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Designated according to Article 29 of Regulation (EU) No 305/2011

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

European Technical Assessment

ETA 18/0398 of 24/07/2018

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011:	**UL International (UK) Ltd**
Trade name of the construction product	Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal
Product family to which the construction product belongs	Internal partition kits
Manufacturer	Hilti AG Feldkircherstrasse 100 9494 Schaan Liechtenstein
Manufacturing plant(s)	Hilti Werk 4a
This European Technical Assessment contains	18 pages including 4 Annexes which form an integral part of this assessment
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	Guideline for European technical approval of Internal Partition Kits for Use as Non-loadbearing Walls.: ETAG 003 (used as European Assessment Document)

I. SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product (kit)

1.1 Definition of the construction product

1. The Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal consist of a galvanised steel frame with a lining of gypsum plasterboards. The joints between the plaster boards are finished with joint tape and gypsum-based joint filler. Hilti CFS-TTS E Firestop Top Track Seal is a compressible strip installed around the horizontal top track of a flexible wall. It is a U-shaped strip based on flexible polyurethane foam in a plastic foil. For details of the seal design depending on orientation, building elements forming the joint/gap or backfilling material and the related classifications see Annex 3.
2. For further details on Hilti CFS-TTS E Firestop Top Track Seal see Annex 1.
3. For a description of the installation procedure see Annex 3.

1.2 Components of the Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal

1. Metallic profiles

   Metal framing components for drywall partitions in accordance with EN 14195. Details about dimensions are given in Annex 2.

2. Boards

   Gypsum plasterboards in accordance with EN 520. Details about classifications and dimensions are given in Annex 2.

3. Fixings

   mechanical fasteners, including nails, screws and staples, intended to be used for the fixing of the framing components and gypsum plasterboard, in accordance with EN 14566. More details for specific configurations are given in Annex 2.

4. Jointing materials

   Gypsum-based jointing materials for gypsum boards, in accordance with EN 13963.

5. Insulation material (optional)

   Mineral wool in accordance with EN 13162. More details are given in Annex 2.

6. Hilti CFS-TTS E Firestop Top Track Seal

   The application of Hilti CFS-TTS E Firestop Top Track Seal is to provide fire resistance performance in the area of the top track of the partition. The Hilti CFS-TTS E Firestop Top Track Seal seals the respective track which is freestanding from the vertical studs and boards of the flexible wall construction and absorb movements generated by displacements of a surrounding building construction.

2 Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): ETAG 003

2.1 Intended use

The Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal are foreseen to be used in:

Use category I as specified in clauses 6.4.1 and 6.7.1 of ETAG 003, Zones accessible primarily to those with high incentive to exercise care. Small risk of accidents occurring and of misuse. This corresponds to the Area category as specified in Eurocode 1 EN 1991-1-1:2002 of A - Areas for domestic and residential activities, and B – Office areas

Use category II as specified in clauses 6.4.1 and 6.7.1 of ETAG 003, Zones accessible primarily to those with some incentive to exercise care. Some risk of accidents occurring and of misuse. This corresponds to the Area category as specified in Eurocode 1 EN 1991-1-1:2002 of A - Areas for domestic and residential activities, and B – Office areas

More details about the intended use can be found in Appendix 2.

The partitions are to be installed between rigid floors and ceilings. The floors must have a minimum thickness of 100 mm and comprise concrete with a minimum density of 2400 kg/m^3.

In some cases (see Annex 2 for more details) the partitions have been tested to demonstrate the performance when installed below a metal deck ceiling/floor.

2.2 Working life

The provisions made in this European Technical Assessment are based on an assumed intended working life of the Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal for the intended use of 25 years, provided that Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal are subject to appropriate use and maintenance (see chapter 7 of ETAG 003). These provisions are based upon the current state of art and the available knowledge and experience.

An "assumed intended working life" means that it is expected that, when an assessment following the ETAG-provisions is made, and when this working life has elapsed, the real working life may be, in normal use conditions, considerably longer without major degradation affecting the essential requirements.

The indications given as to the working life of Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal cannot be interpreted as a guarantee given by the producer or the approval body. They shall only be regarded as a means for the specifiers to choose the appropriate criteria for internal partition kits in relation to the expected, economically reasonable working life of the works..

2.3 General Assumptions

It is assumed that damages to the Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal are repaired accordingly.

2.4 Manufacturing

The European Technical Assessment is issued for the product on the basis of agreed data / information, deposited with UL International (UK) Ltd, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data / information being incorrect, should be notified to UL International (UK) Ltd before the changes are introduced.

