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designated according to Article 29 of the Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment, [www.eota.eu](http://www.eota.eu))

## European Technical Assessment

## ETA 22/0033 of 15/03/2022

**Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: UL International (Netherlands) B.V.**

<b>Trade name of the construction product</b>	Protecta FR Graphite Plate
<b>Product family to which the construction product belongs</b>	Fire Stopping and Sealing Product: <ul style="list-style-type: none"><li>• Penetration Seals</li></ul>
<b>Manufacturer</b>	Polyseam Ltd 15. St. Andrews Road Huddersfield, West Yorkshire HD1 6SB, UK <a href="http://www.protecta.co.uk">www.protecta.co.uk</a>
<b>Manufacturing plant(s)</b>	Polyseam Ltd 15. St. Andrews Road Huddersfield, West Yorkshire HD1 6SB, UK
<b>This European Technical Assessment contains</b>	20 pages including 1 Annex which forms an integral part of this assessment.
<b>This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of</b>	EAD 350454-00-1104, September 2017.
<b>Corrigendum No. 1</b>	

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## I. SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

### 1 Technical description of the product

- 1) Protecta FR Graphite Plate is a preformed, self-adhesive intumescent sheet used to reinstate the fire resistance performance of wall constructions where they have been provided with apertures for the penetration of cables into socket boxes, on both sides or one side of the wall.
- 2) The Protecta FR Graphite Plate is supplied pre-cut to size with a peel off strip to one face to protect the adhesive layer. The Protecta FR Graphite Plate is installed by removing the peelable strip and placing the pad to the back face, within the socket box.
- 3) Polyseam AS submitted a written declaration that Protecta FR Graphite Plate does not contain substances which have to be classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No 1272/2008 and listed in the "Indicative list on dangerous substances" of the EGDS - taking into account the installation conditions of the construction product and the release scenarios resulting from there.

In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

### 2 Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): EAD 350454-00-1104

Detailed information and data is given in Annex A.

- 1) The intended use of Protecta FR Graphite Plate is to reinstate the fire resistance performance of flexible wall constructions where they are penetrated by cables in socket boxes.
- 2) The specific elements of construction that the system Protecta FR Graphite Plate may be used to provide a penetration seal in, are as follows:

- a. Flexible walls: The wall must have a minimum thickness of 75 mm and comprise steel studs or timber studs\* lined on both faces with minimum 1 layer of 12.5 mm thick board.

\* no part of the penetration seal may be closer than 100 mm to a stud, the cavity must be closed between the penetration seal and the stud, and minimum 100 mm of insulation of class A1 or A2 according to EN 13501-1 must be provided within the cavity between the penetration seal and the stud.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

Protecta Fire Protection Systems which involve services penetrating both sides of a flexible wall may also be used in the situation where the services penetrates one side of the wall only and the remaining side of the wall is not penetrated at the same point (i.e. the services continues on the inside of the wall). All fire integrity and thermal insulation ratings for such single-sided penetrations remain the same as for the equivalent double-sided penetration.

- 3) The System Protecta FR Graphite Plate may be used to provide a penetration seal with cables in socket boxes (for details see Annex A).
- 4) The system Protecta FR Graphite Plate may be used to seal apertures in the separating element up to 142 mm wide by 83 mm high (aperture containing socket box). The aperture around the socket box should be as tightly fitting as possible and gaps filled with plaster filler, or Protecta FR Acrylic.
- 5) Socket boxes can be placed back-to-back or side-by-side with zero distance, or further apart. The socket boxes should be installed according to the installation instructions from the manufacturer, and can be fixed directly to drywall studs, or to timber noggins or steel plates fixed to studs.
- 6) The provisions made in this European Technical Assessment are based on an assumed working life of the Protecta FR Graphite Plate of 25 years, provided that the conditions laid down in the product datasheet for the packaging/transport/ storage/installation/use/repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.
- 7) Type Z<sub>2</sub>: Intended for uses in internal conditions with humidity lower than 85 % RH excluding temperatures below 0°C, without exposure to rain or UV.

### 3 Performance of the product and references to the methods used for its assessment

Product-type: Intumescent sheet		Intended use: Penetration Seal
Assessment method	Essential characteristic	Product performance
<b>BWR 2 Safety in case of fire</b>		
EN 13501-1	Reaction to fire	No performance determined
EN 13501-2	Resistance to fire	Annex A
<b>BWR 3 Hygiene, health and environment</b>		
EN 1026	Air permeability	No performance determined
EAD 350454-00-1104, Annex C	Water permeability	No performance determined
Declaration of manufacturer & EN 16516	Content, emission and/or release of dangerous substances	Use category: IA1, S/W2 Declaration of manufacturer
<b>BWR 4 Safety in use</b>		
EOTA TR 001:2003	Mechanical resistance and stability	No performance determined
EOTA TR 001:2003	Resistance to impact/movement	No performance determined
EOTA TR 001:2003	Adhesion	No performance determined
EAD 350454-00-1104, Clause 2.2.9	Durability	Z <sub>2</sub>
<b>BWR 5 Protection against noise</b>		
EN 10140-1,2,4,5/ EN ISO 717-1	Airborne sound insulation	No performance determined
<b>BWR 6 Energy economy and heat retention</b>		
EN 12664, EN 12667, EN 12939, EN ISO 8990, EN ISO 6946, EN ISO 14683, EN ISO 10211, EN ISO 10456	Thermal properties	No performance determined
EN ISO 12572, EN 12086, EN ISO 10456	Water vapour permeability	No performance determined

**4 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE**

According to the decision 1999/454/EC – Commission Decision of date 22nd June 1999 on the procedure for attesting the conformity of construction products pursuant to Article 20(2) of Council Directive 89/106/EEC as regards fire stopping, fire sealing and fire protective products, published in the Official Journal of the European Union (OJEU) L178/52 of 14/07/1999, (see <https://eur-lex.europa.eu/oj/direct-access.html>) of the European Commission<sup>1</sup>, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table(s) applies (apply).

<b>Product(s)</b>	<b>Intended use(s)</b>	<b>Level(s) or class(es)</b>	<b>System(s)</b>
Fire stopping and Fire Sealing Products	For fire compartmentation and/or fire protection or fire performance	Any	1

**5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD**

Tasks of the manufacturer:

Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall ensure that the product is in conformity with this European technical Assessment.

The manufacturer may only use initial / raw / constituent materials stated in the technical documentation of this European Technical Assessment.

The factory production control shall be in accordance with the Control Plan of 14<sup>th</sup> October 2021 relating to the European technical assessment ETA 22/0033 issued on 15/03/2022 which is part of the technical documentation of this European technical approval. The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at UL International (UK) Ltd.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan.

