

# Technical Data Sheet

Astro X Series Pillow

UIC of product-type: XSPIL

Revision 10 - 12th September 2023





ETA - 21-0317		
> Technical Data	General Product Description	> Page 1
> Technical Data	Intended Use	> Page 1
> Technical Data	Use Category	> Page 1
> Technical Data	Reaction To Fire	> Page 1
> Technical Data	Resistance To Fire	> Page 1
> Technical Data	Air Permeability	> Page 2
> Technical Data	Dangerous Substances, Airborne Sound Insulation & Durability And Serviceability	> Page 2-3
> Technical Data	Astro X Series Fire Pillows Fire Resistant Cable & Cable Tray Penetration Seal Through Rigid Wall Horizontal Orientation	> Page 4
> Technical Data	Astro X Series Fire Pillows Fire Resistant Cable & Cable Tray Penetration Seal Through Rigid Wall Horizontal Orientation	> Page 5
> Technical Data	Astro X Series Fire Pillows In Fire Resistant Cable & Cable Tray Penetration Seal With Partial Additional Pillows Through Rigid Wall Horizontal Orientation	> Page 6
> Technical Data	Astro X Series Fire Pillows In Fire Resistant Plastic Tube Penetration Seal Through Rigid Wall Horizontal Orientation	> Page 7
> Technical Data	Astro X Series Fire Pillows In Fire Resistant Loose Cables Penetration Seal Through Rigid Wall Horizontal Orientation	> Page 8
> Technical Data	Astro X Series Fire Pillows In Fire Resistant Un-Insulated Metallic Pipe Penetration Seal Through Rigid Wall Horizontal Orientation	> Page 9
> Technical Data	Astro X Series Fire Pillows In Fire Resistant Metallic Pipe Penetration Seal With TDW Through Rigid Wall Horizontal Orientation	> Page 10
> Technical Data	Astro X Series Fire Pillows In Fire Resistant Metallic Pipe Penetration Seal With Additional Pillows Through Rigid Wall Horizontal Orientation	> Page 11
> Technical Data	Astro X Series Fire Pillows in fire resistant insulated with armaflex metallic pipe penetration seal with astro TDW through rigid wall horizontal orientation	> Page 12

### General Product Description

Astro X series Pillow are a compressible combination of reactive and non-reactive components, encased in a thin woven glass fibre casing used to reinstate the fire resistance performance of wall construction where they have been provided with apertures for the penetration of single or multiple services.

Astro X series Pillow is a dry system and does not require the use of any sealant or sealing products.

Astro X series Pillow are supplied in three different sizes referenced Large (330mm x 200mm x 45mm), Medium (330 x 200mm x 25mm) and small (330mm x 50mm x 20mm), a mixture of which may be utilized to obtain a tight compression.

### Intended Use

The intended use of Astro X series Pillow is to reinstate the fire resistance performance of rigid wall construction where they are penetrated by various cables and metallic pipes.

#### Rigid Walls:

The wall must have a minimum thickness of 150mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650kg/m<sup>3</sup>.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period. The Astro X series Pillow may be used to provide a penetration seal with pipes and cables.

The total amount of cross sections of services (including insulation) should not exceed 60% of the penetration area.

The system Astro X series Pillow may be used to seal apertures in the separation element up to 1100mm wide by 1100mm high dependant on the configuration. The minimum permitted separation between adjacent seals/apertures is 200mm.

Pipes must be installed singular, cables require no minimum separation.

Services in walls shall be supported at maximum 250mm from the face of the separating element.

The provisions made in this European Technical Assessment are based on an assumed working life of the Astro X series Pillow of 10 years, provided that the conditions laid down in sections 4.2/5.1/5.2 for the packaging/transport/installation/use/repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

### Use Category

Type Z1: Intended for use in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV.

### Reaction to Fire

System Astro X series Pillow is classified 'F' in accordance with EN 13501-1.

### Resistance to Fire

System Astro X Series Pillow has been tested in accordance with BS EN 1366-3: 2009 based upon the test results and the field of direct application specified within EN 1366-3: 2009, the system Astro X series Pillow has been classified in accordance with EN 13501-2, as given in Annex C:

**\*\*Where relevant Non combustible fixings are to be used in line with test data to secure the product to the relevant substrate. Please contact us for further details.\*\***

### Air Permeability

System Astro X series Pillow has been tested in accordance with BS EN 1314-1 to provide the following results:

Product tested		Astro X series Pillow		
	Results under positive chamber pressure		Results under negative chamber pressure	
Pressure (Pa)	Leakage (m3/m2/h)	Leakage (m3/m2/h)	Leakage (m3/h)	Leakage (m3/m2/h)
50	2.5	13.9	3.1	17.2
100	4.1	22.8	5.6	31.1
150	5.8	32.2	7.4	41.1
200	7.2	40.0	8.9	49.4
250	8.7	48.3	10.3	57.2
300	9.8	54.4	11.1	61.7
450	13.4	74.4	15.3	85.0
600	17.5	97.2	18.6	103.3

### Dangerous Substances

Astroflame Fireseals Ltd persented a declaration that Astro X series Pillow does not contain any substance of high concern with regards to REACH Regulations and are compliant with the requirements reference to <http://ec.europa.eu/emerprise/construction/cpd-ds/index.cfm>

Confirmation has further been declared that all dangerous chemical substances  $\geq 1.0\%$  w/w as well as all toxic, carcinogenic, toxic for reproduction and mutagenic chemical substances  $\geq 0.1\%$  w/w (Status: 29. adaption - 2004/73/EG - of the EU directive 67/548/ EEC - classification, packaging and labelling of dangerous substances) are stated in the Astro Intu Mastic 300 safety data sheets in the Astro Intu Mastic 300 safety data sheets (according to 91/155/EEC including amendments) and have been considered for the classification of the products according to the directive 1999/45/EG (classification of preparations, including amendments).

All dangerous chemical substances are below the classification limits of 67/548/EEC.

In addition to the specific clauses relating to dangerous substances contained in the European Technical Approval, 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 Regulations, these requirements need also to be complied with, when and where they apply.

### Airborne Sound Insulation

The results of the test provided the following single number rating:

$R_w (C;Ctr)=33(0;-2)$

### Durability and Serviceability

Astro X series Pillow has been tested in accordance with EOTA Technical Report - TR024 - Edition November 2006, for the type Z1 use category specified in ETAG 026-3 (used as European Assessment Document, EAD), and the results of the tests have demonstrated suitability for penetration seals intended for use in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0oC, without exposure to rain or UV.

