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Authorised and notified according to Article 29 of the Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011

European Technical Assessment ETA-17/0651 of 18/08/2017

General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the construction product:	Würth Fire Protection Pillow
Product family to which the above construction product belongs:	Pillows for fire sealing and fire stopping purposes.
Manufacturer:	Würth International AG Aspermontstrasse 1 CH-7000 Chur T +41 81 558 04 75 F +41 81 558 14 75 Internet www.wurth-international.com
Manufacturing plant:	Plant 4
This European Technical Assessment contains:	13 pages including 4 annex which form an integral part of the document
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:	Guideline for European technical approval of "Fire Stopping and Fire Sealing Products", ETAG 026 Part 2: "Penetration Seals", used as European Assessment Document (EAD) according to Article 66 Paragraph 3 of Regulation (EU) No 305/2011.
This version replaces:	-

II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of product and intended use

Technical description of the product

The Würth Fire Protection Pillow. Detailed specification and data for identification and performance criteria relevant for fire safety with regard to the construction products are given in Annex 1-4.:

1) Würth Fire Protection Pillow are a compressible material that consist of a reactive material encased in a bag.
2) Würth Fire Protection Pillow are supplied in three different sizes referenced Würth Fire Protection Pillow S (250x60x30 mm, weight approximately 120 g) Würth Fire Protection Pillow M (250x130x35 mm weight approximately 650 g) and Würth Fire Protection Pillow L (250x180x35 mm weight approximately 940 g).
3) Installation of the Würth Fire Protection Pillow see annex 2.

Additional components used is the intumescent material Würth Band IS-P a black strip and has a weight pr. unit area of 1.34 kg/m^2 for a nominal thickness of 1.0 mm and furthermore a weight pr. unit area of 3.32 kg/m^2 for a nominal thickness of 3.0 mm. The construction product Würth Band IS-P is intended for use as components with a fire protection effect in products made from Steel, Copper, Aluminium, PVC, PE.

Specification of the intended use in accordance with the applicable European Assessment Document

The definition of the intended use of the construction product Würth Fire Protection Pillow is to temporarily or permanently reinstate the fire resistance performance of fire rated flexible wall constructions, rigid wall constructions and rigid floor constructions of masonry, aerated concrete or concrete, where they are penetrated by various services.

The specific elements of construction in which the Würth Fire Protection Pillow can be used to provide a penetration seal in, are as follows:

- Flexible walls (drywalls). The wall shall have a minimum thickness of ≥ 100 mm and comprise timber or steel studs according to EN14195. The wall shall be lined on both faces with minimum 2 layer of gypsum boards (minimum thickness 12,5 mm) according to EN 520. All individual compartments between the studs shall be filled with a minimum of 40 mm of stone wool insulation with minimum density of 100 kg/m³. For the stud walls there must be a minimum distance of ≥ 350 mm of the penetration seal to any stud and the cavity between the penetration seal and the stud shall be closed with a minimum 350 mm of insulation with classification Euro class A1 or A2 according to EN 13501 – 1 in the cavity between stud and seal. The wall construction shall be classification according to EN13501 – 2.
- Rigid walls. Since the test has been carried out in light weight flexible partitioning walls the classification also covers rigid walls with the same minimum thickness of ≥ 100 mm and density of the originally tested wall. The rigid wall shall be classified in accordance with EN 13501 – 2 for the required fire resistance period.
- Rigid floors. The floor must have a minimum thickness of ≥ 150 mm and comprise of aerated concrete with a minimum density of 700 kg/m³. Since the test has been carried out in aerated concrete, the classification also covers concrete and masonry with the same minimum thickness and density of the originally tested wall. The rigid floor shall be classified in accordance with EN 13501 – 2 for the required fire resistance period.

The supporting construction must be classified in accordance with EN 13501-2 for required fire resistance period. The Würth Fire Protection Pillow may be used to provide a penetration seal with the following specific services.:

- Sheathed as well as not sheated cables according to EN 1366-3:2009
- Empty Schott (Blank seal) according to EN 1366-3:2009
- Ductwork, plastic and steel pipe according to EN 1366-3:2009.

All electrical services, sheathed as well as not sheated cables and bundles, ductwork, plastic and steel pipe according to EN 1366-3:2009 shall be supported on both sides of the surface of the wall in a distance of ≤ 225 mm. For the floor construction it shall be supported in a distance of ≤ 500 mm from the upper surface of the floor.