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<sup>1</sup> Official Journal of the European Communities L178/52 of 14/7/1999

Other tasks of the manufacturer

Additional information

The manufacturer shall provide a technical data sheet and an installation instruction with the following minimum information:

(a) Technical data sheet:

- Field of application:
- Building elements for which the penetration seal is suitable, type and properties of the building elements like minimum thickness, density, and - in case of lightweight constructions – the construction requirements.
- Limits in size, minimum thickness etc. of the penetration seal
- Construction of the penetration seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.
- Services which the penetration seal is suitable, type and properties of the services like material, diameter, thickness etc. in case of pipes including insulation materials; necessary/allowed supports/fixings (e.g. cable trays)

(b) Installation instruction:

- Steps to be followed
- Procedure in case of retrofitting
- Stipulations on maintenance, repair and replacement

**6 Issued on:**

**15<sup>th</sup> March 2022**

Report by:



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Senior Project Engineer  
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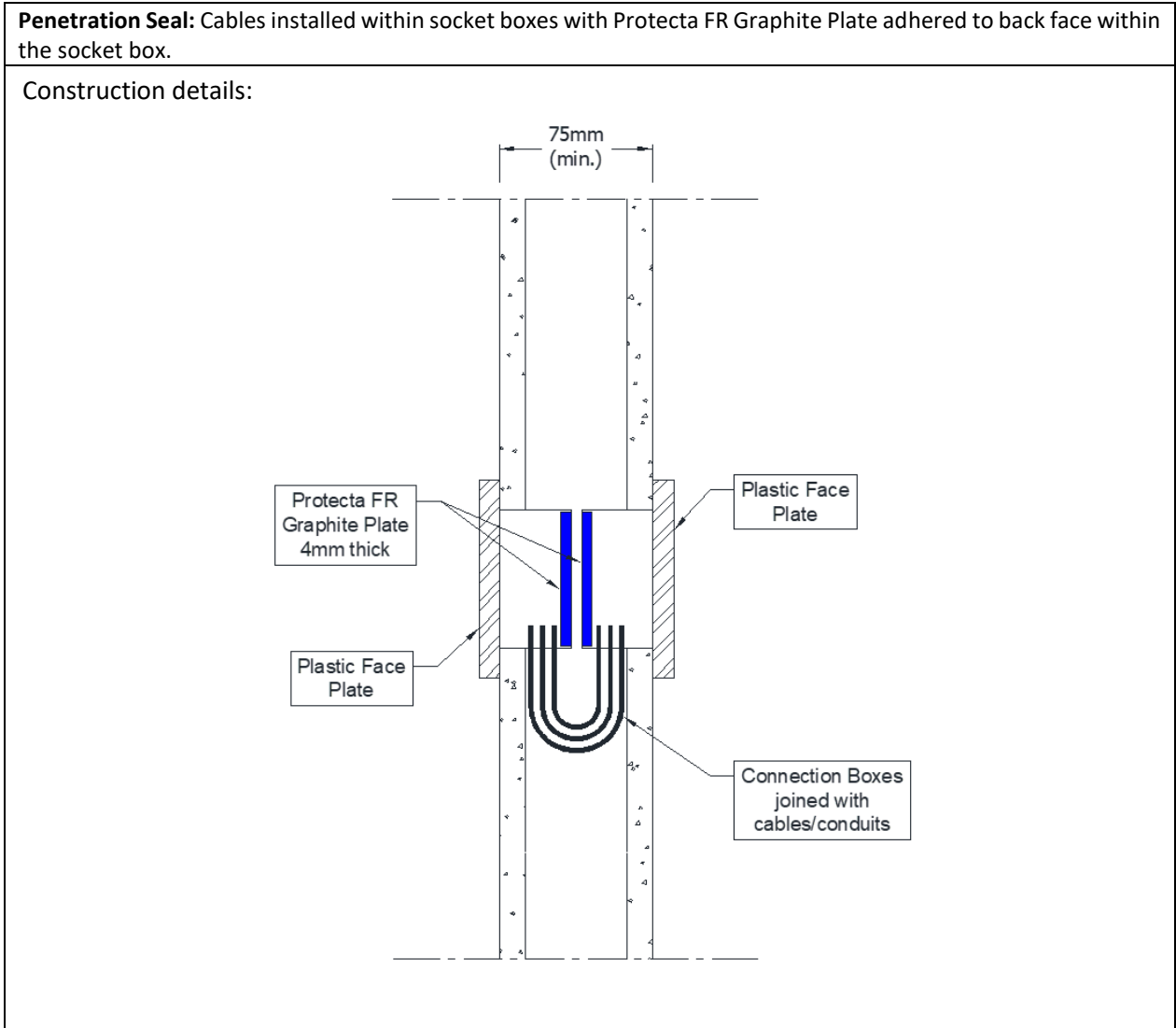
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For and on behalf of UL International (Netherlands) B.V.

# ANNEX A – Resistance to Fire Classification – Protecta FR Graphite Plate

## A.1 Flexible wall constructions with wall thickness of minimum 75 mm

### A.1.1 Cable penetration seal with 4.0 mm thick Protecta FR Graphite Plate in socket boxes back to back, with one fitted to each face.



#### A.1.1.1 Double side penetration seal with cables in socket boxes

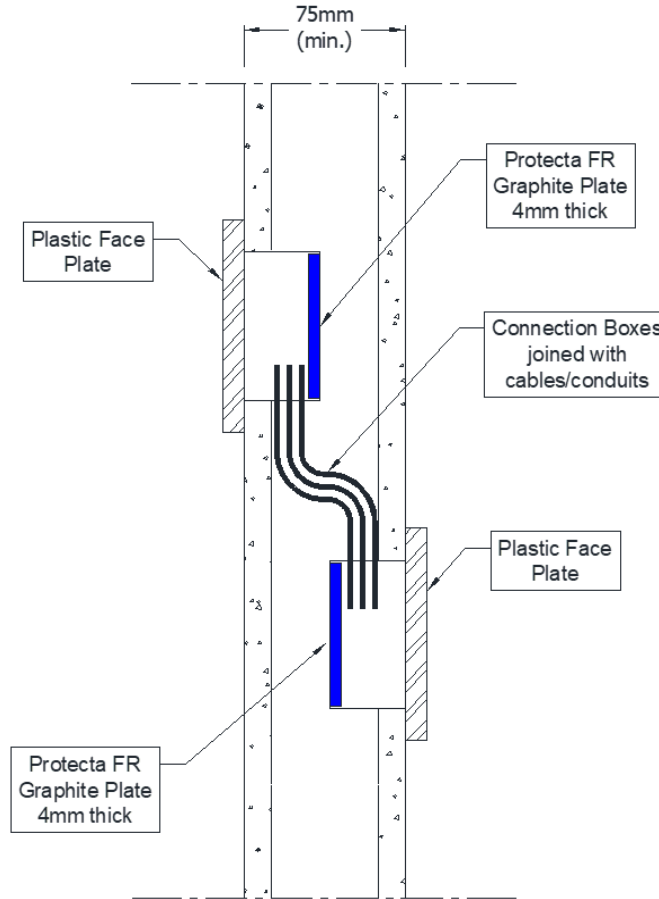
Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	UK standard double socket box, 145mm wide x 85mm high x 35mm deep, each with up to 25mm hole cut to accept the cables	110mm wide x 60mm high x 4mm thick, fitted lining the back of the back box	134 wide x 73 High	<b>EI 30</b>



**A.1.2 Cable penetration seal with 4.0 mm thick Protecta FR Graphite Plate in socket boxes side by side, with one fitted each face.**

**Penetration Seal:** Cables installed within socket boxes with Protecta FR Graphite Plate adhered to back face within the socket box.

