




Terrain Firetrap

Fire protection for above ground drainage systems

TERRAIN

 **Polypipe**

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TERRAIN FIRETRAP

The best fire rating available for the drainage stack

As part of the on-going development of Terrain drainage systems, we have developed a comprehensive range of passive fire protection products for use with Terrain PVC soil and waste, Terrain Fuze and Terrain Acoustic dB12. These products will enable secure specification of Terrain drainage systems with the confidence of conforming to the requirements of Part B Building Regulations. In addition all products comply with BS 476 Part 20 and BS EN 1366-3.



The Terrain Firetrap range comprises:

Terrain Firetrap Sleeves

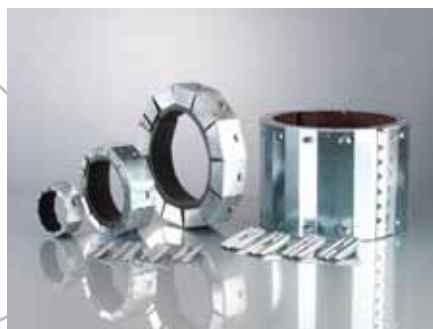
- Ideal for Terrain Fuze stacks
- Up to 4 hour fire protection
- Quick to install in new build and retro-fit
- Protects compartment above and below slab



Terrain Firetrap Collars

- Suitable for all Terrain drainage systems
- Can be surface mounted or built in
- Up to 4 hour fire protection

In addition, independent testing has been carried out on both Firetrap Sleeves and Firetrap Collars in typical floor installations. These test results form the basis of the Terrain Firetrap Product Selector (see page 10).



The product selector is an easy to use guide ensuring that specification and installation of the products can be done in confidence; with assurance that you will achieve the best fire rating possible for the drainage stack.



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Firetrap Sleeves

The Terrain Firetrap Sleeve is a cost effective product for the fire stopping of pipe penetrations whilst maintaining similar thermal and acoustic properties as standard mineral fibre insulation.

Terrain Firetrap Sleeve was developed with ease of installation in mind. The sleeve can be quickly and simply fitted onto the pipe and slid into the penetration ensuring that there are no air gaps around the sleeves by filling with mortar or mastic. In a fire situation the sleeve expands to fill the available space (15mm max) between the pipe and the penetration and will crush and close off plastic drainage pipes. The pipe forms a solid char preventing the passage of fire and smoke to the adjacent compartment.



Terrain Fuze



Terrain Acoustic dB12



Terrain PVC Soil and Waste

Applications

Terrain Fuze, Terrain Acoustic dB12 and Terrain PVC soil and waste above ground drainage through:

- Concrete, masonry or plasterboard partitions
- Concrete floor constructions

Benefits

- Up to 4 Hour Fire Rating to BS 476 Part 20, BS EN 1366-3
- Protects pipe above and below the slab
- Cost effective
- One sleeve can replace two collars
- Easy installation
- Don't have to drill slab
- No need for mechanical fixings
- No mastic is required, providing close fit
- Easily cut to size to minimise wastage
- Simple to install without special tools or skills
- Will accept hole irregularities of up to 15mm
- Can be retro-fitted
- Offers excellent acoustic insulation
- Maintains the thermal insulation of the pipe through the slab or wall penetration
- Maintains vapour seal of existing insulation
- Allows for thermal movement of pipe

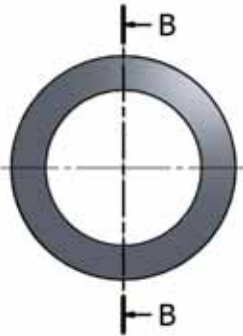
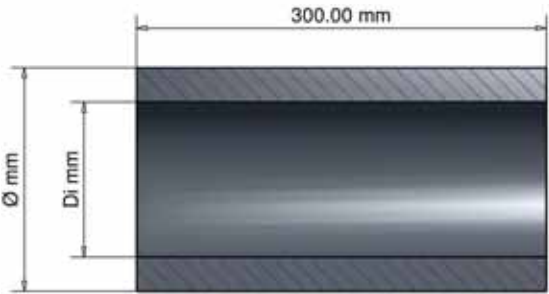


Terrain Firetrap Sleeve was developed with ease of installation in mind.