The performances given in Section 3 exclusively relate to this penetration seals (e.g. with respect to the design and arrangement of the components of the penetration seals and the type and position of the services, see annexes 1-4).

The verification and assessment methods on which this European Technical Assessment is based, lead to the assumption of a working life for Würth Fire Protection Pillow of 10 years.

The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, but are to be regarded only as a means for choosing the right product in relation to the expected economically reasonable working life of the works.

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

Characteristic	Assessment of characteristic
3.2 Safety in case of fire (ER 2)	
Reaction to fire	The Würth Fire Protection Pillow is classified as **Euroclass E** in accordance with EN 13501-1 The Würth Band IS-P intumescent is classified as **Euroclass E** in accordance with EN 13501-1.
Resistance to fire	The Würth Fire Protection Pillow used as described in annex 1-4 is classified as **EI 90 – EI 120 – EI 180** in accordance with EN 13501-2
3.3 Hygiene, health and the environment (ER 3)	
Air permeability	**NPD** – (No Performance Assessed)
Water permeability	**NPD** – (No Performance Assessed)
Release of dangerous substances	**NPD** – (No Performance Assessed)
3.7 Sustainable use of natural resources (ER 7)	**NPD** – (No Performance Assessed)

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.

3.9 General aspects relating to fitness for use

Durability and serviceability:

The verification of durability and serviceability is part of testing the essential characteristics. The construction product called Würth Fire Protection Pillow fulfils the requirements according to ETAG 026-Part 2 clause 2.4.12.1.3.3 for use Category: Z_2 without expecting significant changes of the characteristics relevant for fire sealing and fire stopping properties and the result performance.

The construction product called Würth Fire Protection Pillow is intended for use at internal conditions with humidity classes other than Z_2 excluding temperatures below 0 [°C] Although a penetration seal is intended for indoor applications only, the construction process may result in it being subjected to more exposed conditions for a period before the building envelope is closed. For this case provisions shall be made to protect temporarily exposed penetration seals.

The proof and its assessment concerning applicability under climate conditions were carried out in accordance with EOTA TR 024 clause 4.2. thermal conditions (23±3) [°C] and RH (50±5) [%]

Property	Parameter	Method
Appearance	Visually examined OK	EOTA TR 024 - B.12
Tear strength of fabric	891,9 [N/50mm] max ±15 [%] OK	EOTA TR 024 - B.5.4.1 in accordance with EN 13934-1
Tear strength of seams	178,1 [N/50mm] max ±15 [%] OK 97,7 [N/50mm] max ±15 [%] OK (Under Heat)	EOTA TR 024 - B.5.4.2 in accordance with EN 13935-1
Filling material Expansion ratio	1,3 [mm/g] max ±15 [%] OK	EOTA TR 024 – 3.1.11

4 Assessment and verification of constancy of performance (AVCP)

4.1 AVCP system

According to the decision 1999/454/EC of the European Commission, as amended by 2001/596/EC, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is 1.

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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark prior to CE marking

Issued in Copenhagen on 2017-08-18 by

Thomas Bruun
Managing Director, ETA-Danmark

Annex 1
Product details, definitions and specification of intended use
The Würth Fire Protection Pillow

The product specification details of the Würth Fire Protection Pillow:

Manufacturer	**Description**
Plant 4	Würth Fire Protection Pillow for fire stopping purpose
The Würth Fire Protection Pillow Fire Protection is designed for the sealing of cables and electric lines in solid walls or ceilings and drywall partitions. The Würth Fire Protection Pillow is suitable for permanent and temporary sealing.	

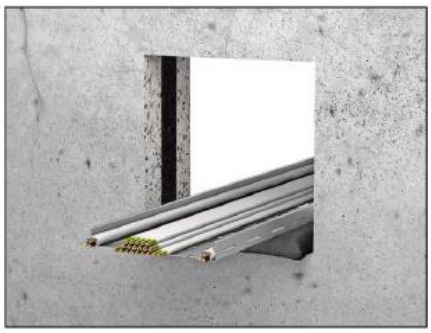
Additional components

Manufacturer	**Description**
Plant 4	Würth Band IS-P, for a detailed product information please see ETA-15/0719 dated 2015-12-02 from ETA-Denmark.
The intumescent material Würth Band IS-P is a black strip and has a weight pr. unit area of 1.34 kg/m^2 for a nominal thickness of 1.0 mm and furthermore a weight pr. unit area of 3.32 kg/m^2 for a nominal thickness of 3.0 mm. The construction product Würth Band IS-P are intended for use as components with a fire protection effect in products made from Steel, Copper, Aluminium, PVC, PE.	