Construction details:

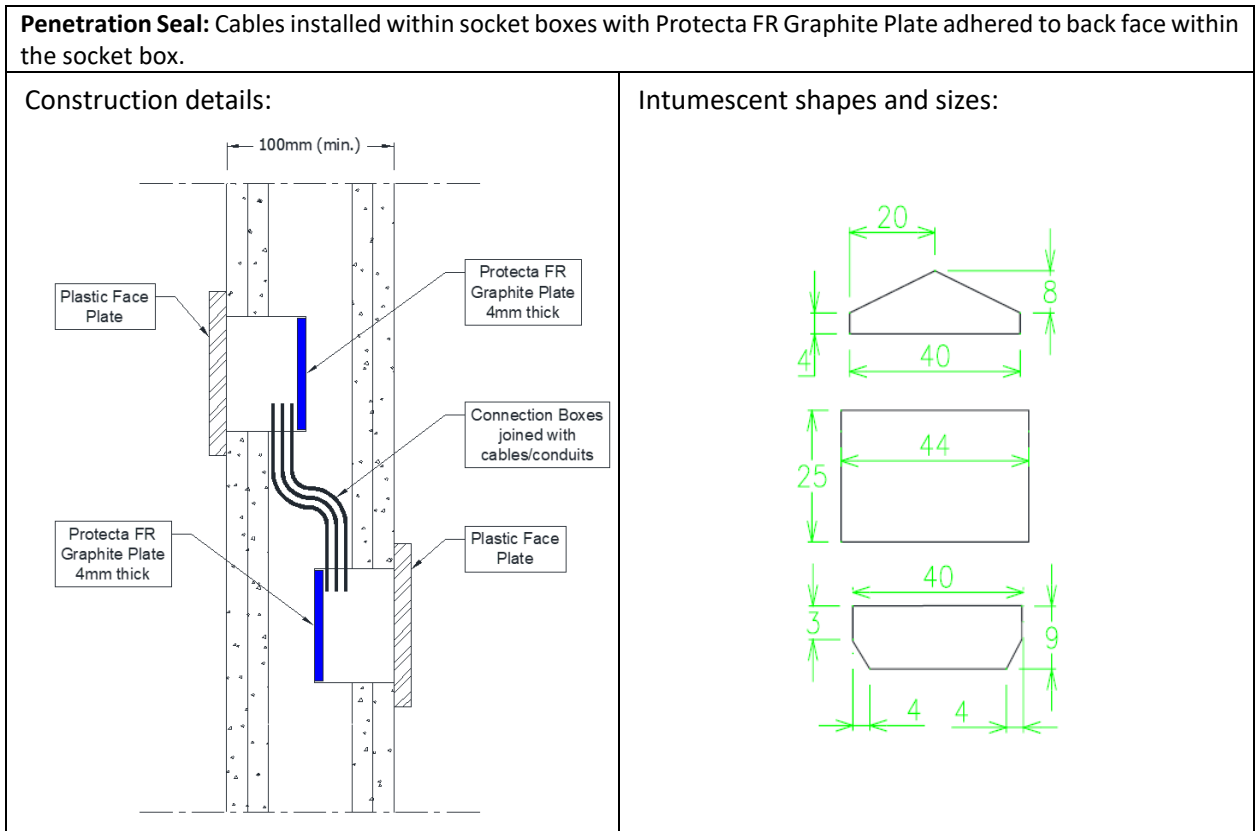


**A.1.2.1 Double side penetration seal with cables in socket boxes**

Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	Elko 3012 S57/100 1223789 red standard box	45mm wide x 45mm high x 4mm thick, fitted lining the back of the socket box	74mm $\varnothing$	<b>E 60, EI 45</b>
Plastic conduits with or without cables				

**A.2 Flexible wall constructions with wall thickness of minimum 100 mm**

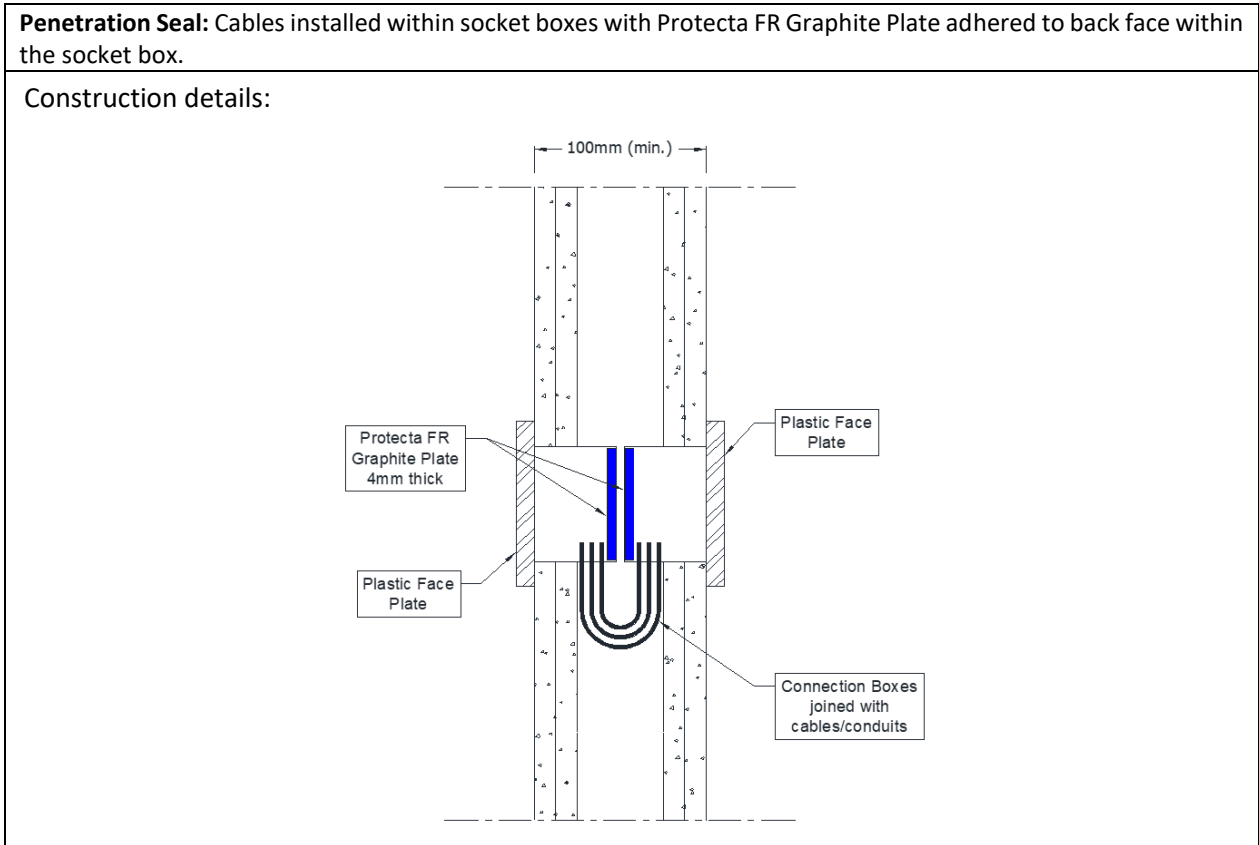
**A.2.1 Cable penetration seal with 4.0 mm thick Protecta FR Graphite Plate in socket boxes back-to-back, with one fitted to each face**



**A.2.1.1 Double side penetration seal with cables in socket boxes**

Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	Schneider Electric Ref. IMT 36316 connection box, 100mm Ø cover plate with 70mm Ø x 48mm deep back box	3no. Protecta FR Graphite Plate, each fitted lining the back of the socket box	70mm Ø	<b>E 90, EI 60</b>