### Durability and serviceability

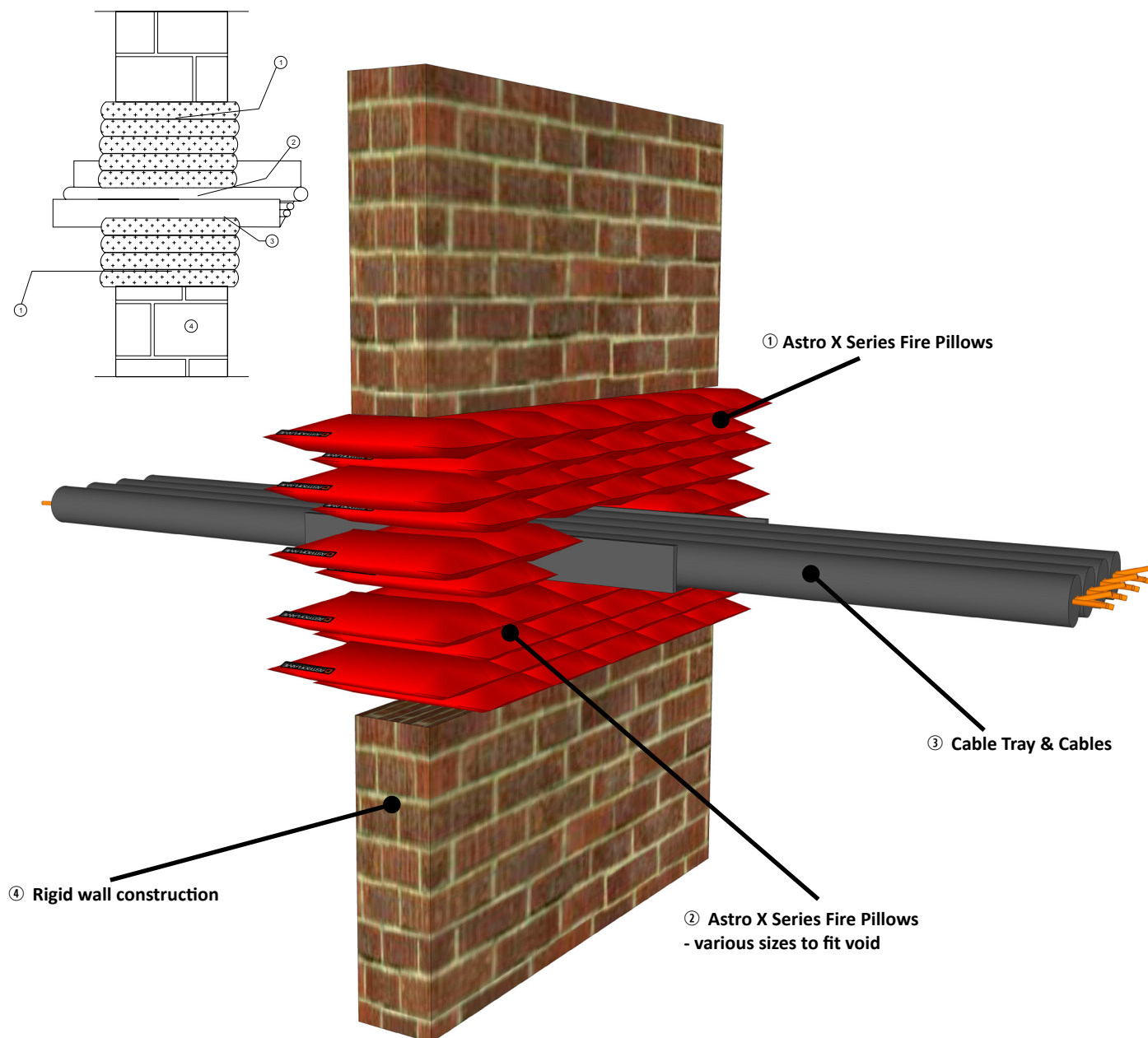
The principle of the durability is to select suitable physico-chemical or technological properties of the product and to check whether these properties have changed during exposure of the product to defined exposure conditions. The product shall be tested according to the following procedures:

Property	Test Method
<b>Bag</b>	
Apperance	EOTA ETAG No 026: Part 2: Clause B.12
Tear Strength of Fabric	EN ISO 13934-1
Tear Strength of Seams	EN ISO 13935-1 or EN ISO 13935-2
<b>Filling material</b>	
Expansion ratio	EOTA TR 024, clause 3.1.11

Astro X series Pillow Penetration Seals 300 mm deep, in Rigid Walls 150mm thick (min.)	
Services	Classification
Telecom cables up to 21mm Ø (single or bundles up 100mm Ø)	EI 120
Electrical cables up to 21mm Ø	EI 120
Electrical cables up to 50mm Ø	E 120, EI 90
Electrical cables up to 80mm Ø	E 120, EI 90
Unsheathed wires up to 24mm Ø	EI 120
Steel or Copper conduits and tubes up to 16mm Ø	EI 120
Plastic (any) conduits and tubes up to 16mm Ø	EI 120
Cables trays or ladders up to 300mm wide	E 120, EI 60