UL International (UK) Ltd will decide whether or not such changes affect the European Technical Assessment and consequently the validity of the CE marking on the basis of the European Technical Assessment and if so whether further assessment or alterations to the European Technical Assessment, shall be necessary.

2.5 Installation

See Annex 3

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

Basic requirements for construction works	Essential characteristic	Method of verification	Performance
BWR 2	Reaction to fire	EN 13501-1: 2007+A1:2009	NPD
	Resistance to fire	EN 13501-2: 2007+A1:2009	Clause 3.1.2 and Annex 2 of the ETA
BWR 3	Air permeability (material property)	No performance assessed	
	Water permeability (material property)	Not relevant	
	Content and/or release of dangerous substances	Regulation (EC) No 1272/2008 and EOTA TR 034 (General BWR 3 Checklist for EADs/ETAs – Dangerous substances), edition October 2015	Declaration by the manufacturer
BWR 4	Resistance to horizontal linear static load	NPD	
	Resistance to dynamic loads	Use category II	
	Safety against personal injury by contact	No sharp and cutting edges No risk of abrasion or cutting people by nature of surfaces	
BWR 5	Airborne sound insulation	EN ISO 10140-1 and EN ISO 10140-2, EN ISO 717-1	Clause 3.4.1 of the ETA
BWR 6	Thermal resistance	No performance assessed	
	Thermal inertia	No performance assessed	
	Water vapour permeability	No performance assessed	
Aspects of durability and servicability	Robustness and rigidity: - Resistance to dynamic loads - Resistance to eccentric vertical loads - Resistance to point loads - Rigidity of partitions for ceramic tiling	Use category II - see Annex 2 Loading category A - see Annex 2 No performance assessed No performance assessed	
	Resistance to deterioration caused by: - physical agents - chemical agents - biological agents	No performance assessed	

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

The reaction to fire classification for Hilti CFS-TTS E Firestop Top Track Seal is class E in accordance with EN 13501-1:2007 +A1:2009.

The reaction to fire classification of the metal framing components is A1 in accordance with EN 13501-1:2007 +A1:2009, as defined by Commission Decision 96/603/EC, as amended.

The reaction to fire classification of the gypsum plasterboard lining is A2-s1, d0 in accordance with EN 13501-1:2007 +A1:2009, as defined by Commission Decision 2003/43/EC.

The minimum reaction to fire classification for the (optional) mineral wool insulation material must be A2-s3, d2 in accordance with EN 13501-1:2007 +A1:2009.

3.1.2 Resistance to fire

Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal have been tested in accordance with EN 1364-1:2015. Based upon these test results and the field of direct application specified within EN 1364-1:2015, Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal have been classified in accordance with EN 13501-2: 2007 +A1:2009, as shown in Annex 2.

3.2 Hygiene, health and environment (BWR 3)

3.2.1 Release of dangerous substances

According to the manufacturer's declaration, the product specification has been compared with the list of dangerous substances of the European Commission to verify that that it does not contain such substances above the acceptable limits.

A written declaration in this respect was submitted by the ETA-holder.

In addition to the specific clauses relating to dangerous substances contained in this ETA, 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 Product Regulation, these requirements need also to be complied with, when and where they apply.

3.3 Safety and accessibility in use (BWR 4)

3.3.1 Mechanical resistance and stability – resistance to dynamic loads

Resistance to structural damage from soft body impact load – 50 kg bag:
Testing of partitions for resistance to impact from a large soft body is performed as described in ISO 7892:1988, and ISO/DIS 7893:1990, with amendments and modifications as described in Annexes C and D to the ETAG 003.

Resistance to structural damage from hard body impact load – 1 kg steel ball:
Testing of partitions for resistance to impacts from a small hard body is performed as described in ISO 7892:1988, and ISO/DIS 7893:1990, with amendments and modifications as described in Annexes C and D to the ETAG 003.

Resistance to structural damage from eccentric vertical load – Testing of partitions for support of heavy eccentric vertical downward load is performed as described in ISO/DIS 8413:1990, with amendments and modifications as described in Annexes C and D to ETAG 003.

More details are given in Annex 2.

Resistance to horizontal linear static load – no performance determined

3.3.2. Presence of sharp or cutting edges

Absence of sharp borders or edges, no abrasion risks

3.4 Protection against noise (BWR 5)

3.4.1 Airborne sound insulation

Test reports from noise reduction according to EN ISO 10140-2 have been provided.

The tests were performed with Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal based on 100 mm metal C-studs with a double layer of 12.5 mm fibre gypsum board cladding with 50 mm mineral wool infill, as well as in a flexible wall construction based on double metal CW-studs of 50 mm with a double layer of 12.5 mm fibre gypsum board cladding and 2 x 50 mm mineral wool infill.