Product Code	Di	Ø	Pipe size suitable for
1925.17	17mm	67mm	
1925.21	21mm	71mm	
1925.27	27mm	77mm	
1925.34	34mm	84mm	32mm
1925.42	42mm	92mm	40mm 32mm PVC
1925.48	48mm	98mm	40mm PVC
1925.54	54mm	104mm	50mm
1925.60	60mm	110mm	56mm 50mm PVC
1925.67	67mm	117mm	63mm
1925.76	76mm	126mm	75mm

Product Code	Di	Ø	Pipe size suitable for
1925.80	80mm	130mm	
1925.89	89mm	139mm	82mm
1925.102	102mm	152mm	90mm
1925.108	108mm	158mm	
1925.114	114mm	164mm	110mm
1925.127	127mm	177mm	125mm
1925.134	134mm	184mm	
1925.140	140mm	190mm	
1925.159	159mm	209mm	
1925.169	169mm	219mm	160mm



Firetrap Collars - for Terrain PVC soil and waste

Terrain Firetrap Collars (for PVC soil and waste) have been specifically designed to re-instate the fire resistance of a wall or floor which has been penetrated by services such as plastic pipe systems used in soil & waste.

The collars will seal pipes from 50mm to 160mm diameter and can be face fixed or set-in to a wall or ceiling structure. They are suitable for use on concrete, masonry and plasterboard partitions. They have a 2 hour fire rating and feature a tab closing device which ensures the pipe collars are quick and easy to fix in place.

Applications

For Terrain PVC soil and waste above ground drainage through:

- Concrete, masonry and plasterboard partitions
- Concrete floor constructions

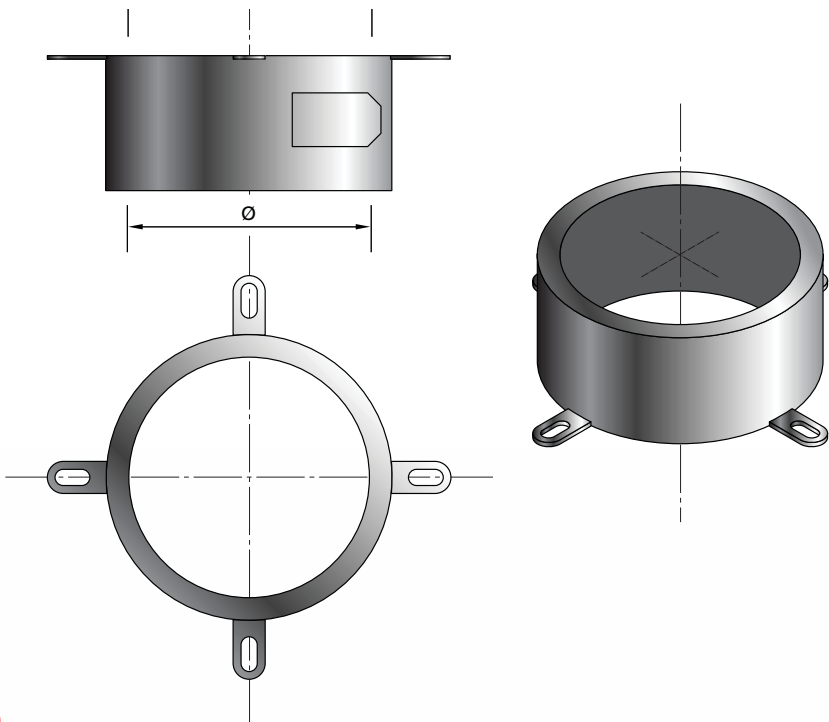
Features

- 2 Hour fire rating
- Seals against smoke, toxic gases, flames and heat
- Can be surface mounted or built in
- Tab closing device means collars are easy to fix in place around pipe and rotate or slide into position
- Intumescent material is totally unaffected by water, is robust, 'non-flaking' and difficult to tear
- Stainless steel outer casing





2HR
RATING



Product Code	Ø	Fire Rating
1725.2	50mm	2 Hour
1725.3	82mm	2 Hour
1725.4	110mm	2 Hour
1725.6	160mm	2 Hour



Terrain Firetrap Collars are tested to BS476 Part 20:1987 BS EN 1366-3 and many other International Standards.