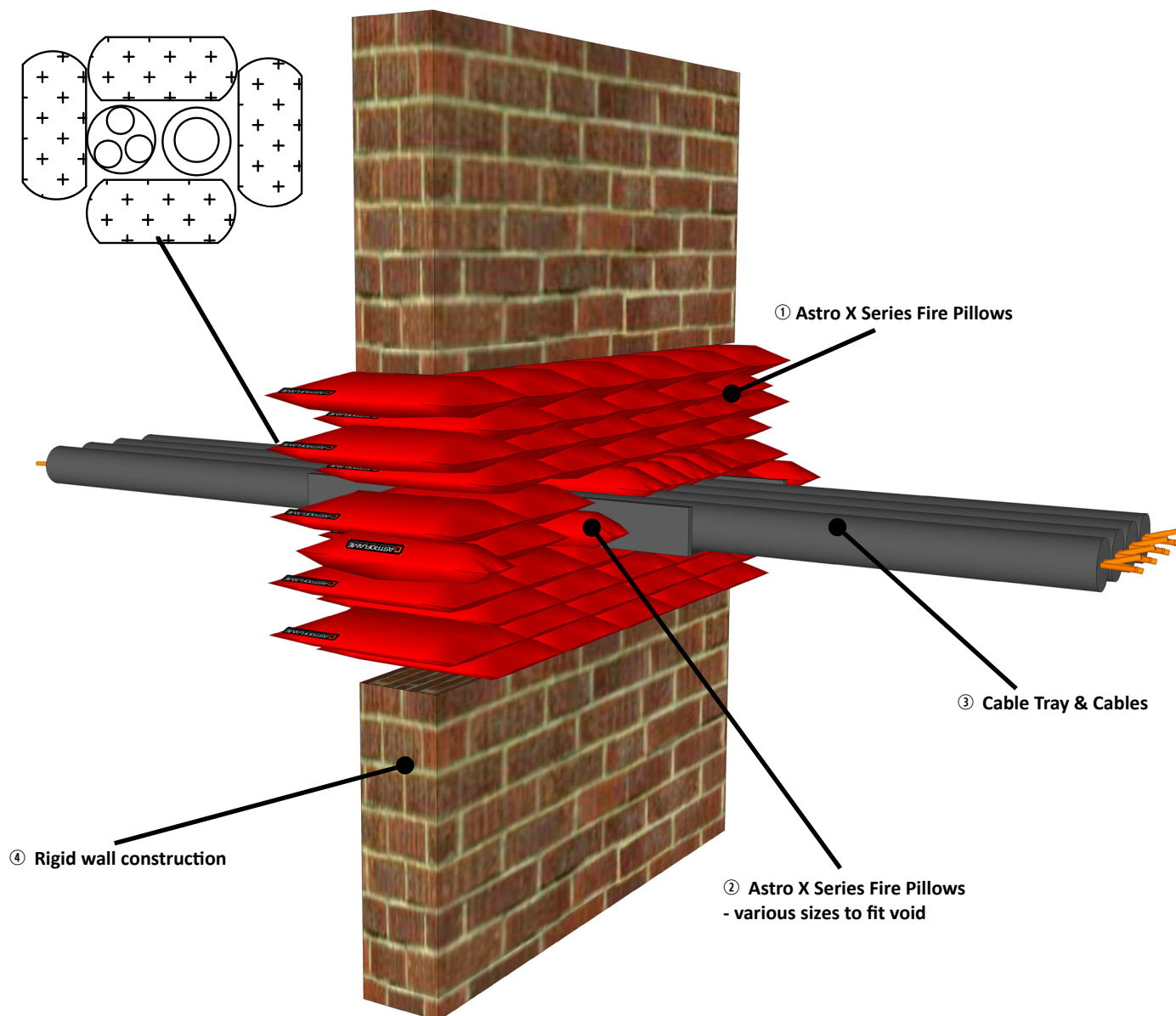
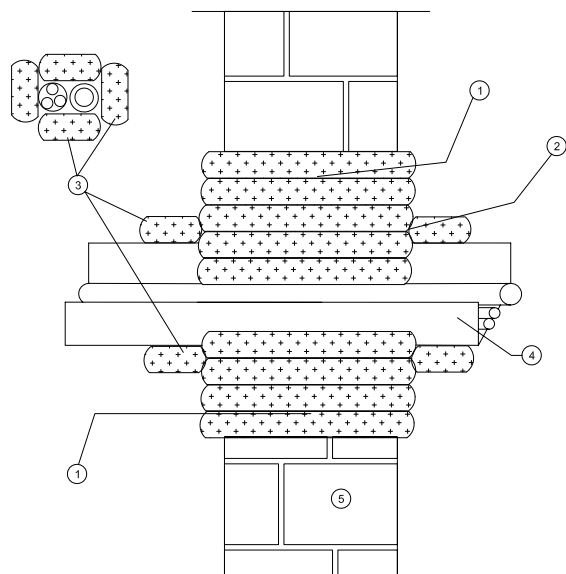
**DESIGN TO ETA 14-0046 & CE-2531-CPR-CXO10300**

**ASTRO X SERIES FIRE PILLOWS FIRE RESISTANT CABLE & CABLE TRAY PENETRATION SEAL THROUGH RIGID WALL HORIZONTAL ORIENTATION**

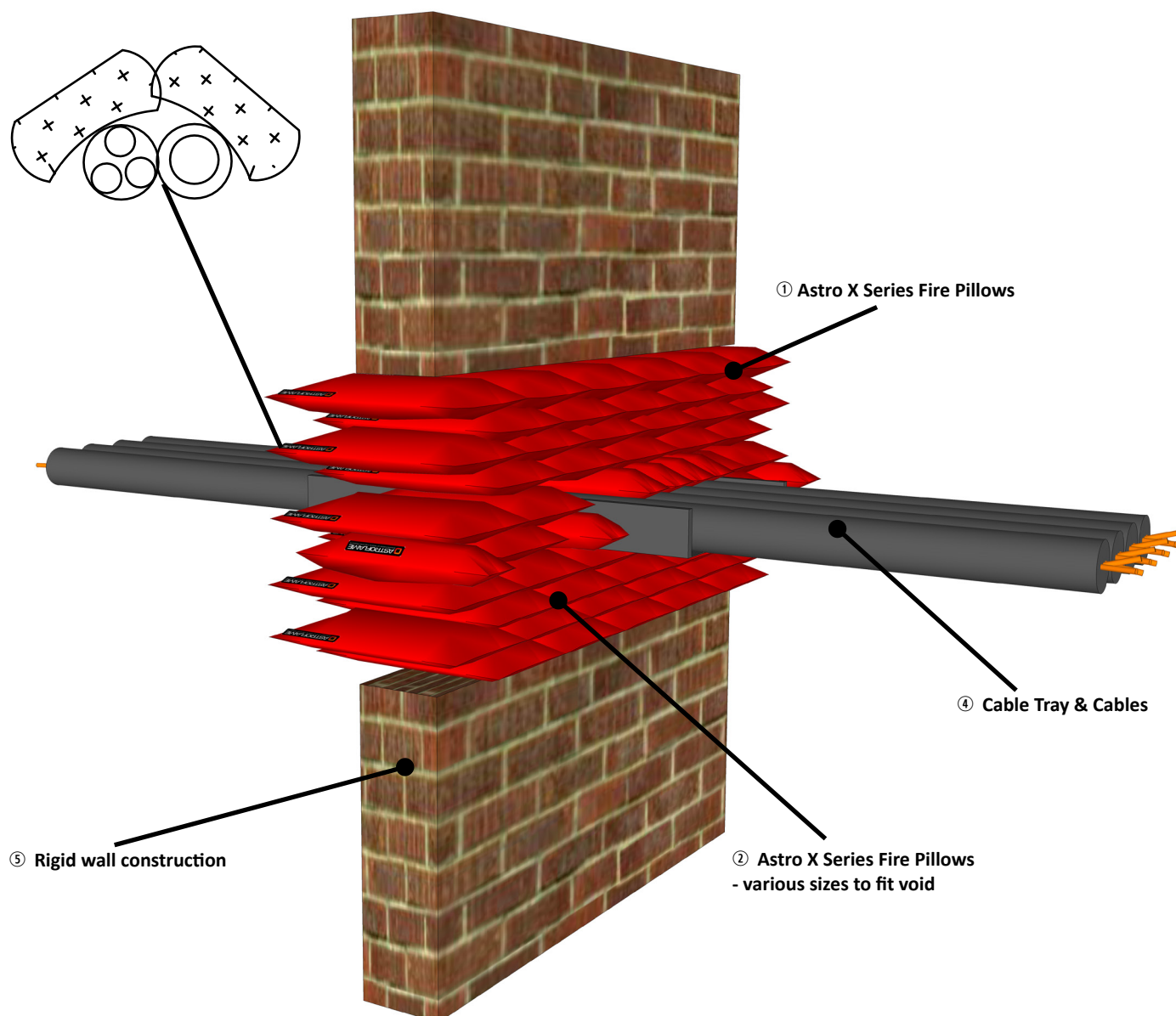
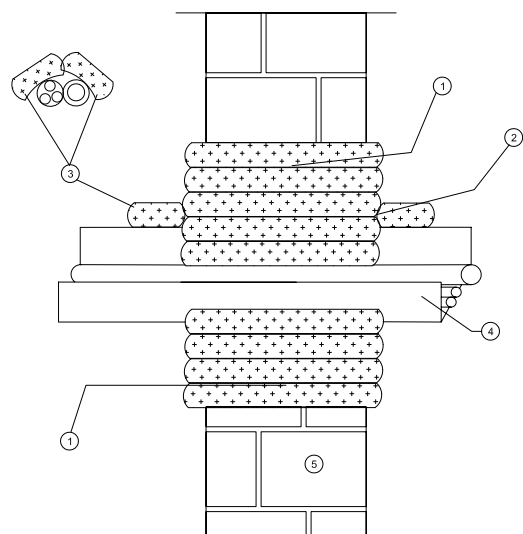