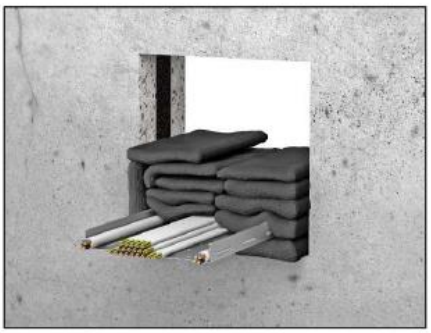
Annex 2

Description of the installation of the Würth Fire Protection Pillow, under which the test for the fire resistance performance was determined.

Clean the aperture and remove all loose parts. Check the correct support distances for both and cable trays for wall and floor constructions.

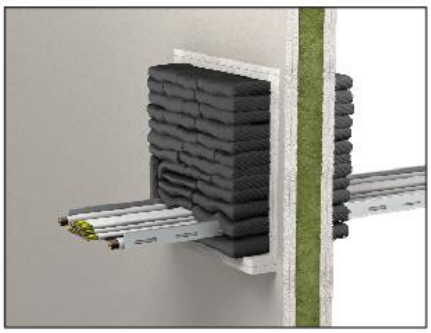


If possible, provide one layer of pillows underneath the cable bundle or cable tray.



Place all other layers of fire protection pillows very tightly around the cables. Therefore the use of pillows in different sizes is recommended.

A structure thickness of < 250 mm must be increased with non-combustible building panels to the required thickness of 250 mm. Use a steel grid to support the fire protection pillows from bottom side of the opening.



The application in ≥ 100mm drywall partitions is possible.

Make sure that the fire protection pillows are installed in a staggered pattern.

Finally apply the label.

Annex 3
Description of the test conditions concerning the resistance to fire for the Würth Fire Protection Pillow

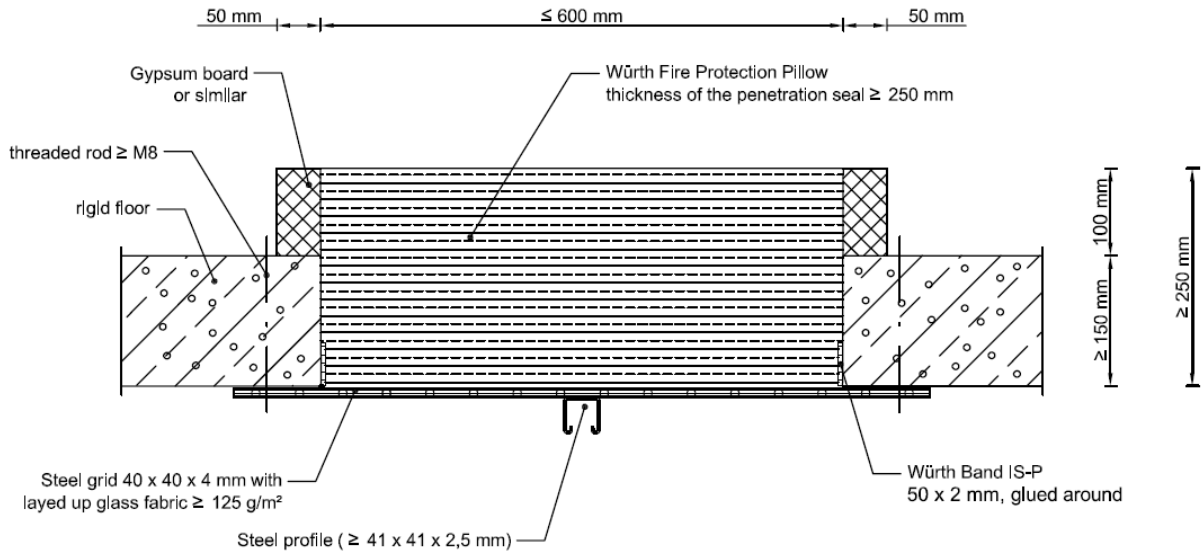
Würth Fire Protection Pillow have been tested in accordance with EN 1363-1:2012 and EN1366-3:2009, installed in apertures in flexible walls (drywalls) with a minimum thickness of ≥ 100 mm lined on both faces with minimum 2 layer of gypsum boards (minimum thickness 12,5 mm) according to EN 520. All individual compartments between the studs shall be filled with a minimum of 40 mm of stone wool insulation with minimum density of 100 kg/m^3 and Rigid floors with a minimum thickness of ≥ 150 mm and comprise aerated concrete with a minimum density of 700 kg/m^3.