Firetrap Collars - for Terrain Fuze and Terrain Acoustic dB12

Terrain Firetrap Collars have been specifically designed to re-instate the fire resistance of a wall or floor which has been penetrated by services such as Terrain Fuze or Terrain Acoustic dB12.

Manufactured in galvanised steel, each fire collar contains an internal lining of intumescent graphite wrapped in a polyethylene mesh. Anchoring hooks are also supplied.

The collars will seal pipes from 50mm to 315mm diameter and can be face fixed or set-in to a wall or ceiling structure. They are suitable for use on concrete, masonry and plasterboard partitions.

They have a 2 hour or 4 hour fire rating and feature adjustable mounting tabs for quick and easy installation.

Applications

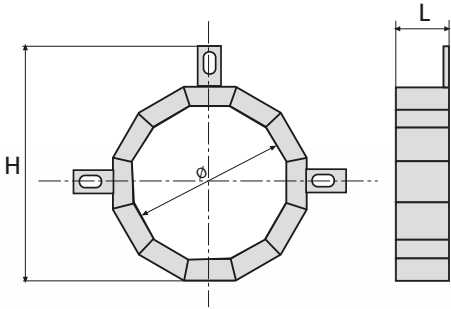
For Terrain Fuze and Terrain Acoustic dB12 above ground drainage through:

- Concrete, masonry or plasterboard partitions
- Concrete floor construction
- Fire-proof concrete
- Brickwork floors and walls

Features

- 2 Hour fire rating (up to 160mm)
- 4 Hour fire rating (200mm to 315mm)
- Galvanised steel outer casing
- Can be surface mounted or built in
- Adjustable mounting tabs for quick and easy installation
- Seals against smoke, toxic gases, flames and heat
- Significant noise insulating properties
- Can be installed in a recessed area to minimize overall dimensions





Product Code	Ø	Fire Rating
1625.50	50mm	2 Hour
1625.56	56mm	2 Hour
1625.63	63mm	2 Hour
1625.75	75mm	2 Hour
1625.90	90mm	2 Hour
1625.110	110mm	2 Hour
1625.125	125mm	2 Hour
1625.160	160mm	2 Hour
1625.200	200mm	4 Hour
1625.250	250mm	4 Hour
1625.315	315mm	4 Hour

Collars will seal pipes from 50mm to 315mm diameter and can be face fixed or set-in to a wall or ceiling structure.