**DESIGN TO ETA 14-0046 & CE-2531-CPR-CXO10300**  
**ASTRO X SERIES FIRE PILLOWS FIRE RESISTANT CABLE & CABLE TRAY PENETRATION SEAL WITH**  
**ADDITIONAL PILLOWS THROUGH RIGID WALL HORIZONTAL ORIENTATION**

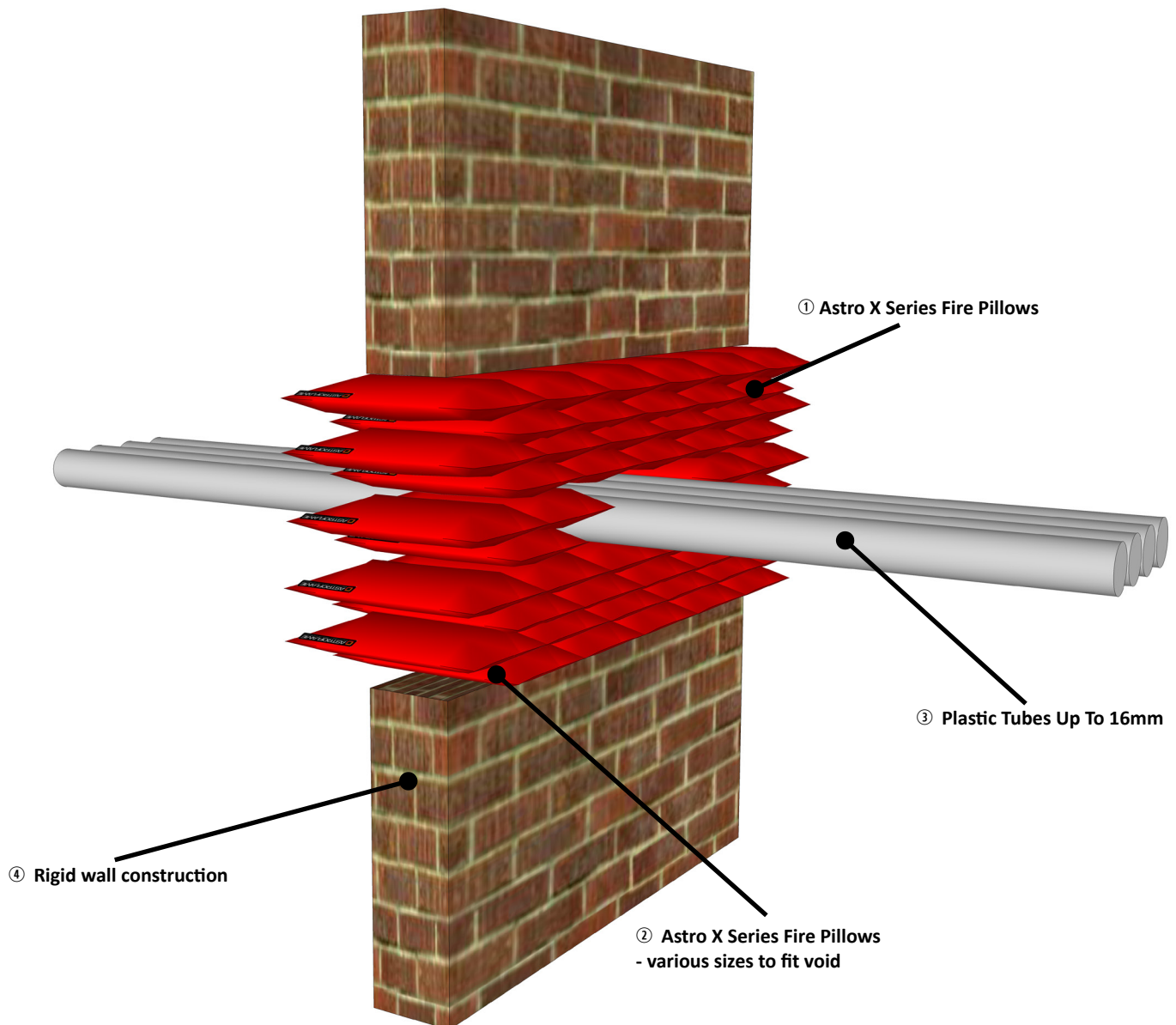
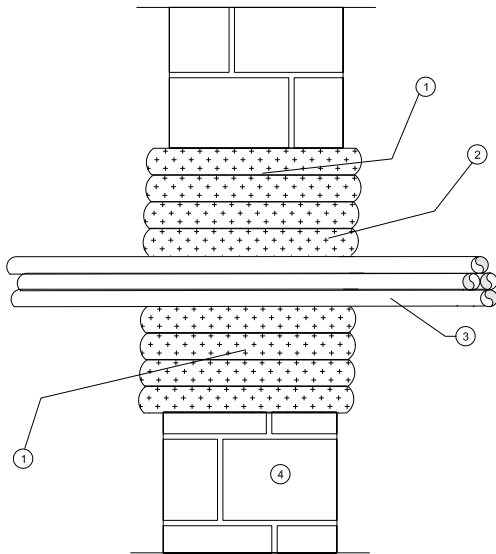


**DESIGN TO ETA 14-0046 & CE-2531-CPR-CXO10300**  
**ASTRO X SERIES FIRE PILLOWS IN FIRE RESISTANT CABLE & CABLE TRAY PENETRATION SEAL WITH PARTIAL ADDITIONAL PILLOWS THROUGH RIGID WALL HORIZONTAL ORIENTATION**