The resulting $R_{w(C;Ctr)}$ values are:

Configuration	$R_{w(C;Ctr)}$ [dB]
Wall construction with 100 mm C-studs and 50 mm mineral wool infill	62 (-2;-5)
Wall construction with double 50 mm CW-studs and 2 x 50 mm mineral wool infill	63 (-1;-4)

3.5 Energy, economy and heat retention (BWR 6)

3.5.1 Thermal properties

No performance determined

3.5.2 Water vapour permeability

No performance determined

3.5.3 Resistance to deterioration

No performance determined

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

According to Annex V of Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 and according to the decision 98/213/EC in compliance with ETAG 003 as regards internal partition kits for use as non-loadbearing walls the system 3 of Assessment and Verification of Constancy of Performance applies as a minimum. The manufacturer has designated that system 1 of Assessment and Verification of Constancy of Performance shall be applied.

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

5.1 Tasks of the manufacturer:

5.1.1 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 shall draw up and keep up-to-date documents defining the factory production control that applies. The documentation to be carried out by the manufacturer and the applicable procedures shall be appropriate to the product and manufacturing process. The factory production control shall ensure the conformity of the product to an appropriate level. This involves:

a) the preparation of documented procedures and instructions relating to factory production control operations.
b) the effective implementation of these procedures and instructions.
c) the recording of these procedures and their results.
d) the use of these results to correct any deviations, repair the effects of such deviations, treat any resulting instances of non-conformity and, if necessary, revise the factory production control to rectify the cause of non-conformity.
e) a procedure to ensure that both the Assessment Body and the Notified (Certification) Bodies are advised before any significant change to the product, its components or manufacturing process, is made.
f) a procedure to ensure that personnel involved in the production processes and the quality control procedures are qualified and adequately trained to carry out their required tasks.
g) that all testing and measuring equipment is maintained and up to date calibration records are documented.
h) maintenance of records to ensure every batch produced is clearly labelled with the batch number, which allows traceability to its production to be identified.

The manufacturer may only use components stated in the technical documentation of this European Technical Assessment.

For the components which the ETA-holder does not manufacture by himself, he shall make sure that factory production control carried out by the other manufacturers gives the guaranty of the components compliance with the European Technical Assessment.

The factory production control and the provisions taken by the ETA-holder for components not produced by himself shall be in accordance with the control plan relating to this European Technical Assessment which is part of the technical documentation of this European Technical Assessment. 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.

5.1.2 Other tasks of the manufacturer:

The manufacturer shall, on the basis of a contract, involve a body (bodies) which is (are) approved for the tasks referred to in section 3.1 in the field of linear joint seals in order to undertake the actions laid down in section 3.3. For this purpose, the "control plan" referred to in sections 3.2.1.1 and 3.2.2 shall be handed over by the manufacturer to the assessment body and notified body (bodies) involved.
The manufacturer shall make a declaration of conformity, stating that the construction product is in conformity with the provisions of this European Technical Assessment.

5.1.3. Further testing of samples taken at the factory

5.2. Tasks of notified product certification body

5.2.1. Determination of the product type

5.2.2. Initial inspection of the manufacturing plant and of factory production control
The Notified Body (Bodies) shall ascertain that, in accordance with the control plan, the factory (in particular the employees and the equipment) and the factory production control are suitable to ensure continuous and orderly manufacturing of the components according to the specifications mentioned in clause 2 of this ETA.

5.2.3. Continuous surveillance, assessment and evaluation of factory production control
The Notified Body (Bodies) shall visit the factory at least twice a year or once a year for surveillance of this manufacturer having a FPC system complying with a quality management system covering the manufacturing of the approval product components. It has to be verified that the system of factory production control and the specified automated manufacturing process are maintained taking into account the control plan.

These tasks shall be performed in accordance with the provisions laid down in the control plan of this European Technical Assessment.

The Notified Body (Bodies) shall retain the essential points of its (their) actions referred to above and state the results obtained and conclusions drawn in a written report.

The Notified Body involved by the manufacturer shall issue an EC certificate of conformity of the product stating the conformity with the provisions of this European Technical Assessment.

In cases where the provisions of the European Technical Assessment and its control plan are no longer fulfilled the certification body shall withdraw the certificate of conformity and inform UL INTERNATIONAL (UK) LTD without delay.

6 Issued on:

24th July 2018

Report by:

C. Johnson
Staff Engineer
Building and Life Safety Technologies

Reviewed by:

C. W. Miles
Business Manager – Europe & Latin America
Building and Life Safety Technologies

For and on behalf of UL International (UK) Ltd.