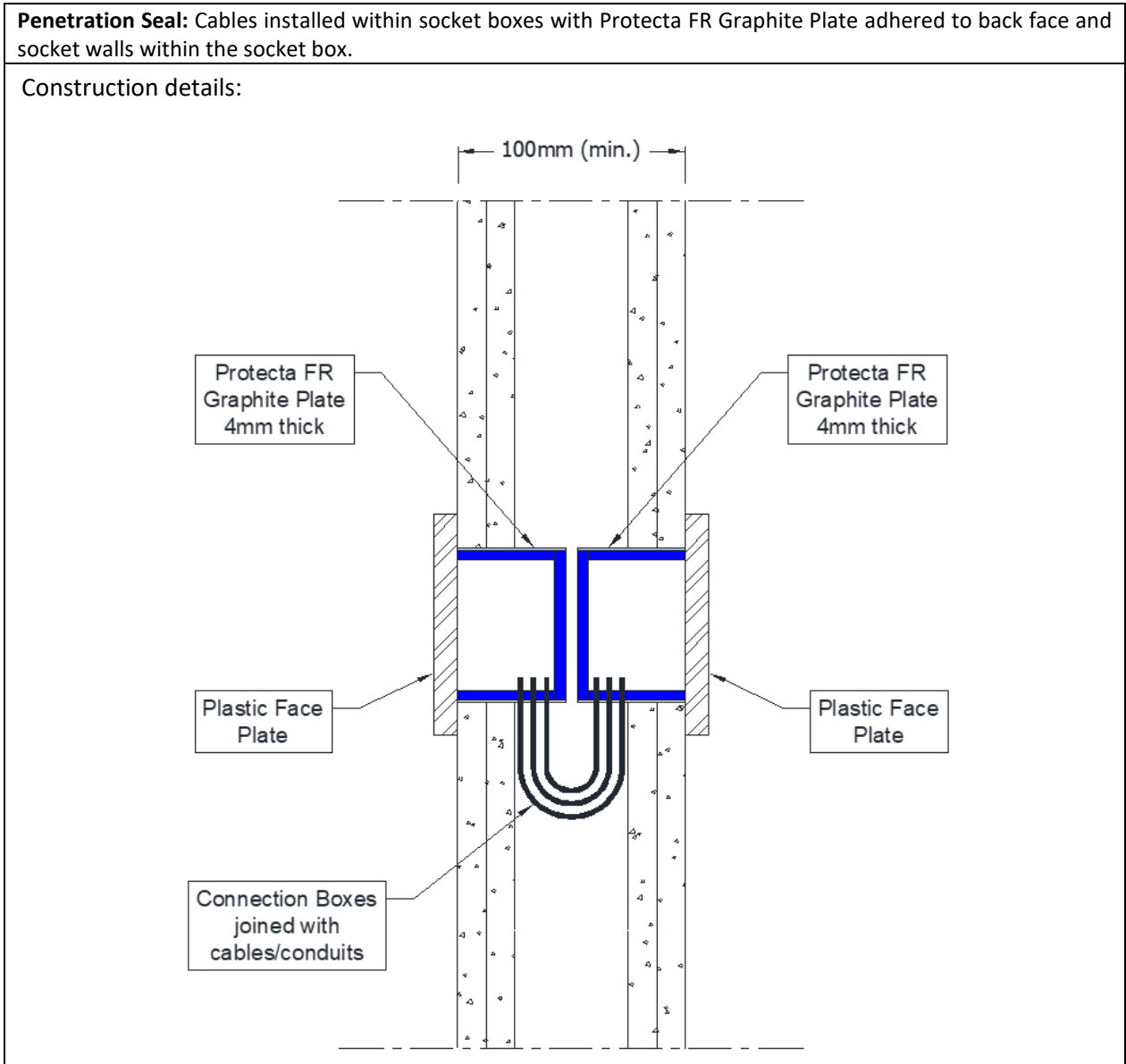
**A.2.2 Cable penetration seal with 4.0 mm thick Protecta FR Graphite Plate in socket boxes back-to-back, with one fitted to each face.**



**A.2.2.1 Double side penetration seal with cables in socket boxes**

Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	Rutab 8 connection/junction box, 100mm $\varnothing$ cover plate with 80mm $\varnothing$ x 47mm deep back box	57mm wide by 74mm high, fitted lining the back of the back box	80mm $\varnothing$	EI 90
	Schneider Electric IMT 36190 connection box, 100mm $\varnothing$ cover plate with 52mm $\varnothing$ x 44mm deep back box	30mm wide by 30mm high, fitted lining the back of the back box	52mm $\varnothing$	EI 120
	Schneider Electric TED26 IMT 36263 connection box, with 83mm $\varnothing$ x 47mm deep back box	66mm wide by 52mm high, fitted lining the back of the back box	83mm $\varnothing$	EI 90
	Schneider Electric TED A26 IMT 36256 connection box, with 72mm $\varnothing$ x 37mm deep back box	46mm wide by 46mm high, fitted lining the back of the back box	72mm $\varnothing$	EI 90
	Elko 4038 1225422 connection box, with 50mm $\varnothing$ x 40mm deep back box	30mm wide by 30mm high, fitted lining the back of the back box	50mm $\varnothing$	EI 90
	Rutab 3 connections junction box "Article No. 1426102"	65mm $\varnothing$ with 10mm trimmed off 2no. parallel edges		75mm $\varnothing$