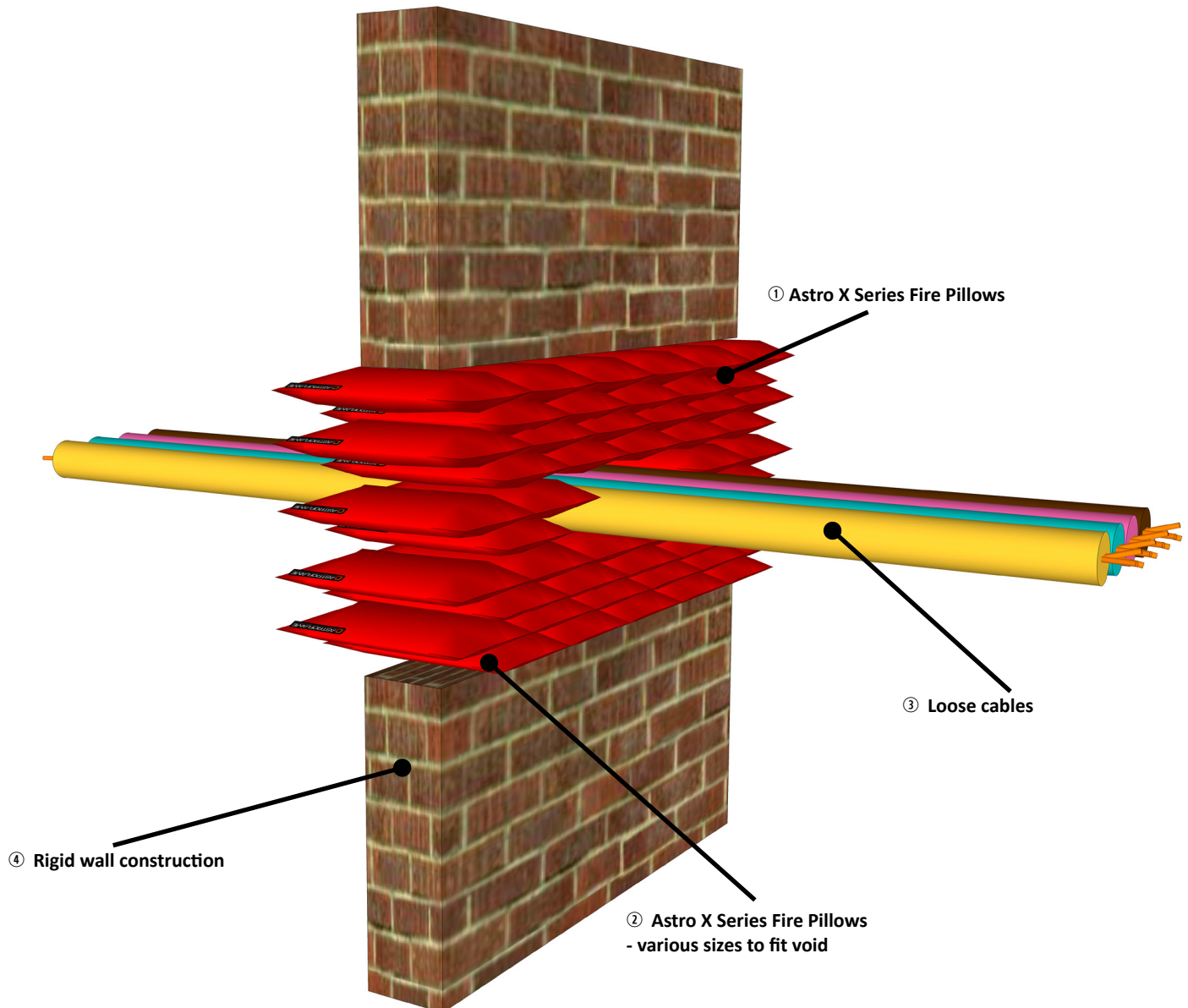
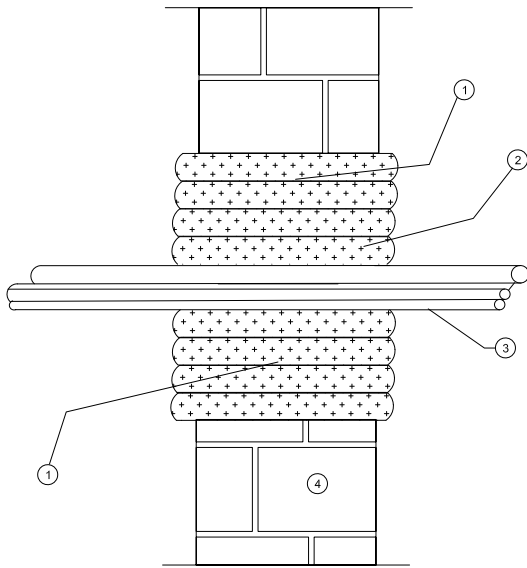




**DESIGN TO ETA 14-0046 & CE-2531-CPR-CXO10300**  
**ASTRO X SERIES FIRE PILLOWS IN FIRE RESISTANT PLASTIC TUBE PENETRATION SEAL THROUGH**  
**RIGID WALL HORIZONTAL ORIENTATION**



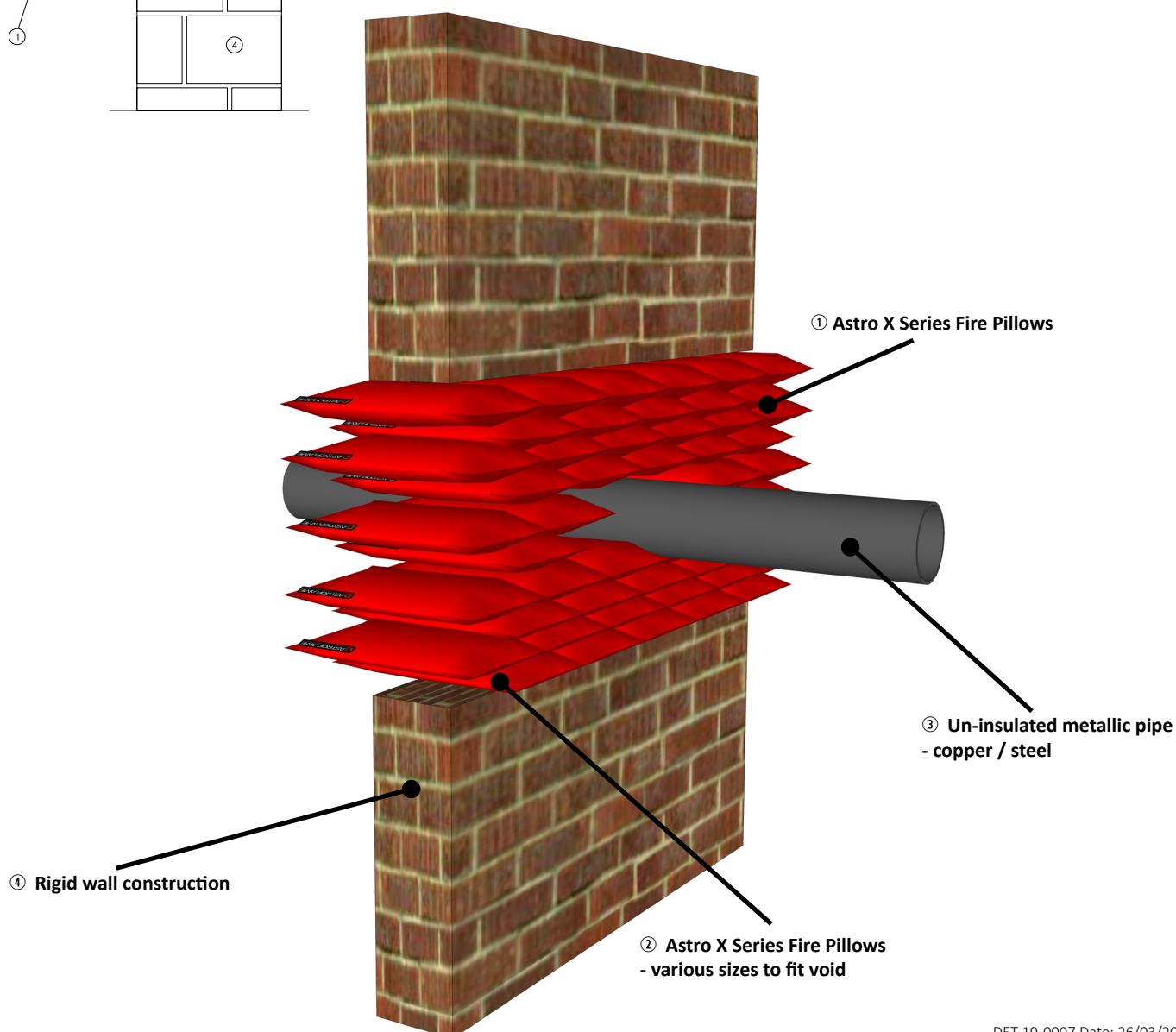
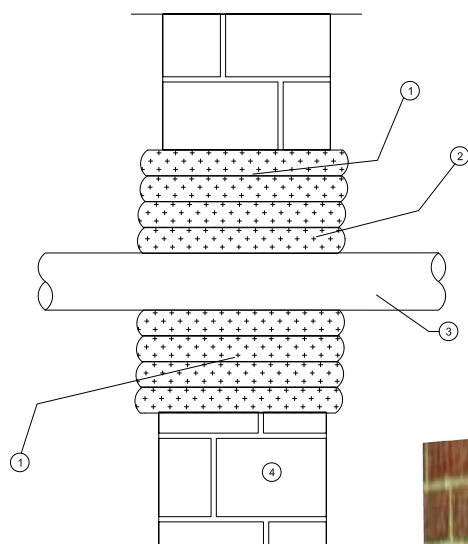
**DESIGN TO ETA 14-0046 & CE-2531-CPR-CXO10300**  
**ASTRO X SERIES FIRE PILLOWS IN FIRE RESISTANT LOOSE CABLES PENETRATION SEAL THROUGH RIGID WALL HORIZONTAL ORIENTATION**