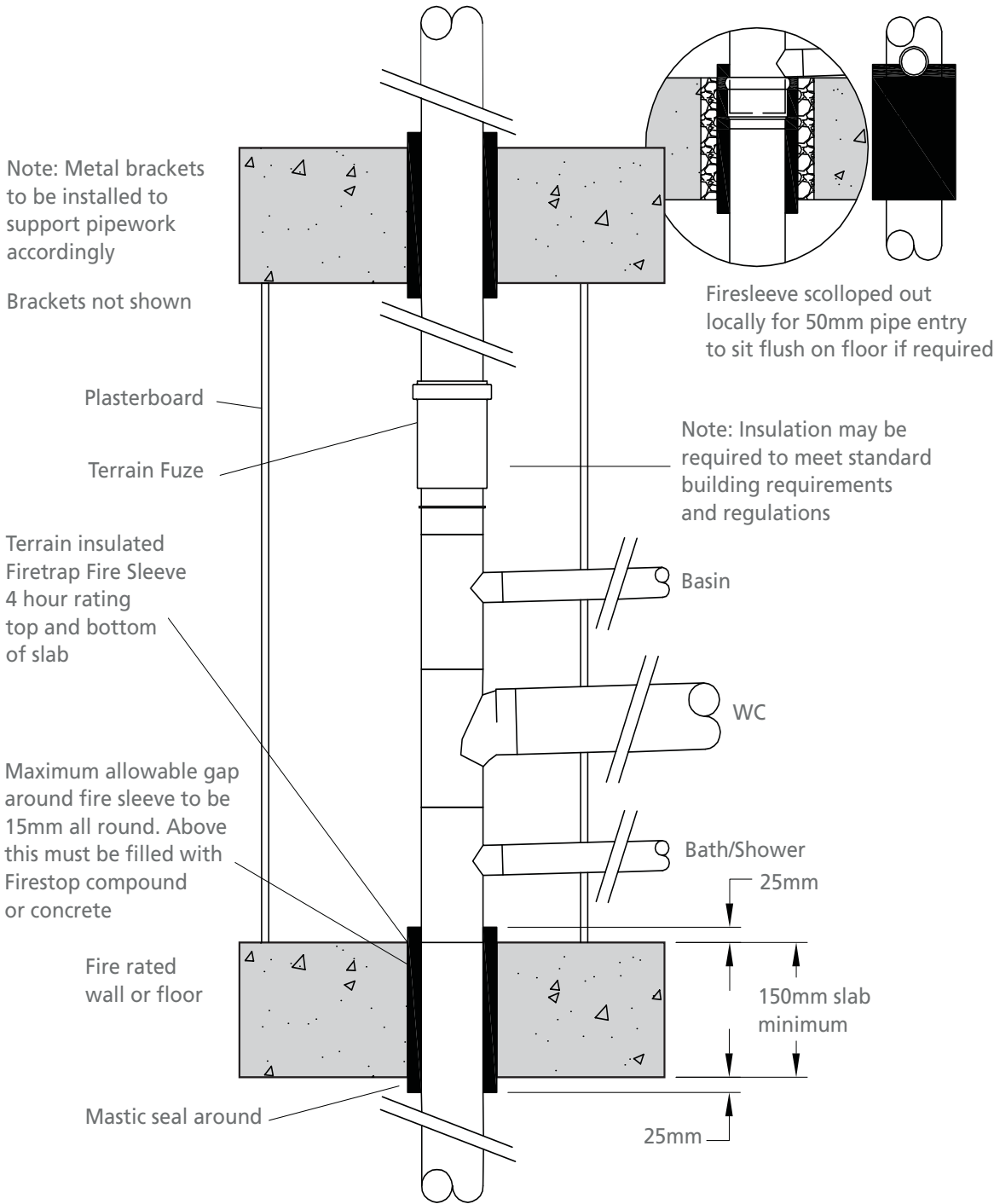


Terrain Firetrap - Product Selector

Product Code	Product Type	Pipe Material	Ø	Time Rating (hours)	
				Block Slab	Block Wall
1925.54	Terrain Firetrap Sleeve	Terrain Fuze	50	4	2
1925.60	Terrain Firetrap Sleeve	Terrain Fuze	56	4	2
1925.67	Terrain Firetrap Sleeve	Terrain Fuze	63	4	2
1925.76	Terrain Firetrap Sleeve	Terrain Fuze	75	4	2
1925.102	Terrain Firetrap Sleeve	Terrain Fuze	90	4	2
1925.114	Terrain Firetrap Sleeve	Terrain Fuze	110	4	2
1925.127	Terrain Firetrap Sleeve	Terrain Fuze	125	4	n/a
1925.169	Terrain Firetrap Sleeve	Terrain Fuze	160	3	2
1925.60	Terrain Firetrap Sleeve	Terrain PVC	56	4	2
1925.89	Terrain Firetrap Sleeve	Terrain PVC	82	4	n/a
1925.114	Terrain Firetrap Sleeve	Terrain PVC	110	4	2
1925.169	Terrain Firetrap Sleeve	Terrain PVC	160	2	2
1925.54	Terrain Firetrap Sleeve	Terrain Acoustic dB12	50	4	2
1925.114	Terrain Firetrap Sleeve	Terrain Acoustic dB12	110	4	2
1925.169	Terrain Firetrap Sleeve	Terrain Acoustic dB12	160	4	2
1725.4	Terrain Firetrap Collar	Terrain Fuze	110	4	2
1725.6	Terrain Firetrap Collar	Terrain Fuze	160	4	2
1725.4	Terrain Firetrap Collar	Terrain Acoustic dB12	110	2	2
1725.6	Terrain Firetrap Collar	Terrain Acoustic dB12	160	4	2
1725.2	Terrain Firetrap Collar	Terrain PVC	56	2	2
1725.3	Terrain Firetrap Collar	Terrain PVC	82	2	2
1725.4	Terrain Firetrap Collar	Terrain PVC	110	2	2
1725.6	Terrain Firetrap Collar	Terrain PVC	160	2	2
1925.114	Terrain Firetrap Sleeve	Terrain Fuze with Ring seal joint in slab	110	4	n/a
1925.169	Terrain Firetrap Sleeve	Terrain Fuze with Ring seal joint in slab	160	4	n/a
1925.114	Terrain Firetrap Sleeve	Terrain Fuze with Fusion joint in slab	110	4	n/a
1925.169	Terrain Firetrap Sleeve	Terrain Fuze with Fusion joint in slab	160	4	n/a