ANNEX 1 – DESCRIPTION OF THE PRODUCT COMPONENT HILTI CFS-TTS E FIRESTOP TOP TRACK SEAL

A.1.1 Hilti CFS-TTS E Firestop Top Track Seal

Hilti CFS-TTS E Firestop Top Track Seal is a compressible strip installed around the horizontal top and/or bottom track of a flexible wall. It is a U-shaped strip based on flexible polyurethane foam in a plastic foil.

Hilti CFS-TTS E Firestop Top Track Seal is supplied in lengths packed in cardboard boxes.

A detailed specification of the product is contained in document “Identification / Product Specification relating to the European Technical Assessment ETA-18/0398 - Hilti CFS-TTS E Firestop Top Track Seal” which is a non-public part of this ETA.

The Control Plan is defined in document "Control Plan related to the European Technical Assessment ETA-18/0398 - Hilti CFS-TTS E Firestop Top Track Seal” which is a non-public part of this ETA.

1907/2006 (REACH) with its amendment Regulation (EC) No. 830/2015

Technical product literature:

Technical Data Sheet Hilti CFS-TTS E Firestop Top Track Seal

ANNEX 2 – RESISTANCE TO FIRE CLASSIFICATION AND USE CATEGORIES FOR DRYWALL PARTITIONS USING HILTI CFS-TTS E FIRESTOP TOP TRACK SEAL

A.2.1 Specific characteristics for floor and ceiling construction

a) Rigid floors: The floor must have a minimum thickness $t_{E1} \geq 100$ mm and comprise of concrete with a minimum density of 2400 kg/m^3.

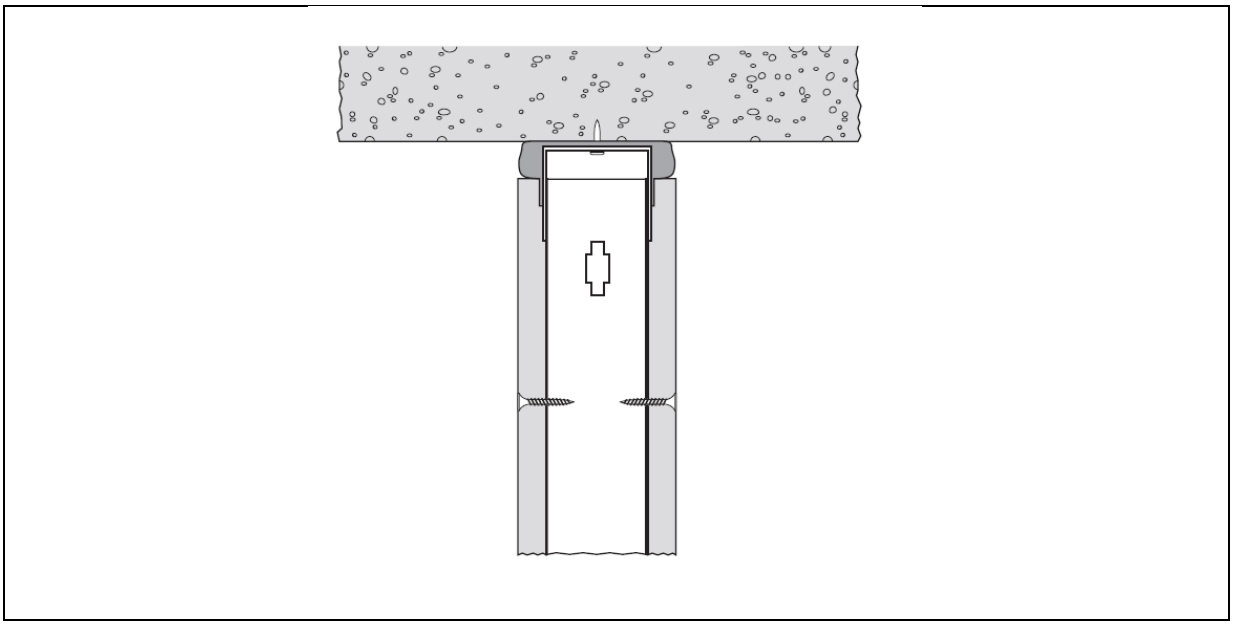
The constructions described in annex 2.3.1 and 2.3.2 can also be used with a flexible floor construction.

A.2.2 Linear joint seal installation specifics

Hilti CFS-TTS E Firestop Top Track Seal is applied on the topside of the upper horizontal U-profile, along the entire width of the wall. The (gypsum plasterboard) lining is fixed onto the vertical studs, compressing (a minimum) of 14 mm of the Hilti CFS-TTS E Firestop Top Track Seal, leaving a joint of (maximum) 25 mm width. The joint will accommodate the incidental movement of the ceiling relative to the wall.