Astro X series Pillow Penetrations Seals 300mm deep, in Rigid Walls 150mm thick (min).	
Services	Classification
165mm Ø x 5.6-14.2mm thick mild steel pipe	E 120 C/U

**DESIGN TO ETA 14-0046 & CE-2531-CPR-CXO10300**

**ASTRO X SERIES FIRE PILLOWS IN FIRE RESISTANT UN-INSULATED METALLIC PIPE PENETRATION  
SEAL THROUGH RIGID WALL HORIZONTAL ORIENTATION**

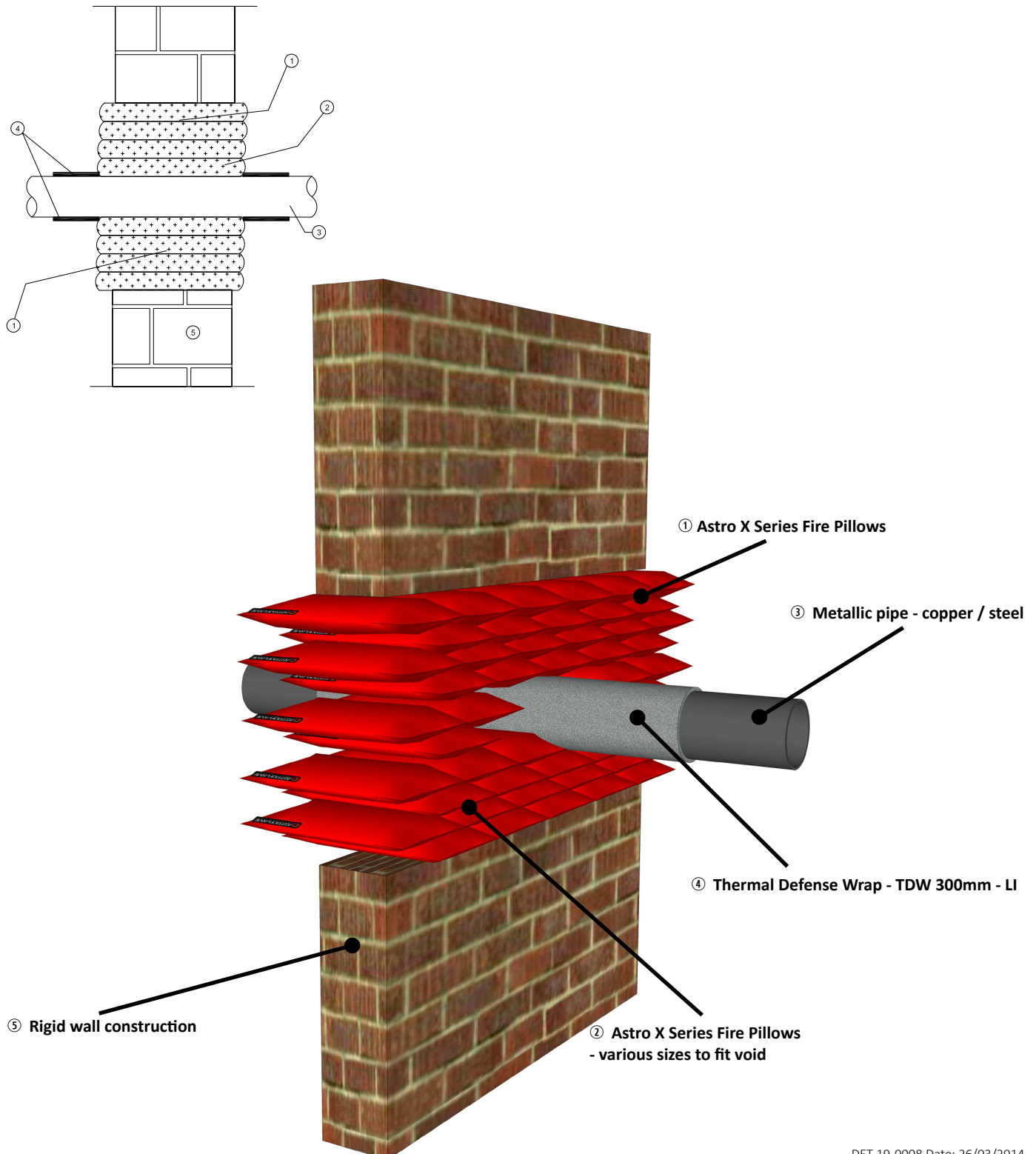


DET 19-0007 Date: 26/03/2014

Astro X series Pillow Fire Penetration Seals 300mm deep, in Rigid Walls 150mm thick (min).	
Services	Classification
48mm Ø x 3.5-14.2mm thick steel pipe with 300mm Local Interrupted (LI) Ast-roflame Thermal Defense Wrap 7mm Thick	EI 120 C/U
113mm Ø x 3.5-14.2mm thick steel pipe with 300mm Local Interrupted (LI) Ast-roflame Thermal Defense Wrap 10mm thick	EI 120 C/U