Construction Details and Fire Rating

Fire protection for vertical Terrain Drainage Pipework in a NON fire rated duct



Installation - Firetrap Sleeves

To maintain the fire rated compartment between floor levels where Terrain drainage penetrates the slab, an insulated fire sleeve should be installed. The fire sleeve should be installed through the entire slab penetration. Where possible a maximum of 25mm of sleeve can be left protruding out of the slab both at floor level and the underside of the slab. If, due to low level connections at slab level, this method is not possible then two alternative methods can be used;

1. Maintain the 25mm protrusion but scollop out the sleeve locally to accommodate the low level connection.
2. Cut the sleeve flush with the slab/soffit level.

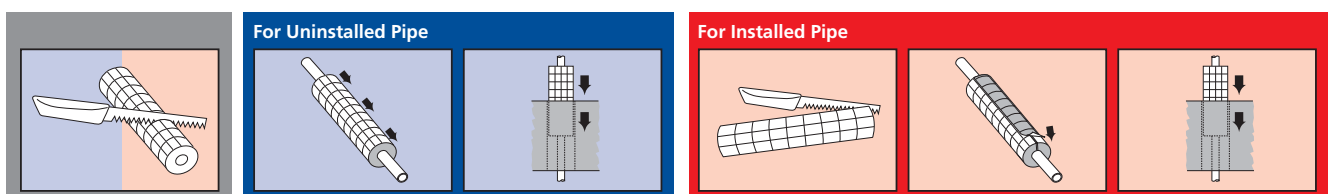
Where possible the sleeve shall be installed by sliding it over the pipe to be protected prior to installation and once the pipe is installed the sleeve shall be slid in to its finish position. Ensure that it doesn't slide out of position with either mortar or mastic.

If this is not possible then the sleeve can be slit along its length and fitted around pipes already in-situ. If this method is used then foil tape shall be used to join the two mating faces.

The sleeve can be fitted into pre-cast holes that are to be made good. The material used to make good can be poured into the shuttered hole and the material can be allowed to flow directly onto the sleeve outer diameter which is foil protected.

Alternatively the sleeve can be fitted into a core drilled hole provided the hole is no more than 15mm larger than the outside diameter of the sleeve. If this method is used then a fire rated mastic should be used to protect the gap between the sleeve outside diameter and the slab.

If acoustic insulation is used on the main body of the stack then this insulation can be jointed to the fire sleeve by using foil tape at the mating faces.



Step One: Cut sleeve to required length i.e. penetration thickness plus 50mm to allow for 25mm to protrude either side of the penetration

Step Two: Slide sleeve along the pipe prior to installation

Step Three: Slide pipe and sleeve into cavity. Leave 25mm protruding out of the top and bottom of the slab

Step Two: Make a single slit along the sleeve length to allow fitting around installed pipe

Step Three: Fit sleeve around pipe and re-seal the cut with foil sealing tape supplied

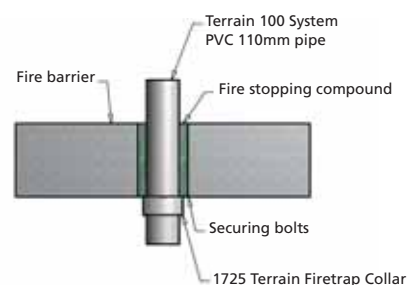
Step Four: Slide sleeve along pipe and into cavity. Leave 25mm protruding out of the top and bottom of the slab. Tape sleeve to existing insulation if required

