

PROTECTA® FR SERVICE TRANSIT

TECHNICAL DATA SHEET



General Product Description

The Protecta® FR Service Transit has been designed to maintain the fire resistance of walls and floors when these are breached by continuous cables, pipes and ducts.

The Service Transit consists of a circular or rectangular high temperature shell containing a graphite based intumescent lining material, which expands upon heating to seal spaces or voids around service penetrations, thus preventing the passage of flames, smoke and gases.

After installation of the Service Transit, services can be retrofitted without having to install a new fire seal.

The Service Transit is available in three different lengths, 150mm, 250mm and 400mm. The selection of which to use depends on the thickness of the supporting construction and the required use.

Properties

- Safe, easy and quick to fire stop service penetrations
- Ideal for installations where it is likely that services will be inserted or replaced later on
- Ideal for installations in tight spaces where it will be difficult to install a normal fire seal at a later stage in the building construction
- A plug in the middle prevents penetration of cold smoke (see air permeability tests on the next page) Note: FD transits does not require plugs
- New patented fast expanding graphite material
- For cables, conduits, plastic pipes, steel pipes and plastic ducts
- Classified for fire sealing all types of constructions; drywalls, masonry or concrete walls, timber walls, concrete floors and timber floors
- Can be fitted several ways; cast in concrete, friction fitted in concrete, masonry or gypsum, or inserted in larger apertures with Protecta FR Acrylic, FR Board or EX Mortar
- Very high fire classifications up to 240 minutes for both integrity and insulation
- Certified for PVC-U, PVC-C, PE, LDPE, MDPE, HDPE, ABS, SAN+PVC and PP pipes plus all kinds of cables
- No emissions - environmentally and user friendly
- Unlimited storage time (under correct conditions)
- 30 years working life guarantee

Sound Insulation

Description	Sound reduction
Service Transit's in all sizes	Rw 64 dB

The sound insulation value is only valid for the Service Transit and not for other elements in the building construction.

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



Sizes, Types and Intended Use

The FR type service transits were originally designed to be positioned central within walls, but can also be positioned central within floors.

The FF type service transits were designed specifically for floors, where they are positioned flush with the soffit side considering they may be fixed to shutters before the concrete is casted. The plastic tube superseding the top side of the floor may also be cut off, so they are flush with both sides of the floor (optional).

The FD type service transits were specifically designed for plastic rectangular ducts, and are the only products with a steel casing instead of plastic tubes.

Pno.	Size	Type	Intended Use
P249	OD Ø40 ID 33.8 x 150mm	FR	Flexible and rigid walls from 75mm to 150mm thick
P250	OD Ø63 ID 53.4 x 150mm	FR	
P251	OD Ø90 ID 75.8 x 150mm	FR	
P252	OD Ø110 ID 95.0 x 150mm	FR	
P253	OD Ø40 ID 33.8 x 250mm	FR	Flexible, rigid and timber walls from 100mm to 210mm thick, or rigid and timber floors from 150mm to 210mm thick
P254	OD Ø63 ID 53.4 x 250mm	FR	
P255	OD Ø90 ID 75.8 x 250mm	FR	
P256	OD Ø110 ID 95.0 x 250mm	FR	
P257	OD Ø40 ID 33.8 x 400mm	FR	Flexible, rigid and timber walls, or rigid and timber floors from 211mm to 400mm thick
P258	OD Ø63 ID 53.4 x 400mm	FR	
P259	OD Ø90 ID 75.8 x 400mm	FR	
P260	OD Ø110 ID 95.0 x 400mm	FR	
P336	OD Ø40 ID 33.8 x 150mm	FF	Rigid and timber floors 150mm thick
P337	OD Ø110 ID 95.0 x 150mm	FF	
P338	OD Ø40 ID 33.8 x 250mm	FF	Rigid and timber floors from 151mm to 250mm thick
P339	OD Ø110 ID 95.0 x 250mm	FF	
P340	OD Ø40 ID 33.8 x 400mm	FF	Rigid and timber floors from 251mm to 400mm thick
P341	OD Ø110 ID 95.0 x 400mm	FF	
P332	OD 126 x 68 x 250mm	FD	Flexible, rigid and timber walls from 100mm to 250mm thick
P333	OD 240 x 108 x 250mm	FD	

Air Permeability

FR Service Transit, without services

Positive Pressure (Pa)	Leakage (m³/h)	Negative Pressure (Pa)	Leakage (m³/h)
25	0.08	25	0.18
50	0.14	50	0.29
100	0.35	100	0.46
200	0.62	200	0.88
300	1.44	300	1.33
450	2.18	450	1.82
600	3.24	600	2.66

FR Service Transit, with one single service penetration

Positive Pressure (Pa)	Leakage (m³/h)	Negative Pressure (Pa)	Leakage (m³/h)
25	0.05	25	0.14
50	0.13	50	0.24
100	0.36	100	0.40
200	0.75	200	0.63
300	1.50	300	1.40
450	2.64	450	1.97
600	3.60	600	2.72

FR Service Transit, with services in a bundle, approx. half filled

Positive Pressure (Pa)	Leakage (m³/h)	Negative Pressure (Pa)	Leakage (m³/h)
25	0.14	25	0.35
50	0.26	50	0.47
100	0.66	100	0.72
200	1.30	200	1.38
300	2.46	300	2.52
450	3.89	450	3.53
600	4.80	600	4.27

FR Service Transit, with services in a bundle, fully filled

Positive Pressure (Pa)	Leakage (m³/h)	Negative Pressure (Pa)	Leakage (m³/h)
25	1.43	25	1.43
50	1.87	50	2.29
100	3.59	100	3.84
200	6.19	200	6.51
300	8.63	300	9.00
450	11.70	450	11.60
600	14.43	600	14.15

Protecta® FR Service Transit - tested at Warringtonfire Testing and Certification Ltd (UKAS accredited); according to EN 1026: 2016.

Technical Data

Technical Approval	EAD 350454-00-1104
Durability according to ETAG 026-2	Z ₂ intended for use in internal conditions with humidity classes other than Z ₁ , excluding temperatures below 0 °C.
Tube	High temperature resistant plastic, or steel
Plug	AES fiber 128 kg/m³
Conditioning procedure	EN 13238:2010
Expansion ratio	17:1
Expansion pressure	65.4 N
Colour	White tube or rectangular steel with anthracite inlay
Graphite weight	1.4 kg/m² per mm thickness
Graphite density	1409 kg/m³
Normal expansion time	Approx. 1 minute
Minimum expansion temperature	105 °C
Storage	Store in temperatures between 5 °C and 30 °C
Life	Under normal conditions; 30 years +