**DESIGN TO ETA 14-0046 & CE-2531-CPR-CXO10300**

**ASTRO X SERIES FIRE PILLOWS IN FIRE RESISTANT METALLIC PIPE PENETRATION SEAL WITH TDW THROUGH RIGID WALL HORIZONTAL ORIENTATION**

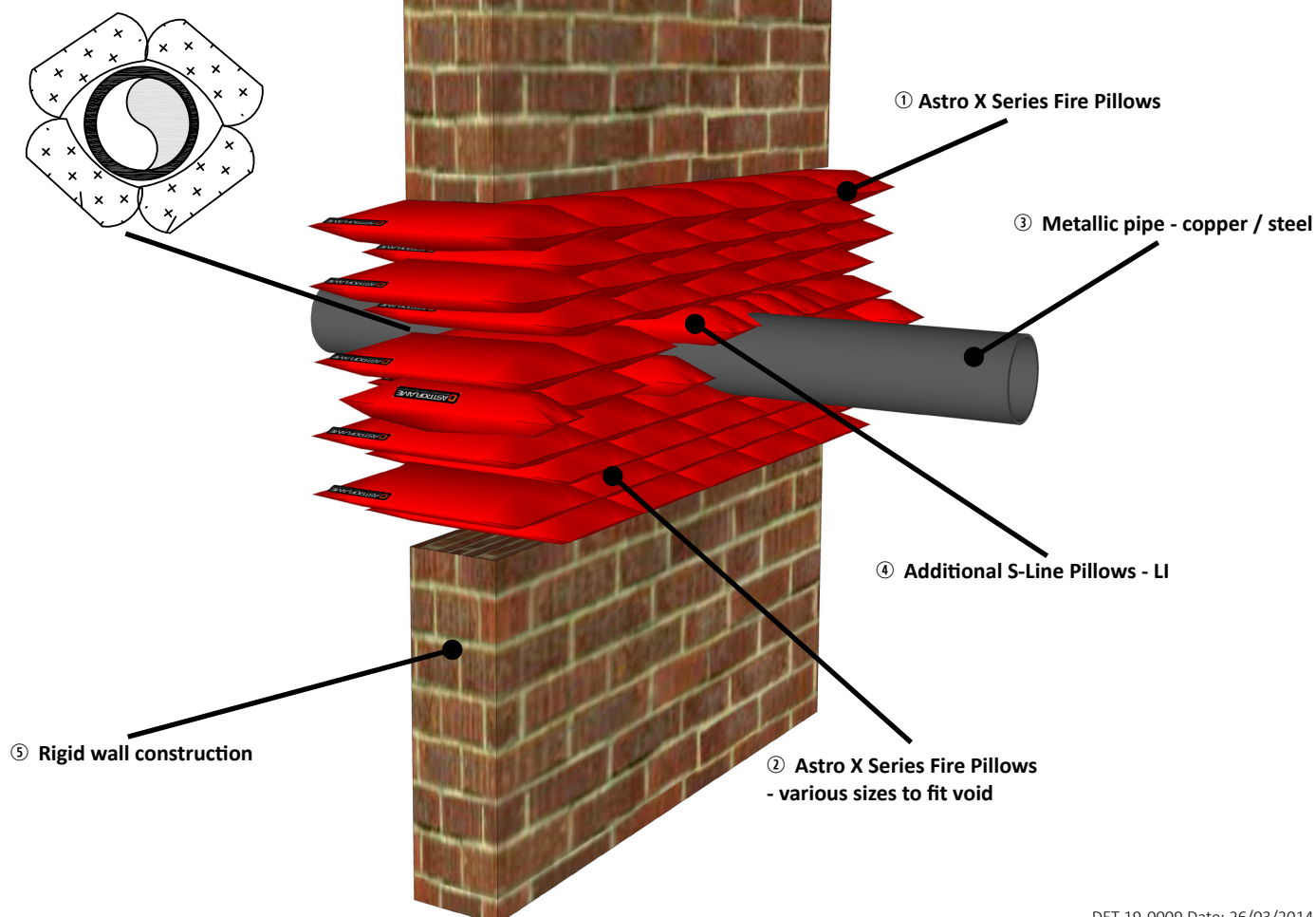
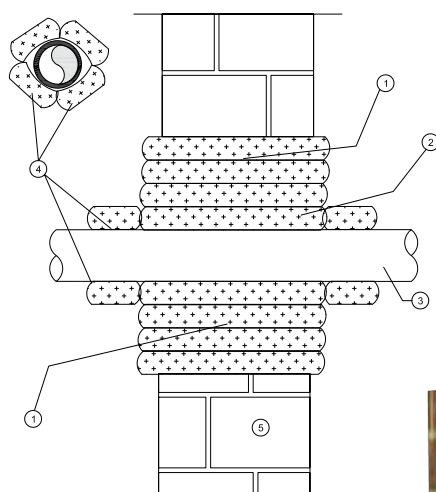


DET 19-0008 Date: 26/03/2014



Astro X series Pillow Fire Pillow Penetration Seals 300mm deep, in Rigid Walls 150mm thick (min).	
Services	Classification
108mm Ø x 1.5-14.2mm thick copper pipe	E 120 C/U, EI 90 C/U

**DESIGN TO ETA 14-0046 & CE-2531-CPR-CXO10300**  
**ASTRO X SERIES FIRE PILLOWS IN FIRE RESISTANT METALLIC PIPE PENETRATION SEAL WITH**  
**ADDITIONAL PILLOWS THROUGH RIGID WALL HORIZONTAL ORIENTATION**