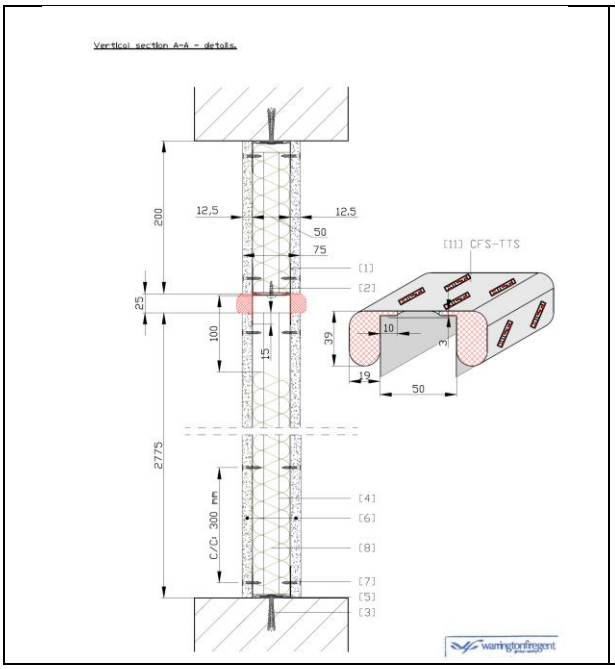
Nominal joint width: up to 25 mm;

Generalised construction details:



A.2.3 Classifications for Drywall partitions using Hilti CFS-TTS E Firestop Top Track Seal

A.2.3.1



[1] U-profile galvanised steel 40 x 50 x 40 x 0.6 mm
[2] Metal construction screw, c/c distance 600 mm
[3] Nail plug, c/c distance 600 mm
[4] C-profile stud galvanized steel 6 x 49 x 48.8 x 51 x 6 x 0.6 mm
[5] sealing strip
[6] Gyproc Rf gypsum plasterboard, type DF to EN 520, 12.5 mm
[7] Drywall screws Ø3.5 x 25 mm, c/c distance 300 mm
[8] Insulation, Rockwool density 45 kg/m^3
[9] Joint tape
[10] Jointfiller
[11] Top Track Seal Hilti CFS-TTS

The total thickness of the wall is 75 mm

The Drywall partition using Hilti CFS-TTS E Firestop Top Track Seal as schematically represented above, has a classification in accordance with EN 13501-2 of:

- **EI 45**
- **EW 60 / E 60**

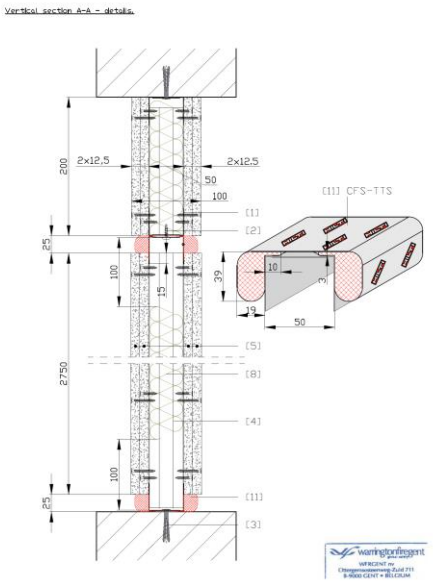
The use category as defined in ETAG 003 (Table 6) is:

- **Use Category II**

For a classification of EI 45 in accordance with EN 13501-2, Hilti CFS-TTS E Firestop Top Track Seal can be applied between:

- A flexible wall of intended fire resistance of 45 minutes (EI 45 in accordance with EN 13501-2), constructed as follows:
  - Horizontal U-profiles of galvanised steel, minimum 40 x 50 x 40 x 0.6 mm, fixed at 600 mm centres
  - Vertical C-profile studs of galvanised steel, minimum 6 x 49 x 48.8 x 51 x 6 x 0.6 mm
  - A lining of a single layer of gypsum plasterboard, Type F in accordance with EN 520, thickness 12.5 mm or more, fixed at 300 mm centres
  - The cavity of the wall can optionally be filled with mineral wool slabs insulation
  - The total thickness of the wall must be 75 mm or more
- a solid floor, or a flexible floor construction.