Installation - Firetrap Collars for Terrain PVC

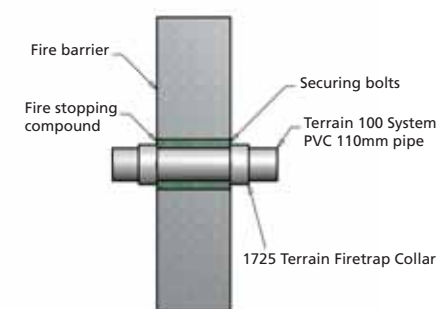
Surface Fixing

1. Remove plastic packaging
2. Remove tab from its location by opening collar
3. Ease the Firetrap Collar open to fit around pipe
4. Slip the Firetrap Collar up to the penetration fire rated barrier, floor or wall:
 - a) Must only be installed to soffit of slab for vertical applications
 - b) Firetrap Collars may be required on both sides of wall for horizontal applications
5. Ensure that the Firetrap Collar is closed around the pipe, with tab fitted through location and bend the locking tab back through 180°
6. Rotate the Firetrap Collar so as to locate the fixing lugs over a sound substructure and in such a position that the fixings themselves can be reached
7. Mark the positions for the fixing holes and drill them
8. Reposition the Firetrap Collar and fix in position
9. See below for correct fixing details
10. Small gaps between Firetrap Collar and substrate surface must be filled with intumescent mastic

Vertical Surface Mounted Concrete Floor Detail



Horizontal Wall Surface Mounted Floor Detail



Building Substrates	Fixing
Fly Ash Blocks	76mm x M6 Steel Anchor Bolts
Standard Bricks	50mm x M6 Steel Anchor Bolts
Dense (Engineering Bricks)	40mm x M6 Steel Anchor Bolts
Dense Cast Concrete	40mm x M6 Steel Anchor Bolts
Light Weight Cast Concrete	60mm x M6 Steel Anchor Bolts
Breeze Blocks	75mm x M6 Steel Anchor Bolts
3mm + Steel	M6 Steel Bolts or Drill & Self Tapping Screw

Fire Rated Plasterboard Stud Wall	M8 Spring Toggles or if a Firetrap Collar is fitted both sides then bolt straight through
Fire Rated Curtains or Mineral Wool Systems	M6 Bolts on a metal angle frame that must be secured to the solid wall, ceiling or floor. See system manufacturers recommendations

Built-in Applications

1. Remove plastic packaging
2. Remove tab from its location by opening collar
3. Ease the Firetrap Collar open to fit around pipe
4. Ensure that the Firetrap Collar is closed around the pipe, with tab fitted through location and bend the locking tab back through 180°
5. Slide the Firetrap Collar in to position within floor/wall thickness, leaving edge of Firetrap Collar exposed at surface (soffit of ceiling)
6. Fill remaining space around the Firetrap Collar with a suitable fire rated material

For further information please contact our technical services department on:

01622 795200.

Installation - Firetrap Collars for Terrain Fuze and Terrain Acoustic dB12

1. How to install the fire collar

Drill a hole through the wall/floor using a corer and crown bit in required size. Install the plastic pipe. Seal the gap between the hole and the pipe. If a wide gap exists, the space must be sealed using fire-proof mortar or alternatively, an intumescent sealing agent.

2. Pipe cleaning

A sealing effect is achieved with the expansion of the intumescent material during the fire which completely seals the plastic pipes. Mortar residue and dirt will impede this sealing effect, so cleaning of the pipes is essential at the point where the fire collar is fitted.

3. Closure and seal against smoke and gas

The intumescent material will seal the gap when activated by high temperature and fire. To protect against the spread of smoke and gas within the first few minutes the remaining gap between the plastic pipe and the opening must be sealed on one side of the wall using an appropriate sealing agent.

4. Fixing the anchoring hook

The anchoring hooks can be applied to various points of the collar's metal structure, enabling the anchoring points to be positioned in line with the space available. To ensure optimum performance, the hooks must be placed as symmetrically as possible.