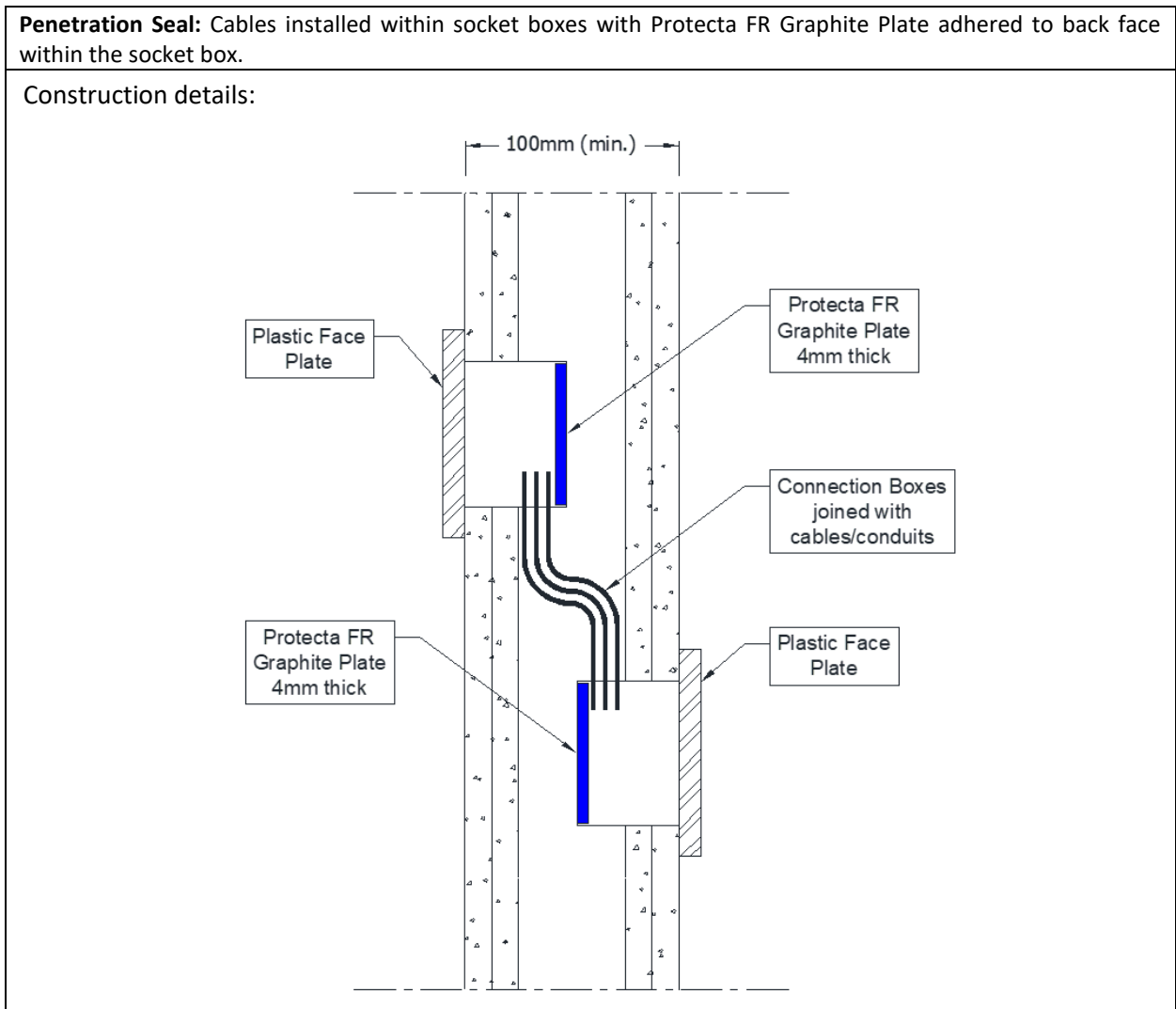
**A.2.3 Cable penetration seal with 4.0 mm thick Protecta FR Graphite Plate in socket boxes back-to-back, with one fitted to each face.**



**A.2.3.1 Double side penetration seal with cables in socket boxes**

Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	Fuga Forfrådåse 1M socket ref: 504DA020	4no. 25 mm x 15 mm fitted on socket walls and 1no. 25 mm x 7 mm fitted lining the back of the socket	52mm $\varnothing$	EI 120
	Fuga Air Forfrådåse 1M socket ref: 504D30100	4no. 25 mm x 15 mm fitted on socket walls and 1no. 20 mm x 20 mm fitted lining the back of the socket		EI 90

**A.2.4 Cable penetration seal with 4.0 mm thick Protecta FR Graphite Plate in socket boxes side-by-side, with one fitted to each face.**



**A.2.4.1 Double side penetration seal with cables in socket boxes**

Services	Socket box	Protecta Graphite Plate mm	Aperture mm	Classification
Cables up to 14 mm diameter	UK standard double socket box, 134mm wide x 74mm high x 48mm deep	Size to suit bottom of socket box	134 x 74	<b>EI 120</b>
Cables up to 14 mm diameter and Plastic conduit 22 mm diameter, with or without cables	ELKO 45/Stender 6-1øp 1223752 white standard box EL	59 ø	73-74 ø	<b>EI 60</b>
	ELKO 3012 S57/100 1223789	46 x 46		
Cables up to 14mm diameter	ABB AU60.1 Ref. 2TKA001744G1/122008 connection box, 100mm ø cover plate with 70mm ø x 55mm deep back box	44mm wide x 44mm high x 4mm thick, fitted lining the back of the socket box	70mm ø	<b>EI 60</b>

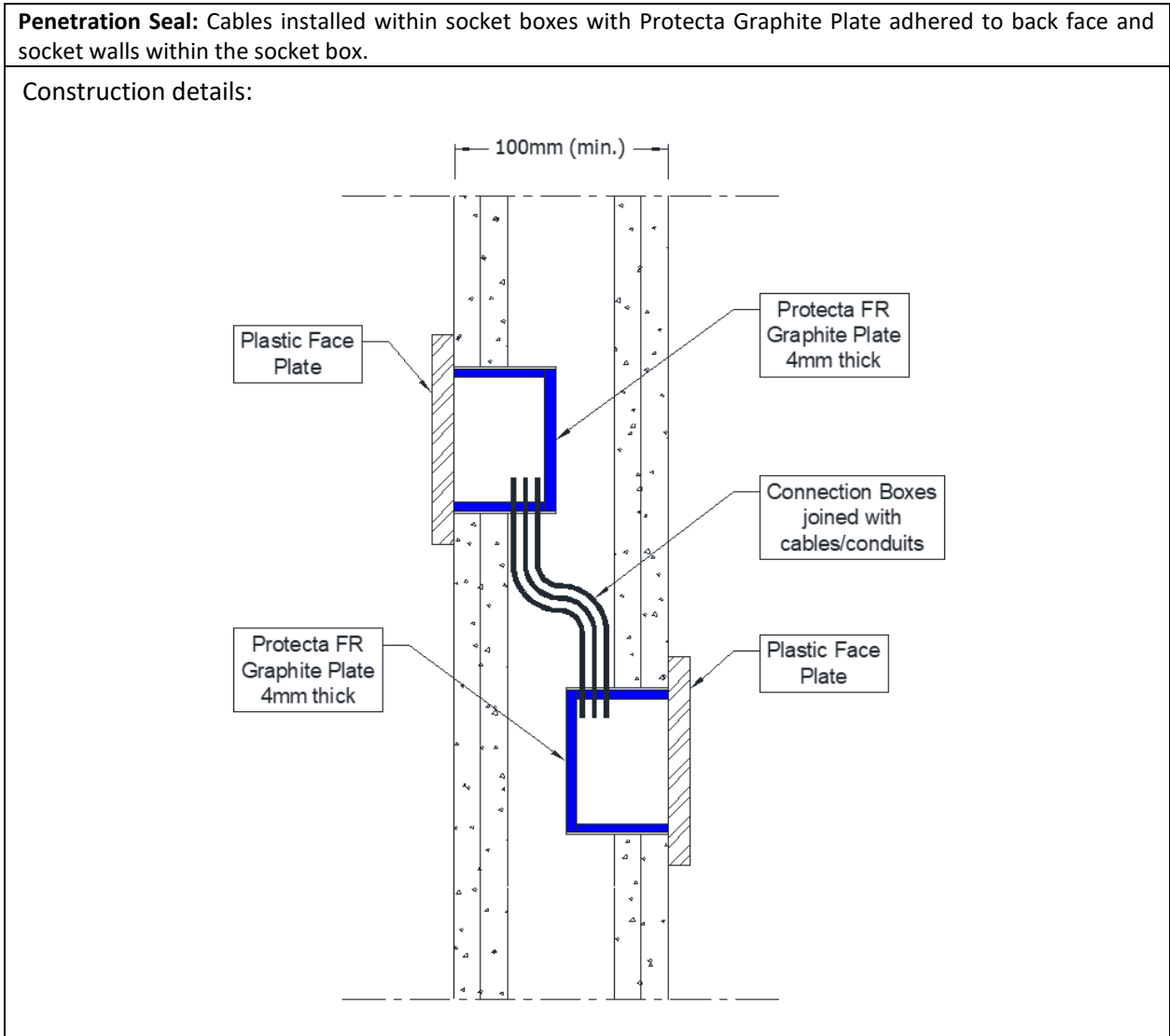
#### A.2.4.2 Double side penetration seal with cables in socket boxes

Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	Schneider Electric IMT 36193 connection box, 70mm wide x 70mm high x 70mm deep	45mm wide x 45mm high, fitted lining the back of the inside of the socket box	70mm Ø	EI 45
	Schneider Electric IMT 36200 connection box, 70mm wide x 70mm high x 70mm deep			EI 60
	Schneider Electric IMT 36356 connection box, 70mm wide x 70mm high x 58mm deep			EI 60
	Etman ETM337S connection box, 70mm wide x 70mm high x 60mm deep		72mm Ø	EI 45
	Etman ETM001S connection box, 70mm wide x 70mm high x 56mm deep			EI 60
	Etman ETM616S connection box, 90mm wide x 71mm high x 60mm deep	65mm wide x 45mm high, fitted lining the back of the inside of the socket box	92mm wide x 72mm high oval diameter	EI 45
	Schneider Electric IMT 36192 connection box, 70mm wide x 70mm high x 58mm deep	45mm wide x 45mm high, fitted lining the back of the inside of the socket box	70mm Ø	EI 60
	Schneider Electric IMT 36205 connection box, 70mm wide x 140mm high x 57mm deep	2no. 55mm wide x 45mm high, (1no. piece fitted either side of separator, lining the back of the inside of the socket box)	140mm x 70mm (with rounded edges)	EI 60
	Elko 3011 connection box, 70mm wide x 140mm high x 57mm deep			EI 60
	Etman ETM611S Flush mounting Big Wall box # 24mm, 71mm wide x 142mm high x 70mm deep	2no. 40mm wide x 110mm high, fitted lining the back of the inside of the socket box	72mm Ø	E 60, EI 45
	Etman ETM614S connection box, 70mm wide x 90mm high x 60mm deep	45mm wide x 65mm high, fitted lining the back of the inside of the socket box	72mm wide x 92mm high oval diameter	EI 45
	Schneider Electric 55/94 2 IØp connection box, 70mm wide x 140mm high x 57mm deep	2no. 55mm wide x 45mm high, (1no. piece fitted either side of separator, lining the back of the inside of the socket box)	140mm x 70mm (with rounded edges)	EI 60

#### A.2.4.3 Double side penetration seal with cables in socket boxes

Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	Etman ETM750S connection box, 71mm wide x 71mm high x 48mm deep	50mm wide x 40mm high, fitted lining the back of the inside of the socket box	62mm Ø	EI 60
	Etman ETM751S connection box, 71mm wide x 71mm high x 48mm deep		62mm Ø	EI 60
	Etman ETM395S junction box, 83mm wide x 94mm high x 60mm deep	50mm wide x 70mm high, fitted lining the back of the inside of the socket box	83mm Ø	EI 60
	Etman ETM394S junction box, 83mm wide x 94mm high x 60mm deep	2no. 50mm wide x 70mm high, fitted lining the back of the inside of the socket box	83mm Ø	EI 60
	Elko 4040 connection box, 70mm wide x 70mm high x 70mm deep	45mm wide x 45mm high, fitted lining the back of the inside of the socket box	70mm Ø	EI 60
	Etman ETM338S connection box, 70mm wide x 70mm high x 60mm deep	50mm wide x 45mm high, fitted lining the back of the inside of the socket box	72mm Ø	EI 45
	Schneider Electric IMT 36029 connection box, 70mm wide x 90mm high x 57mm deep	44mm wide x 60mm high, fitted lining the back of the inside of the socket box	91mm x 71mm (with rounded edges)	EI 60
	Schneider Electric IMT 36006 connection box, 70mm wide x 70mm high x 70mm deep	45mm wide x 45mm high, fitted lining the back of the inside of the socket box	70mm Ø	EI 60
	Schneider Electric IMT 36016 connection box, 70mm wide x 70mm high x 58mm deep	45mm wide x 45mm high, fitted lining the back of the inside of the socket box	70mm Ø	EI 60
	Elko 4045 connection box, 70mm wide x 90mm high x 57mm deep	45mm wide x 60mm high, fitted lining the back of the inside of the socket box	91mm x 71mm (with rounded edges)	EI 60
	Etman ETM663S connection box, 70mm wide x 142mm high x 45mm deep	40mm wide x 110mm high, fitted lining the back of the inside of the socket box	72mm wide x 92mm high oval diameter	EI 60

**A.2.5 Cable penetration seal with 4.0 mm thick Protecta FR Graphite Plate in socket box side-by-side, with one fitted to each face.**



**A.2.5.1 Double side penetration seal with cables in socket boxes**

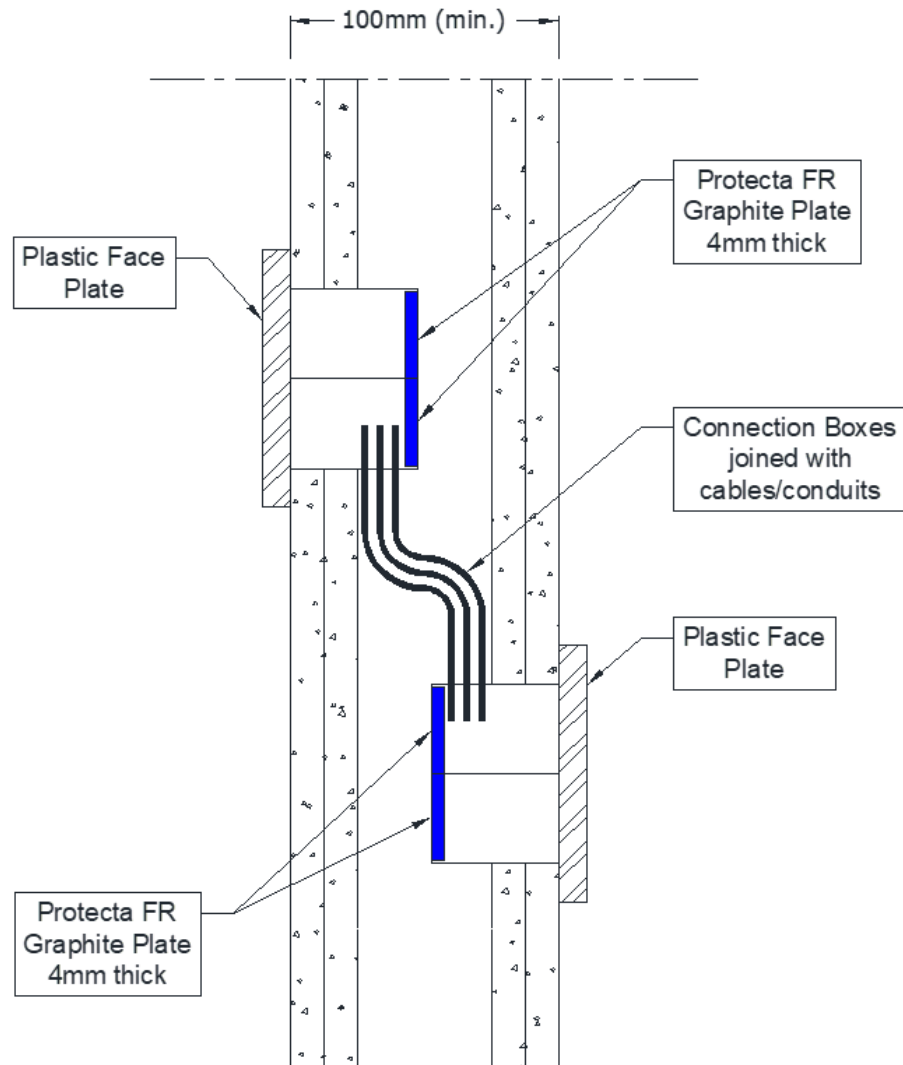
Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	Schneider Electric IMT 36030 connection box, 80mm wide x 144mm high x 55mm deep	8no. 20mm wide x 35mm high pieces, lining the back and sides of the inside of the socket box	140mm x 75mm (with rounded edges)	EI 30
	Elko 4545 connection box, 80mm wide x 144mm high x 55mm deep			EI 45
	Schneider Electric 60/46 connection box, no. 1223281, 70mm wide x 70mm high x 65mm deep	5no. 20mm wide x 50mm high pieces, lining the back and sides of the inside of the socket box	71mm x 71mm	E 90, EI 45



