



TECHNICAL DATA SHEET

General product description

Protecta® FR Collars are designed to maintain the fire resistance of fire rated walls and floors where these are breached by service penetrations, and may be used in drywalls, masonry or concrete walls and floors.

Each collar consists of a white coated circular steel shell that splits in two to fit around the service penetrations by means of a simple 'slide-lock' system. The steel shell contains a graphite based reactive material which reacts when exposed to heat from fire closing the openings left by the softening combustible material.

Properties

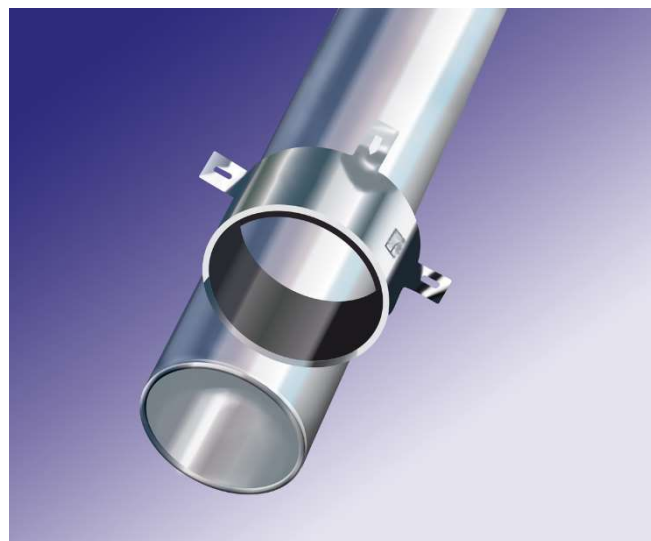
- High end fast expanding patented graphite material, certified Worldwide
- Classified for fire sealing all types of constructions and many different building service penetrations including plastic pipes, composite pipes, metal pipes and cable bundles
- Approved plastic pipe sizes range from smallest pipes available to Ø 400mm, each with a wide range of pipe wall thicknesses
- Collars are available in two different heights for different fire classifications to maximise cost efficiency
- Smaller pipes can be fitted within larger collars with the benefit of accommodating pipes that are at an angle, or if the opening around the pipe is too large
- Fire classifications up to 240 minutes for both integrity and insulation
- Tested and certified for U/U pipe end applications
- Very high sound insulation
- Causes no deleterious effects on cPVC pipes like BlazeMaster, supported by mechanical testing evidence
- No emissions - environmentally and user friendly
- Simple to install using widely available standard fixings
- Unlimited storage time (under correct conditions)
- 30 years working life guarantee

Sound insulation

| Description | Sound reduction |
|---|-----------------|
| Collars installed as described in walls | RW 58 dB |

The sound insulation value is only valid for the collar/pipe and not for other elements in the building construction.

The sound insulation has been tested by the accredited laboratory Exova BM Trada in Great Britain according to EN ISO 10140-2. Test report is available upon request.



Pipe end configurations

When testing pipes, one can choose not to cap (or close) the pipe, or cap the pipe inside the furnace, or outside the furnace, or on both sides. 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 which means the pipe was capped inside the furnace, and uncapped outside the furnace. The test configuration defines the approvals possible.

Our engineering judgment based on EN 1366-3:2009 are:

| Intended use of pipe | Pipe end condition ⁴⁾ | |
|--|----------------------------------|-------------------|
| Rainwater pipe, plastic | At drainage | U/U ¹⁾ |
| | Not at drainage | C/C ²⁾ |
| Drainage or sewage pipe, plastic | Ventilated drain | U/U ¹⁾ |
| | Unventilated drain | U/C ¹⁾ |
| | Drain w/water trap | U/C ¹⁾ |
| | Not at drainage | C/C ²⁾ |
| Pipe in closed circuit (water, gas, air, electricity etc.) | C/C ^{2) 3)} | |
| Flue gas recovery system pipe, plastic | U/C ¹⁾ | |
| Pipe with open ends and ≥ 50cm length on both sides, plastic | U/U ²⁾ | |
| Pipe supported by suspension system, metal | Fire rated support | C/U ¹⁾ |
| | Non-fire rated | U/C ¹⁾ |
| Waste disposal shaft pipe, metal | U/C ¹⁾ | |

¹⁾ Suggested in EN 1366-3:2009. ²⁾ Polyseam's judgment based on tests.

³⁾ Metal pipes should have fire rated support. ⁴⁾ U/U classified fire seals cover C/U, U/C and C/C. C/U classified fire seals cover U/C and C/C. U/C classified fire seals cover C/C.



Sizes & packaging

| Product code | Product diameter & height | Qty / box |
|--------------|---------------------------------|-----------|
| PRO269-30 | Protecta FR Collar Ø32 / 30mm | 24 |
| PRO269 | Protecta FR Collar Ø32 / 50mm | 24 |
| PRO270-30 | Protecta FR Collar Ø40 / 30mm | 24 |
| PRO270 | Protecta FR Collar Ø40 / 50mm | 24 |
| PRO037-30 | Protecta FR Collar Ø55 / 30mm | 24 |
| PRO037 | Protecta FR Collar Ø55 / 50mm | 24 |
| PRO271-30 | Protecta FR Collar Ø63 / 30mm | 24 |
| PRO271 | Protecta FR Collar Ø63 / 50mm | 24 |
| PRO272-30 | Protecta FR Collar Ø75 / 30mm | 24 |
| PRO272 | Protecta FR Collar Ø75 / 50mm | 24 |
| PRO038-30 | Protecta FR Collar Ø82 / 30mm | 24 |
| PRO038 | Protecta FR Collar Ø82 / 50mm | 24 |
| PRO273-30 | Protecta FR Collar Ø90 / 30mm | 24 |
| PRO273 | Protecta FR Collar Ø90 / 50mm | 24 |
| PRO039-30 | Protecta FR Collar Ø110 / 30mm | 24 |
| PRO039 | Protecta FR Collar Ø110 / 50mm | 24 |
| PRO040 | Protecta FR Collar Ø125 / 60mm | 20 |
| PRO274 | Protecta FR Collar Ø140 / 60mm | 12 |
| PRO041 | Protecta FR Collar Ø160 / 60mm | 12 |
| PRO042 | Protecta FR Collar Ø200 / 75mm | 1 |
| PRO043 | Protecta FR Collar Ø250 / 75mm | 1 |
| PRO044 | Protecta FR Collar Ø315 / 75mm | 1 |
| PRO045 | Protecta FR Collar Ø400 / 100mm | 1 |

Collars ≤ Ø 160mm are available in white and red. For red collars -R is added to end of product code.

Technical data

| | |
|-------------------------------|---|
| Condition | Ready for use, steel shell with a graphite material |
| Shell | Powder coated 1mm steel |
| Conditioning procedure | EN 13238:2010 |
| Expansion ratio | 17:1 |
| Expansion pressure | 65.4 N |
| Graphite weight | 1.4 kg/m ² per mm thickness |
| Graphite density | 1409 kg/m ³ |
| Normal expansion time | Less than 2 minutes |
| Minimum expansion temperature | 105 °C |
| Durability | Z ₂ intended for use in internal conditions with humidity classes other than Z ₁ , excluding temperatures below 0 °C. |
| Life | Under normal conditions; 30 years + |
| Storage | May be stored for a long period of time. To be stored in temperatures between 5 °C and 30 °C |
| Installation temp. | +5°C to +50°C (sealant) |
| Colour | White or red shell with anthracite inlay |