A.2.3.2



[1] U-profile galvanised steel, 40 x 50 x 40 x 0.6 mm
[2] Hilti S-MD 01 PS Ø4.8 x 19 mm construction screw, c/c 600 mm
[3] Nail plug Ø3.8 x 60 mm, c/c 600 mm
[4] C-profile stud galvanized steel, 6 x 49 x 48.8 x 51 x 6 x 0.6 mm
[5] Gyproc Rf gypsum plasterboard, type DF to EN 520, 12.5 mm
[6] Drywall screws Ø3.5 x 25 mm, c/c distance 300 mm
[7] Drywall screws Ø3.5 x 35 mm, c/c distance 300 mm
[8] Insulation, Rockwool density 45 kg/m^3
[9] Joint tape
[10] Jointfiller
[11] Top Track Seal Hilti CFS-TTS

The total thickness of the wall is 100 mm

The Drywall partition using Hilti CFS-TTS E Firestop Top Track Seal as schematically represented above, has a classification in accordance with EN 13501-2 of:

- **EI 60**
- **EW 90 / E 90**

The use category as defined in ETAG 003 (Table 6) is:

- **Use Category II**

The resistance to structural damage from eccentric vertical load (Table 7) is:

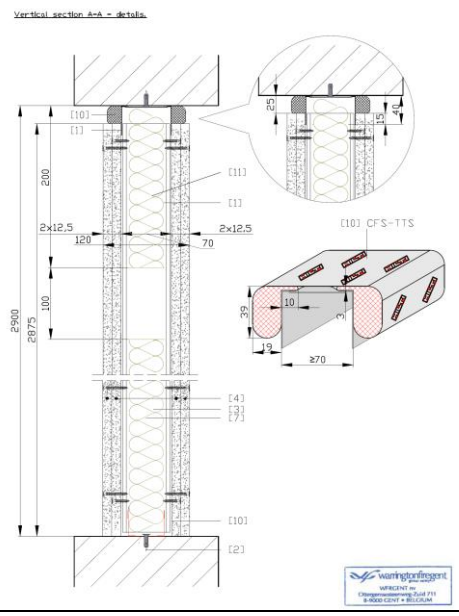
- **Loading Category A**

For a classification of EI 60 in accordance with EN 13501-2, Hilti CFS-TTS E Firestop Top Track Seal can be applied between:

- A flexible wall of intended fire resistance of 60 minutes (EI 60 in accordance with EN 13501-2), constructed as follows:
  - Horizontal U-profiles of galvanised steel, minimum 40 x 50 x 40 x 0.6 mm, fixed at 600 mm centres
  - Vertical C-profile studs of galvanised steel, minimum 6 x 49 x 48.8 x 51 x 6 x 0.6 mm
  - A lining of a double layer of gypsum plasterboard, Type F in accordance with EN 520, minimum thickness 12.5 mm, fixed at 300 mm centres
  - The cavity of the wall can optionally be filled with mineral wool slabs insulation
  - The total thickness of the wall must be 100 mm or more

- A solid floor, or a flexible floor construction.

A.2.3.3



[1] U-profile galvanised steel, 40 x 70 x 40 x 0.6 mm
[2] Nail, Hilti X-S B3 MX Ø4.8 x 14 mm, c/c distance 300 mm for the top track, 600 mm for the bottom track
[3] C-profile stud of galvanised steel, 8 x 48 x 69 x 48 x 6 x 0.6 mm
[4] Gyproc Rf gypsum plasterboard, type DF to EN 520, 12.5 mm
[5] Drywall screws Ø3.5 x 25 mm, c/c distance 750 mm
[6] Drywall screws Ø3.5 x 35 mm, c/c distance 250 mm
[7] Insulation, Rockwool density 45 kg/m^3
[8] Joint tape
[9] Jointfiller
[10] Top Track Seal Hilti CFS-TTS

The total thickness of the wall is 120 mm

The Drywall partition using Hilti CFS-TTS E Firestop Top Track Seal as schematically represented above, has a classification in accordance with EN 13501-2 of:

- **EI 90**
- **EW 120 / E 120**

The use category as defined in ETAG 003 (Table 6) is:

- **Use Category II**

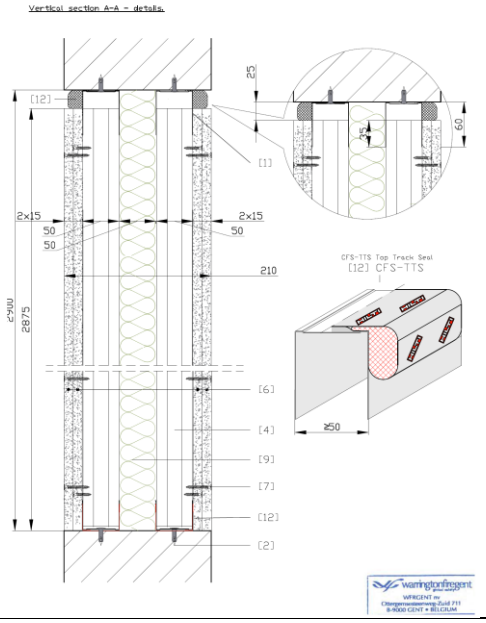
The resistance to structural damage from eccentric vertical load (Table 7) is:

- **Loading Category A**

For a classification of EI 90 in accordance with EN 13501-2, Hilti CFS-TTS E Firestop Top Track Seal can be applied between:

- A flexible wall of intended fire resistance of 90 minutes (EI 90 in accordance with EN 13501-2), constructed as follows:
  - Horizontal U-profiles of galvanised steel, minimum 40 x 70 x 40 x 0.6 mm, fixed at 300 mm centres for the top track and 600 mm centres for the bottom track
  - Vertical C-profile studs of galvanised steel, minimum 8 x 48 x 69 x 48 x 6 x 0.6 mm
  - A lining of a double layer of gypsum plasterboard, Type F in accordance with EN 520, minimum thickness 12.5 mm, fixed at 750 mm centres for the inner layer and 250 mm centres for the outer layer
  - The cavity of the wall can optionally be filled with mineral wool slabs insulation
  - The total thickness of the wall must be 120 mm or more
- A solid floor of minimum thickness 150 mm and comprised of concrete with a minimum density of 2200 kg/m^3

A.2.3.4



[1] U-profile galvanised steel, 60 x 50 x 60 x 0.6 mm
[2] Nail, Hilti S-MD 01 PS Ø4.8 x 19 mm, c/c distance 300 mm for the top track
[3] Nail plug Ø3.8 x 60 mm, c/c 600 mm
[4] C-profile stud galvanized steel, 6 x 49 x 48.8 x 51 x 6 x 0.6 mm
[5] Backing strip
[6] Gyproc Rf gypsum plasterboard, type DF to EN 520, 15 mm
[7] Drywall screws Ø3.5 x 25 mm, c/c distance 750 mm
[8] Drywall screws Ø3.5 x 35 mm, c/c distance 250 mm
[9] Insulation, Rockwool density 45 kg/m^3
[10] Joint tape
[11] Jointfiller

The Drywall partition using Hilti CFS-TTS E Firestop Top Track Seal as schematically represented above, has a classification in accordance with EN 13501-2 of:

- **EI 120**

The use category as defined in ETAG 003 (Table 6) is:

- **Use Category II**

The resistance to structural damage from eccentric vertical load (Table 7) is:

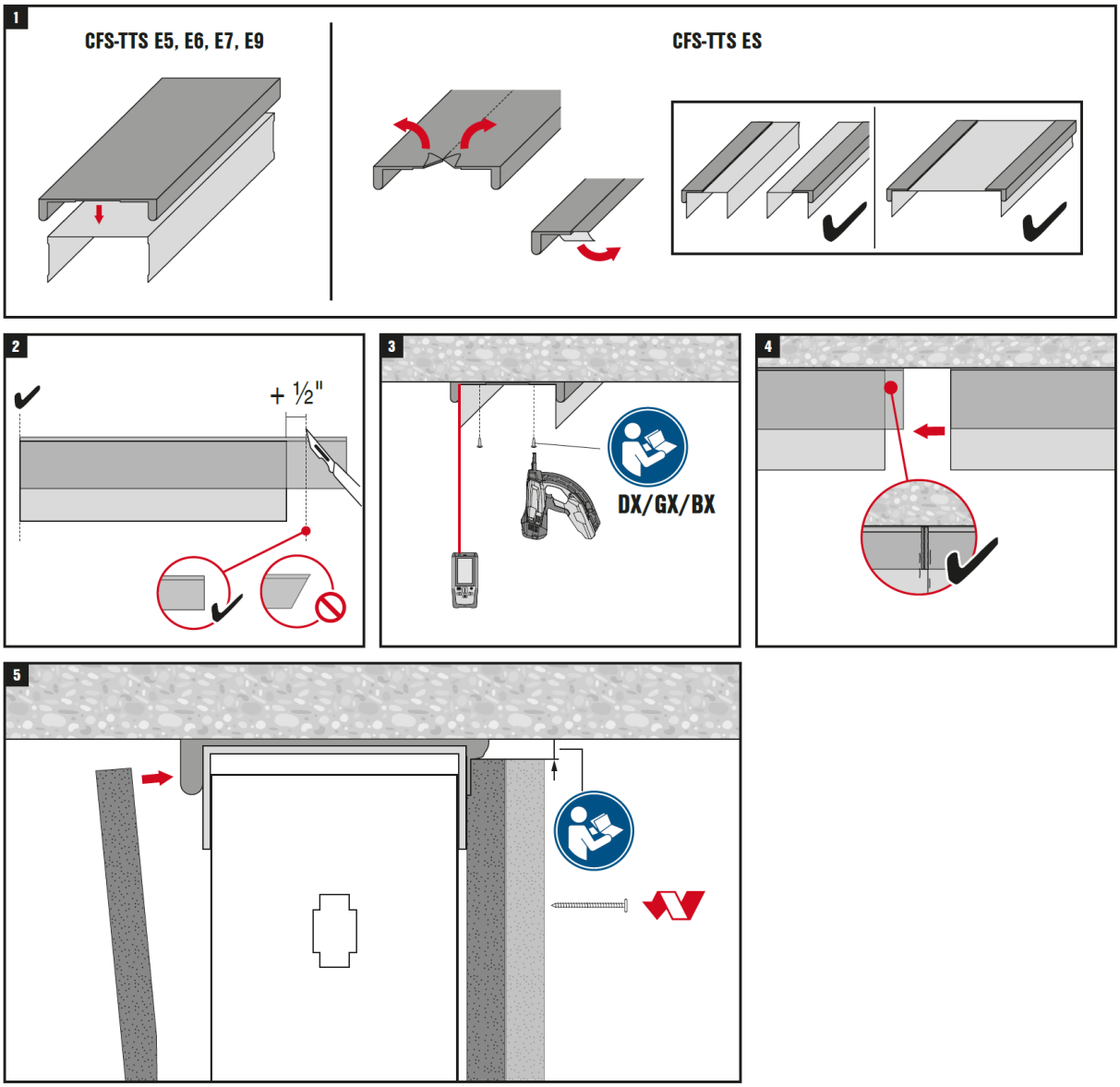
- **Loading Category A**

For a classification of EI 120 in accordance with EN 13501-2, Hilti CFS-TTS E Firestop Top Track Seal can be applied between:

- A flexible wall of intended fire resistance of 120 minutes (EI 120 in accordance with EN 13501-2), constructed as follows:
  - Two identical frames are installed with a distance of 50 mm from each other; the studs are coupled to each other by means of horizontally placed C-profiles at 300 mm and 1500 mm from the top
  - (Two) Horizontal U-profiles of galvanised steel, minimum 60 x 50 x 60 x 0.6 mm, fixed at 300 mm centres for the top track and 600 mm centres for the bottom track
  - (Two) Vertical C-profile studs of galvanised steel, minimum 8 x 49 x 48.8 x 51 x 6 x 0.6 mm
  - A lining of a double layer of gypsum plasterboard, Type F in accordance with EN 520, thickness 15 mm or more, fixed at 750 mm centres for the inner layer and 250 mm centres for the outer layer
  - In the cavity of the wall stone wool slabs, minimum density 45 kg/m^3, thickness 50 mm installed horizontally (width 1000 mm, height 625 mm)
  - The total thickness of the wall must be 210 mm or more
- A solid floor of minimum thickness 150 mm and comprised of concrete with a minimum density of 2200 kg/m3

ANNEX 3 – INSTALLATION OF THE PRODUCT AND ANCILLARY PRODUCT(S)

Installation of the Hilti CFS-TTS E Firestop Top Track Seal should be conducted as follows:



ANNEX 4 – ABBREVIATIONS AND REFERENCE DOCUMENTS

4.1 References to standards mentioned in the ETA:

EN 1364-1	Fire resistance tests for non-loadbearing elements - Part 1: Walls
EN 13501	Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire tests Part 2: Classification using test data from fire resistance tests
EN ISO 140-1	Measurement of sound insulation in buildings and of building elements -- Part 1: Requirements for laboratory test facilities with suppressed flanking transmission
EN 20140	Acoustics – Measurement of sound insulation in buildings and of building elements – Part 3: Laboratory measurements of airborne sound insulation of building elements Part 10: Laboratory measurement of airborne sound insulation of small building elements
EN ISO 10140	Acoustics - Laboratory measurement of sound insulation of building elements - Part 1: Application rules for specific products Part 2: Measurement of airborne sound insulation Part 5: Requirements for test facilities and equipment
EN ISO 717-1	Acoustics – Rating of sound insulation of buildings and of building elements – Part 1: Airborne sound insulation

4.2 Other reference documents:

EOTA TR 024	Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products