5. Closing the fire collar

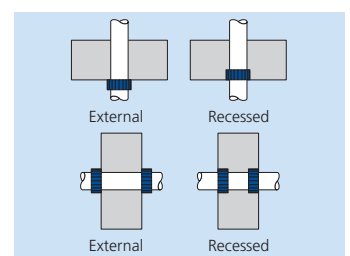
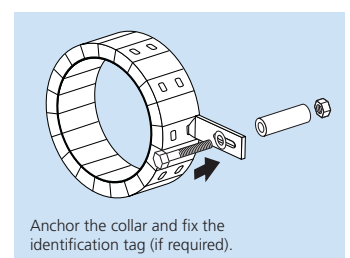
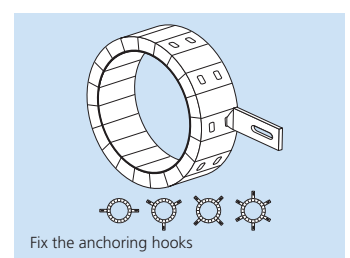
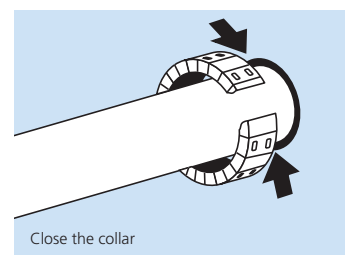
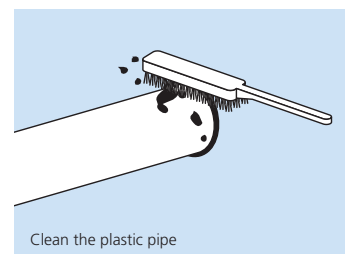
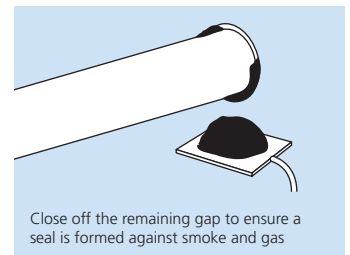
No tools, pins or screws are required to lock the collar in place. Simply position the fire collar around the plastic pipe and press firmly to tighten the closing device until the mechanism snaps into place. Ensure the collar is positioned correctly to enable the anchoring hooks to be fixed.

6. Locking the fire collar

The fire collar can only protect against fire if it is adequately fixed in place. The use of anchoring devices is recommended to secure the collar in place.

7. Recessed installation

Ensuring that the hole is sufficiently wide enough to accommodate the external diameter of the fire collar, insert the fire collar into the opening. The fire collar must be installed flush with the lower surface when installed at ceiling level. Insert one collar on each side in the case of a wall installation, if a gap remains around the installed collar, this must be filled with mortar.



Standards and Certification

Steps must be taken that comply with the provisions of the National certificates issued for the product when a fire-proof seal is made for the passage of pipes using fire-proof intumescent collars.

Terrain recommends referring to the product's certificates to verify the limitations with regards to the size of the opening, type and thickness of the wall or floor and the maximum diameter of the pipes. Local Fire Regulations should always be consulted in accordance with Building Regulations Part B.

Firetrap Sleeves for Terrain Fuze

Fire Testing

Terrain Firetrap Sleeves are fire tested in accordance with BS 476: Part 20: 1987, BS EN 1366-3.

Constructions covered - Plasterboard partition and Solid walls and floors.

Chiltern International Fire testing reports available on request.

Acoustic Testing

Firetrap Sleeves were acoustically tested in a plasterboard partition system under UKAS conditions in accordance with BS EN ISO 140-3:1995 and BS EN ISO 717-1:1997 to be fixed.

Firetrap Collars for Terrain Fuze and Terrain Acoustic dB12

- Tested to BS 476 Part 20.
- Warres Test Reports: Nos. 62293/A, 62293/B, 62293/C, 60300/A, 60300 /B, C 81542, 69750/A, 69751/B, 69752, 69853.

Firetrap PVC Collars

Terrain PVC collars are fire tested in accordance with BS 476: Part 22: 1987, BS EN1366-4 and other international standards.

Warrington & Chiltern International Fire test reports available on request.

TERRAIN FIRETRAP



Polypipe Terrain

New Hythe Business Park
College Road
Aylesford
Kent
ME20 7PJ

United Kingdom

Tel: +44 (0)1622 795200

Fax: +44 (0)1622 716796

commercialenquiries@polypipe.com

www.terraindrainage.com



Mixed Sources
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