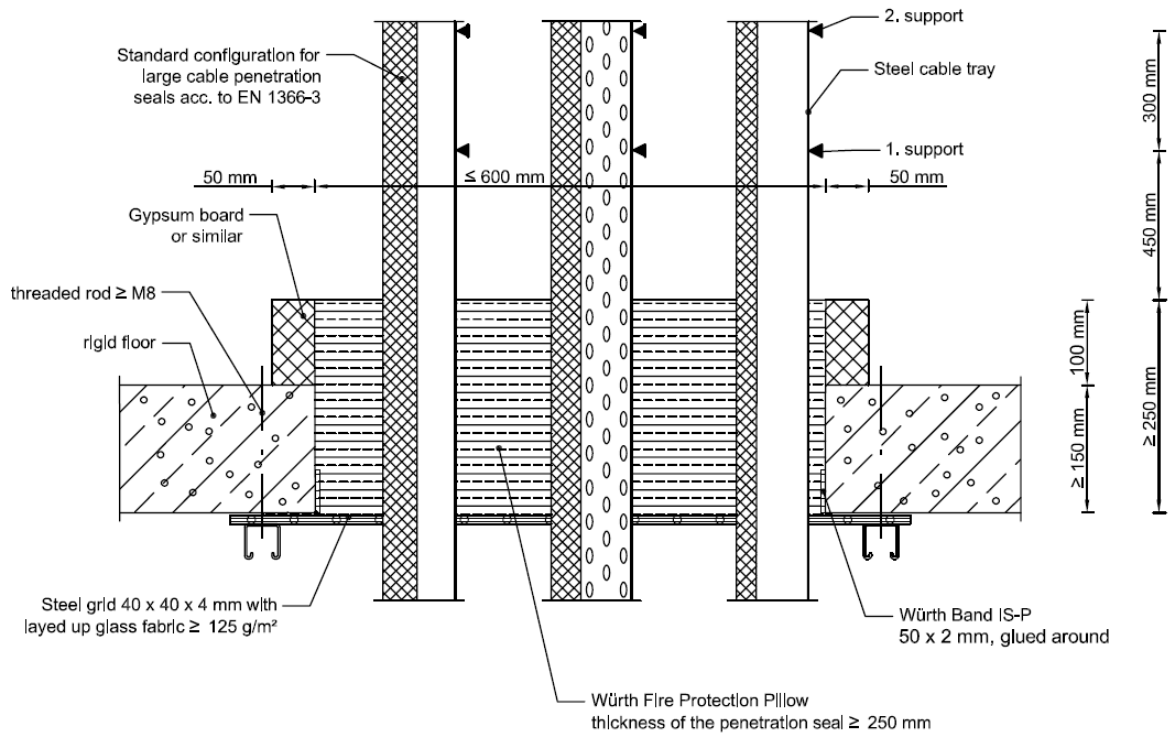
The classification of the resistance to fire performance has been carried out in accordance with EN13501 – 2:2007+A1:2009. Penetration seals made from Würth Fire Protection Pillow with additional materials and services are classified according to Annex 4. The classification is valid for services running through openings of maximum dimensions of 600 * 600 mm (Width * Height) running through:

- Flexible (drywalls) or rigid walls (masonry, aerated concrete or concrete) with a minimum thickness of ≥ 100 mm and with a density the as the originally tested wall.