**A.2.6 Cable penetration seal with 4.0 mm thick Protecta FR Graphite Plate in socket box side-by-side, with one fitted to each face.**

**Penetration Seal:** Cables installed within double socket boxes with Protecta Graphite Plate adhered to back face within the socket box.

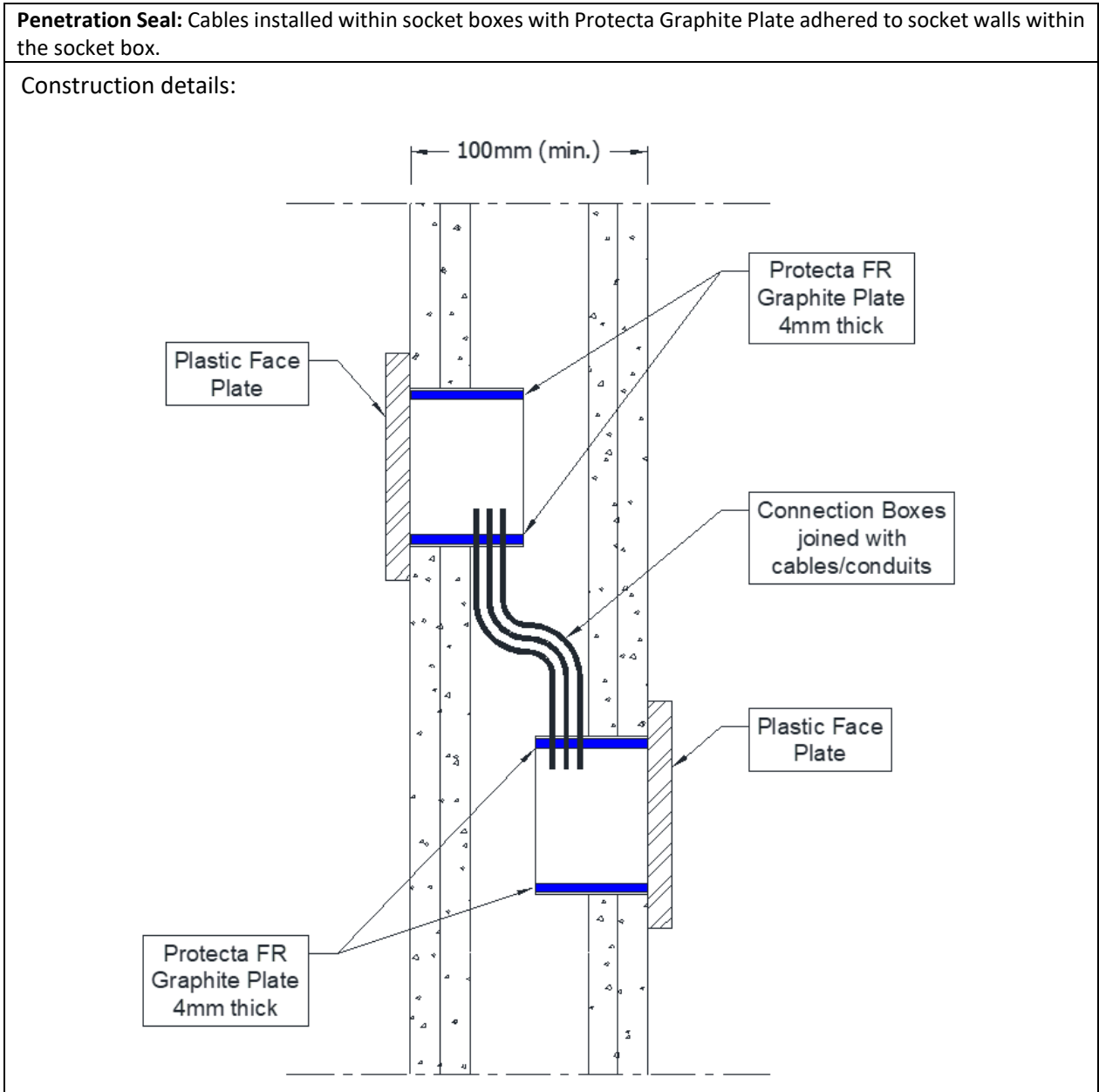
Construction details:



**A.2.6.1 Double side, double flush penetration seal with cables in socket boxes**

Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	Etman ETM611S double connection box, 72mm wide x 142mm high x 60mm deep	2no. 40mm wide x 50mm high, fitted lining the back of the inside of the socket box	72mm x 142mm	<b>EI 45</b>