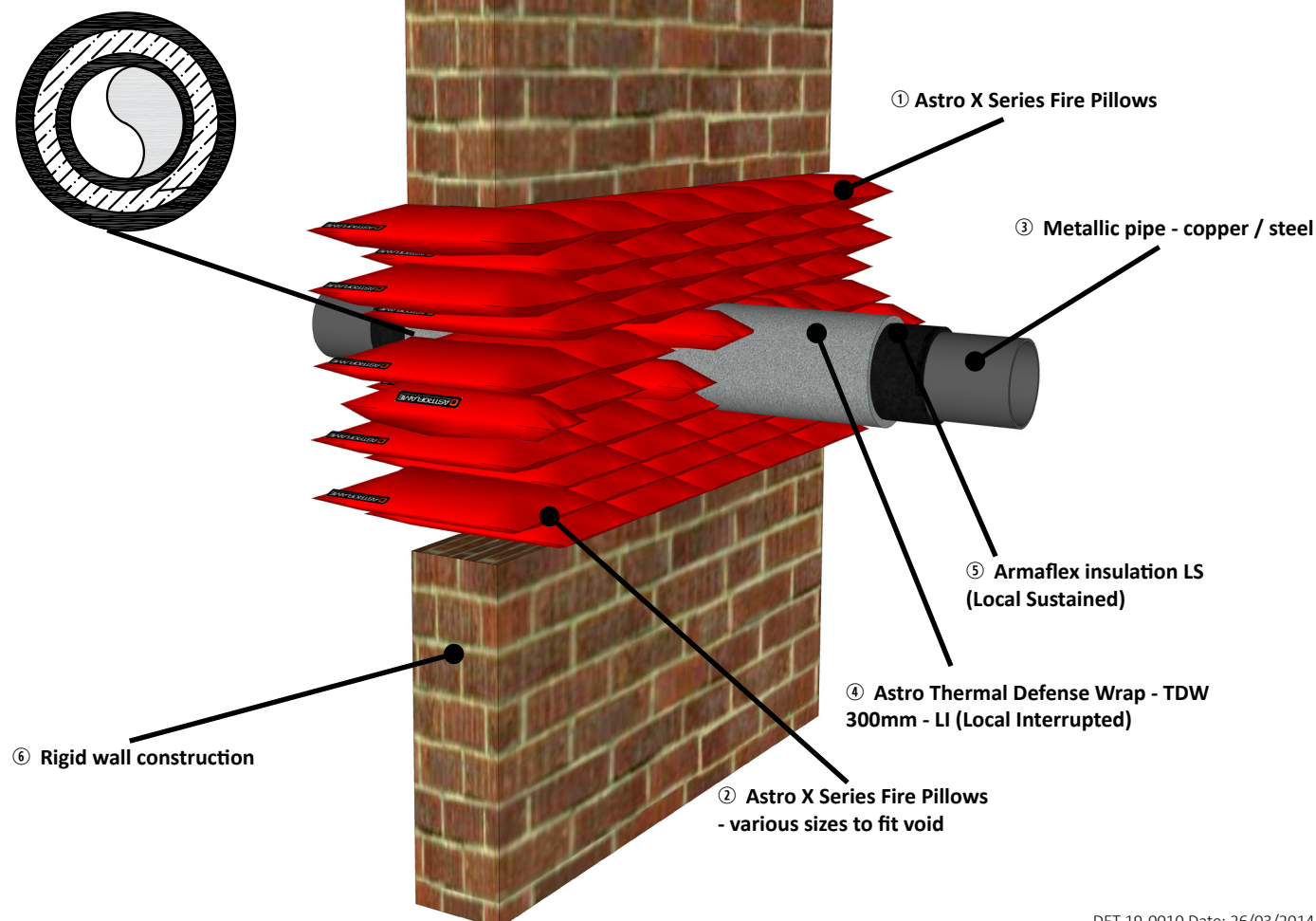
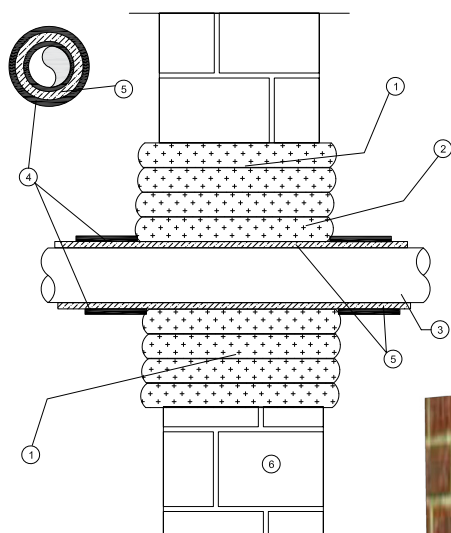


DET 19-0009 Date: 26/03/2014



Astro X series Pillow Penetration Seals 300mm Deep, in Rigid Walls 150mm thick (min).	
Services	Classification
54mm Ø x 1.0-14.2mm thick copper pipe with 2 layers of insulation	EI 120

**DESIGN TO ETA 14-0046 & CE-2531-CPR-CXO10300**  
**ASTRO X SERIES FIRE PILLOWS IN FIRE RESISTANT INSULATED WITH ARMAFLEX METALLIC PIPE PENETRATION SEAL WITH ASTRO TDW THROUGH RIGID WALL HORIZONTAL ORIENTATION**



DET 19-0010 Date: 26/03/2014

---

**3<sup>RD</sup> PARTY ACCREDITATION  
CERTIFIRE CF 615  
HAS BEEN REPLACED BY  
UL 3<sup>RD</sup> PARTY ACCREDITATION  
PLEASE **CLICK HERE** FOR CERTIFICATE  
OR SCAN THE QR CODE:**

---



### Installation

We have technical representatives who provide assistance in the selection and specification of the products on this site and should be consulted for exact installation and product suitability. Ensure an early engagement with ourselves, designers, main contractor and specialist installers before any installation. Other trades and/or manufacturers may need to be consulted. For in-depth information, specification and technical advice please call our Head Office on tel [01329 844 500](tel:01329844500) or email [sales@astroflame.com](mailto:sales@astroflame.com)

### Maintenance

All interested parties, designer, specifier, main contractor and specialist installers should provide access to allow the fire stopping seals to be regularly inspected and maintained, as well as records kept of such maintenance at minimum periods of 12 months, as required by the Regulatory Reform Order, and repaired if necessary. Reference should be made to ASFP TGD 17 – Code of Practice for the Installation and Inspection of Fire Stopping.

### Competency

It is vital that those entrusted to design or install a fire stopping product have the necessary levels of competence to undertake the task professionally and thoroughly. The level of competency required will be commensurate with the expected complexity of the building. All designers must eliminate, reduce or control foreseeable risks that may arise during installation, construction or maintenance when preparing or modifying designs. Clients should ensure that the principal designer and principal contractor carry out their duties under CDM regulations. The ASFP foundation course in passive fire protection provides essential knowledge as part of demonstrating competency and understanding in this key fire protection specialism.

### Additional Notes

Please refer to the ETA/UL-EU sheet for fields of application for this product. For further information on installation requirements please refer to the manufacturer of the services and the wall/floor specification to ensure the compatibility of this product, if in doubt please contact the technical team with services and wall/floor specification on: tel [01329 844 500](tel:01329844500) or email [sales@astroflame.com](mailto:sales@astroflame.com)

As part of our policy of ongoing improvements, we reserve the right to modify, alter or change product specifications without giving notice. Product illustrations are representations only. All information contained in this document is provided for guidance only, and as ASTROFLAME (FIRE SEALS) LTD has no control over the specific application or installation methods of the products, or of the prevailing site conditions, no warranties expressed or implied are intended to be given as to the actual performance of the products mentioned or referred to, and no liability whatsoever will be accepted for any loss, damage or injury arising from the use of the information given of products mentioned or referred to herein.

The above information to the best of our knowledge is true and accurate and based upon current test data and is supplied for your guidance only. Customers should satisfy themselves to the suitability of the product based on the products limitation of applications and that the product is fit for purpose for their intended use and no guarantee is given or implied since the conditions of actual use are beyond our control. ASTROFLAME (FIRE SEALS) LTD, disclaim any liability for loss, damage or other expense arising from the use of information, data or products mentioned or referred to and reserve the right to change any details or specifications without notice. If you are in any doubt as to the suitability of this product for your intended application please contact our technical team on 01329 844500 or email [sales@astroflame.com](mailto:sales@astroflame.com) and we will contact you.