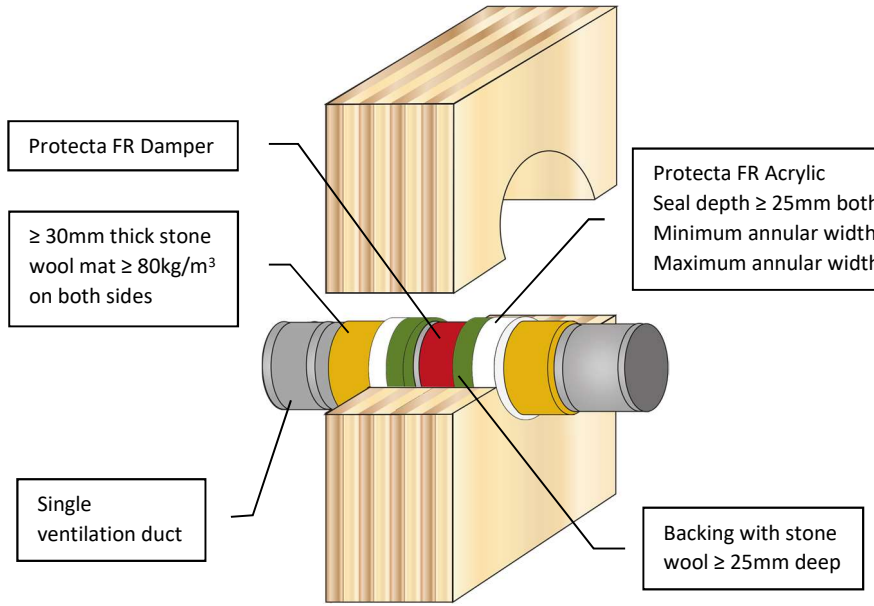
Installation Instructions

1. Before installing Protecta® FR Damper ensure that the surface of surrounding construction is free from all loose contaminants, dust and grease.
2. Install the backing material and lock the Damper in position. Cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved and that the centre point of the Damper is located mid-depth in the wall.
3. Fill the gap or joint with Protecta® FR Acrylic on both sides to the required depth.
4. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
5. Connect the ventilation duct(s) to the damper.
6. Insulate the duct towards the fire seal on both sides with stone wool mat. If the duct is ending in the wall then insulate on one side only.
7. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.



Client:

Job Title:

Products	Protecta FR Acrylic Protecta FR Damper Stone wool backing ≥ 33 kg/m³
Application	Fire stopping of ventilation ducts in timber walls
Construction	Minimum wall thickness of 100 mm and comprise solid wood or cross-laminated timber

Fire and Sound classifications

Ventilation duct ≤ Ø400mm with ≥ 200mm stone wool mat	EI 90 & E 90
Ventilation duct ≤ Ø1250mm with ≥ 500mm stone wool mat	EI 60 & E 90
Sound & Air flow	See technical data sheet
External pressure with zero leakage	Min. 200 Pa
Reaction to fire	B-s1,d0

UL EU

UL-EU-01028-CPR

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INDEX

Appendix I – Solutions in timber floors

Appendix II – Solutions in timber walls

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