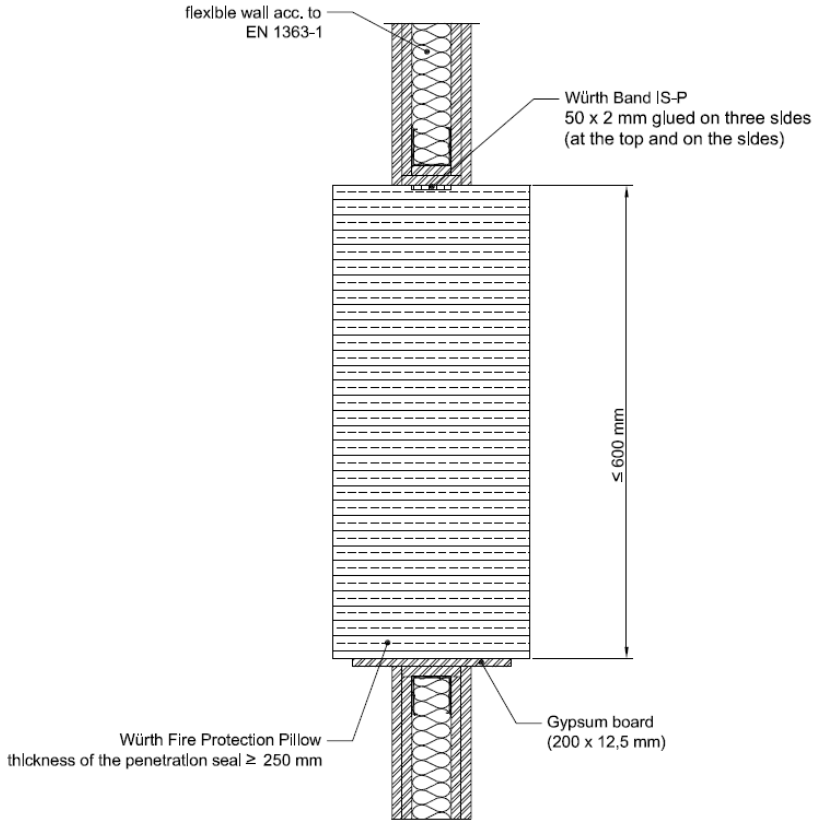
- Rigid floors of aerated concrete, concrete and masonry of a minimum thickness of ≥ 150 mm with a minimum density of 700 kg/m^3.

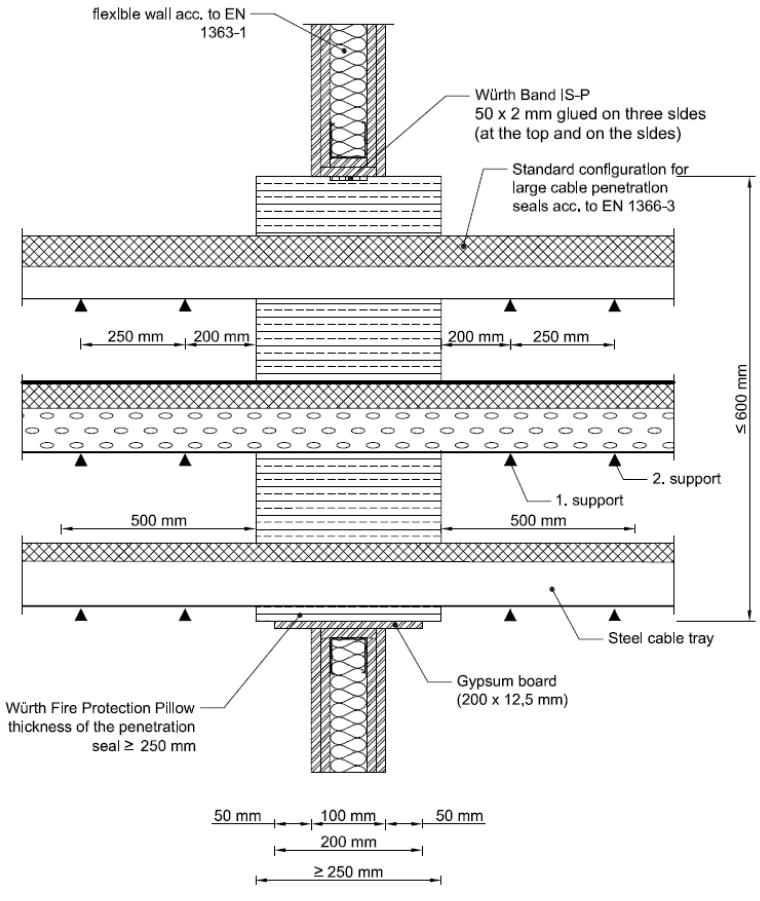
Würth Fire Protection Pillow in rigid floors





Würth Fire Protection Pillow in flexible walls or rigid walls





Annex 4
Resistance to Fire, classification of Würth Fire Protection Pillow

The classification of Würth Fire Protection Pillow in flexible and rigid wall constructions thickness of ≥ 100 mm is declared under the following conditions in accordance with EN13501 – 2:2007+A1:2009:

Penetration seal / Services	The classification of Würth Fire Protection Pillow in accordance with the mounting orientation in flexible and rigid wall constructions thickness of ≥ 100 mm. E = Integrity I = Insulation
All sheathed cable types Ø ≤ 21 mm (cable group 1 according to EN 1366-3:2009)	E 120 EI 120
All sheathed cable types Ø ≤ 50 mm (cable group 2 according to EN 1366-3:2009)	E 120 EI 120
All sheathed cable types Ø ≤ 80mm (cable group 3 according to EN 1366-3:2009)	E 120 EI 90
Cable bundles Ø ≤ 100mm (cable group 4 according to EN 1366-3:2009)	E 120 EI 120
Not sheathed cable types Ø ≤ 24mm (cable group 5 according to EN 1366-3:2009)	E 120 EI 120
Plastic and steel pipe end configuration C/C Ø ≤ 16mm (cable group 6 according to EN 1366-3:2009)	E 120 EI 120
Empty Schott	E 120 EI 120

The classification of Würth Fire Protection Pillow in rigid floor constructions thickness of ≥ 150 mm is declared under the following conditions in accordance with EN13501 – 2:2007+A1:2009:

Penetration seal / Services	The classification of Würth Fire Protection Pillow in accordance with the mounting orientation in rigid floor constructions thickness of ≥ 150 mm. E = Integrity I = Insulation	
	Continuous trays and Ladders	Discontinuous trays and Ladders
All sheathed cable types Ø ≤ 21 mm (cable group 1 according to EN 1366-3:2009)	E 180 EI 180	E 180 EI 180
All sheathed cable types Ø ≤ 50 mm (cable group 2 according to EN 1366-3:2009)	E 180 EI 120	E 180 EI 90
All sheathed cable types Ø ≤ 80mm (cable group 3 according to EN 1366-3:2009)	E 180 EI 180	E 180 EI 90
Cable bundles Ø ≤ 100mm (cable group 4 according to EN 1366-3:2009)	E 180 EI 120	E 180 EI 120
Not sheathed cable types Ø ≤ 24mm (cable group 5 according to EN 1366-3:2009)	E 180 EI 120	E 180 EI 90
Plastic and steel pipe end configuration C/C Ø ≤ 16mm (cable group 6 according to EN 1366-3:2009)	E 180 EI 180	E 180 EI 180
Empty Schott	E 120 EI 120	E 120 EI 120

The direct field of application for Würth Fire Protection Pillow is derived from tests according to standard EN 1366-3:2009. The classification is declared according to EN13501 – 2:2007+A1:2009 under the following conditions:

Field of application (Chapter 4.3 of the classification report)	• Test results and classifications are applicable only for the orientation in which the penetration was tested, therefore in floors (horizontal) and walls (vertical). • Flexible walls (drywalls). The wall shall have a minimum thickness of ≥ 100 mm and comprise timber or steel studs according to EN14195. The wall shall be lined on both faces with minimum 2 layer of gypsum boards (minimum thickness 12,5 mm) according to EN 520. All individual compartments between the studs shall be filled with a minimum of 40 mm of stone wool insulation with minimum density of 100 kg/m³. For the stud walls there must be a minimum distance of ≥ 350 mm of the penetration seal to any stud and the cavity between the penetration seal and the stud shall be closed with a minimum 350 mm of insulation with classification Euro class A1 or A2 according to EN 13501 – 1 in the cavity between stud and seal. The wall construction shall be classification according to EN13501 – 2. Since the test and classification has been carried out in light weight flexible walls (drywalls) the classification also cover and may be applied to rigid walls of a thickness and density equal to or greater than that of the supporting construction used in the test. The rigid wall shall be classified in accordance with EN 13501 – 2 for the required fire resistance period. • Rigid floors. The floor must have a minimum thickness of ≥ 150 mm and comprise of aerated concrete with a minimum density of 700 kg/m³. Since the test and classification has been carried out in aerated concrete, the classification also cover and may be applied to concrete or masonry separating elements of a thickness and density equal to or greater than that of the supporting construction used in the test. The rigid floor shall be classified in accordance with EN 13501 – 2 for the required fire resistance period. • All electrical services, sheathed as well as not sheated cables and bundles, ductwork, plastic and steel pipe according to EN 1366-3:2009. Shall be supported on both sides of the wall schott in a distance of ≤ 225 mm. For the floor construction it shall be supporter in a distance of ≤ 500 mm from the top of the schott. • Sheathed as well as not sheated cables and bundles can be sealed off in zero clearance for cable ladder in bundles to 3 pieces. • A minimum distance of 100 mm applies to other wall schotts.
Maximum size of the void	• 600 x 600 mm