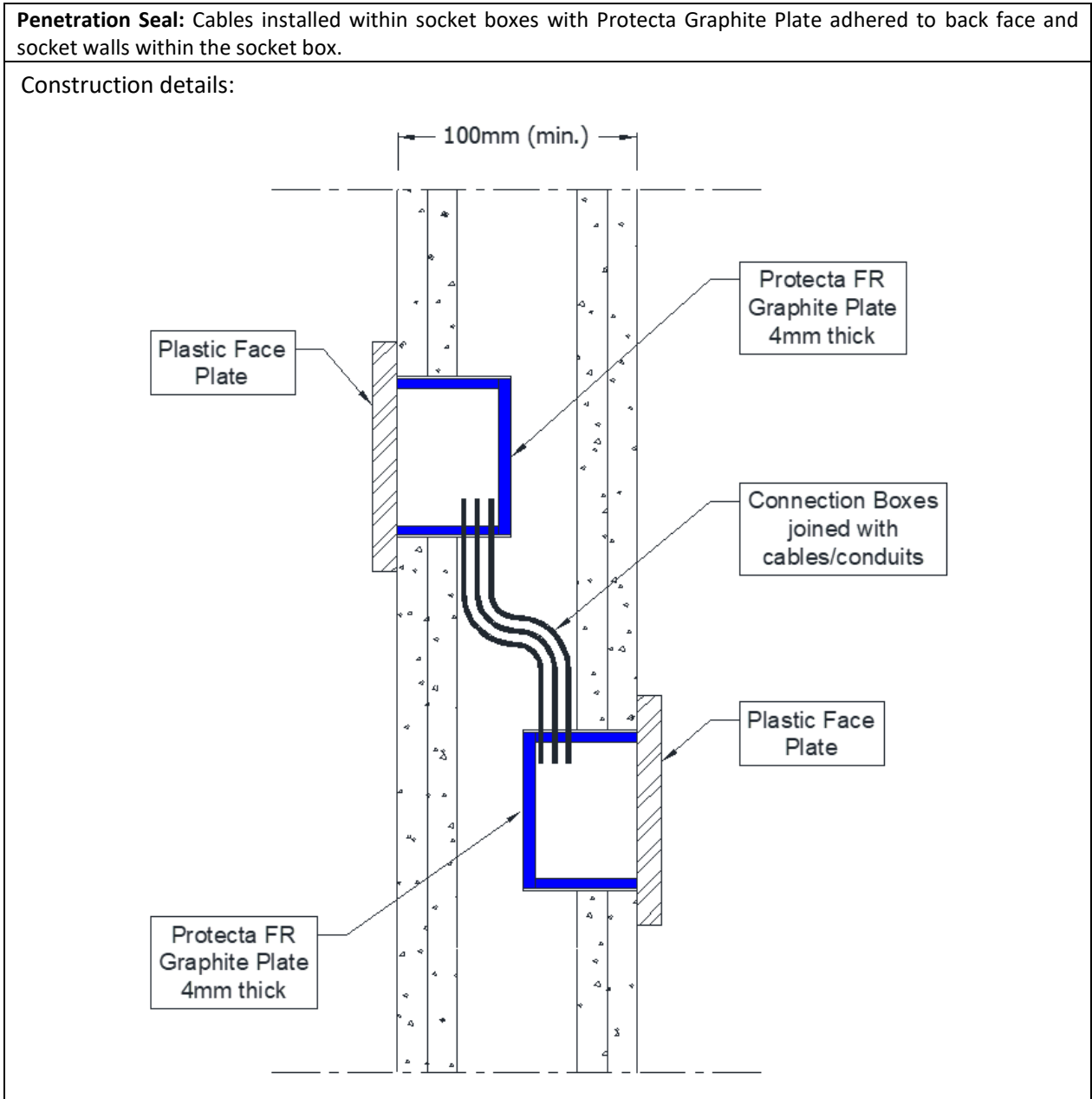
**A.2.7 Cable penetration seal with 4.0 mm thick Protecta FR Graphite Plate in Multibox side-by-side, with one fitted to each face.**



**A.2.7.1 Double side penetration seal with cables in Multiboxes**

Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	Etman ETM546S multibox 90-degree entries connection box, 70mm wide x 60mm high	4no. 20mm wide x 40mm high, fitted lining the sides of the inside of the socket box	72mm $\varnothing$	E 90, EI 45

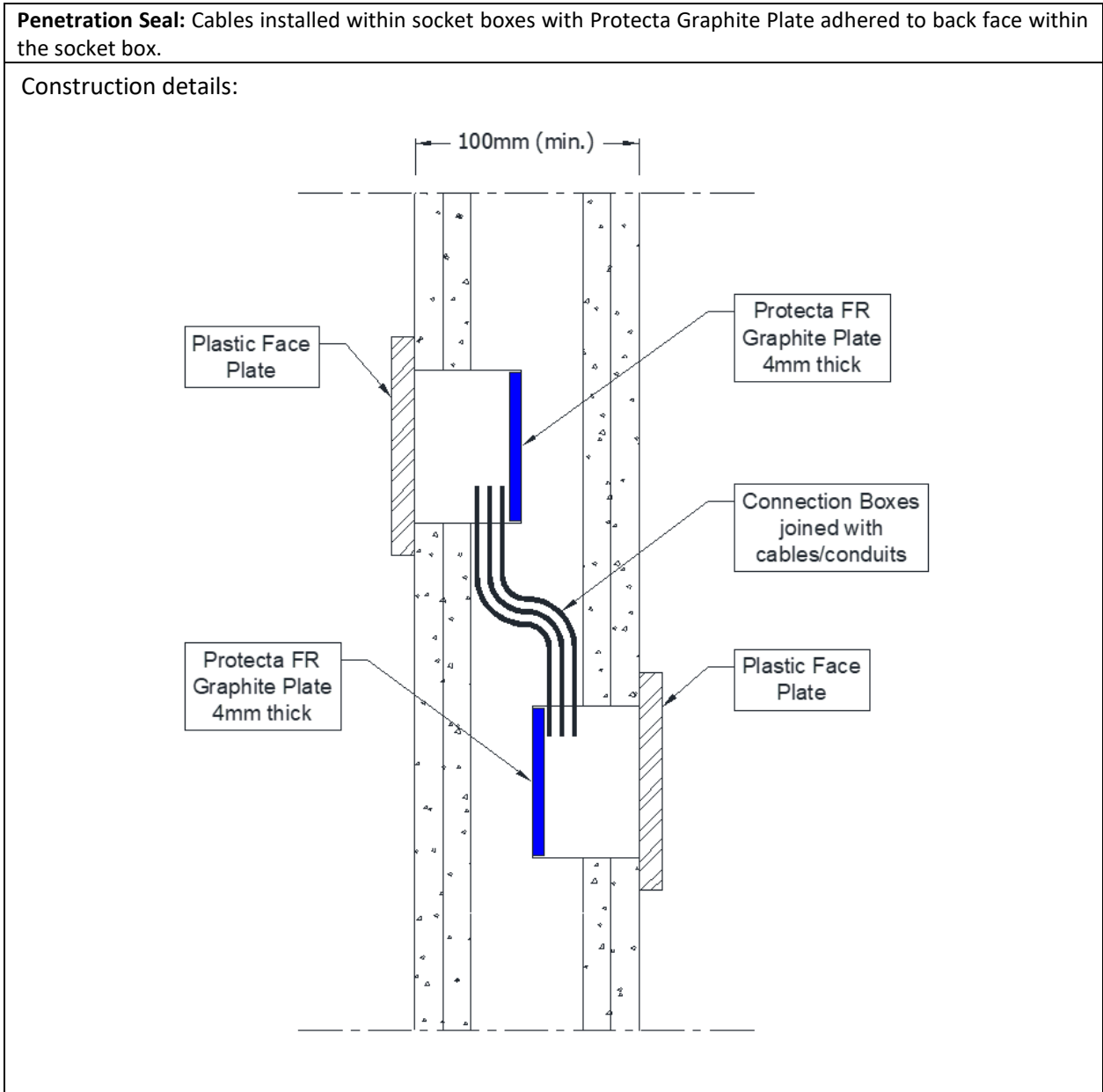
**A.2.8 Cable penetration seal with 4.0 mm thick Protecta FR Graphite Plate in Multibox side-by-side, with one fitted to each face.**



**A.2.8.1 Double side penetration seal with cables in Multiboxes**

Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	Etman ETM220S multibox connection box, 70mm x 60mm deep	3no. 20mm wide x 40mm high, fitted lining the back and sides of the inside of the socket box	72mm $\varnothing$	<b>EI 60</b>

**A.2.9 Cable penetration seal with 4.0 mm thick Protecta FR Graphite Plate in Multibox side-by-side, with one fitted to each face.**



**A.2.9.1 Double side penetration seal with cables in multiboxes**

Services	Socket box	Protecta FR Graphite Plate	Aperture mm	Classification
Cables up to 14mm diameter	Etman ETM548S multibox connection box, 90mm x 70mm x 58mm deep	40mm wide x 50mm high, fitted lining the back of the inside of the socket box	92mm x 72mm	<b>EI 30</b>